

INDUCTIVE SENSORS

Inductive sensors detect the presence of metal objects presence in the sensible area. They aren't influenced by non-metal materials.

WORKING PRINCIPLE

An oscillating electromagnetic field is generated in the sensible area. When a metal object enters the sensitivity field, it tends to decrease the amplitude of oscillation, creating in this way a switching in the output stage.

In inductive sensors range there are version with linear output in current or in voltage.

In these sensors the presence of metal objects is detected and turned into a signal proportional to the damping of the oscillator, which depends by the distance and metallic composition of the detected object.

INDUCTIVE SENSORS

- IPS** = high precision ($H < 1 \mu m$)
- AC** = amplified a.c. 2 wire cylindrical body inductive series
- ACB** = amplified a.c. 3 wire cylindrical body inductive series
- ACF** = amplified a.c. 2 wire slot inductive series
- AX** = amplified a.c. + d.c. 2 wire 20 ÷ 240 V
- AXM** = amplified a.c. + d.c. 2 wire 10 ÷ 50 V
- DC** = cylindrical inductive NOT amplified d.c. NAMUR series 2 wires
- DCA** = cylindrical inductive amplified d.c. 3-4 wires
- DCAL** = cylindrical inductive analog linear output
- DCE** = extended sensing distance d.c. series
- DCF** = amplified d.c. slot series
- DF** = inductive slot sensors NOT amplified d.c. NAMUR series
- DSA** = amplified d.c. cylindrical SHORT body inductive series
- DSE** = extended sensing distance d.c. SHORT series
- DX** = amplified d.c. 2 wire 5 function series
- DCM** = amplified d.c. 2 wire non polarized

Diameter of cylindrical sensor or slot width for slot types.
For other types, change the number with the following:

- 80B** = diameter 80 mm
- P** = rectangular plastic 5 positions head 40 x 40 x 112
- R** = rectangular plastic with adjustable sensing distance 100 x 111 x 30
- T** = rectangular plastic 25 x 40 x 12
- X** = rectangular plastic 25 x 50 x 10
- Y** = rectangular plastic 30 x 50 x 15
- Z** = rectangular plastic 16 x 28 x 10

P = plastic housing

4 = flush mounting

5 = non flush mounting

DCA	18	P/	4	7	0	9	KS	-5	PUR
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- 0** = with connector n° 17 - 18
- 1** = with connector n° 15 - 16
- 2** = 90° output with connector n° 1
- 3** = with connector M12 x 1
- 4** = with connector n° 1
- 6** = standard type cable output
- 7** = cable output with sheath holder
- 8** = with gland
- 9** = with connector M8 x 1
- A** = body length 50 mm completely threaded
- E** = with connector n° 2
- L** = side cable output
- *** = male connector wired on the sensor (see pag. H-1)

- 0** = NO (normally open output)
- 1** = NC (normally closed output)
- 2** = NO + NC (complementary outputs)
- C** = NC (output normally closed on pin 2 of connector)
- 5** = 5 functions sensor

- 0** = NAMUR series with 2 wires
- 8** = NPN
- 9** = PNP
- 9** = 20 ÷ 240 V. for a.c. sensors
- X** = 5 functions sensor

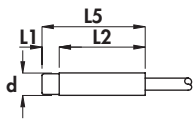
- L** = smooth body
- M** = stainless steel sensing face
- J** = degree of protection IP68
- K** = protection against short circuit and overload
- S** = LED output status
- T** = high temperature version
- V** = linear sensor with voltage output

Cable length (if required different than standard 2m)

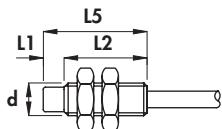
For Polyurethane cable add PUR

**NAMUR SERIES - diameters 4 - 5 - 6,5 - 8 - 12 mm •
Non amplified in d.c. 2 wires •
Cable output •**

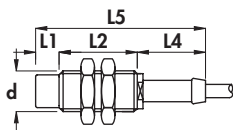
Housing A



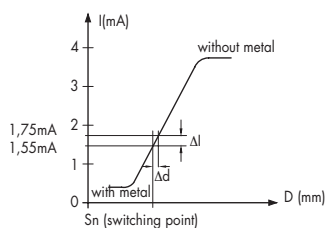
Housing B



Housing F



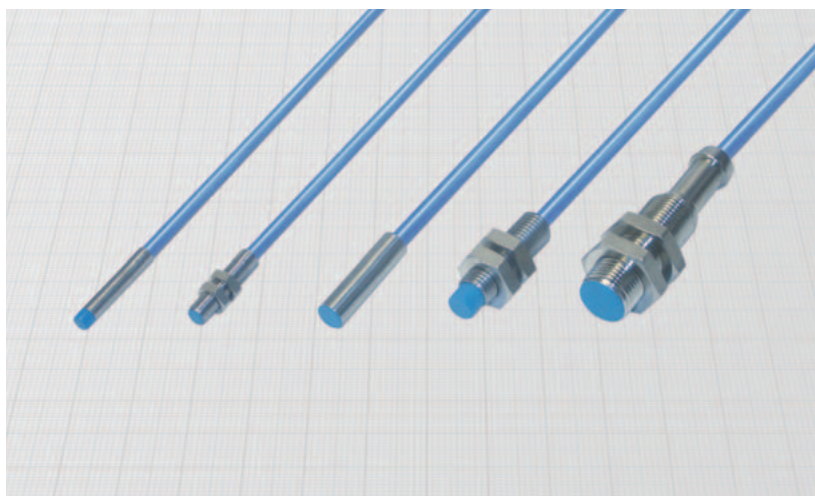
Typical curve



Diameter	M5 x 0,5	M8 x 1	M12 x 1
Nut	Size	SW7	SW13
	Thickness mm	2,5	4
Max tightening torque Nm	2	10	15

Materials:

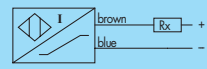
- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing 4 - 5 - 6,5 - 8 mm: stainless steel
- Housing 12 mm: nickel plated brass
- Sensing face: plastic



Technical data:

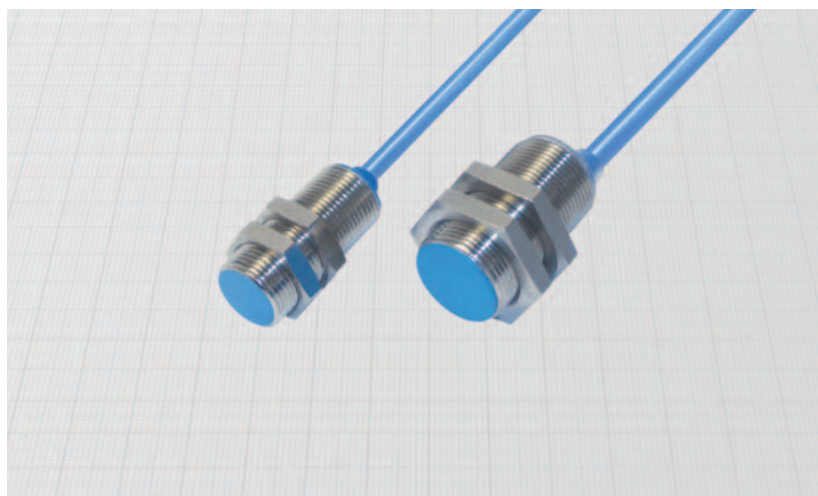
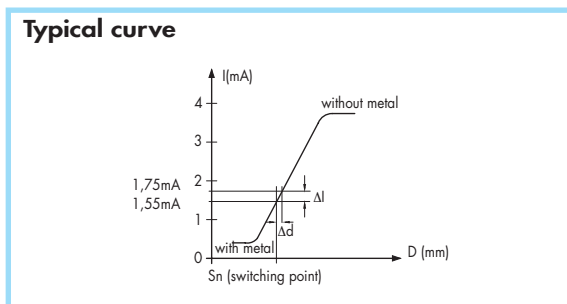
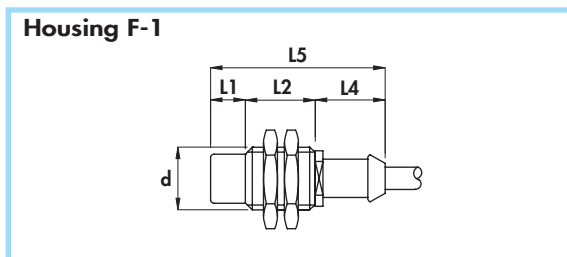
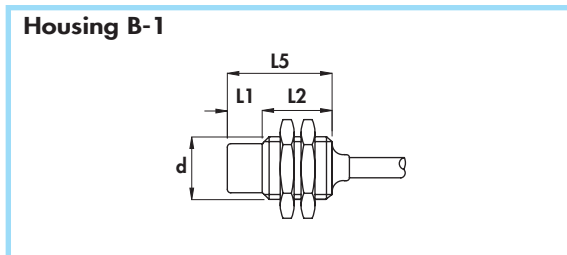
- Working voltage: 5 ÷ 30 Vdc
- Supply voltage according to NAMUR: 7,7 ÷ 9 Vdc
- Max ripple: 10%
- Consumption at 8,2 V with Rx = 1000 Ω
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_i: ± 10%
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- Cable conductor cross section: 0,15 mm² on 4 and 5 mm; 0,35 mm² on 6,5 ÷ 12 mm
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Nominal sensing distance (S _i) ± 10%	ORDERING REFERENCES
		mm	mm	mm	mm	mm					
A	•	-	20	-	-	20	3	4	5	0,8	DC4/4600L
B	•	-	20	-	-	20	3	M5 x 0,5	5	0,8	DC5/4700
A	•	-	25	-	-	25	4	6,5	5	1,5	DC6,5/4700L
A	•	5	20	-	-	25	4	6,5	3	2,5	DC6,5/5700L
A	•	-	25	-	-	25	4	8	5	1,5	DC8/4700L
B	•	-	25	-	-	25	4	M8 x 1	5	1,5	DC8/4700
B	•	5	20	-	-	25	4	M8 x 1	3	2,5	DC8/5700
B	•	-	30	-	-	30	4	M12 x 1	5	2	DC12/4600
F	•	-	30	-	20	50	4	M12 x 1	5	2	DC12/4700
B	•	7	23	-	-	30	4	M12 x 1	1	4	DC12/5600
F	•	7	23	-	20	50	4	M12 x 1	1	4	DC12/5700



CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- **NAMUR SERIES - diameters 14 - 16 - 18 mm**
- **Non amplified in d.c. 2 wires**
- **Cable output**



Diameter	M14 x 1	M16 x 1	M18 x 1
Nut	Size	SW17	SW22
	Thickness mm	4	4
Max tightening torque Nm	20	25	35

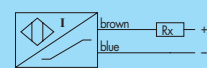
Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: nickel plated brass
- Sensing face: plastic

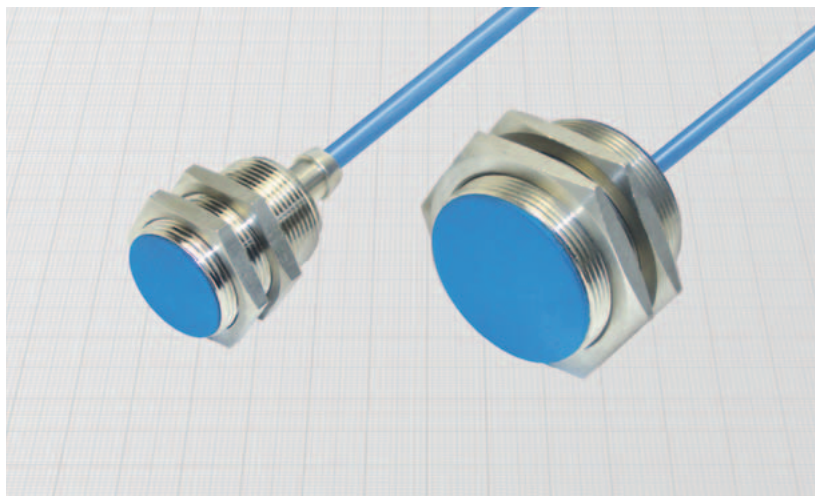
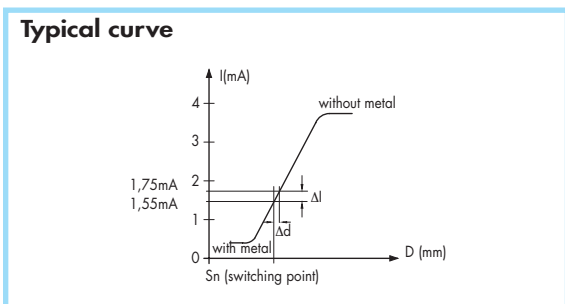
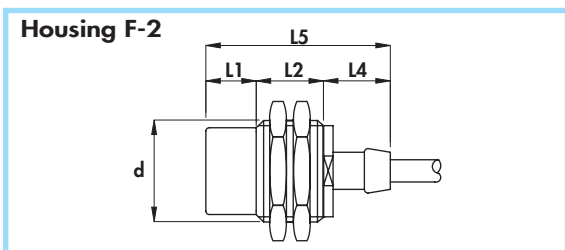
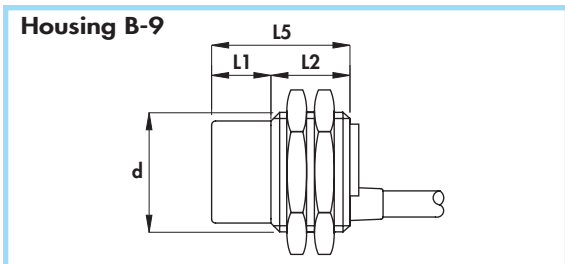
Technical data:

- Working voltage: 5 ÷ 30 Vdc
- Supply voltage according to NAMUR: 7,7 ÷ 9 Vdc
- Max ripple: 10%
- Consumption at 8,2 V with Rx = 1000 Ω
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_p: ± 10%
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- Cable conductor cross section: 0,35 mm² on 14 ÷ 16 mm, 0,50 mm² on 18 mm
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES
		mm	mm	mm	mm	mm					
B-1	•	-	30	-	-	30	4	M14 x 1	2	3	DC14/4700 DC14/5700
B-1	•	10	30	-	-	40	4	M14 x 1	1	5	
B-1	•	-	30	-	-	30	4	M16 x 1	2	4	DC16/4700 DC16/5700
B-1	•	10	30	-	-	40	4	M16 x 1	1	5,5	
B-1	•	-	30	-	-	30	6	M18 x 1	1	5	DC18/4600 DC18/4700
F-1	•	-	30	-	20	50	6	M18 x 1	1	5	
B-1	•	10	20	-	-	30	6	M18 x 1	0,5	8	DC18/5600 DC18/5700
F-1	•	10	20	-	20	50	6	M18 x 1	0,5	8	



**NAMUR SERIES - diameters 4 - 5 - 6,5 - 8 - 12 mm •
Non amplified in d.c. 2 wires •
Cable output •**



Diameter		M28 x 1,5	M30 x 1,5	M35 x 1,5	M45 x 1,5
Nut	Size	SW32	SW36	SW41	SW55
	Thickness mm	4	5	5	5
Max tightening torque Nm		80	80	70	70

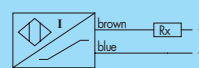
Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: nickel plated brass
- Sensing face: plastic

Technical data:

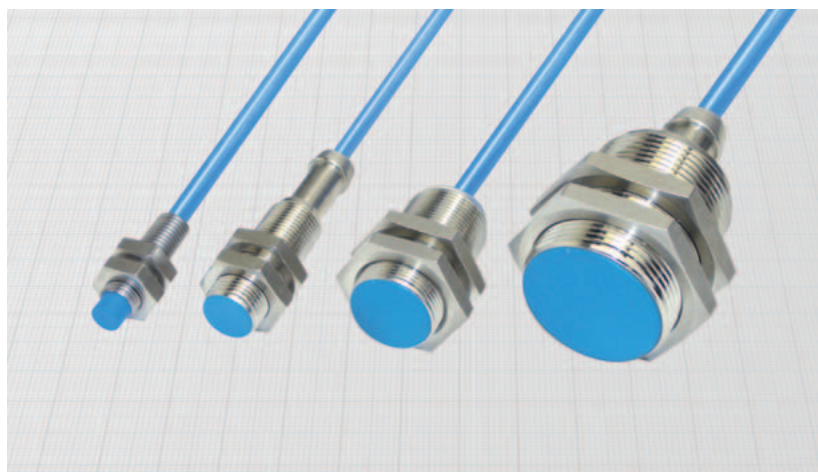
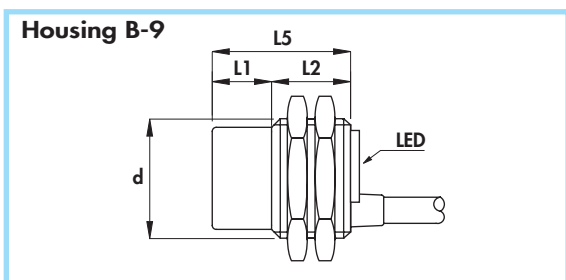
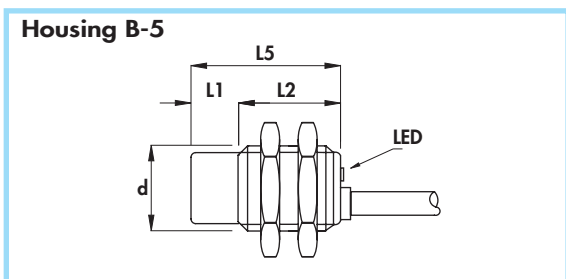
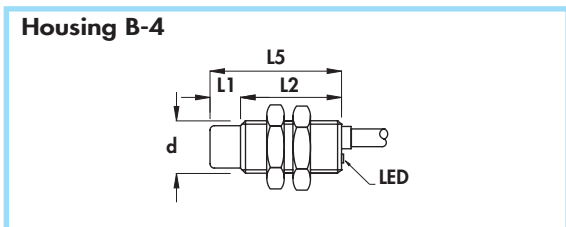
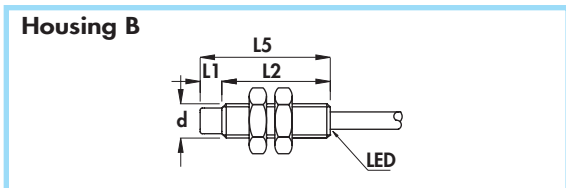
- Working voltage: $5 \div 30$ Vdc
- Supply voltage according to NAMUR: $7,7 \div 9$ Vdc
- Max ripple: 10%
- Consumption at 8,2 V with $R_x = 1000 \Omega$
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: $-25^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_r : $\pm 10\%$
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- Cable conductor cross section: $0,50 \text{ mm}^2$
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Nominal sensing distance (S _n) $\pm 10\%$	ORDERING REFERENCES
		mm	mm	mm	mm	mm					
B-9	•	-	35	-	-	35	6	M28 x 1,5	0,3	10	DC28/4700 DC28/5700
B-9	•	10	25	-	-	35	6	M28 x 1,5	0,2	15	
B-9	•	-	35	-	-	35	6	M30 x 1,5	0,3	10	DC30/4600 DC30/4700 DC30/5600 DC30/5700
F-2	•	-	35	-	20	55	6	M30 x 1,5	0,3	10	
B-9	•	15	20	-	-	35	6	M30 x 1,5	0,2	15	
F-2	•	15	20	-	20	55	6	M30 x 1,5	0,2	15	
B-9	•	-	35	-	-	35	6	M35 x 1,5	0,3	15	DC35/4700
B-9	•	-	35	-	-	35	6	M45 x 1,5	0,3	20	DC45/4700



CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- **NAMUR SERIES with LED**
- **Non amplified in d.c. 2 wires**
- **Cable output**



General Features:

With this new series of sensors it's possible to drive specific inputs for NAMUR sensors or inputs for 2 wires amplified switches with low current (up to 10 mA). The output is internally triggered and monitored by LED. The load can be applied on both terminals (function PNP or NPN).

Technical data:

- Working voltage: 7,7 ÷ 30 Vdc
- Max ripple: 10%
- Off-state current (I_o): <1 mA
- Minimum operational current (I_m): 2 mA
- Rated operational current (I_r): 10 mA
- Voltage drop (U_d) with load 10 mA: < 6,5 V
- Voltage drop (U_d) with load 8 mA: < 5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_p : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,35 mm² on 8 and 12 mm
0,75 mm² on 18 and 30 mm

- Protected against short-circuit and overload (8 mm not included)
- Protected against any wrong connection
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW13	SW17	SW24
	Thickness mm	4	4	4
Max tightening torque Nm	10	15	35	80

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing 8 mm: stainless steel
- Housing 12 - 18 - 30 mm: nickel plated brass
- Sensing face: plastic

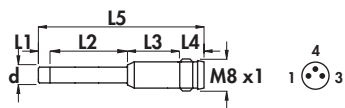
Use according to NAMUR:

- Supply voltage: 7,7 ÷ 9 Vdc
- Consumption at 8,2 V with $R_x = 1000 \Omega$
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA

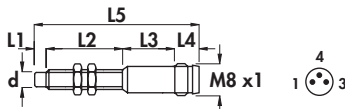
Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES	
											mm	mm
B	•	-	30	-	-	30	4	M8 x 1	3	1,5	 DC8/4600S DC8/5600S	 DC8/4610S DC8/5610S
B	•	5	25	-	-	30	4	M8 x 1	2	2,5		
B-4	•	-	30	-	-	30	4	M12 x 1	2	2	DC12/4600KS DC12/5600KS	DC12/4610KS DC12/5610KS
B-4	•	7	23	-	-	30	4	M12 x 1	1	4		
B-5	•	-	30	-	-	30	5	M18 x 1	0,8	5	DC18/4600KS DC18/5600KS	DC18/4610KS DC18/5610KS
B-5	•	10	20	-	-	30	5	M18 x 1	0,6	8		
B-9	•	-	35	-	-	35	5	M30 x 1,5	0,8	10	DC30/4600KS DC30/5600KS	DC30/4610KS DC30/5610KS
B-9	•	15	20	-	-	35	5	M30 x 1,5	0,4	15		

NAMUR SERIES •
Non amplified in d.c. •
Connector output M8 x 1 •

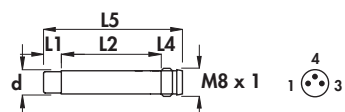
Housing I-3



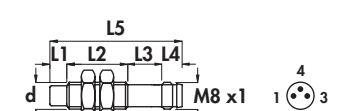
Housing I-4



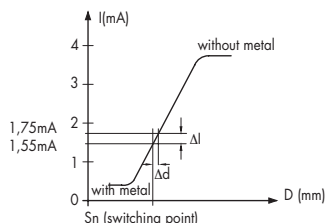
Housing I-8



Housing I-6



Typical curve



Diameter	M5 x 0,5	M8 x 1
Nut	Size	SW7
	Thickness mm	2,5
Max tightening torque Nm	2	10

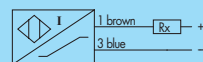
Materials:

- Housing: stainless steel
- Sensing face: plastic

Technical data:

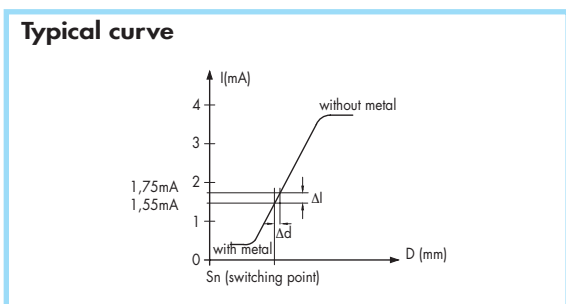
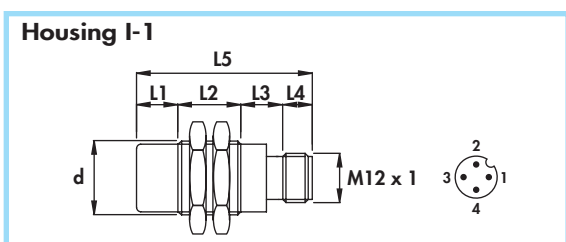
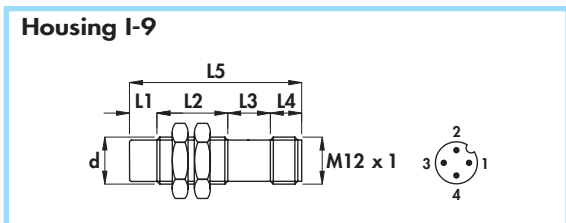
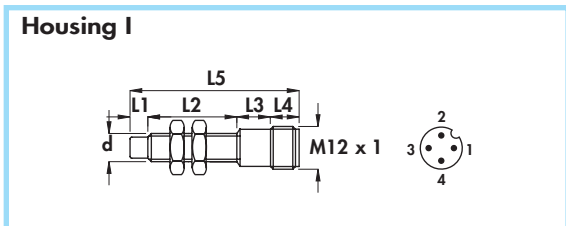
- Working voltage: 5 ÷ 30 Vdc
- Supply voltage according to NAMUR: 7,7 ÷ 9 Vdc
- Max ripple: 10%
- Consumption at 8,2 V with Rx = 1000 Ω
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_n: ± 10%
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES
		mm	mm	mm	mm	mm					
I-3	•	-	22	12	5,5	39,5	11-12	4	5	0,8	DC4/4900L
I-4	•	-	22	12	5,5	39,5	11-12	M5 x 0,5	5	0,8	DC5/4900
I-8	•	-	29,5	-	5,5	35	11-12	6,5	4	1,5	DC6,5/4900L
I-8	•	5	24,5	-	5,5	35	11-12	6,5	3	2,5	DC6,5/5900L
I-6	•	-	21	8,5	5,5	35	11-12	M8 x 1	4	1,5	DC8/4900
I-6	•	5	16	8,5	5,5	35	11-12	M8 x 1	3	2,5	DC8/5900



CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

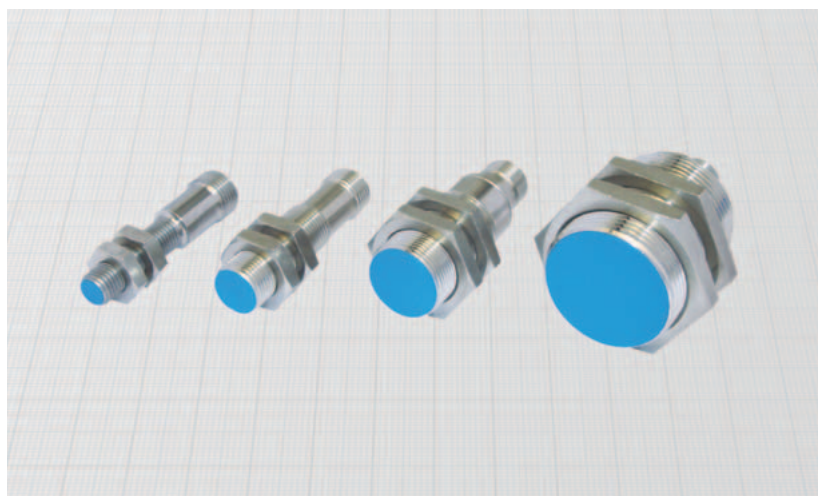
- **NAMUR SERIES**
- **Non amplified in d.c.**
- Connector output M12 x 1



Diameter		M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW13	SW17	SW24	SW36
	Thickness mm	4	4	4	5
Max tightening torque Nm		10	15	35	80

Materials:

- Housing 8 mm: stainless steel
- Housing 12 - 18 - 30 mm: nickel plated brass
- Sensing face: plastic

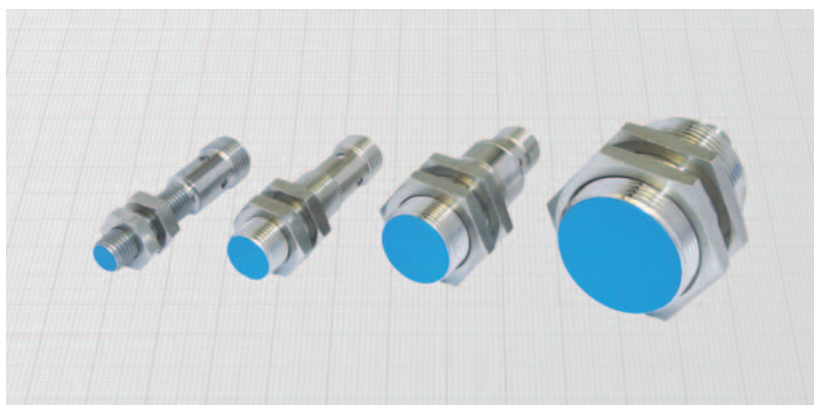
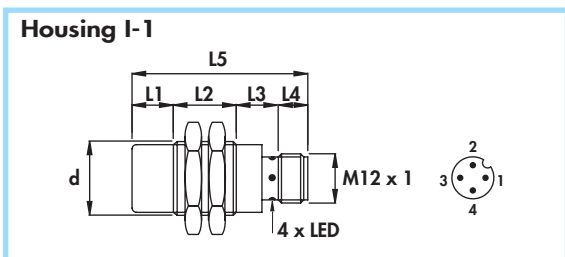
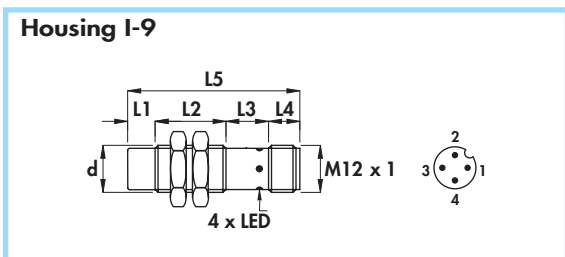
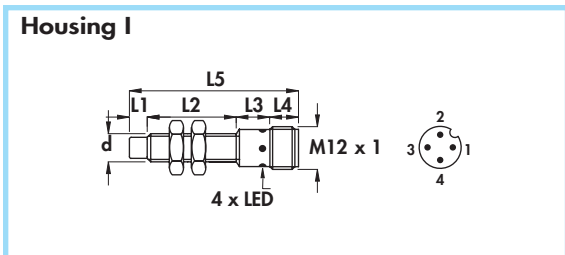


Technical data:

- Working voltage: 5 ÷ 30 Vdc
- Supply voltage according to NAMUR: 7,7 ÷ 9 Vdc
- Max ripple: 10%
- Consumption at 8,2 V with Rx = 1000 Ω
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_r: ± 10%
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES
		mm	mm	mm	mm	mm					
I	•	-	26	13	8	47	6-8B-10	M8 x 1	4	1,5	DC8/4300 DC8/5300
	•	5	21	13	8	47	6-8B-10	M8 x 1	3	2,5	
I-9	•	-	30	10	8	48	6-8B-10	M12 x 1	2	2	DC12/4300 DC12/5300
	•	7	23	10	8	48	6-8B-10	M12 x 1	1	4	
I-1	•	-	25	15	8	48	6-8B-10	M18 x 1	0,8	5	DC18/4300 DC18/5300
	•	10	15	15	8	48	6-8B-10	M18 x 1	0,6	8	
I-1	•	-	25	17	8	50	6-8B-10	M30 x 1,5	0,8	10	DC30/4300 DC30/5300
	•	15	25	17	8	65	6-8B-10	M30 x 1,5	0,4	15	

NAMUR SERIES with LED •
Non amplified in d.c. •
Connector output M12 x 1 •



Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW13	SW17	SW24
	Thickness mm	4	4	4
Max tightening torque Nm	10	15	35	80

Materials:

- Housing 8 mm: stainless steel
- Housing 12 - 18 - 30 mm: nickel plated brass
- Sensing face: plastic

General Features:

With this new series of sensors it's possible to drive specific inputs for NAMUR sensors or inputs for 2 wires amplified switches with low current (up to 10 mA). The load can be applied on both terminals (function PNP or NPN). Thanks to LED monitoring and to the internally triggered output, direct use is allowed with PLC and other electronic inputs optimizing in this way the wiring and the reliability of the entire system.

Technical data:

- Working voltage: 7,7 ÷ 30 Vdc
- Max ripple: 10%
- Off-state current (I_o): < 1 mA
- Minimum operational current (I_m): 2 mA
- Rated operational current (I_o): 10 mA
- Voltage drop (U_d) with load 10 mA: < 6,5 V
- Voltage drop (U_d) with load 8 mA: < 5 V
- Temperature range: - 25° ÷ +70°C
- Max thermal drift of sensing distance S_r: ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload (8 mm not included)
- Protected against any wrong connection
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Use according to NAMUR:

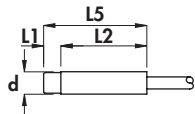
- Supply voltage: 7,7 ÷ 9 Vdc
- Consumption at 8,2 V with R_x = 1000 Ω
 with metal: ≤ 1 mA
 without metal: ≥ 3 mA
- For certified ATEX version see ATEX Catalogue

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Nominal sensing distance (S _r) ± 10%	ORDERING REFERENCES	
											mm	mm
I	•	-	26	13	8	47	6-8B-10	M8 x 1	3	1,5		
	•	5	21	13	8	47	6-8B-10	M8 x 1	2	2,5	DC8/4300S	DC8/4310S
I-9	•	-	30	10	8	48	6-8B-10	M12 x 1	2	2	DC12/4300KS	DC12/4310KS
	•	7	23	10	8	48	6-8B-10	M12 x 1	1	4	DC12/5300KS	DC12/5310KS
I-1	•	-	25	16	8	49	6-8B-10	M18 x 1	0,8	5	DC18/4300KS	DC18/4310KS
	•	10	15	16	8	49	6-8B-10	M18 x 1	0,6	8	DC18/5300KS	DC18/5310KS
I-1	•	-	25	17	8	50	6-8B-10	M30 x 1,5	0,8	10	DC30/4300KS	DC30/4310KS
	•	15	25	17	8	65	6-8B-10	M30 x 1,5	0,4	15	DC30/5300KS	DC30/5310KS

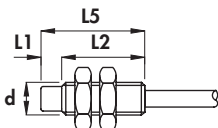
CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- **NAMUR SERIES** - for high temperatures (-25° ÷ +110°C)
- **Non amplified in d.c. 2 wires**
- Cable output

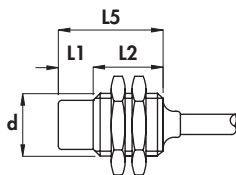
Housing A



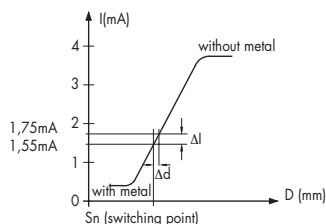
Housing B



Housing B-1



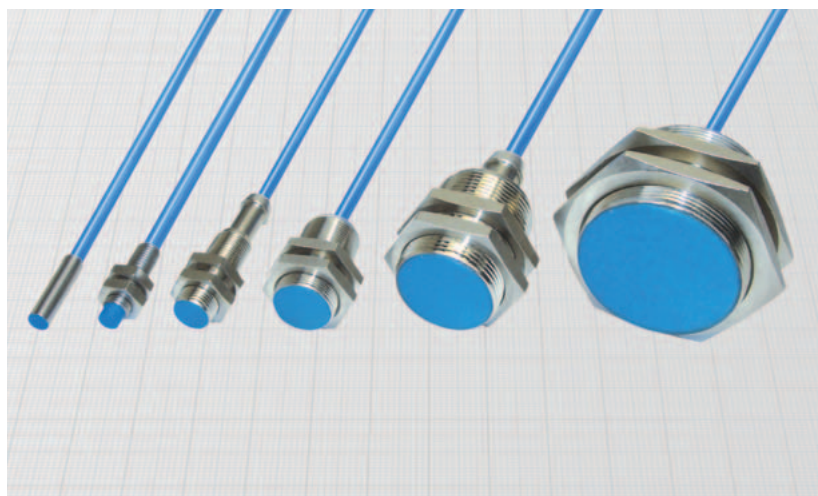
Typical curve



Diameter		M8 x 1	M12 x 1	M18 x 1	M30 x 1,5	M45 x 1,5
Nut	Size	SW13	SW17	SW24	SW36	SW55
	Thickness mm	4	4	4	5	5
Max tightening torque Nm		10	15	35	80	70

Materials:

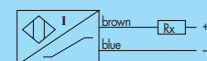
- Cable: 2 m thermoplastic 140°C; 300 V; O.R.
- Housing 6,5 - 8 mm: stainless steel
- Housing 12 ÷ 45 mm: nickel plated brass
- Sensing face: plastic



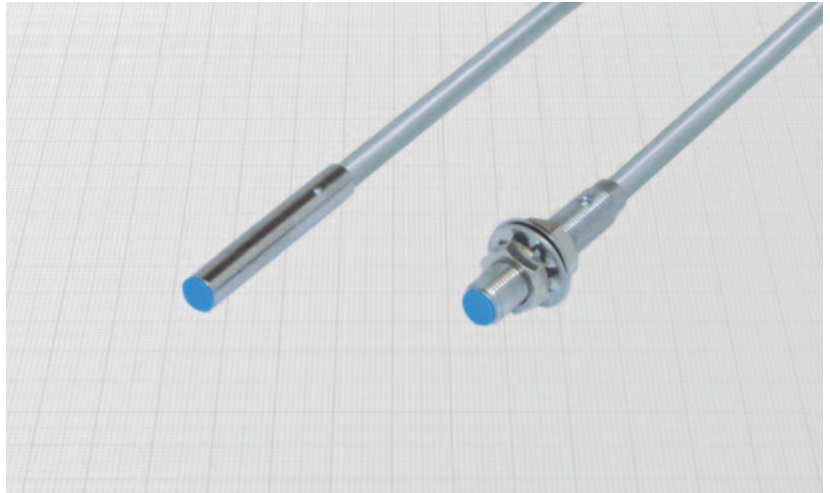
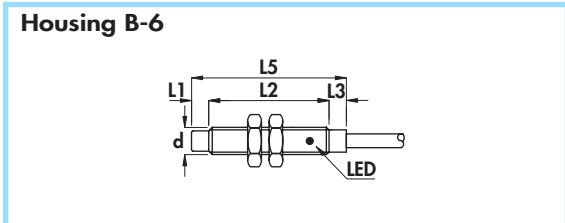
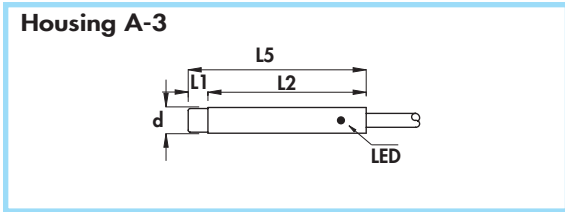
Technical data:

- Working voltage: 5 ÷ 30 Vdc
- Supply voltage according to NAMUR: 7,7 ÷ 9 Vdc
- Max ripple: 10%
- Consumption at 8,2 V with Rx = 1000 Ω
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: -25° ÷ +110°C
- Max thermal drift of sensing distance S_n: ± 10%
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- Cable conductor cross section:
 - 0,35 mm² on 6,5 ÷ 12 mm
 - 0,50 mm² on 18 ÷ 45 mm
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES
		mm	mm	mm	mm	mm					
A	•	-	25	-	-	25	4	6,5	5	1,5	DC6,5/4600LT
B	•	-	25	-	-	25	4	M8 x 1	5	1,5	DC8/4600T
B	•	-	30	-	-	30	4	M12 x 1	5	2	DC12/4600T
B-1	•	-	30	-	-	30	5	M18 x 1	1	5	DC18/4600T
B-1	•	-	35	-	-	35	6	M30 x 1,5	0,3	10	DC30/4600T
B-1	•	-	35	-	-	35	6	M45 x 1,5	0,3	20	DC45/4600T



Diameters 4 - 5 mm •
 Amplified in d.c. 3 wires •
 Cable output •



Diameter	M5 x 0,5	
Nut	Size	SW7
	Thickness mm	2,5
Max tightening torque Nm	2	

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: stainless steel
- Sensing face: plastic

Technical data:

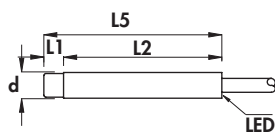
- Supply voltage (U_B): 7 ÷ 30 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 1,5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,15 mm²
- Protected against short-circuit and overload (versions with letter K)
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Rated operational current (I_e)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES	
											PNP (positive switching)	
A - 3	•	-	25	-	25	3	4	5	200	0,8		
A - 3	•	3	22	-	25	3	4	5	200	1,4		
A - 3	•	-	30	-	30	3	4	5	200	1		
A - 3	•	3	27	-	30	3	4	5	200	1,4		
B - 6	•	-	20	5	25	3	M5 x 0,5	5	200	0,8		
B - 6	•	3	17	5	25	3	M5 x 0,5	5	200	1,4		
B - 6	•	-	25	5	30	3	M5 x 0,5	5	200	1		
B - 6	•	3	22	5	30	3	M5 x 0,5	5	200	1,4		
NPN (negative switching)												
Use the above mentioned part number changing the last number 9 with 8 (ie. DCA4/4608LS)												

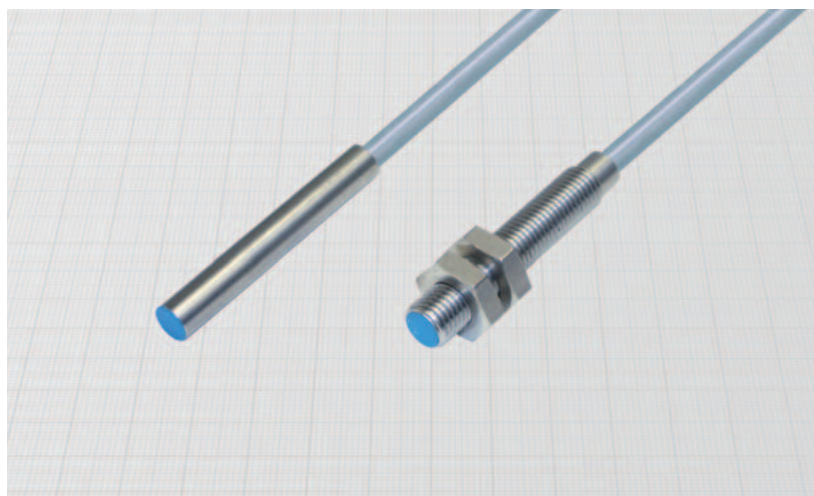
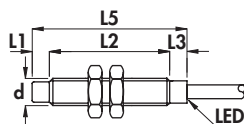
CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Diameters 6,5 - 8 mm
- Amplified in d.c. 3 and 4 wires
- Cable output

Housing A-3



Housing B-6



Diameter	M8 x 1	
Nut	Size	SW13
	Thickness mm	4
Max tightening torque Nm	10	

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: stainless steel
- Sensing face: plastic

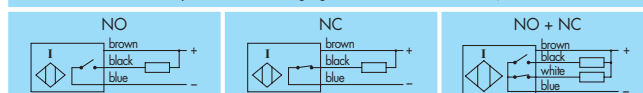
Technical data:

- Supply voltage (U_B): 7 ÷ 30 Vdc
 - Max ripple: 10%
 - No-load supply current (I_0): ≤ 10 mA
 - Voltage drop (U_d): ≤ 1,5 V
 - Temperature range: - 25° ÷ + 70°C
 - Max thermal drift of sensing distance S_s : ± 10%
 - Repeat accuracy (R): 2%
 - Switching hysteresis (H): 10%
 - Degree of protection: IP67
 - Switch status indicator: yellow LED
 - Cable conductor cross section: 0,15 mm² on 4 wires versions
0,22 mm² on 3 wires versions
- Protected against short-circuit and overload
 - Protected against any wrong connection
 - Suppression of initial false impulse
 - Electromagnetic compatibility (EMC) according to EN60947-5-2
 - Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	No-load supply current (I_0)	Nominal sensing distance (S_n) ±10%	ORDERING REFERENCES		
											mm	mm	mm
A-3	•	-	45	-	45	3,5	6,5	4	200	1,5			
A-3	•	5	40	-	45	3,5	6,5	3	200	2,5	DCA6,5/4609LKS DCA6,5/5609LKS	DCA6,5/4619LKS DCA6,5/5619LKS	DCA6,5/4629LKS DCA6,5/5629LKS
A-3	•	-	45	-	45	3,5	8	4	200	1,5			
B-6	•	-	40	5	45	3,5	M8 x 1	4	200	1,5	DCA8/4609LKS DCA8/4609KS	DCA8/4619LKS DCA8/4619KS	DCA8/4629LKS DCA8/4629KS
A-3	•	5	40	-	45	3,5	8	3	200	2,5	DCA8/5609LKS DCA8/5609KS	DCA8/5619LKS DCA8/5619KS	DCA8/5629LKS DCA8/5629KS
B-6	•	5	35	5	45	3,5	M8 x 1	3	200	2,5	DCA8/5609LKS DCA8/5609KS	DCA8/5619LKS DCA8/5619KS	DCA8/5629LKS DCA8/5629KS

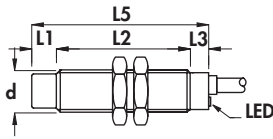
NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie. DCA6,5/4608LKS)

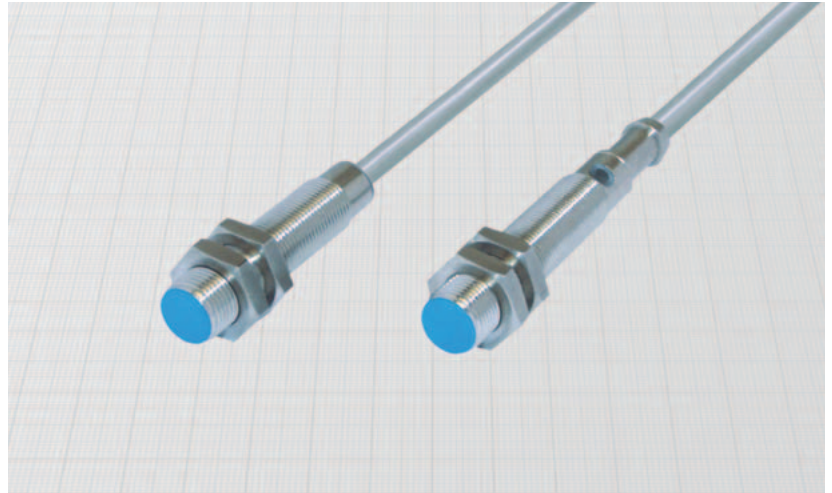
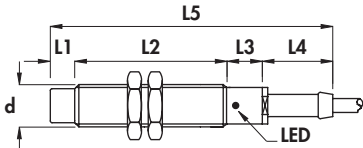


Diameters 12 mm •
Amplified in d.c. 3 and 4 wires •
Cable output •

Housing B-3



Housing D



Diameter		M12 x 1	M14 x 1	M16 x 1
Nut	Size	SW17	SW17	SW22
	Thickness mm	4	4	4
Max tightening torque Nm		15	20	25

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: nickel plated brass
- Sensing face: plastic

Technical data:

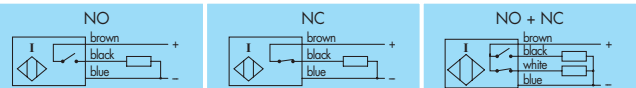
- Supply voltage (U_B): 5 ÷ 40 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 1,5 V
- Temperature range: -25° ÷ +75°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,35 mm² on 3 wires
0,25 mm² on 4 wires

- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES		
												mm	mm	mm
B-3	•	-	43	7	-	50	4	M12 x 1	2	200	2	DCA12/4609KS	DCA12/4619KS	DCA12/4629KS
D	•	-	50	10	20	80	4	M12 x 1	2	200	2	DCA12/4709KS	DCA12/4719KS	DCA12/4729KS
B-3	•	7	36	7	-	50	4	M12 x 1	1,5	200	4	DCA12/5609KS	DCA12/5619KS	DCA12/5629KS
D	•	7	43	10	20	80	4	M12 x 1	1,5	200	4	DCA12/5709KS	DCA12/5719KS	DCA12/5729KS

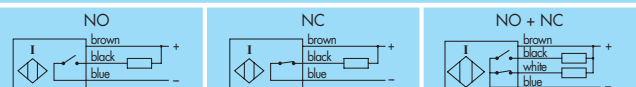
ORDERING REFERENCES

PNP (positive switching)



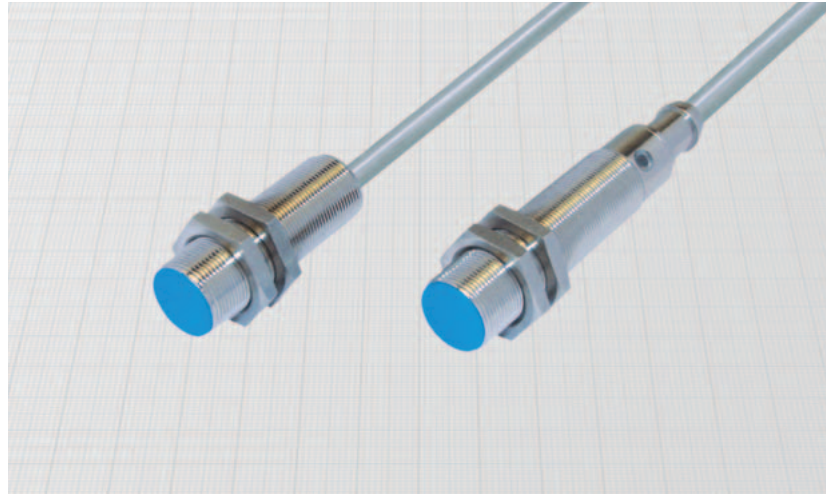
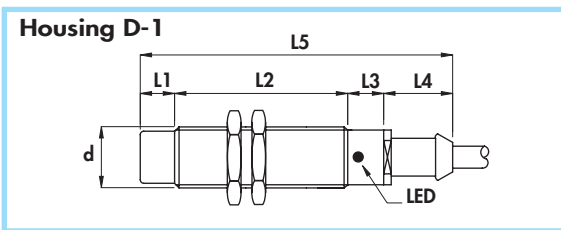
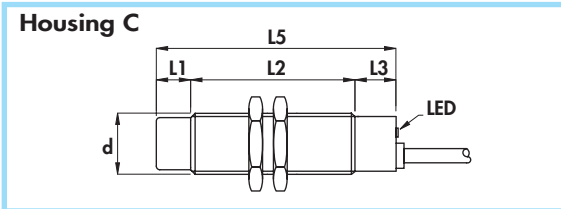
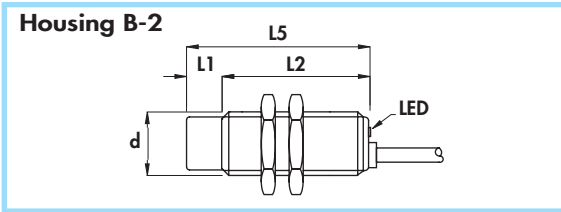
NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie DCA12/4608KS)



CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Diameters 18 mm
- Amplified in d.c. 3 and 4 wires
- Cable output



Diameter	M18 x 1	
Nut	Size	SW24
	Thickness mm	4
Max tightening torque Nm	35	

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: nickel plated brass
- Sensing face: plastic

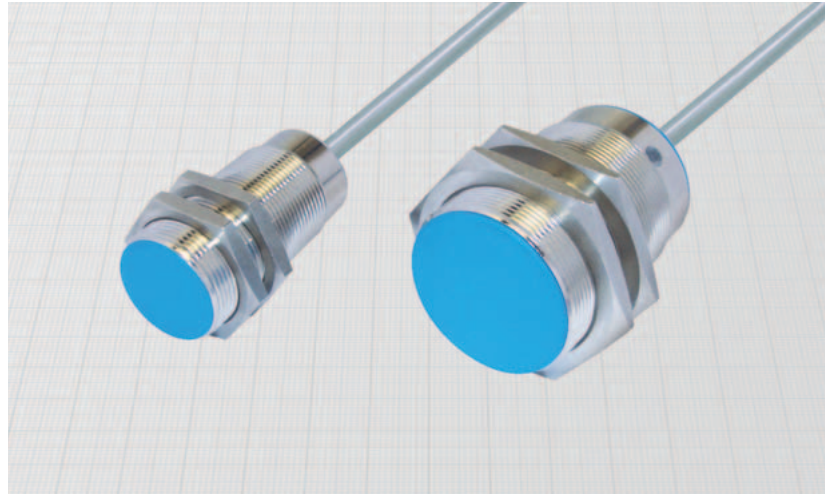
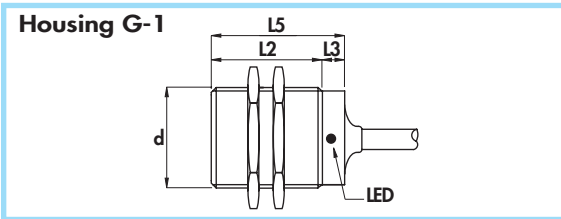
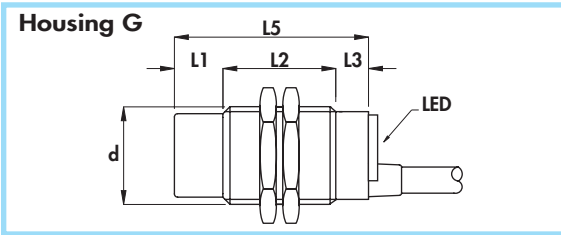
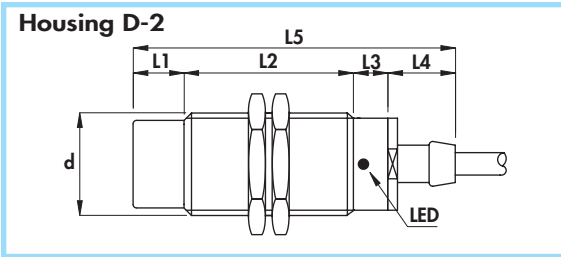
Technical data:

- Supply voltage (U_B): 5 ÷ 60 V
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 2,2 V
- Temperature range: - 25° ÷ + 75°C
- Max thermal drift of sensing distance S_s : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,50 mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	No-load supply current (I ₀)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES		
												PNP (positive switching)		
												NO	NC	NO + NC
												NO	NC	NO + NC
B-2	•	-	50	-	-	50	5	M18 x 1	1	400	5	DCA18/4A09KS	DCA18/4A19KS	DCA18/4A29KS
B-2	•	10	40	-	-	50	5	M18 x 1	1	400	8	DCA18/5A09KS	DCA18/5A19KS	DCA18/5A29KS
C	•	-	58	12	-	70	5	M18 x 1	1	400	5	DCA18/4609KS	DCA18/4619KS	DCA18/4629KS
D-1	•	-	60	12	20	92	6	M18 x 1	1	400	5	DCA18/4709KS	DCA18/4719KS	DCA18/4729KS
C	•	10	48	12	-	70	5	M18 x 1	1	400	8	DCA18/5609KS	DCA18/5619KS	DCA18/5629KS
D-1	•	10	50	12	20	92	6	M18 x 1	1	400	8	DCA18/5709KS	DCA18/5719KS	DCA18/5729KS
												NPN (negative switching)		
												Use the above mentioned part number changing the last number 9 with 8 (ie DCA18/4A08KS)		
												NO	NC	NO + NC

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Diameters 30 - 45 mm •
- Amplified in d.c. 3 and 4 wires •
- Cable output •



Diameter	M30 x 1,5	M45 x 1,5
Nut	Size	SW36
	Thickness mm	5
Max tightening torque Nm	80	70

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: nickel plated brass
- Sensing face: plastic

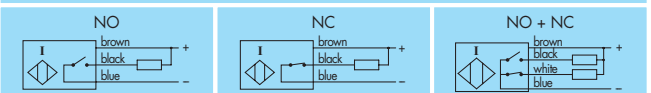
Technical data:

- Supply voltage (U_B): 7 ÷ 60 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 2,2 V
- Temperature range: -25° ÷ +75°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,50 mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	No-load supply current (I ₀)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES		
												mm	mm	mm
D-2	•	-	50	10	-	60	6	M30 x 1,5	0,8	400	10			
	•	-	65	10	20	95	6	M30 x 1,5	0,8	400	10			
D-2	•	15	35	10	-	60	6	M30 x 1,5	0,4	400	15			
	•	15	50	10	20	95	6	M30 x 1,5	0,4	400	15			
G-1	•	-	50	10	-	60	6	M45 x 1,5	0,15	400	20			

NPN (negative switching)

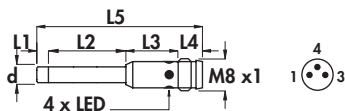
Use the above mentioned part number changing the last number 9 with 8 (ie DCA30/4608KS)



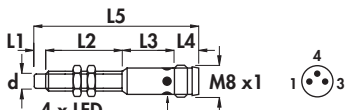
CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Diameters 4 - 5 - 6,5 - 8 mm
- Amplified in c.c.
- Connector output M8 x 1

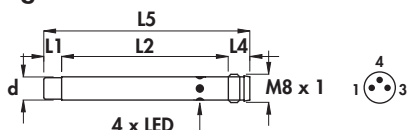
Housing I-3



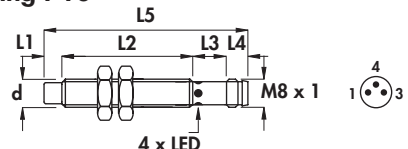
Housing I-4



Housing I-5



Housing I-10



Diameter	M5x0,5	M8 x 1
Nut	Size	SW7
	Thickness mm	2,5
Max tightening torque Nm	2	10

Materials:

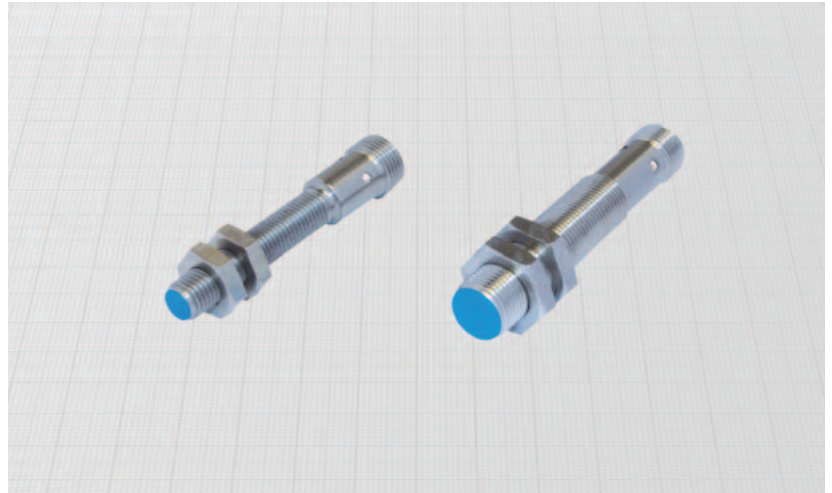
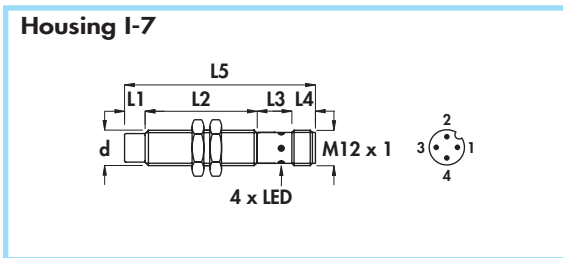
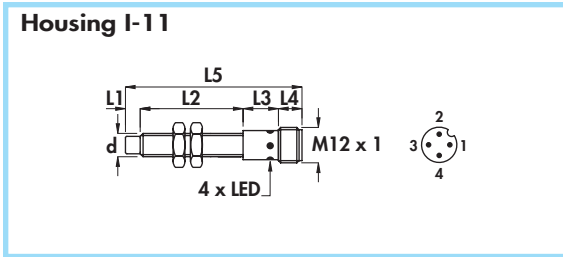
- Housing: stainless steel
- Sensing face: plastic

Technical data:

- Supply voltage (U_B): 7 ÷ 30 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 1,5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_s : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _o)	Nominal sensing distance (S _s) ± 10%	ORDERING REFERENCES	
												PNP (positive switching)	
		mm	mm	mm	mm	mm	n°	mm	KHz	mA	mm		
I-3	•	-	22	12	5,5	39,5	11-12	4	5	200	1	DCA4/4909LKS	DCA4/4919LKS
I-3	•	3	19	12	5,5	39,5	11-12	4	5	200	1,4	DCA4/5909LKS	DCA4/5919LKS
I-4	•	-	22	12	5,5	39,5	11-12	M5 x 0,5	5	200	1	DCA5/4909KS	DCA5/4919KS
I-4	•	3	19	12	5,5	39,5	11-12	M5 x 0,5	5	200	1,4	DCA5/5909KS	DCA5/5919KS
I-5	•	-	48,5	-	5,5	54	11-12	6,5	4	200	1,5	DCA6,5/4909LKS	DCA6,5/4919LKS
I-5	•	5	43,5	-	5,5	54	11-12	6,5	3	200	2,5	DCA6,5/5909LKS	DCA6,5/5919LKS
I-10	•	-	40	8,5	5,5	54	11-12	M8 x 1	4	200	1,5	DCA8/4909KS	DCA8/4919KS
I-10	•	5	35	8,5	5,5	54	11-12	M8 x 1	3	200	2,5	DCA8/5909KS	DCA8/5919KS
												NPN (negative switching)	
Use the above mentioned part number changing the last number 9 with 8 (ie. DCA4/4908LKS)													

Diameters 8 - 12 mm •
Amplified in d.c. •
Connector output M12 x 1 •



Diameter		M8 x 1	M12 x 1
Nut	Size	SW13	SW17
	Thickness mm	4	4
Max tightening torque Nm		10	15

Materials:

- Housing diametro 8 mm: stainless steel
- Housing diametro 12 mm: nickel plated brass
- Sensing face: plastic

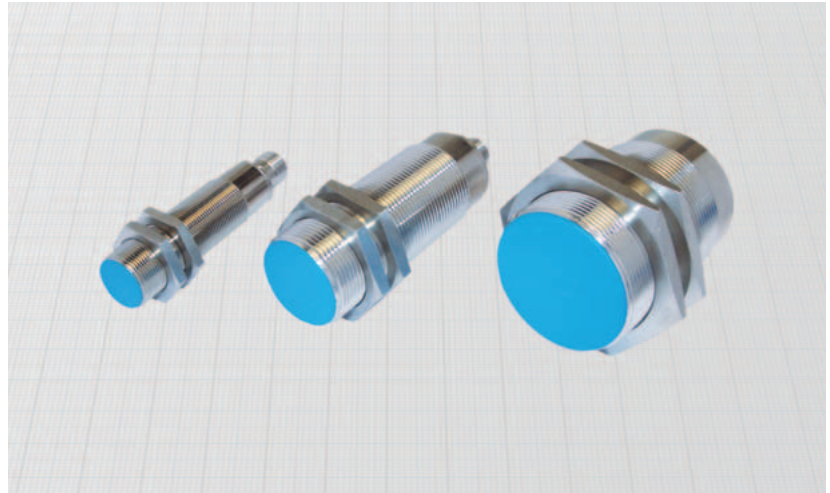
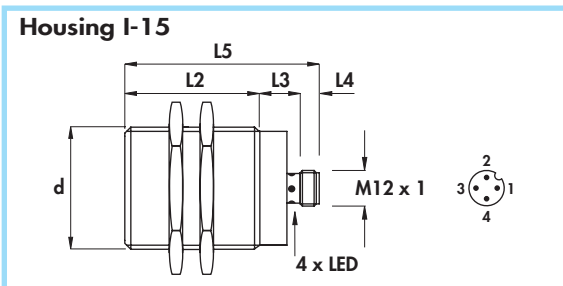
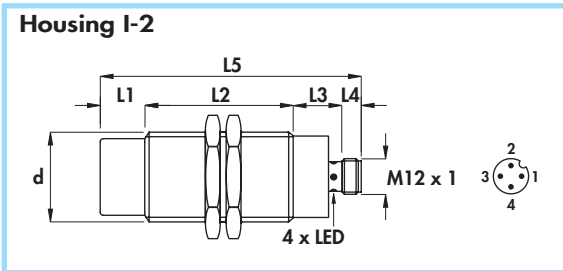
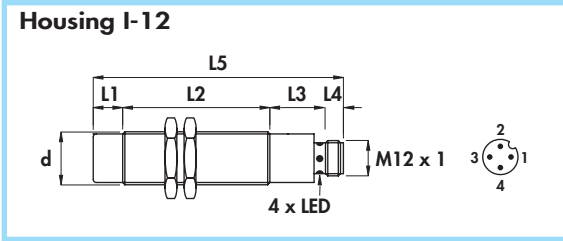
Technical data:

- Supply voltage (U_B): diameter 8 mm 7 ÷ 30 Vdc
diameter 12 mm 5 ÷ 40 Vdc
- Max ripple: 10%
- No-load supply current (I_o): ≤ 10 mA
- Voltage drop (U_j): ≤ 1,5 V
- Temperature range: -25° ÷ +75°C
- Max thermal drift of sensing distance S_s : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES		
												PNP (positive switching)		
I-11	• Flush mounting	-	40	12	8	60	6-8B-10	M8 x 1	4	200	1,5			
I-11	• Non flush mounting	5	35	12	8	60	6-8B-10	M8 x 1	3	200	2,5	DCA8/4309KS	DCA8/43C9KS	DCA8/4329KS
I-11												DCA8/5309KS	DCA8/53C9KS	DCA8/5329KS
I-7	• Flush mounting	-	43	15	8	66	6-8B-10	M12 x 1	2	200	2			
I-7	• Non flush mounting	7	36	15	8	66	6-8B-10	M12 x 1	1,5	200	4	DCA12/4309KS	DCA12/43C9KS	DCA12/4329KS
I-7												DCA12/5309KS	DCA12/53C9KS	DCA12/5329KS
												NPN (negative switching)		
Use the above mentioned part number changing the last number 9 with 8 (ie DCA8/4308KS)														

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Diameters 18 - 30 - 45 mm
- Amplified in d.c.
- Connector output M12 x 1



Diameter	M18 x 1	M30 x 1,5	M45 x 1,5
Nut	Size	SW24	SW36
	Thickness mm	4	5
Max tightening torque Nm	35	80	70

Materials:

- Housing: nickel plated brass
- Sensing face: plastic

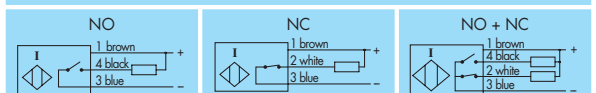
Technical data:

- Supply voltage (U_B):
 - diameter 18 mm $5 \div 60$ Vdc
 - diameters 30 and 45 mm $7 \div 60$ Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 2,2$ V
- Temperature range: $-25^\circ \div +75^\circ\text{C}$
- Max thermal drift of sensing distance S_T : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ±10%	ORDERING REFERENCES					
		mm	mm	mm	mm	mm						PNP (positive switching)					
I-12	•	-	50	19	8	77	6-8B-10	M18 x 1	1	400	5				DCA18/4309KS	DCA18/43C9KS	DCA18/4329KS
I-12	•	10	50	19	8	87	6-8B-10	M18 x 1	1	400	8				DCA18/5309KS	DCA18/53C9KS	DCA18/5329KS
I-2	•	-	65	17	8	90	6-8B-10	M30 x 1,5	0,8	400	10				DCA30/4309KS	DCA30/43C9KS	DCA30/4329KS
I-2	•	15	50	17	8	90	6-8B-10	M30 x 1,5	0,4	400	15				DCA30/5309KS	DCA30/53C9KS	DCA30/5329KS
I-15	•	-	50	19	8	77	6-8B-10	M45 x 1,5	0,15	400	20				DCA45/4309KS	DCA45/43C9KS	DCA45/4329KS

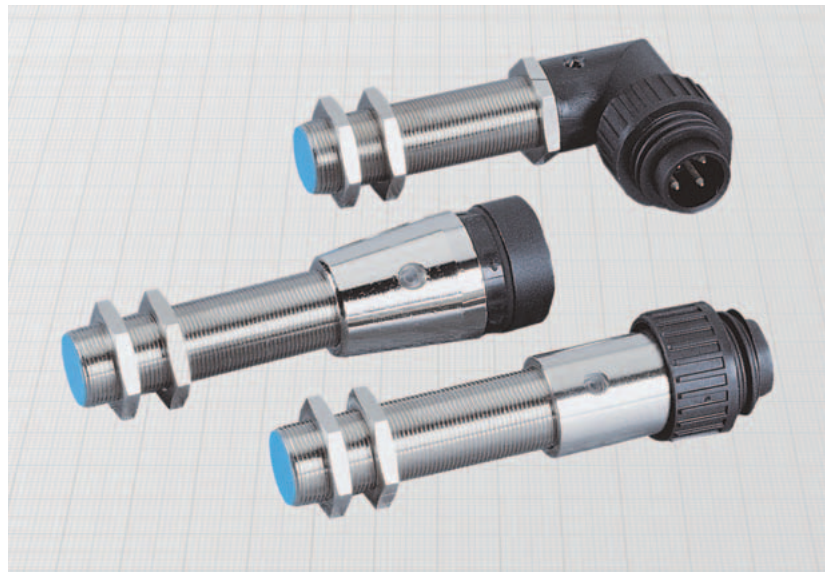
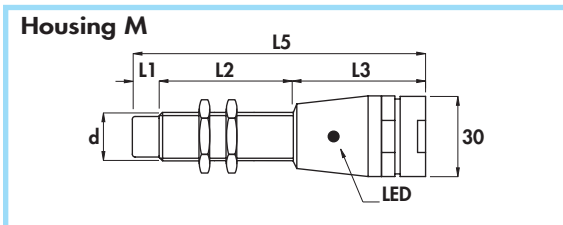
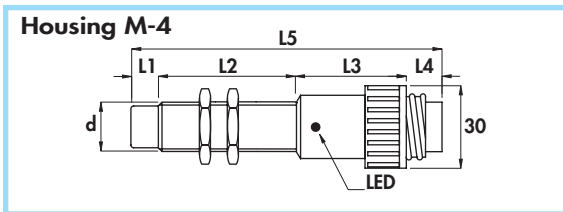
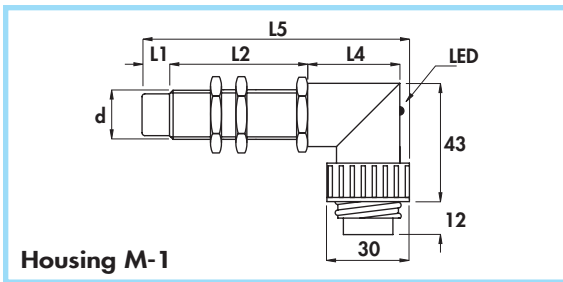
NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie DCA18/4308KS)



CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Diameter 18 mm •
- Amplified in d.c. •
- Connector output C1 - C2 •



Diameter	M18 x 1	
Nut	Size	SW24
	Thickness mm	4
Max tightening torque Nm	35	

Materials:

- Housing: nickel plated brass
- Sensing face and socket connector: plastic

Technical data:

- Supply voltage (U_B): $5 \div 60$ Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 2,2$ V
- Temperature range: $-25^\circ \div +75^\circ$ C
- Max thermal drift of sensing distance S_T : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP65
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _T) ±10%	ORDERING REFERENCES	
												PNP (positive switching)	
M-1	Flush mounting	-	60	-	33	96	1	M18 x 1	1	400	5		
M-4	Non flush mounting	-	60	40	13	113	1	M18 x 1	1	400	5		
M-1	Flush mounting	10	50	-	33	96	1	M18 x 1	1	400	8		
M-4	Non flush mounting	10	50	40	13	113	1	M18 x 1	1	400	8		

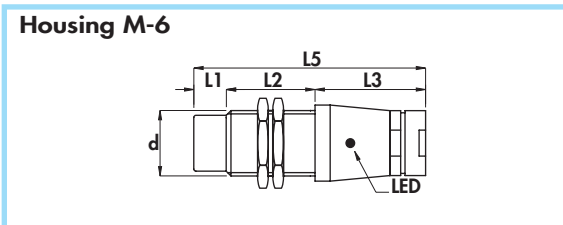
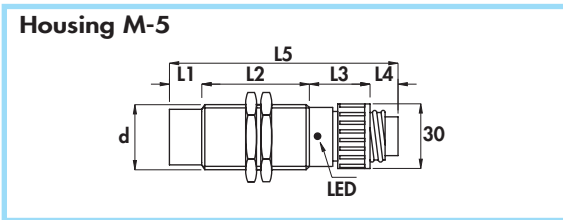
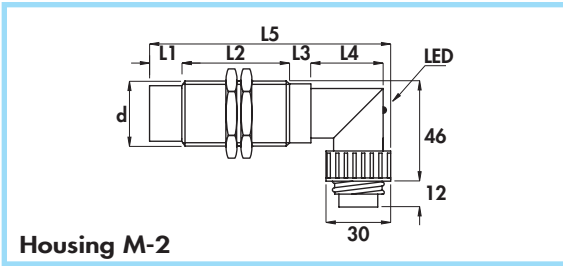
NPN (negative switching)												ORDERING REFERENCES			
Use the above mentioned part number changing the last number 9 with 8 (ie DCA18/4208KS)															
M	Flush mounting	-	60	50	-	110	2	M18 x 1	1	400	5				
M	Non flush mounting	10	50	50	-	110	2	M18 x 1	1	400	8				

PNP (positive switching)												ORDERING REFERENCES								
Use the above mentioned part number changing the last number 9 with 8 (ie DCA18/4E08KS)																				
M	Flush mounting	-	60	50	-	110	2	M18 x 1	1	400	5									
M	Non flush mounting	10	50	50	-	110	2	M18 x 1	1	400	8									

NPN (negative switching)												ORDERING REFERENCES								
Use the above mentioned part number changing the last number 9 with 8 (ie DCA18/4E08KS)																				
M	Flush mounting	-	60	50	-	110	2	M18 x 1	1	400	5									
M	Non flush mounting	10	50	50	-	110	2	M18 x 1	1	400	8									

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

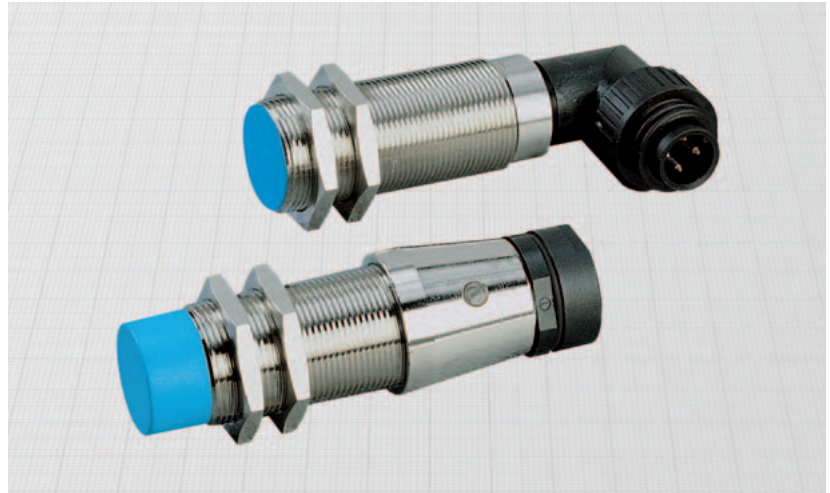
- Diameter 30 mm
- Amplified in d.c.
- Connector output C1 - C2



Diameter	M30 x 1,5	
Nut	Size	SW36
	Thickness mm	5
Max tightening torque Nm	80	

Materials:

- Housing: nickel plated brass
- Sensing face and socket connector: plastic

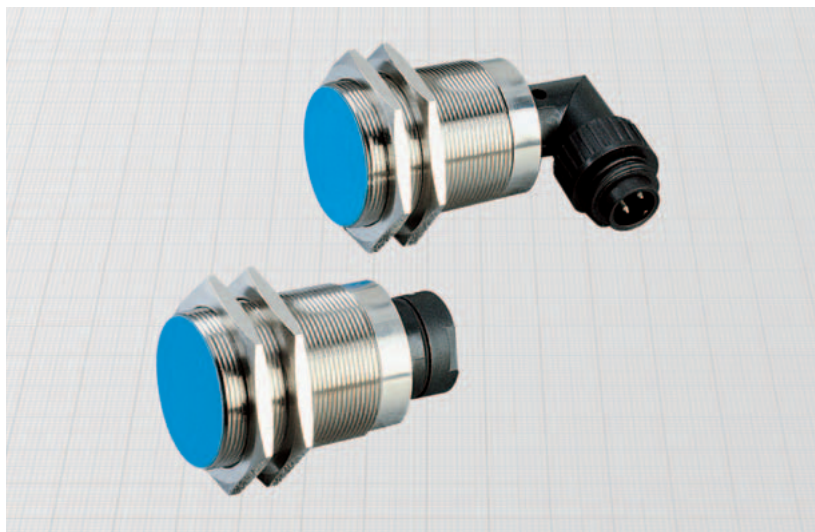
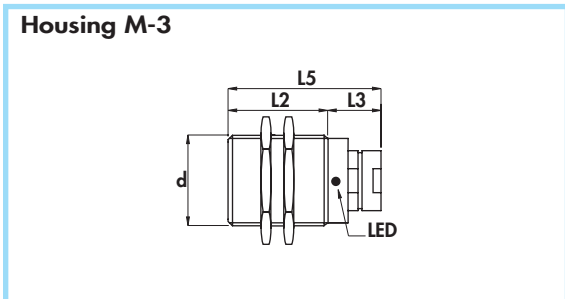
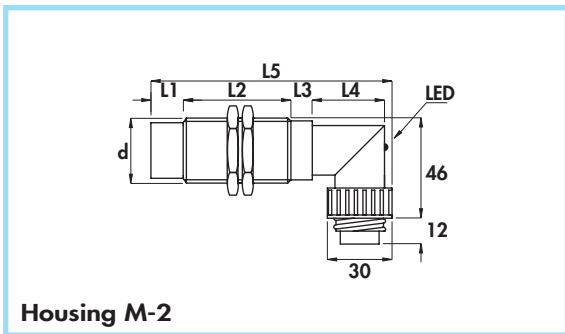


Technical data:

- Supply voltage (U_b): 7 ÷ 60 Vdc
- Max ripple: 10%
- No-load supply current (I_o): ≤ 10 mA
- Voltage drop (U_d): ≤ 2,2 V
- Temperature range: -25° ÷ +75°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP65
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	No-load supply current (I _o)	Nominal sensing distance (S _T) ±10%	ORDERING REFERENCES		
		mm	mm	mm	mm	mm						n°	mm	KHz
M-2	•	-	65	10	40	115	1	M30 x 1,5	0,8	400	10			
M-5	•	-	65	28	13	106	1	M30 x 1,5	0,8	400	10	DCA30/4209KS	DCA30/4219KS	
M-2	•	15	50	10	40	115	1	M30 x 1,5	0,4	400	15	DCA30/4409KS	DCA30/4419KS	
M-5	•	15	50	28	13	106	1	M30 x 1,5	0,4	400	15	DCA30/5209KS	DCA30/5219KS	
												NPN (negative switching)		
												Use the above mentioned part number changing the last number 9 with 8 (ie DCA30/4208KS)		
M-6	•	-	56	51	-	107	2	M30 x 1,5	0,8	400	10	DCA30/4E09KS	DCA30/4E19KS	DCA30/4E29KS
M-6	•	15	41	51	-	107	2	M30 x 1,5	0,4	400	15	DCA30/5E09KS	DCA30/5E19KS	DCA30/5E29KS
												NPN (negative switching)		
												Use the above mentioned part number changing the last number 9 with 8 (ie. DCA30/4E08KS)		

Diameter 45 mm •
 Amplified in d.c. •
 Connector output C1 - C2 •



Diameter	M45 x 1,5	
Nut	Size	SW55
	Thickness mm	5
Max tightening torque Nm	70	

Materials:

- Housing: nickel plated brass
- Sensing face and socket connector: plastic

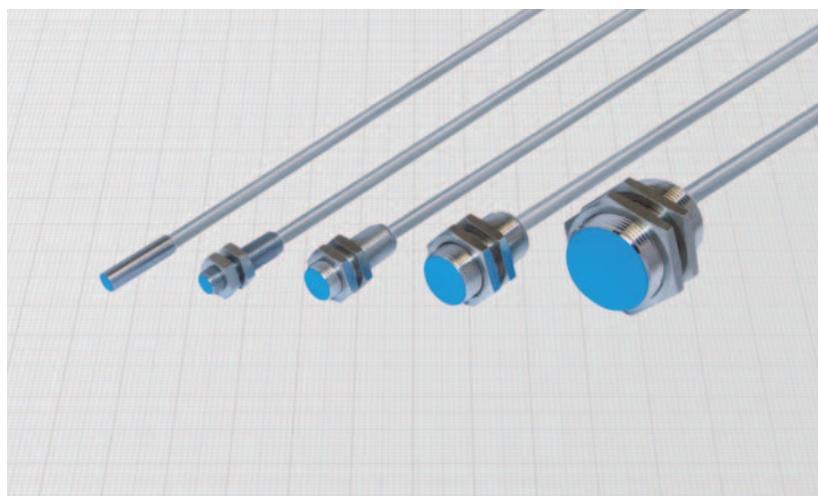
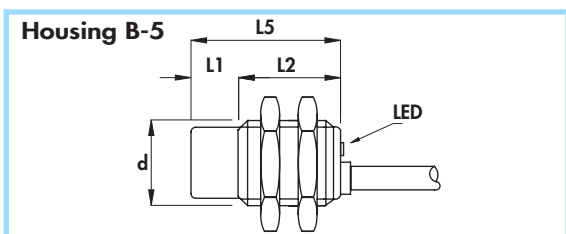
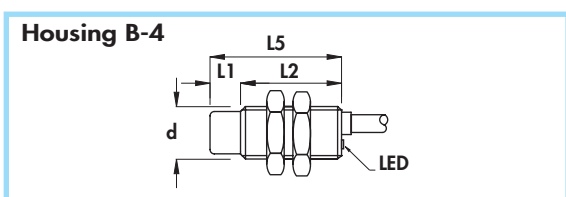
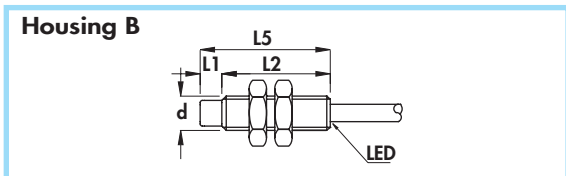
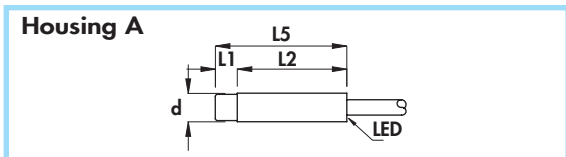
Technical data:

- Supply voltage (U_B): $7 \div 60$ Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 2,2$ V
- Temperature range: $-25^\circ \div +75^\circ$ C
- Max thermal drift of sensing distance S_T : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP65
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _T) ± 10%	ORDERING REFERENCES		
												PNP (positive switching)		
M-2	•	-	50	10	42	102	1	M45 x 1,5	0,15	400	20			
												DCA45/4209KS	DCA45/4219KS	
												NPN (negative switching) Use the above mentioned part number changing the last number 9 with 8 (ie DCA45/4208KS)		
												PNP (positive switching)		
M-3	•	-	50	28	-	78	2	M45 x 1,5	0,15	400	20	DCA45/4E09KS	DCA45/4E19KS	DCA45/4E29KS
												NPN (negative switching) Use the above mentioned part number changing the last number 9 with 8 (ie DCA45/4E08KS)		

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- **SHORT SERIES**
- **Amplified in d.c. 3 wires**
- **Cable output**



Diameter		M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW13	SW17	SW24	SW36
	Thickness mm	4	4	4	5
Max tightening torque Nm		10	15	35	80

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing 6,5 and 8 mm: stainless steel
- Housing 12 ÷ 30 mm: nickel plated brass
- Sensing face: plastic

Technical data:

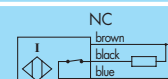
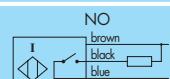
- Supply voltage (U_B): see ordering references
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-25^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_s : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,22 mm² on 6,5 and 8 mm
0,35 mm² on 12 mm
0,50 mm² on 18 and 30 mm

- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Supply voltage (U_B)	Max switching frequency (f)	No-load supply current (I_0)	Nominal sensing distance ($S_n \pm 10\%$)	ORDERING REFERENCES	
													PNP (positive switching)	
		mm	mm	mm	mm	mm	mm	mm	V (min - max)	KHz	mA	mm		
A	•	-	30	-	-	30	3,5	6,5	7 ÷ 30	4	200	1,5	DSA6,5/4609LKS	DSA6,5/4619LKS
A	•	5	25	-	-	30	3,5	6,5	7 ÷ 30	3	200	2,5	DSA6,5/5609LKS	DSA6,5/5619LKS
B	•	-	30	-	-	30	3,5	M8 x 1	7 ÷ 30	4	200	1,5	DSA8/4609KS	DSA8/4619KS
B	•	5	25	-	-	30	3,5	M8 x 1	7 ÷ 30	3	200	2,5	DSA8/5609KS	DSA8/5619KS
B-4	•	-	30	-	-	30	4	M12 x 1	7 ÷ 40	2	200	2	DSA12/4609KS	DSA12/4619KS
B-4	•	7	23	-	-	30	4	M12 x 1	7 ÷ 40	1,5	200	4	DSA12/5609KS	DSA12/5619KS
B-5	•	-	30	-	-	30	5	M18 x 1	5 ÷ 40	0,8	200	5	DSA18/4609KS	DSA18/4619KS
B-5	•	10	20	-	-	30	5	M18 x 1	5 ÷ 40	0,6	200	8	DSA18/5609KS	DSA18/5619KS
B-5	•	-	35	-	-	35	6	M30 x 1,5	7 ÷ 40	0,8	200	10	DSA30/4609KS	DSA30/4619KS
B-5	•	15	20	-	-	35	6	M30 x 1,5	7 ÷ 40	0,4	200	15	DSA30/5609KS	DSA30/5619KS

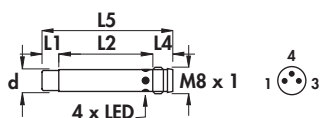
NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie. DSA6,5/4608LKS)

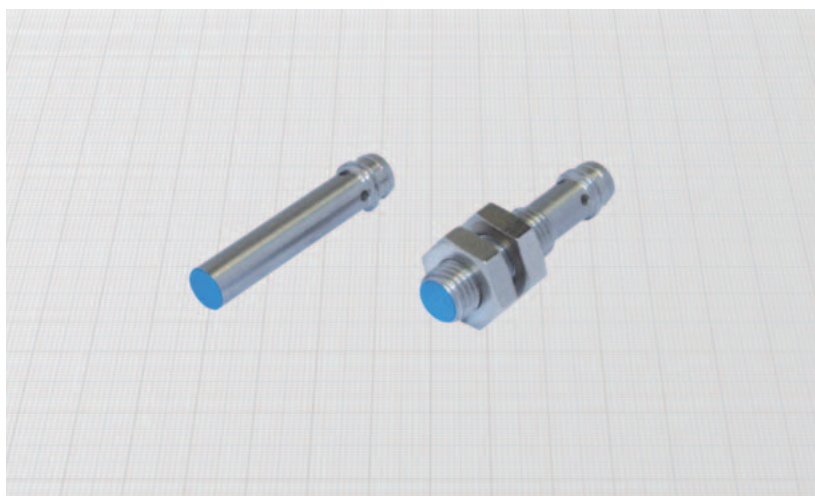
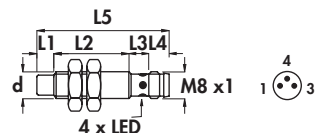


**SHORT SERIES - diameters 6,5 - 8 mm •
Amplified in d.c. •
Connector output M8 x 1 •**

Housing I-8



Housing I-6



Diameter	M8 x 1	
Nut	Size	SW13
	Thickness mm	4
Max tightening torque Nm	10	

Materials:

- Housing: stainless steel
- Sensing face: plastic

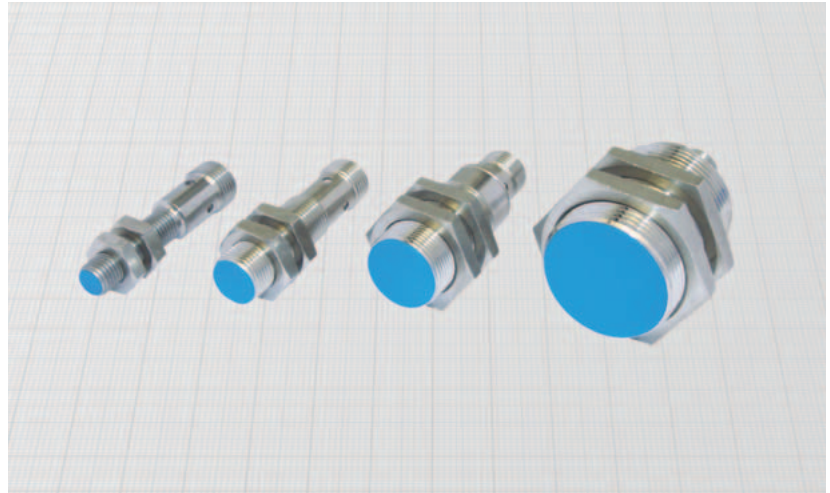
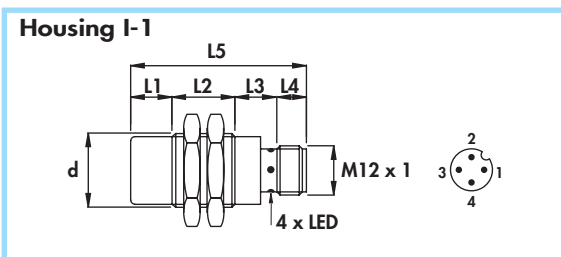
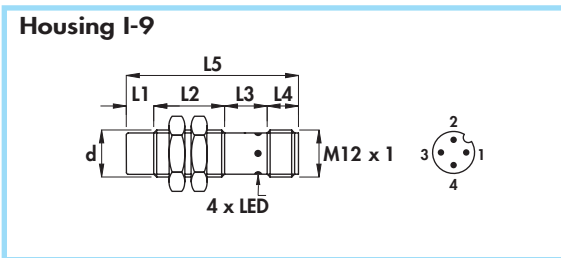
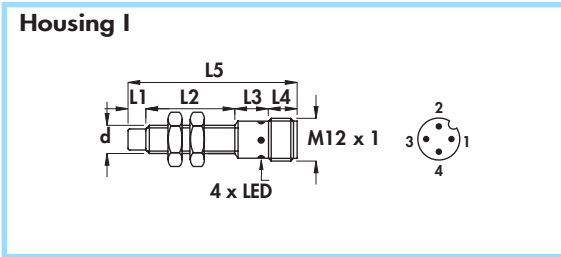
Technical data:

- Supply voltage (U_B): $7 \div 30$ Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-25^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_r : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES	
												PNP (positive switching)	
												NO	NC
I-8	•	-	29,5	-	5,5	35	11 - 12	6,5	4	200	1,5		
I-8	•	5	24,5	-	5,5	35	11 - 12	6,5	3	200	2,5	DSA6,5/4909LKS DSA6,5/5909LKS	DSA6,5/4919LKS DSA6,5/5919LKS
I-6	•	-	21	8,5	5,5	35	11 - 12	M8 x 1	4	200	1,5		
I-6	•	5	16	8,5	5,5	35	11 - 12	M8 x 1	3	200	2,5	DSA8/4909KS DSA8/5909KS	DSA8/4919KS DSA8/5919KS
												NPN (negative switching)	
												Use the above mentioned part number changing the last number 9 with 8 (ie. DCA45/4E08KS)	

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- **SHORT SERIES** - diameters 8 - 12 - 18 - 30 mm
- **Amplified in d.c.**
- Connector output M12 x 1



Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5	
Nut	Size	SW13	SW17	SW24	SW36
	Thickness mm	4	4	4	5
Max tightening torque Nm	10	15	35	80	

Materials:

- Housing 8 mm: stainless steel
- Housing 12 ÷ 30 mm: nickel plated brass
- Sensing face: plastic

Technical data:

- Supply voltage (U_b): see ordering references
- Max ripple: 10%
- No-load supply current (I_o): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-25^\circ \div +70^\circ$ C
- Max thermal drift of sensing distance S_T : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

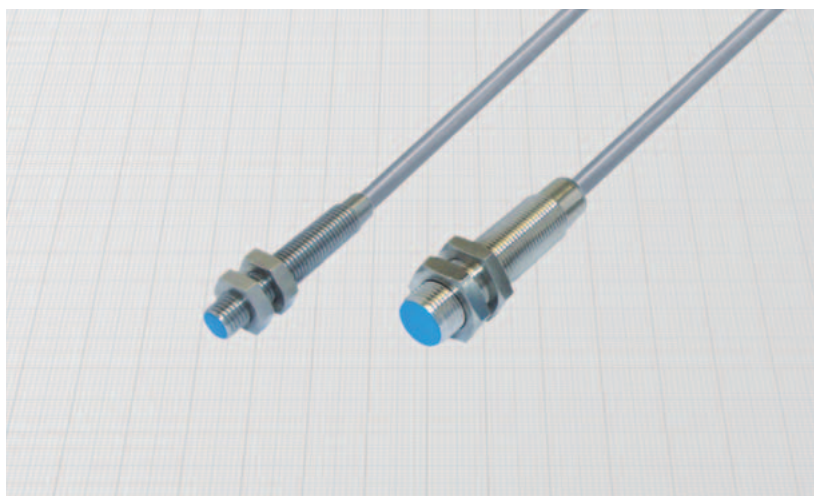
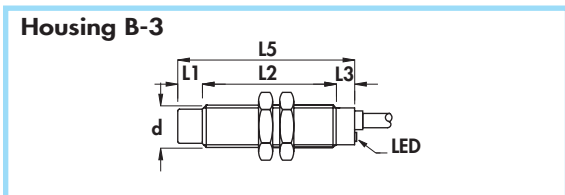
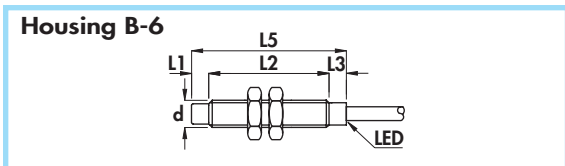
Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Supply voltage (U_b)	Max switching frequency (f)	Rated operational current (I_o)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES	
													PNP (positive switching)	
I	•	-	26	13	8	47	6-8B-10	M8 x 1	7 ÷ 30	4	200	1,5		
	•	5	21	13	8	47	6-8B-10	M8 x 1	7 ÷ 30	3	200	2,5		
I-9	•	-	30	10	8	48	6-8B-10	M12 x 1	7 ÷ 40	2	200	2		
	•	7	23	10	8	48	6-8B-10	M12 x 1	7 ÷ 40	1	200	4		
I-1	•	-	25	16	8	49	6-8B-10	M18 x 1	5 ÷ 40	0,8	200	5		
	•	10	15	16	8	49	6-8B-10	M18 x 1	5 ÷ 40	0,6	200	8		
I-1	•	-	25	17	8	50	6-8B-10	M30 x 1,5	7 ÷ 40	0,8	200	10		
	•	15	25	17	8	65	6-8B-10	M30 x 1,5	7 ÷ 40	0,4	200	15		

NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie. DSA8/4308KS)



Extended sensing distance - diameters 8 - 12 mm •
Amplified in d.c. 3 wires •
Cable output •



Diameter	M8 x 1	M12 x 1
Nut	Size	SW13
	Thkns mm	4
Max tightening torque Nm	10	15

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing 8 mm: stainless steel
- Housing 12 mm: nickel plated brass
- Sensing face: plastic

Technical data:

- Supply voltage (U_B): see ordering references
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-20^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_T : $\pm 10\%$
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,22 mm² on 8 mm
0,35 mm² on 12 mm
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting (*) Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Supply voltage (U_B)	Max switching frequency (f)	Rated operational current (I_e)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES	
													PNP (positive switching)	
		mm	mm	mm	mm	mm	mm	mm	V (min - max)	Hz	mA	mm		
B-6	•	-	40	5	-	45	3,5	M8 x 1	7÷30	800	200	2	DCAE8/4609KS	DCAE8/4619KS
B-6	•	-	40	5	-	45	3,5	M8 x 1	7÷30	800	200	2,5	DCE8/4609KS	DCE8/4619KS
B-6	•	5	35	5	-	45	3,5	M8 x 1	7÷30	400	200	3	DCAE8/5609KS	DCAE8/5619KS
B-6	•	5	35	5	-	45	3,5	M8 x 1	7÷30	400	200	3,5	DCE8/5609KS	DCE8/5619KS
B-3	•	-	43	7	-	50	4	M12 x 1	7÷40	800	200	3	DCAE12/4609KS	DCAE12/4619KS
B-3	•	-	43	7	-	50	4	M12 x 1	7÷40	800	200	4	DCE12/4609KS	DCE12/4619KS
B-3	•	7	36	7	-	50	4	M12 x 1	7÷40	600	200	5	DCAE12/5609KS	DCAE12/5619KS
B-3	•	7	36	7	-	50	4	M12 x 1	7÷40	600	200	6	DCE12/5609KS	DCE12/5619KS

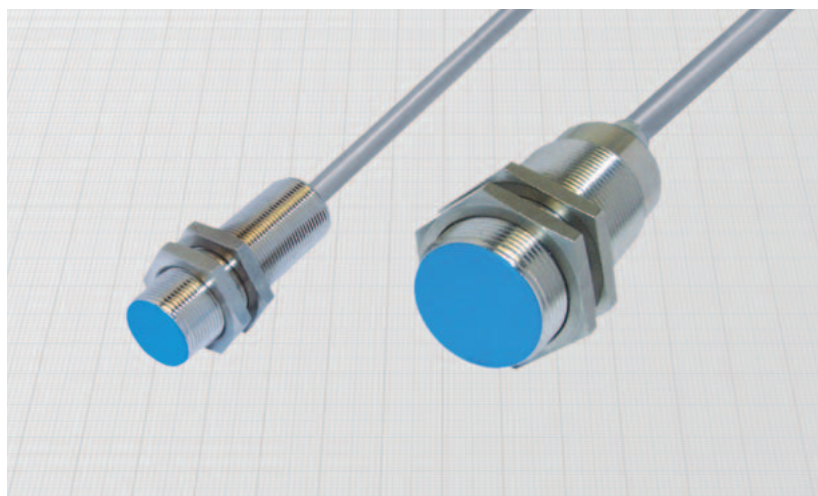
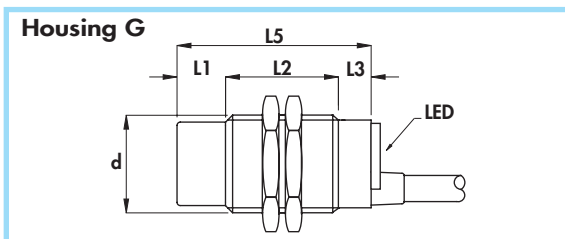
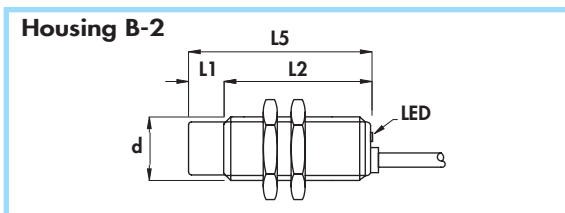
(*) Note: See mounting precautions (pag. 22)

NPN (negative switching)
 Use the above mentioned part number changing the last number 9 with 8 (ie. DCE8/4608KS)

		NO	NC

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Extended sensing distance - diameters 18 - 30 mm
- Amplified in d.c. 3 wires
- Cable output



Diameter		M18 x 1	M30 x 1,5
Nut	Size	SW24	SW36
	Thkns mm	4	5
Max tightening torque Nm		35	80

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: nickel plated brass
- Sensing face: plastic

Technical data:

- Supply voltage (U_B): see ordering references
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-20^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_s : $\pm 10\%$
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,50 mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

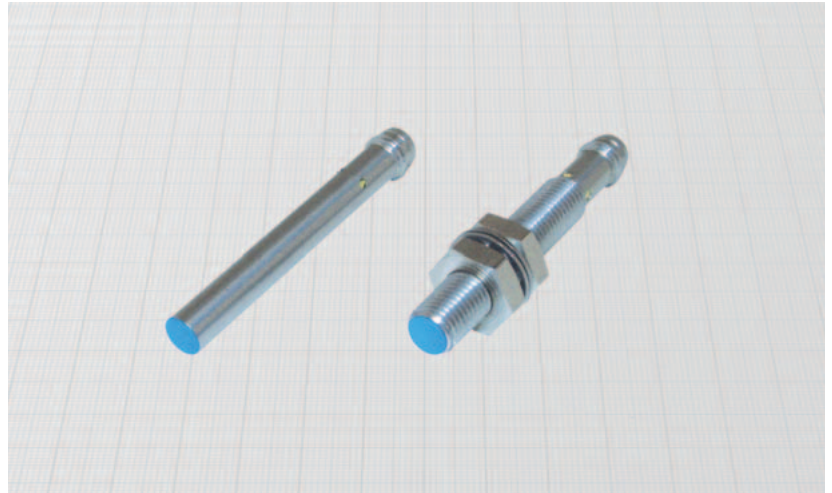
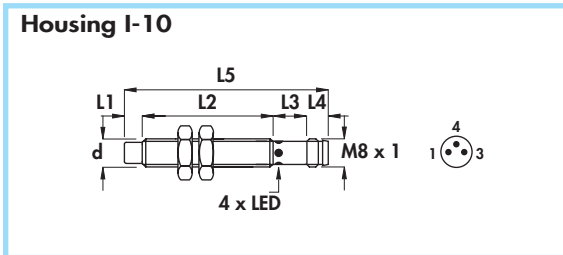
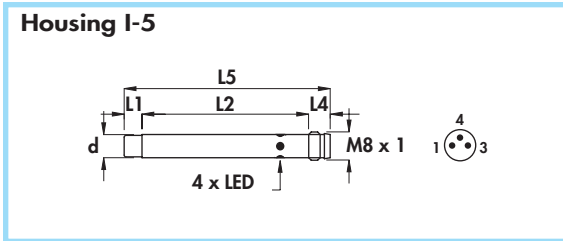
Housing	Flush mounting (*) Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Supply voltage (U_B)	Max switching frequency (f)	Rated operational current (I_e)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES	
													PNP (positive switching)	
		mm	mm	mm	mm	mm	mm	V (min - max)	Hz	mA	mm			
B - 2	•	-	50	-	-	50	5	M18 x 1	7÷40	300	200	8	DCAE18/4A09KS	DCAE18/4A19KS
B - 2	•	-	50	-	-	50	5	M18 x 1	7÷40	300	200	10	DCE18/4A09KS	DCE18/4A19KS
B - 2	•	10	40	-	-	50	5	M18 x 1	7÷40	200	200	12	DCAE18/5A09KS	DCAE18/5A19KS
B - 2	•	10	40	-	-	50	5	M18 x 1	7÷40	200	200	14	DCE18/5A09KS	DCE18/5A19KS
G	•	-	50	10	-	60	6	M30 x 1,5	7÷40	100	200	15	DCAE30/4609KS	DCAE30/4619KS
G	•	-	50	10	-	60	6	M30 x 1,5	7÷40	100	200	20	DCE30/4609KS	DCE30/4619KS
G	•	15	35	10	-	60	6	M30 x 1,5	7÷40	100	200	20	DCAE30/5609KS	DCAE30/5619KS
G	•	15	35	10	-	60	6	M30 x 1,5	7÷40	100	200	28	DCE30/5609KS	DCE30/5619KS

(*) Note: See mounting precautions (pag. 22)

NPN (negative switching)
Use the above mentioned part number changing the last number 9 with 8 (ie. DCE8/4608KS)



- Extended sensing distance •
- Amplified in d.c. •
- Connector output M8 x 1 •



Diameter	M8 x 1	
Nut	Size	SW13
	Thickness mm	4
Max tightening torque Nm	10	

Materials:

- Housing: stainless steel
- Sensing face: plastic

Technical data:

- Supply voltage (U_B): 7 ÷ 30 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 1,5 V
- Temperature range: -20° ÷ +70°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting (*) Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ±10%	ORDERING REFERENCES	
												PNP (positive switching)	
I-5	•	-	48,5	-	5,5	54	11-12	6,5	800	200	2		
I-5	•	-	48,5	-	5,5	54	11-12	6,5	800	200	2,5	DCAE6,5/4909LKS	DCAE6,5/4919LKS
I-5	•	5	43,5	-	5,5	54	11-12	6,5	400	200	3	DCE6,5/4909LKS	DCE6,5/4919LKS
I-5	•	5	43,5	-	5,5	54	11-12	6,5	400	200	3,5	DCAE6,5/5909LKS	DCAE6,5/5919LKS
I-5	•	5	43,5	-	5,5	54	11-12	6,5	400	200	3,5	DCE6,5/5909LKS	DCE6,5/5919LKS
I-10	•	-	40	8,5	5,5	54	11-12	M8 x 1	800	200	2	DCAE8/4909KS	DCAE8/4919KS
I-10	•	-	40	8,5	5,5	54	11-12	M8 x 1	800	200	2,5	DCE8/4909KS	DCE8/4919KS
I-10	•	5	35	8,5	5,5	54	11-12	M8 x 1	400	200	3	DCAE8/5909KS	DCAE8/5919KS
I-10	•	5	35	8,5	5,5	54	11-12	M8 x 1	400	200	3,5	DCE8/5909KS	DCE8/5919KS

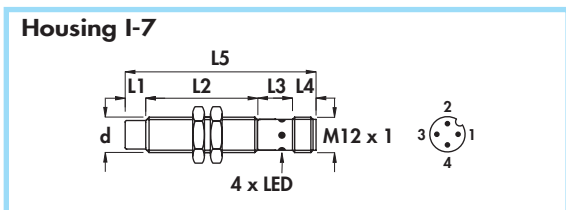
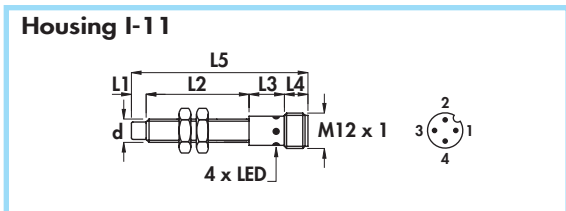
(*) Note: See mounting precautions (pag. 22)

NPN (negative switching)
Use the above mentioned part number changing the last number 9 with 8 (ie. DCAE6,5/4908LKS)



CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Extended sensing distance - diameter 8 - 12 mm
- Amplified in d.c.
- Connector output M12 x 1



Diameter	M8 x 1	M12 x 1
Nut	Size	SW13
	Thkns mm	4
Max tightening torque Nm	10	15

Materials:

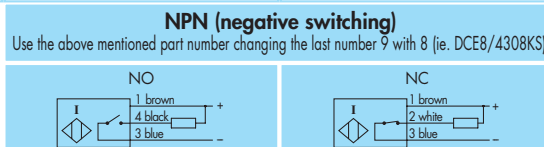
- Housing 8 mm: stainless steel
- Housing 12 mm: nickel plated brass
- Sensing face: plastic

Technical data:

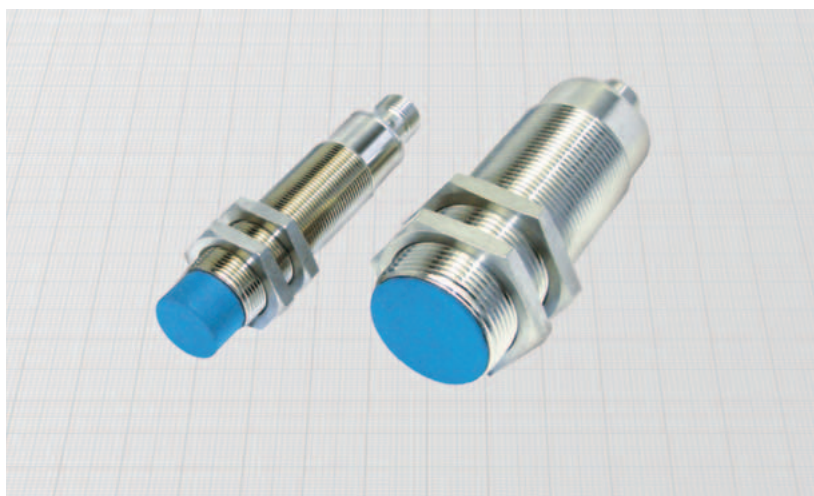
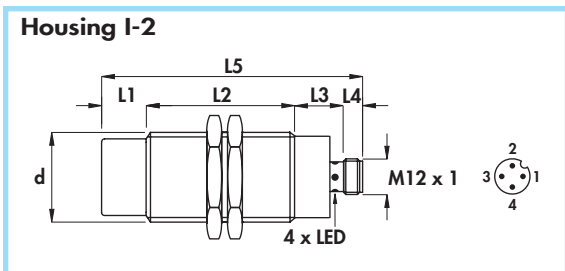
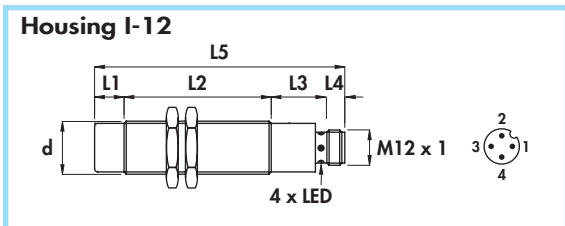
- Supply voltage (U_B): see ordering references
- Max ripple: 10%
- Rated operational current (I_o): 200 mA
- No-load supply current (I_o): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-20^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_p : $\pm 10\%$
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting (*) Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Supply voltage (U_B)	Max switching frequency (f)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES	
												PNP (positive switching)	
I-11	•	-	40	12	8	60	6-8B-10	M8 x 1	7 ÷ 30	800	2		
I-11	•	-	40	12	8	60	6-8B-10	M8 x 1	7 ÷ 30	800	2,5	DCAE8/4309KS	DCAE8/43C9KS
I-11	•	5	35	12	8	60	6-8B-10	M8 x 1	7 ÷ 30	400	3	DCE8/4309KS	DCE8/43C9KS
I-11	•	5	35	12	8	60	6-8B-10	M8 x 1	7 ÷ 30	400	3,5	DCAE8/5309KS	DCAE8/53C9KS
I-11	•	5	35	12	8	60	6-8B-10	M8 x 1	7 ÷ 30	400	3,5	DCE8/5309KS	DCE8/53C9KS
I-7	•	-	43	15	8	66	6-8B-10	M12 x 1	7 ÷ 40	800	3	DCAE12/4309KS	DCAE12/43C9KS
I-7	•	-	43	15	8	66	6-8B-10	M12 x 1	7 ÷ 40	800	4	DCE12/4309KS	DCE12/43C9KS
I-7	•	7	36	15	8	66	6-8B-10	M12 x 1	7 ÷ 40	600	5	DCAE12/5309KS	DCAE12/53C9KS
I-7	•	7	36	15	8	66	6-8B-10	M12 x 1	7 ÷ 40	600	6	DCE12/5309KS	DCE12/53C9KS

(*) Note: See mounting precautions (pag. 22)



Extended sensing distance - diameters 18 - 30 mm •
 Amplified in d.c. •
 Connector output M12 x 1 •



Diameter	M18 x 1	M30 x 1,5
Nut	Size	SW24
	Thkns mm	4
Max tightening torque Nm	35	80

Materials:

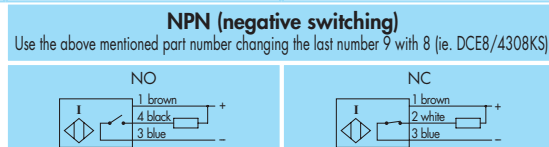
- Housing: nickel plated brass
- Sensing face: plastic

Technical data:

- Supply voltage (U_B): see ordering references
- Max ripple: 10%
- Rated operational current (I_B): 200 mA
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-20^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_T : $\pm 10\%$
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

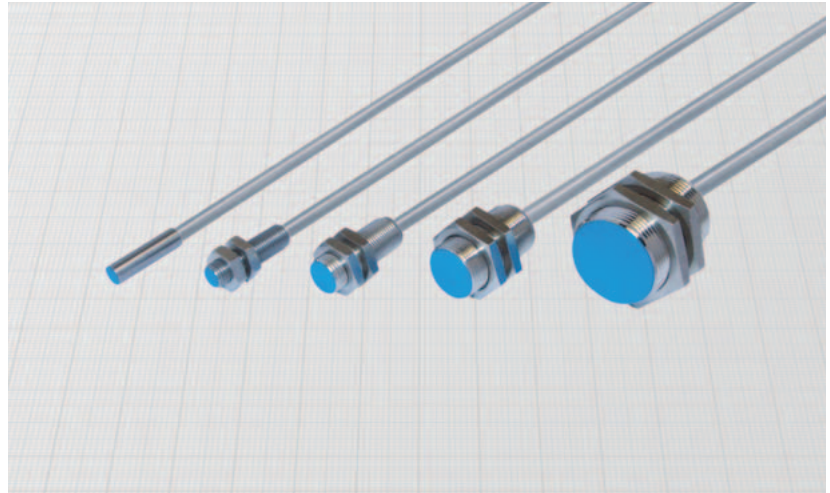
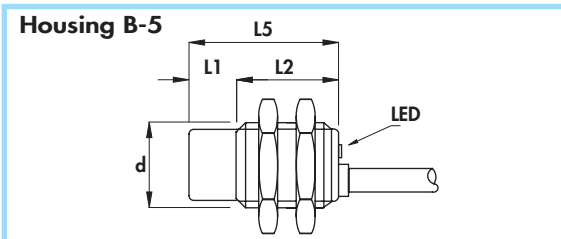
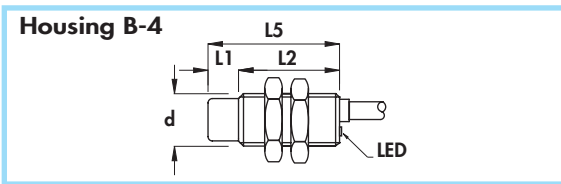
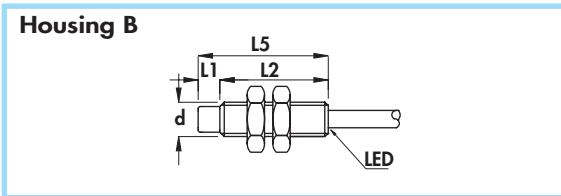
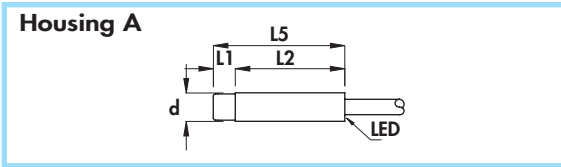
Housing	Flush mounting (*) Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Supply voltage (U_B)	Max switching frequency (f)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES	
												PNP (positive switching)	
I-12	•	-	50	19	8	77	6-8B-10	M18 x 1	7 ÷ 40	300	10		
I-12	•	-	50	19	8	77	6-8B-10	M18 x 1	7 ÷ 40	300	10	DCAE18/4309KS	DCAE18/43C9KS
I-12	•	10	50	19	8	87	6-8B-10	M18 x 1	7 ÷ 40	200	14	DCE18/4309KS	DCE18/43C9KS
I-12	•	10	50	19	8	87	6-8B-10	M18 x 1	7 ÷ 40	200	14	DCAE18/5309KS	DCAE18/53C9KS
I-12	•	10	50	19	8	87	6-8B-10	M18 x 1	7 ÷ 40	200	14	DCE18/5309KS	DCE18/53C9KS
I-2	•	-	65	17	8	90	6-8B-10	M30 x 1,5	7 ÷ 40	100	20	DCAE30/4309KS	DCAE30/43C9KS
I-2	•	-	65	17	8	90	6-8B-10	M30 x 1,5	7 ÷ 40	100	20	DCE30/4309KS	DCE30/43C9KS
I-2	•	15	50	17	8	90	6-8B-10	M30 x 1,5	7 ÷ 40	100	28	DCAE30/5309KS	DCAE30/53C9KS
I-2	•	15	50	17	8	90	6-8B-10	M30 x 1,5	7 ÷ 40	100	28	DCE30/5309KS	DCE30/53C9KS

(*) Note: See mounting precautions (pag. 22)



CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- **SHORT SERIES** - Extended sensing distance
- **Amplified in d.c. 3 wires**
- Cable output



Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW13	SW17	SW24
	Thickness mm	4	4	5
Max tightening torque Nm	10	15	35	80

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing 6,5 and 8 mm: stainless steel
- Housing 12 ÷ 30 mm: nickel plated brass
- Sensing face: plastic

Technical data:

- Supply voltage (U_b): see ordering references
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-20^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_T : $\pm 10\%$
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,22 mm² on 6,5 and 8 mm
0,35 mm² on 12 mm
0,50 mm² on 18 and 30 mm

- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting (*) Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Supply voltage (U_b)	Max switching frequency (f)	Rated operational current (I_e)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES			
													PNP (positive switching)			
													NO	NC		
A	•	-	30	-	-	30	3,5	6,5	7 ÷ 30	800	200	2,5			DSE6,5/4609LKS	DSE6,5/4619LKS
B	•	-	30	-	-	30	3,5	M8 x 1	7 ÷ 30	800	200	2,5			DSE8/4609KS	DSE8/4619KS
B-4	•	-	30	-	-	30	4	M12 x 1	7 ÷ 30	800	200	4			DSE12/4609KS	DSE12/4619KS
B-4	•	7	23	-	-	30	4	M12 x 1	7 ÷ 30	600	200	6			DSE12/5609KS	DSE12/5619KS
B-5	•	-	35	-	-	35	5	M18 x 1	7 ÷ 40	300	200	10			DSE18/4609KS	DSE18/4619KS
B-5	•	10	25	-	-	35	5	M18 x 1	7 ÷ 40	200	200	14			DSE18/5609KS	DSE18/5619KS
B-5	•	-	35	-	-	35	6	M30 x 1,5	7 ÷ 40	100	200	20			DSE30/4609KS	DSE30/4619KS
B-5	•	15	20	-	-	35	6	M30 x 1,5	7 ÷ 40	100	200	28			DSE30/5609KS	DSE30/5619KS

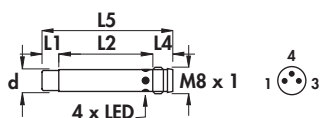
(*) Note: See mounting precautions (pag. 22)

NPN (negative switching)
Use the above mentioned part number changing the last number 9 with 8 (ie. DSE6,5/4608LKS)

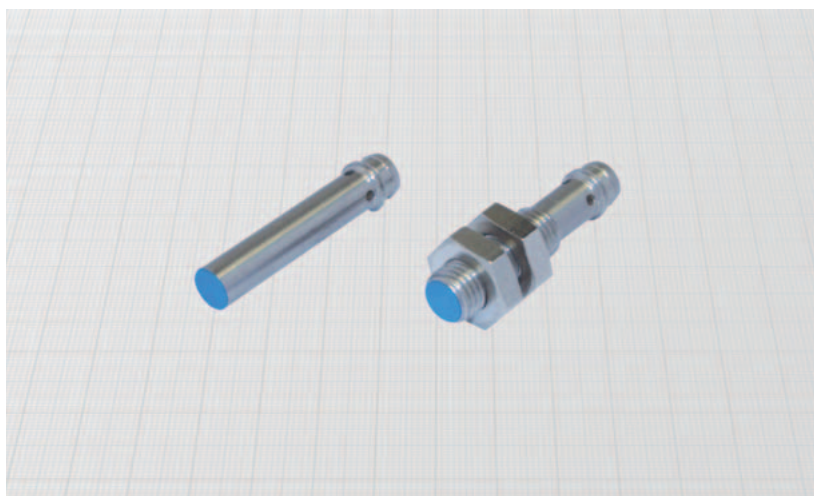
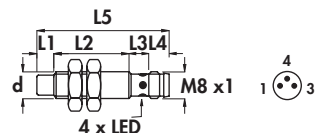


**SHORT SERIES - Extended sensing distance •
Amplified in d.c. •
Connector output M8 x 1 •**

Housing I-8



Housing I-6



Diameter	M8 x 1	
Nut	Size	SW13
	Thickness mm	4
Max tightening torque Nm	10	

Materials:

- Housing: stainless steel
- Sensing face: plastic

Technical data:

- Supply voltage (U_B): $7 \div 30$ Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-20^\circ \div +70^\circ$ C
- Max thermal drift of sensing distance S_r : $\pm 10\%$
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

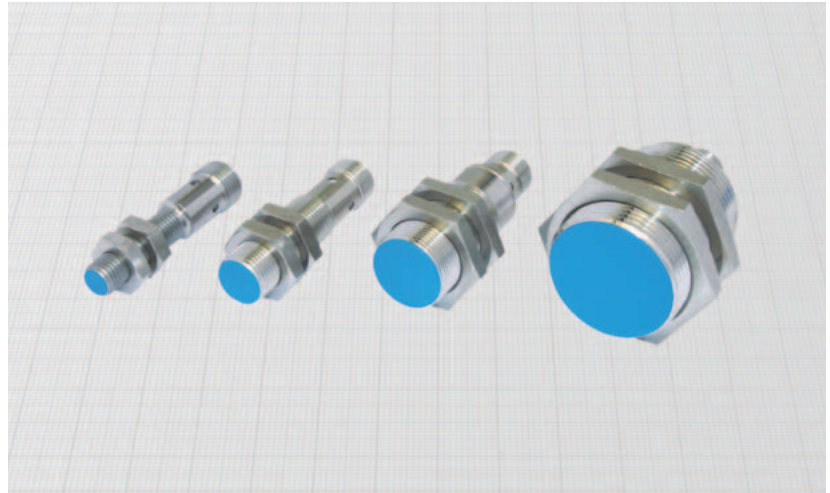
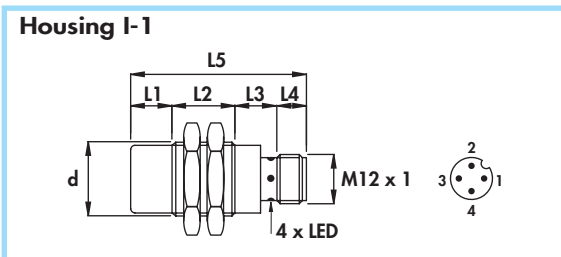
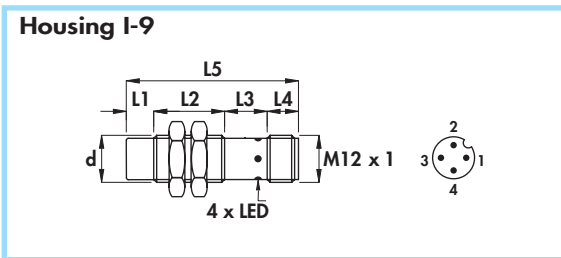
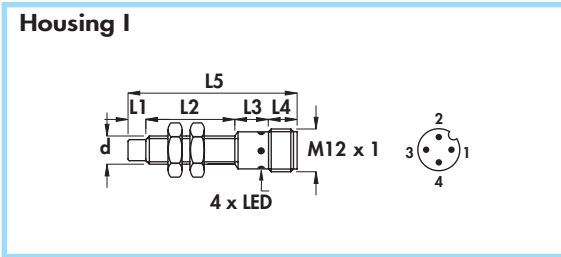
Housing	Flush mounting (*) Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ±10%	ORDERING REFERENCES	
												PNP (positive switching)	
I-8	•	-	29,5	-	5,5	35	11 - 12	6,5	800	200	2,5	 DSE6,5/4909LKS	 DSE6,5/4919LKS
I-6	•	-	21	8,5	5,5	35	11 - 12	M8 x 1	800	200	2,5	 DSE8/4909KS	 DSE8/4919KS

(*) Note: See mounting precautions (pag. 22)

NPN (negative switching)	
Use the above mentioned part number changing the last number 9 with 8 (ie. DSE6,5/4908LKS)	
 DSE6,5/4908LKS	 DSE6,5/4918LKS

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- **SHORT SERIES** - Extended sensing distance
- **Amplified in d.c.**
- Connector output M12 x 1



Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW13	SW17	SW24
	Thickness mm	4	4	4
Max tightening torque Nm	10	15	35	80

Materials:

- Housing 8 mm: stainless steel
- Housing 12 ÷ 30 mm: nickel plated brass
- Sensing face: plastic

Technical data:

- Supply voltage (U_B): see ordering references
- Max ripple: 10%
- Rated operational current (I_o): 200 mA
- No-load supply current (I_o): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-20^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_T : $\pm 10\%$
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting (*) Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Supply voltage (U_B)	Max switching frequency (f)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES	
												PNP (positive switching)	
												NO	NC
I	•	-	26	13	8	47	6-8B-10	M8 x 1	7 ÷ 30	800	2,5		
I-9	•	-	30	10	8	48	6-8B-10	M12 x 1	7 ÷ 30	800	4	DSE8/4309KS	DSE8/43C9KS
I-9	•	7	23	10	8	48	6-8B-10	M12 x 1	7 ÷ 30	600	6	DSE12/4309KS DSE12/5309KS	DSE12/43C9KS DSE12/53C9KS
I-1	•	-	30	19	8	57	6-8B-10	M18 x 1	7 ÷ 40	300	10	DSE18/4309KS	DSE18/43C9KS
I-1	•	10	25	15	8	58	6-8B-10	M18 x 1	7 ÷ 40	200	14	DSE18/5309KS	DSE18/53C9KS
I-1	•	-	25	17	8	50	6-8B-10	M30 x 1,5	7 ÷ 40	100	20	DSE30/4309KS	DSE30/43C9KS
I-1	•	15	25	17	8	65	6-8B-10	M30 x 1,5	7 ÷ 40	100	28	DSE30/5309KS	DSE30/53C9KS

(*) Note: See mounting precautions (pag. 22)

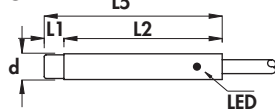
NPN (negative switching)
Use the above mentioned part number changing the last number 9 with 8 (ie. DSE8/4308KS)



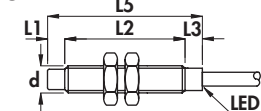
CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- With extended temperature range (- 40° ÷ + 85°C) •
- Amplified in d.c. 3 and 4 wires •
- Cable output •

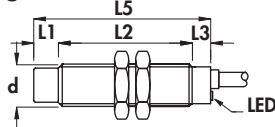
Housing A-3



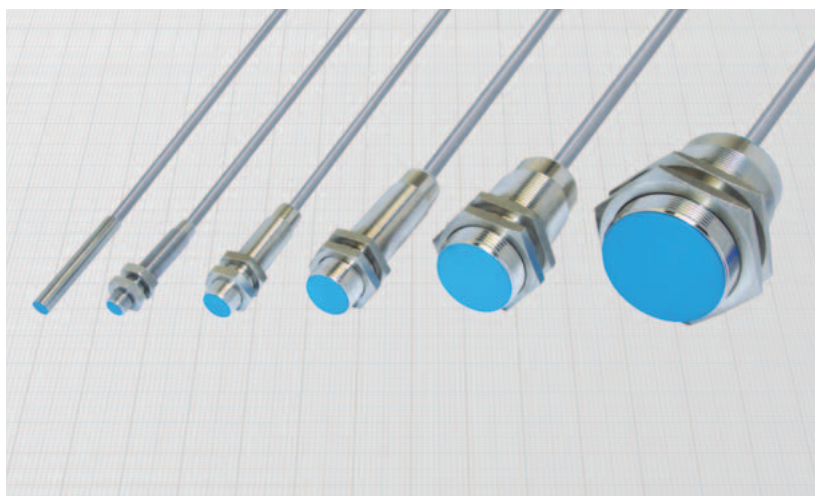
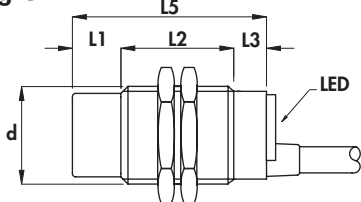
Housing B-6



Housing B-3



Housing G



Diameter		M8 x 1	M12 x 1	M18 x 1	M30 x 1,5	M45 x 1,5
Nut	Size	SW13	SW17	SW24	SW36	SW55
	Thkns mm	4	4	4	5	5
Max tightening torque Nm		10	15	35	80	70

Materials:

- Cable: 2 m thermoplastic 140°C; 300 V; O.R.
- Housing 6,5 and 8 mm: stainless steel
- Housing 12 ÷ 45 mm: nickel plated brass
- Sensing face: plastic

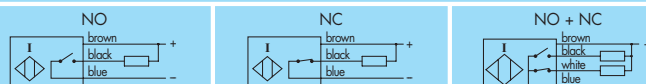
Technical data:

- Supply voltage (U_B): 10 ÷ 30 Vdc
- Max ripple: 10%
- No-load supply current (I₀): ≤ 10 mA
- Voltage drop (U_d): see ordering references
- Temperature range: - 40° ÷ + 85°C
- Max thermal drift of sensing distance S_r: ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,35 mm² on 6,5 - 8 - 12 mm
0,50 mm² on 18, 30 and 45 mm
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flugh mounting Non flush mounting	L2	L3	L5	Cable diameter	Body diameter (d)	Voltage drop (U _d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES		
											PNP (positive switching)		
		mm	mm	mm	mm	mm	V	KHz	mA	mm	NO	NC	NO + NC
A-3	•	45	-	45	4	6,5	1,5	4	150	1,5			
B-6	•	40	5	45	4	M8 x 1	1,5	4	150	1,5			
B-3	•	43	7	50	4	M12 x 1	1,5	2	150	2			
B-3	•	58	12	70	5	M18 x 1	2,2	1	250	5			
G	•	50	10	60	6	M30 x 1,5	2,2	0,8	250	10			
G	•	50	10	60	6	M45 x 1,5	2,2	0,15	250	20			

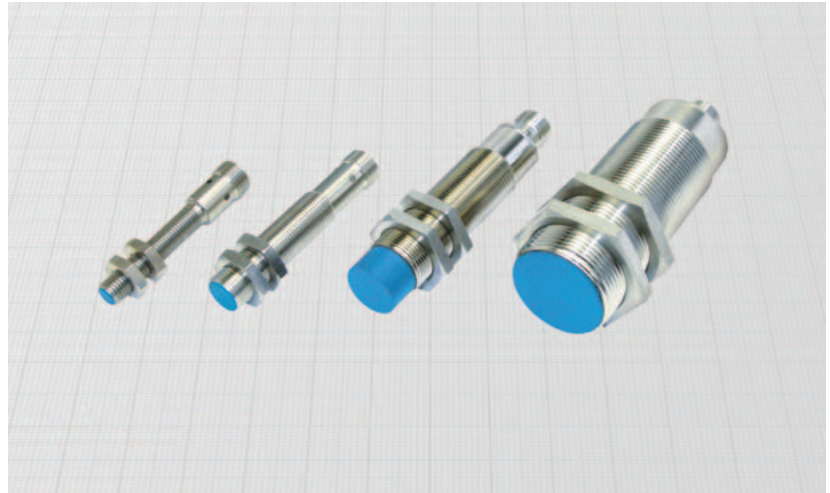
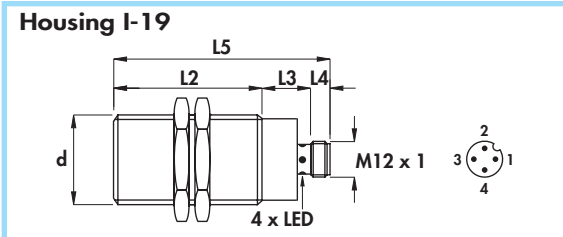
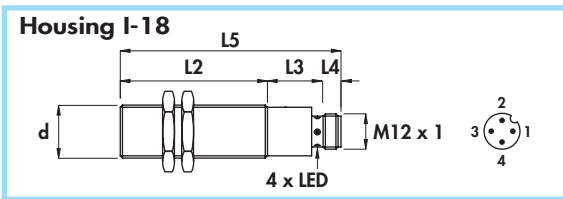
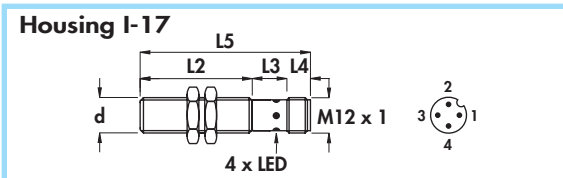
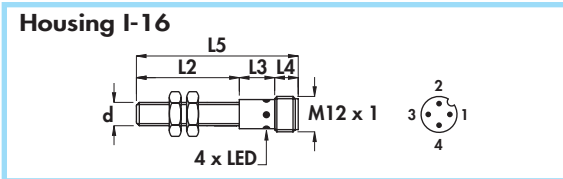
NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie. DCA6,5/4608LKST)



CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- With extended temperature range (-40° ÷ + 85°C)
- Amplified in d.c. 3 and 4 wires
- Connector output M12 x 1



Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5	M45 x 1,5
Nut	Size SW13	SW17	SW24	SW36	SW55
	Thkns mm 4	4	4	5	5
Max tightening torque Nm	10	15	35	80	70

Materials:

- Housing 8 mm: stainless steel
- Housing 12 ÷ 45 mm: nickel plated brass
- Sensing face: plastic

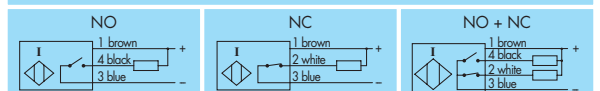
Technical data:

- Supply voltage (U_B): 10 ÷ 30 Vdc
- Max ripple: 10%
- No-load supply current (I₀): ≤ 10 mA
- Voltage drop (U_d): see ordering references
- Temperature range: -40° ÷ + 85°C
- Max thermal drift of sensing distance S_r: ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

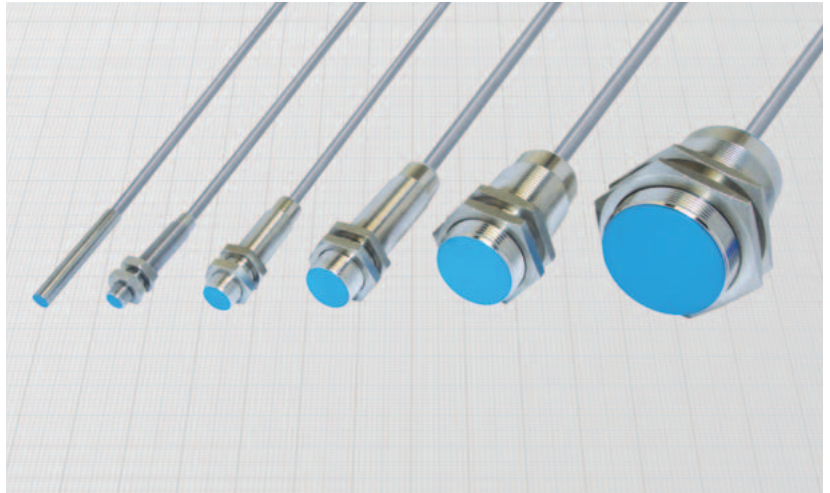
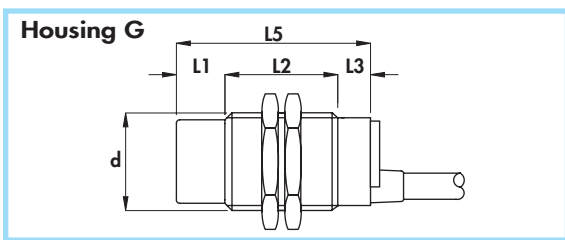
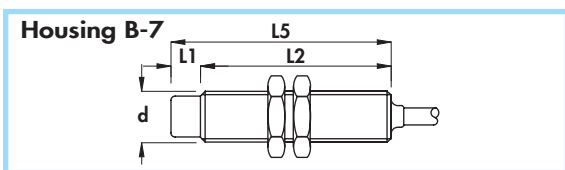
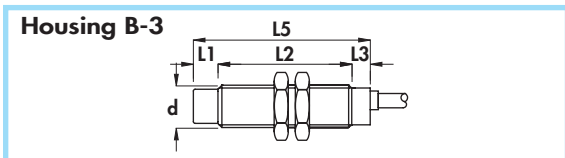
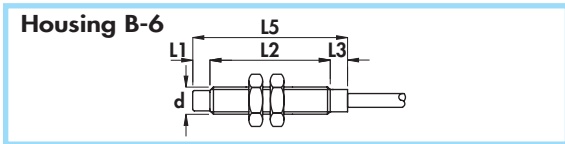
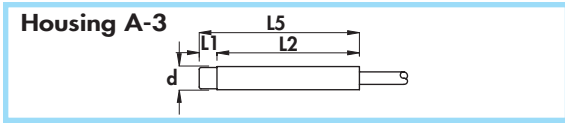
Housing	Flush mounting Non flush mounting	L2	L3	L4	L5	Female connector (see pag. H-1)	Body diameter (d)	Voltage drop (U _d)	Max switching frequency (f _y)	Rated operational current (I _o)	Nominal sensing dist. (S _r) ± 10%	ORDERING REFERENCES		
												PNP (positive switching)		
		mm	mm	mm	mm	n°	mm	V	KHz	mA	mm	NO	NC	NO + NC
I-16	•	40	12	8	60	8B-10...T	M8 x 1	1,5	4	150	1,5			-
I-17	•	43	15	8	66	8B-10...T	M12 x 1	1,5	2	150	2			
I-18	•	50	19	8	77	8B-10...T	M18 x 1	2,2	1	250	5			
I-19	•	65	17	8	90	8B-10...T	M30 x 1,5	2,2	0,8	250	10			
I-19	•	50	19	8	77	8B-10...T	M45 x 1,5	2,2	0,15	250	20			

NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie. DCA8/4308KST)



For high temperatures (-25° ÷ +125°C) •
 Amplified in d.c. 3 and 4 wires •
 Cable output •



Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5	M45 x 1,5	
Nut	Size	SW13	SW17	SW24	SW36	SW55
	Thickness mm	4	4	4	5	5
Max tightening torque Nm	10	15	35	80	70	

Materials:

- Cable: 2 m thermoplastic 140°C; 300 V; O.R.
- Housing 6,5 and 8 mm: stainless steel
- Housing 12 ÷ 45 mm: nickel plated brass
- Sensing face: plastic

Technical data:

- Supply voltage (U_B): 10 ÷ 30 Vdc
- Max ripple: 10%
- No-load supply current (I₀): ≤ 10 mA
- Voltage drop (U_d): see ordering references
- Temperature range: -25° ÷ +125°C
- Max thermal drift of sensing distance S_r: ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Cable conductor cross section: 0,35 mm² on 6,5 - 8 - 12 mm
0,50 mm² on 18 - 30 - 45 mm

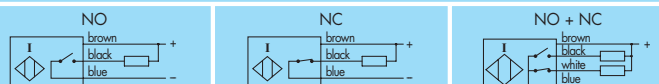
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6



Housing	Flush mounting Non flush mounting	L2	L3	L5	Cable diameter	Body diameter (d)	Voltage drop (U _d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES		
											PNP (positive switching)		
		mm	mm	mm	mm	mm	V	KHz	mA	mm	NO	NC	NO + NC
A-3	•	45	-	45	4	6,5	1,5	4	150	1,5			
B-6	•	40	5	45	4	M8 x 1	1,5	4	150	1,5			
B-3	•	43	7	50	4	M12 x 1	1,5	2	150	2			
B-7	•	65	-	65	5	M18 x 1	2,2	1	250	5			
G	•	50	10	60	6	M30 x 1,5	2,2	0,8	250	10			
G	•	50	10	60	6	M45 x 1,5	2,2	0,15	250	20			

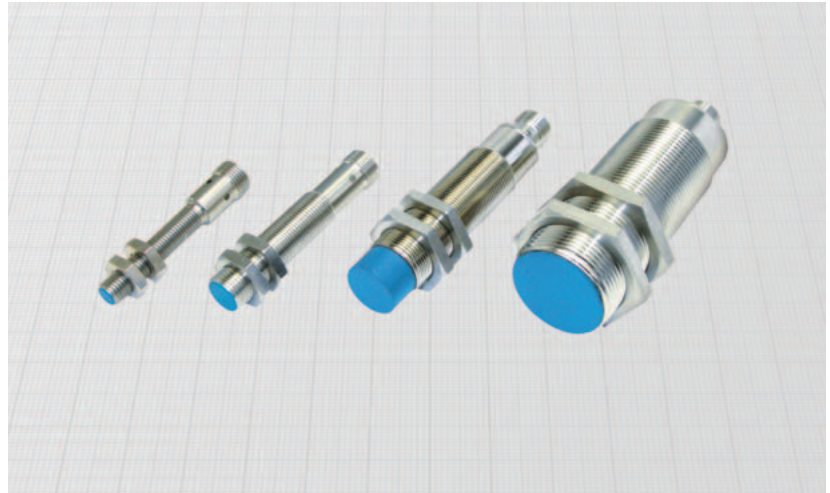
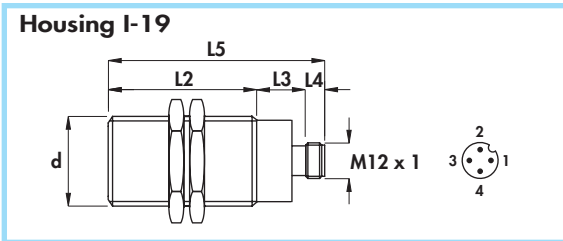
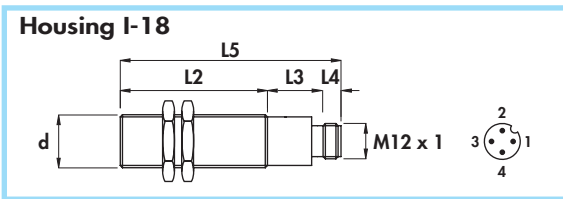
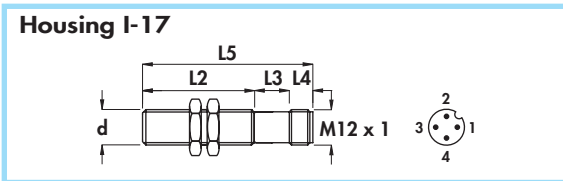
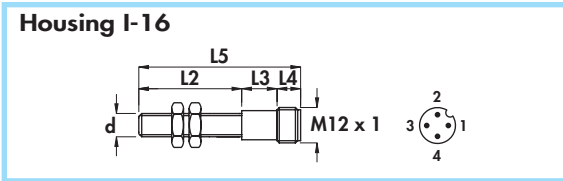
NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie. DCA6,5/4608LKT)



CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- For high temperatures (-25° ÷ + 120°C)
- Amplified in d.c. 3 and 4 wires
- Connector output M12 x 1



Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5	
Nut	Size	SW13	SW17	SW24	SW36
	Thickness mm	4	4	4	5
Max tightening torque Nm	10	15	35	80	

Materials:

- Housing 8 mm: stainless steel
- Housing 12 ÷ 30 mm: nickel plated brass
- Sensing face: plastic

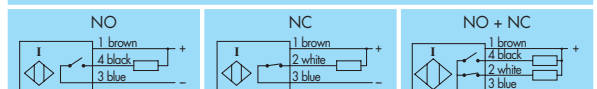
Technical data:

- Supply voltage (U_b): 10 ÷ 30 Vdc
- Max ripple: 10%
- No-load supply current (I_o): ≤ 10 mA
- Voltage drop (U_d): see ordering references
- Temperature range: -25° ÷ +120° C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

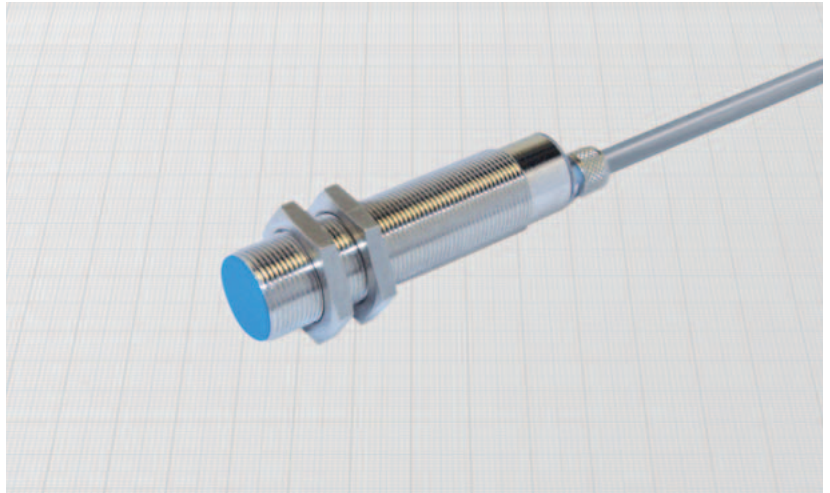
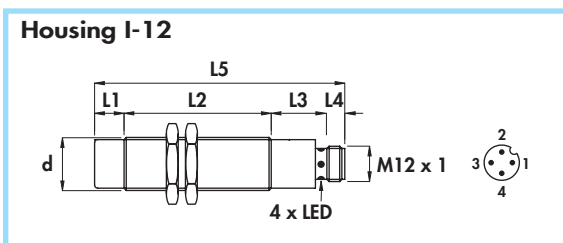
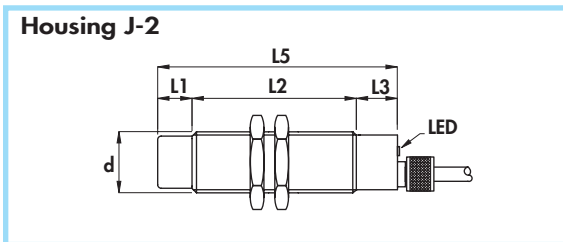
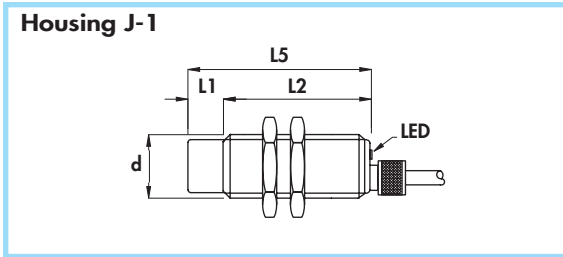
Housing	Flush mounting Non flush mounting	L2	L3	L4	L5	Female connector (see pag. H - 1)	Body diameter (d)	Voltage drop (U_d)	Max switching frequency (f)	Rated operational current (I_o)	Nominal sensing dist. (S_T) ± 10%	ORDERING REFERENCES		
												PNP (positive switching)		
		mm	mm	mm	mm	n°	mm	V	KHz	mA	mm	NO	NC	NO + NC
I-11	•	40	12	8	60	8B-10...T	M8 x 1	1,5	4	150	1,5			-
I-7	•	43	15	8	66	8B-10...T	M12 x 1	1,5	2	150	2			
I-12	•	50	19	8	77	8B-10...T	M18 x 1	2,2	1	250	5			
I-2	•	65	17	8	90	8B-10...T	M30 x 1,5	2,2	0,8	250	10			
I-2	•	50	19	8	77	8B-10...T	M45 x 1,5	2,2	0,15	250	20			

NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie. DCA8/4308KT)



- Degree of protection IP68
- Amplified in d.c. 3 and 4 wires
- Cable and connector output M12 x 1



Diameter	M18 x 1	
Nut	Size	SW24
	Thickness mm	4
Max tightening torque Nm	35	

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing and gland: nickel plated brass
- Sensing face: plastic

General Features:

This new series solves definitively the problem of the ingress of liquids to the inner parts of the sensors. Thanks to the inner hermetic sealing they can be submitted to no-stop jets of liquids under pressure even in presence of temperature changes. They find application in automatic washing machinery, in machines subject to water jets and in continuous immersion applications.

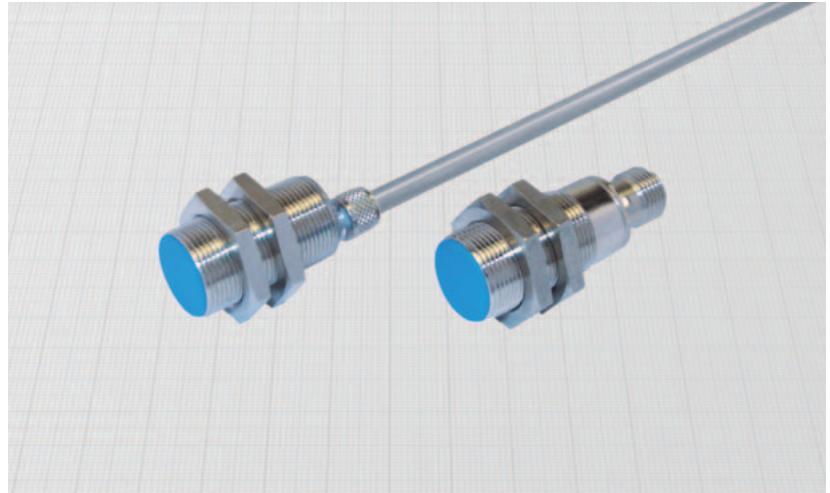
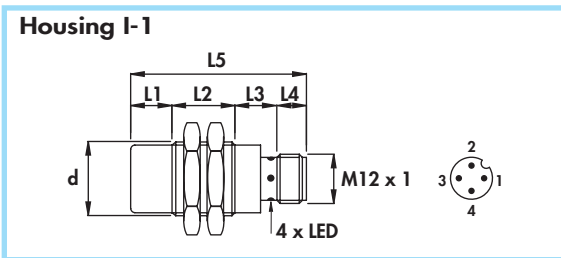
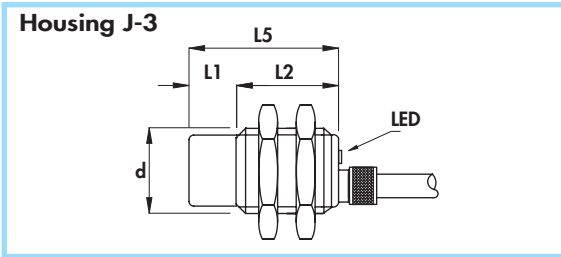
Technical data:

- Supply voltage (U_b): 7 ÷ 60 Vdc
- Max ripple: 10%
- Rated operational current (I_o): 400 mA
- No-load supply current (I_d): ≤ 10 mA
- Voltage drop (U_d): ≤ 2,2 V
- Temperature range: -25° ÷ +75°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP68
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,50 mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Mounting	L1	L2	L3	L4	L5	Cable diameter	Female connector	Body diameter (d)	Max switching frequency (f)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES		
												PNP (positive switching)		
												NO	NC	NO + NC
J-1	•	-	50	-	-	50	5	-	M18 x 1	1	5	DCA18/4A09KSJ	DCA18/4A19KSJ	-
J-1	•	10	40	-	-	50	5	-	M18 x 1	1	8	DCA18/5A09KSJ	DCA18/5A19KSJ	-
J-2	•	-	58	12	-	70	5	-	M18 x 1	1	5	DCA18/4609KSJ	DCA18/4619KSJ	DCA18/4629KSJ
J-2	•	10	48	12	-	70	5	-	M18 x 1	1	8	DCA18/5609KSJ	DCA18/5619KSJ	DCA18/5629KSJ
I-12	•	-	50	19	8	77	-	6-8B-10	M18 x 1	1	5	DCA18/4309KSJ	DCA18/43C9KSJ	DCA18/4329KSJ
I-12	•	10	50	19	8	87	-	6-8B-10	M18 x 1	1	8	DCA18/5309KSJ	DCA18/53C9KSJ	DCA18/5329KSJ
												NPN (negative switching)		
												Use the above mentioned part number changing the last number 9 with 8 (ie. DCA18/4A08KSJ)		
												NO	NC	NO + NC
												<p>(*) Note: In versions with connector use the white wire.</p>		

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- **SHORT SERIES - degree of protection IP68**
- **Amplified in d.c. 3 wires**
- Cable and connector output M12 x 1



Diameter	M18 x 1	
Nut	Size	SW24
	Thickness mm	4
Max tightening torque Nm	35	

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing and gland: nickel plated brass
- Sensing face: plastic

General Features:

This new series solves definitively the problem of the ingress of liquids to the inner parts of the sensors. Thanks to the inner hermetic sealing they can be submitted to no-stop jets of liquids under pressure even in presence of temperature changes. They find application in automatic washing machinery, in machines subject to water jets and in continuous immersion applications.

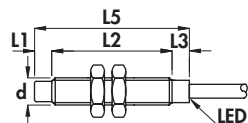
Technical data:

- Supply voltage (U_b): 5 ÷ 40 Vdc
- Max ripple: 10%
- No-load supply current (I_o): ≤ 10 mA
- Voltage drop (U_d): ≤ 1,5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP68
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,50 mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

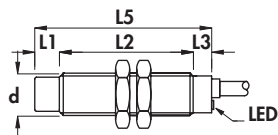
Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES	
													PNP (positive switching)	
J-3	•	-	30	-	-	30	5	-	M18 x 1	0,8	200	5		
J-3	•	10	20	-	-	30	5	-	M18 x 1	0,6	200	8	DSA18/4609KSJ DSA18/5609KSJ	DSA18/4619KSJ DSA18/5619KSJ
I-1	•	-	25	15	8	48	-	6-8B-10	M18 x 1	0,8	200	5		
I-1	•	10	15	15	8	48	-	6-8B-10	M18 x 1	0,6	200	8	DSA18/4309KSJ DSA18/5309KSJ	DSA18/43C9KSJ DSA18/53C9KSJ
													NPN (negative switching)	
													Use the above mentioned part number changing the last number 9 with 8 (ie. DSA18/4608KSJ)	

Non polarized •
Amplified in d.c. 2 wires •
Cable output •

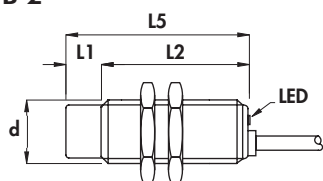
Housing B-6



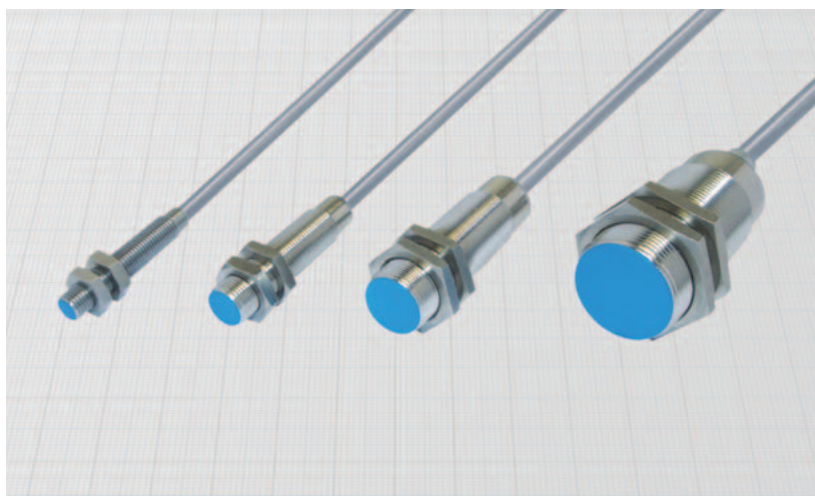
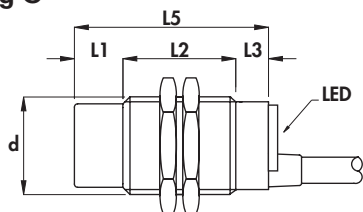
Housing B-3



Housing B-2



Housing G



General Features:

These sensors are not polarized and the load can be connected on both positive and negative lead (function PNP or NPN). So they can replace traditional mechanical microswitches in many applications.

Technical data:

- Supply voltage (U_B): 10 ÷ 55 Vdc
- Max ripple: 10%
- Off-state current (I_o): ≤ 1 mA
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d) with $I_e = 10$ mA: ≤ 5 V
- Voltage drop (U_d) with $I_e = 100$ mA: ≤ 6 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_s : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,34 mm² on 8 and 12 mm
0,50 mm² on 18 mm
0,75 mm² on 30 mm
- Protected against short-circuit and overload (versions with letter K)
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Diameter		M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW13	SW17	SW24	SW36
	Thickness mm	4	4	4	5
Max tightening torque Nm		10	15	35	80

Materials:

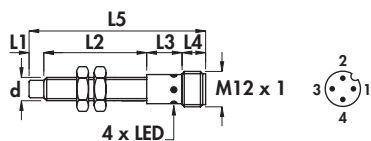
- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing 8 mm: stainless steel
- Housing 12-18-30 mm: nickel plated brass
- Sensing face: plastic PBT

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Nominal sensing distance (S_n) ± 10%	Max switching frequency (f)	Rated operational current (I_e)	ORDERING REFERENCES	
		mm	mm	mm	mm	mm						mm	mm
B-6	•	-	40	5	-	45	4	M8 x 1	1,5	1200	100	 DCM8/4600S DCM8/5600S	 DCM8/4610S DCM8/5610S
B-6	•	5	35	5	-	45	4	M8 x 1	2,5	1000	100		
B-3	•	-	43	7	-	50	4	M12 x 1	2	1200	200	 DCM12/4600KS DCM12/5600KS	 DCM12/4610KS DCM12/5610KS
B-3	•	7	36	7	-	50	4	M12 x 1	4	1000	200		
B-2	•	-	50	-	-	50	5	M18 x 1	5	1100	250	 DCM18/4A00KS DCM18/5A00KS	 DCM18/4A10KS DCM18/5A10KS
B-2	•	10	40	-	-	50	5	M18 x 1	8	700	250		
G	•	-	50	10	-	60	6	M30 x 1,5	10	800	250	 DCM30/4600KS DCM30/5600KS	 DCM30/4610KS DCM30/5610KS
G	•	15	35	10	-	60	6	M30 x 1,5	15	400	250		

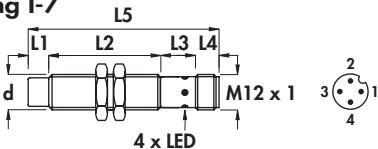
CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Non polarized
- Amplified in d.c. 2 wires
- Connector output

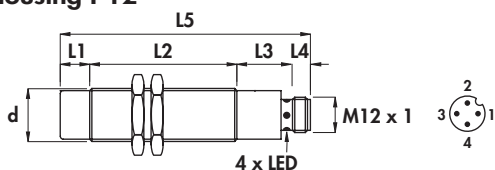
Housing I-11



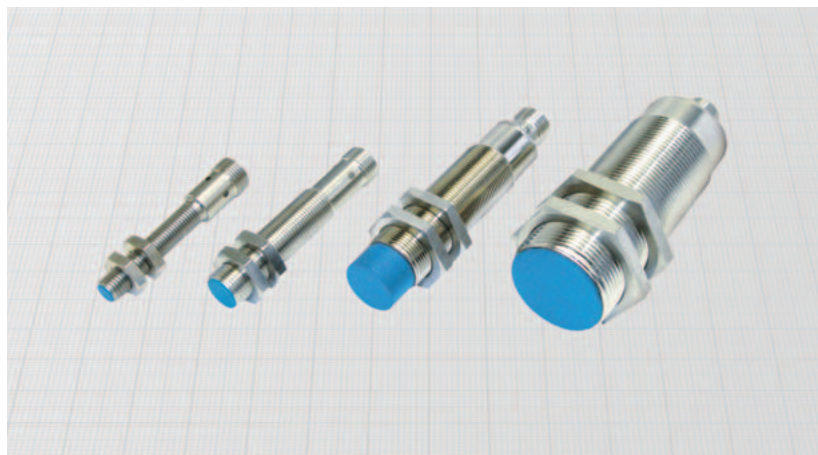
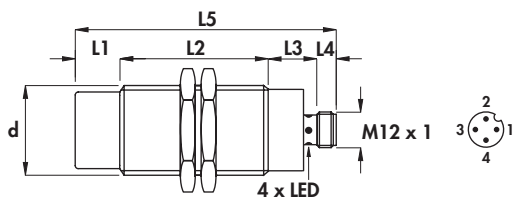
Housing I-7



Housing I-12



Housing I-2



Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size SW13	SW17	SW24	SW36
	Thickness mm 4	4	4	5
Max tightening torque Nm	10	15	35	80

Materials:

- Housing 8 mm: stainless steel
- Housing 12- 18 - 30 mm: nickel plated brass
- Sensing face: plastic PBT

General Features:

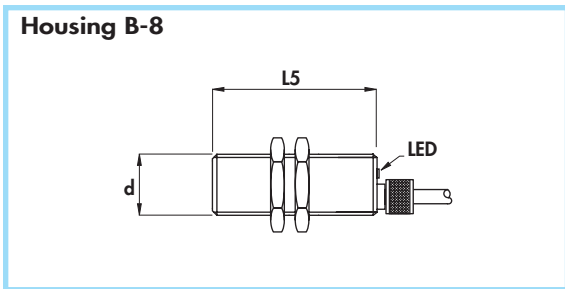
These sensors are not polarized and the load can be connected on both positive and negative sectors (function PNP or NPN). So they can replace traditional mechanical microswitches in many applications. Utilization of connectors without LED is recommended.

Technical data:

- Supply voltage (U_b): 10 ÷ 55 Vdc
- Max ripple: 10%
- Off-state current (I_o): ≤ 1 mA
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d) with $I_e = 10$ mA: ≤ 5 V
- Voltage drop (U_d) with $I_e = 100$ mA: ≤ 6 V
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload (versions with letter K)
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Nominal sensing distance (S_r) ± 10%	Max switching frequency (f) in d.c.	Rated operational current (I_e)	ORDERING REFERENCES	
												NO (connectors 3 or 4 wires)	NC (connectors 4 wires)
I-11	•	-	40	12	8	60	6-8B-10	M8 x 1	1,5	1200	100	DCM8/4300S DCM8/5300S	DCM8/4310S DCM8/5310S
I-11	•	5	35	12	8	60	6-8B-10	M8 x 1	2,5	1000	100		
I-7	•	-	43	15	8	66	6-8B-10	M12 x 1	2	1200	200	DCM12/4300KS DCM12/5300KS	DCM12/4310KS DCM12/5310KS
I-7	•	7	36	15	8	66	6-8B-10	M12 x 1	4	1000	200		
I-12	•	-	50	19	8	77	6-8B-10	M18 x 1	5	1100	250	DCM18/4300KS DCM18/5300KS	DCM18/4310KS DCM18/5310KS
I-12	•	10	50	19	8	87	6-8B-10	M18 x 1	8	700	250		
I-2	•	-	65	17	8	90	6-8B-10	M30 x 1,5	10	800	250	DCM30/4300KS DCM30/5300KS	DCM30/4310KS DCM30/5310KS
I-2	•	15	50	17	8	90	6-8B-10	M30 x 1,5	15	400	250		

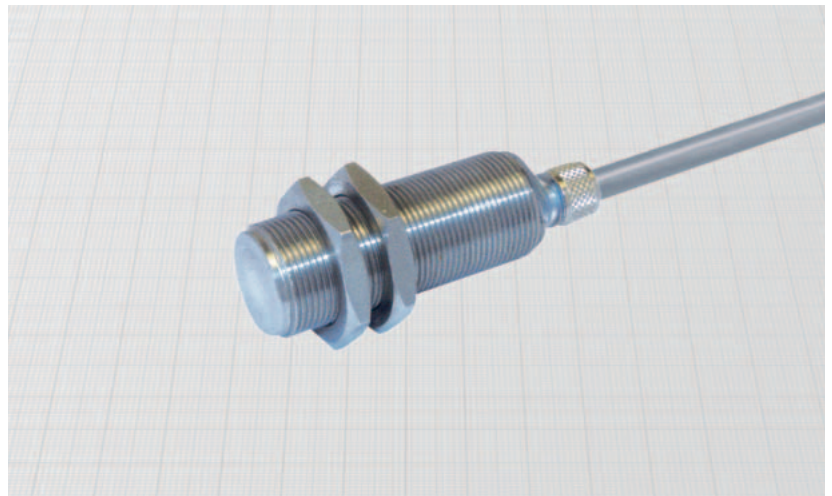
Stainless steel sensing face •
Amplified in d.c. 3 wires •
Cable output •



Diameter		M18 x 1
Nut	Size	SW24
	Thickness mm	4
Max tightening torque Nm		35

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: stainless steel
- Sensing face: stainless steel



General Features:

This particular type of sensor has increased mechanical and chemical resistance:

- **fluid ingress resistant**
- **pressure resistant**
- **corrosion resistant**
- **impact resistant**
- **vibration resistant**
- **abrasion and incandescent objects resistant**

These particular characteristics are mainly dependent by the building of the body, which is made from a single solid piece of stainless steel. The absence of junctions doesn't allow the fluid ingress through the sensing face. A very special sealing system on the back side makes of this sensor the ideal solution for the most critical applications.

Technical data:

- Supply voltage (U_B): $7 \div 40$ Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-25^\circ \div +75^\circ\text{C}$
- Max thermal drift of sensing distance S_r : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP68
- Max pressure on the front side: 50 bar
- Switch status indicator: yellow LED
- Cable conductor cross section: $0,50$ mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

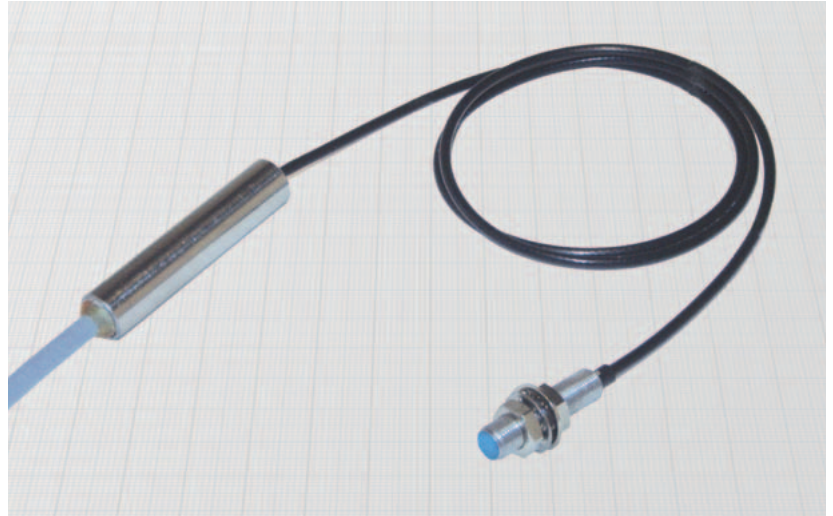
Housing	Flush mounting (*) Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f _f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES			
												PNP (positive switching)			
B-8	•	-	-	-	-	45	5	M18 x 1	50	200	5			DCA18/4609MKSJ	DCA18/4619MKSJ

(*) Note: See mounting precautions (pag. 22)

NPN (negative switching)	
Use the above mentioned part number changing the last number 9 with 8 (ie. DCA18/4608MKSJ)	

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Amplified in d.c. 3 wires
- High precision
- Switching hysteresis < 1 μm
- Cable output




General Features:

This unique sensor enables the detection of metallic targets with extremely high precision without contact. By using an implemented software algorithm and a laser working process it has a very stable and precise switching point with a hysteresis lower than 1 μm .

Applications:

- Semiconductors industry
- Quality control instruments
- High precision mechanical devices
- Calibration equipments

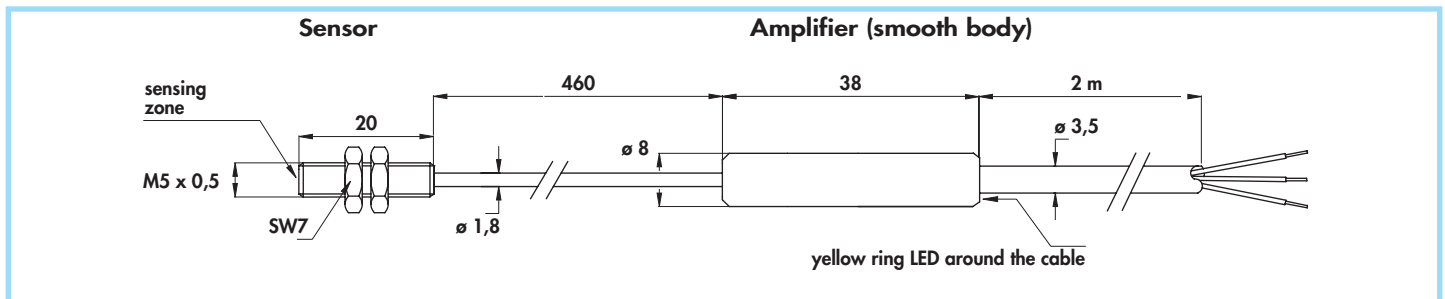
Technical data:

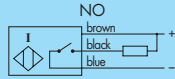
- Supply voltage (U_B): 5 \div 13 Vdc
- Consumption: \leq 10 mA
- Voltage drop ($I_o = 10$ mA): \leq 0.5 V
- Voltage drop ($I_o = 100$ mA): \leq 1 V
- Output polarity: NPN open collector
- Output logic: normally open
- Repeat accuracy (R): $< \pm 2$ μm
- Switch hysteresis (H): < 1 μm
- Temperature range: 10 \div 40°C
- Degree of protection: IP67
- Cable conductor cross section: 0,22 mm²
- Electromagnetic compatibility (EMC) according to EN60947-5-2 
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Diameter	M5 x 0,5	
Nut	Size	SW7
	Thickness mm	2,5
Max tightening torque Nm	2	

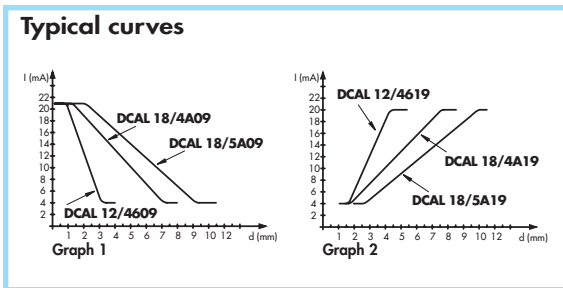
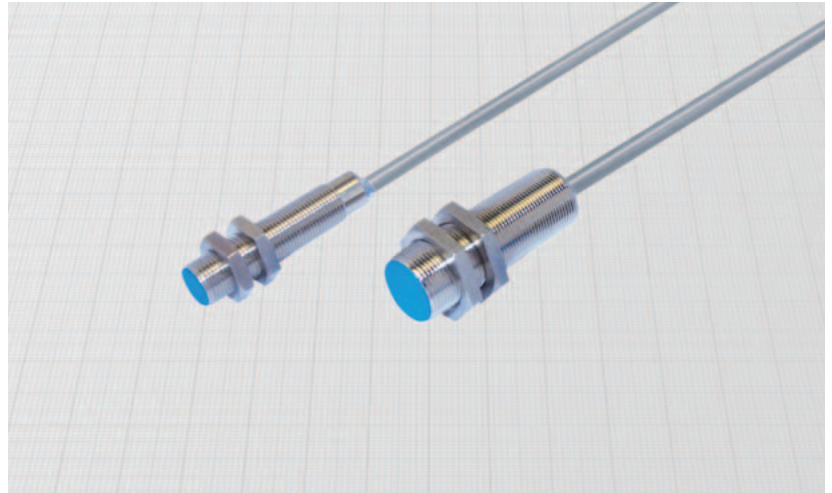
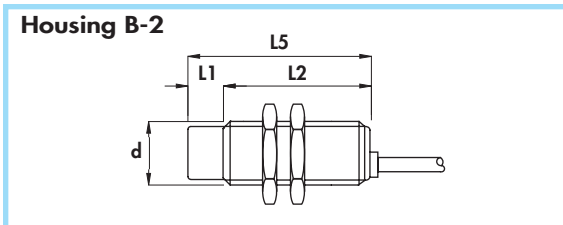
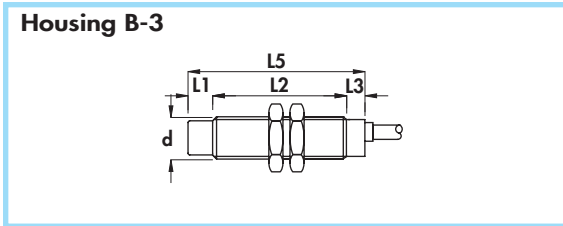
Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C
- Housing sensor and amplifier: stainless steel



Flush mounting Non flush mounting	Cable diameter	Sensor diameter	Amplifier diameter	Rated operational current (I_o)	Max switching frequency (f)	Nominal sensing distance (S_n) \pm 10%	ORDERING REFERENCES	
							NPN (negative switching)	
	mm	mm	mm	mA	Hz	mm		
•	3,5	M5 x 0,5	8	100	100	0,9	IPS05/4608KS	

- Diameters 12 - 18 mm •
- Analog with linear current output •
- Cable output •



2 wires connection

Vout (V)	RL (ohm)	Vdc (min)
0,4 ... 2	100	12
2 ... 10	500	20
4 ... 20	1000	30

$RL (max) = \frac{(V_{dc}-10) K\Omega}{20}$

3 wires connection

Vout (V)	RL (ohm)	Vdc (min)
0 ... 1	42,5	11
0 ... 10	425	15
0 ... 16	1000	21
0 ... 20	1250	25
0 ... 30	1875	35

$RL (max) = \frac{(V_{dc}-5) K\Omega}{16}$

Diameter		M12 x 1	M18 x 1
Nut	Size	SW17	SW24
	Thickness mm	4	4
Max tightening torque Nm		15	35

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R. shielded
- Housing: nickel plated brass
- Sensing face: plastic

General Features:

These inductive proximity sensors provide an output current directly or reversely proportional to the distance between the sensing face and the metal target. The output current is also dependent by the material of the target, so they can be used not only to detect distances, displacements, vibrations and wavings but also to recognize the composition of metals and alloys. In the two wires configuration, they are reversal polarity and short circuit protected devices compliant to the 4-20 mA industrial standard.

Use of the sensor:

The output current flows through the external load RL generating a voltage (V_o) used to drive the input stage of the measuring instrument. The correct value of RL can be chosen accordingly to the values of power supply Vdc and the wanted Vout range as reported on the tables.

Technical data:

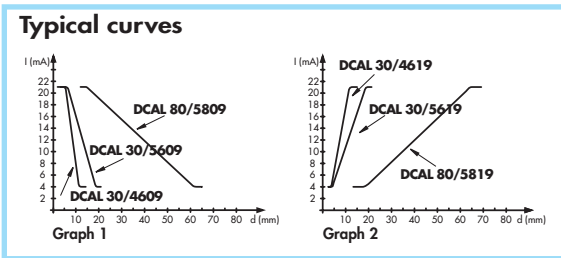
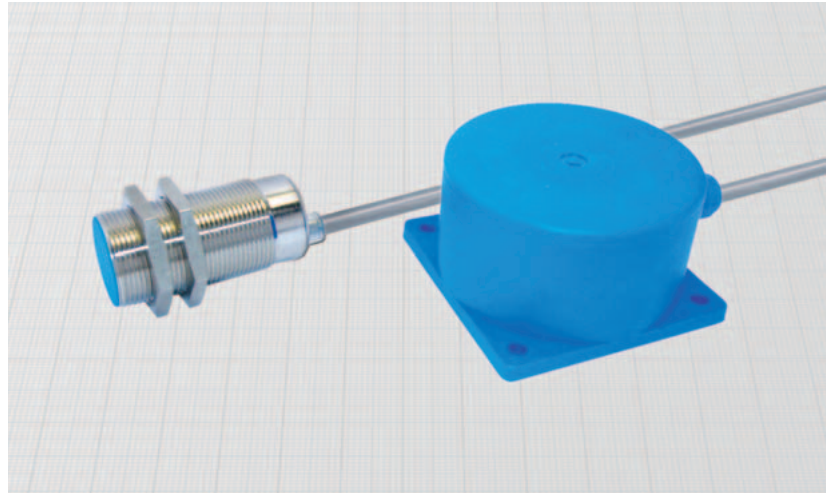
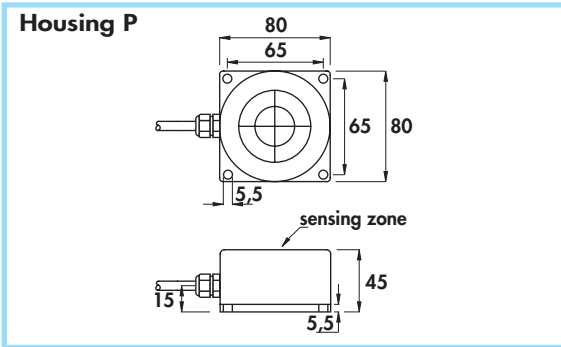
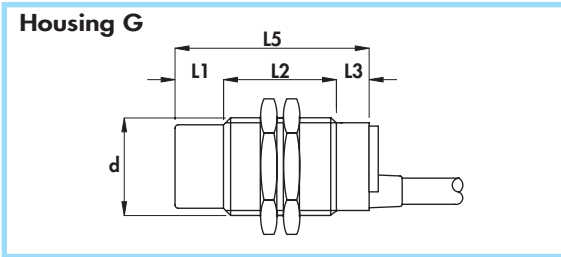
- Supply voltage: 10 ÷ 40 Vdc
- Max ripple: 20%
- Output current range: 0 ÷ 16 mA or 4 ÷ 20 mA
- Temperature range: -10° ÷ +70°C
- Max thermal drift: < 10%
- Degree of protection: IP67
- Cable conductor cross section: 0,22 mm² + shield on 12 mm
0,35 mm² + shield on 18 mm

- Electromagnetic compatibility (EMC) according to EN61000-6-2/-4
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L5	Cable diameter	Body diameter (d)	Linearity error max	No. load supply current	Max switching frequency (F)	Repeat accuracy (R)	Measure range	ORDERING REFERENCES	
		mm	mm	mm	mm								INVERSELY PROPORTIONAL Graph 1	DIRECTLY PROPORTIONAL Graph 2
		mm	mm	mm	mm								mm	mm
B - 3	•	-	43	7	50	4	M12 x 1	5	4	250	0,5	1 ÷ 4	DCAL12/4609	DCAL12/4619
D - 1	•	-	50	-	50	5	M18 x 1	3	4	250	0,5	2 ÷ 7	DCAL18/4A09	DCAL18/4A19
D - 1	•	10	40	-	50	5	M18 x 1	3	4	250	0,5	3 ÷ 9	DCAL18/5A09	DCAL18/5A19

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Diameters 30 - 80 mm
- Analog with linear current output
- Cable output



2 wires connection

Vout (V)	RL (ohm)	Vdc (min)
0,4 ... 2	100	15
2 ... 10	500	20
4 ... 20	1000	30

$RL (max) = \frac{(Vdc-10) K\Omega}{20}$

3 wires connection

Vout (V)	RL (ohm)	Vdc (min)
0 ... 1	62,5	11
0 ... 10	625	15
0 ... 16	1000	21
0 ... 20	1250	25
0 ... 30	1875	35

$RL (max) = \frac{(Vdc-5) K\Omega}{16}$

Diameter	M30 x 1,5	
Nut	Size	SW36
	Thickness mm	5
Max tightening torque Nm	80	

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R. shielded
- Housing 30 mm: nickel plated brass
- Housing 80 mm: plastic
- Sensing face: plastic

General Features:

These inductive proximity sensors provide an output current directly or reversely proportional to the distance between the sensing face and the metal target. The output current is also dependent by the material of the target, so they can be used not only to detect distances, displacements, vibrations and wavings but also to recognize the composition of metals and alloys. In the two wires configuration, they are reversal polarity and short circuit protected devices compliant to the 4-20 mA industrial standard.

Use of the sensor:

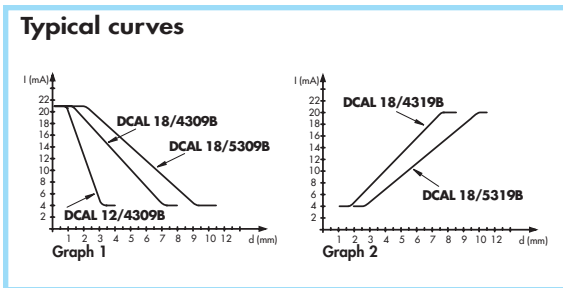
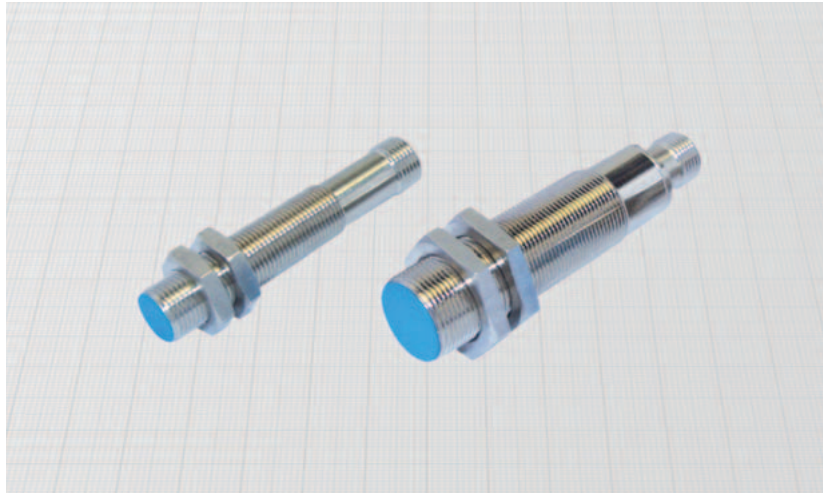
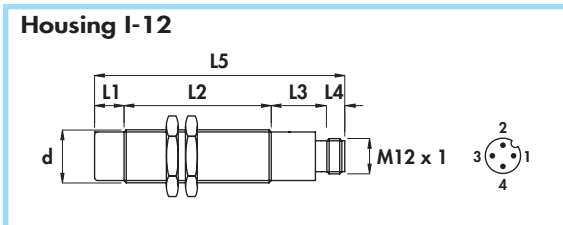
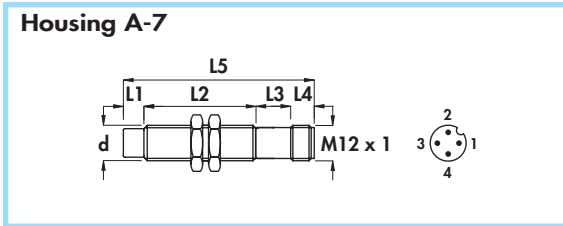
The output current flows through the external load RL generating a voltage (V_o) used to drive the input stage of the measuring instrument. The correct value of RL can be choosed accordingly to the values of power supply Vdc and the wanted Vout range as reported on the tables.

Technical data:

- Supply voltage: 10 ÷ 40 Vdc
- Max ripple: 20%
- Output current range: 0 ÷ 16 mA or 4 ÷ 20 mA
- Temperature range: - 10° ÷ + 70°C
- Max thermal drift: < 10%
- Degree of protection: IP67
- Electromagnetic compatibility (EMC) according to EN61000-6-2/-4
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Repeat accuracy (R)	Maximum linearity error	No-load supply current	Measure range	ORDERING REFERENCES	
		mm	mm	mm	mm	mm								INVERSELY PROPORTIONAL Graph 1	DIRECTLY PROPORTIONAL Graph 2
G	•	-	50	10	-	60	5	M30 x 1,5	250	0,5	5	4	4 ÷ 12	DCAL30/4609	DCAL30/4619
G	•	15	35	10	-	60	5	M30 x 1,5	250	0,5	5	4	5 ÷ 18	DCAL30/5609	DCAL30/5619
P	•	-	-	-	-	-	5	80	250	0,5	5	4	20 ÷ 60	DCAL80/5809	DCAL80/5819

Diameters 12 - 18 mm •
 Analog with linear current output •
 Connector output M12 x 1 •



2 wires connection

Vout (V)	RL (ohm)	Vdc (min)
0,4 ... 2	100	15
2 ... 10	500	20
4 ... 20	1000	30

$RL (max) = \frac{[Vdc-10] \cdot K\Omega}{20}$

3 wires connection

Vout (V)	RL (ohm)	Vdc (min)
0 ... 1	625	11
0 ... 10	625	15
0 ... 16	1000	21
0 ... 20	1250	25
0 ... 30	1875	35

$RL (max) = \frac{[Vdc-5] \cdot K\Omega}{16}$

Diameter		M12 x 1	M18 x 1
Nut	Size	SW17	SW24
	Thickness mm	4	4
Max tightening torque Nm		15	35

General Features:

These inductive proximity sensors provide an output current directly or reversely proportional to the distance between the sensing face and the metal target. The output current is also dependent by the material of the target, so they can be used not only to detect distances, displacements, vibrations and wavings but also to recognize the composition of metals and alloys. In the two wires configuration, they are reversal polarity and short circuit protected devices compliant to the 4-20 mA industrial standard.

It is recommended the use of connectors without LED.

For applications subjected to high levels of electromagnetic interferences, it is recommended the use of the straight connector with shielded cable type C10/00...VS which offers a 360° shielding.

Use of the sensor:

The output current flows through the external load RL generating a voltage (V_o) used to drive the input stage of the measuring instrument. The correct value of RL can be choosed accordingly to the values of power supply Vdc and the wanted Vout range as reported on the tables.

Materials:

- Housing: nickel plated brass
- Sensing face: plastic

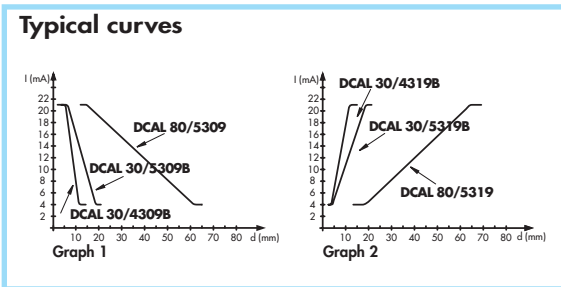
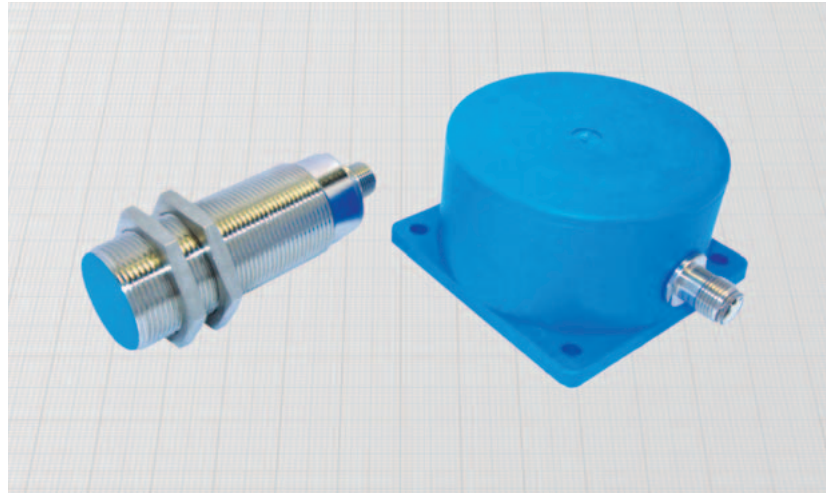
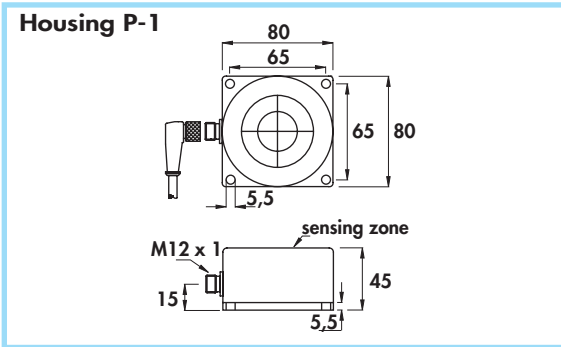
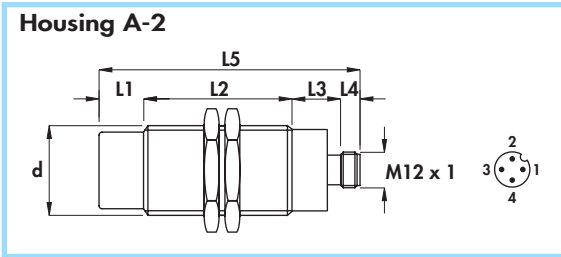
Technical data:

- Supply voltage: 10 ÷ 40 Vdc
- Max ripple: 20%
- Output current range: 0 ÷ 16 mA or 4 ÷ 20 mA
- Temperature range: - 10° ÷ + 70°C
- Max thermal drift: < 10%
- Degree of protection: IP67
- Electromagnetic compatibility (EMC) according to EN61000-6-2/-4
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Repeat accuracy	Maximum linearity error	No-load supply current	Measure range	ORDERING REFERENCES	
		mm	mm	mm	mm	mm								INVERSELY PROPORTIONAL Graph 1	DIRECTLY PROPORTIONAL Graph 2
		mm	mm	mm	mm	mm								n°	mm
A-7	•	-	43	15	8	66	6-8B-10	M12 x 1	250	0,5	5	4	1 ÷ 4	DCAL12/4309B	-
I-12	•	-	50	14	10	74	6-8B-10	M18 x 1	250	0,5	3	4	2 ÷ 7	DCAL18/4309B	DCAL18/4319B
I-12	•	10	50	14	10	84	6-8B-10	M18 x 1	250	0,5	3	4	3 ÷ 9	DCAL18/5309B	DCAL18/5319B

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Diameters 30 - 80 mm
- Analog with linear current output
- Connector output M12 x 1



2 wires connection

Vout (V)	RL (ohm)	Vdc (min)
0,4 ... 2	100	15
2 ... 10	500	20
4 ... 20	1000	30

$RL (max) = \frac{[Vdc-10]}{20} K\Omega$

3 wires connection

Vout (V)	RL (ohm)	Vdc (min)
0 ... 1	62,5	11
0 ... 10	625	15
0 ... 16	1000	21
0 ... 20	1250	25
0 ... 30	1875	35

$RL (max) = \frac{[Vdc-5]}{16} K\Omega$

Diameter	M30 x 1,5	
Nut	Size	SW36
	Thickness mm	5
Max tightening torque Nm	80	

Materials:

- Housing 30 mm: nickel plated brass
- Housing 80 mm: plastic
- Sensing face: plastic

General Features:

These inductive proximity sensors provide an output current directly or reversely proportional to the distance between the sensing face and the metal target. The output current is also dependent by the material of the target, so they can be used not only to detect distances, displacements, vibrations and wavings but also to recognize the composition of metals and alloys. In the two wires configuration, they are reversal polarity and short circuit protected devices compliant to the 4-20 mA industrial standard.

It is recommended the use of connectors without LED.

For applications subjected to high levels of electromagnetic interferences, it is recommended the use of the straight connector with shielded cable type C10/00...V5 which offers a 360° shielding.

Use of the sensor:

The output current flows through the external load R_L generating a voltage (V_o) used to drive the input stage of the measuring instrument. The correct value of R_L can be chosen accordingly to the values of power supply V_{dc} and the wanted V_{out} range as reported on the tables.

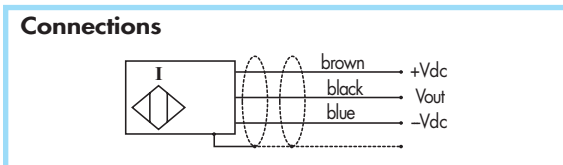
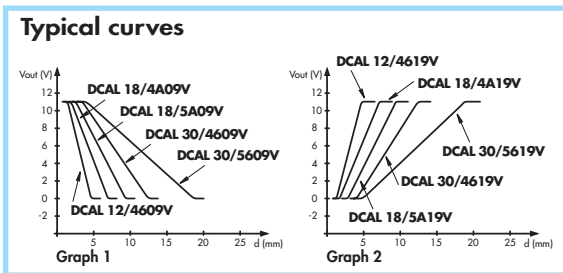
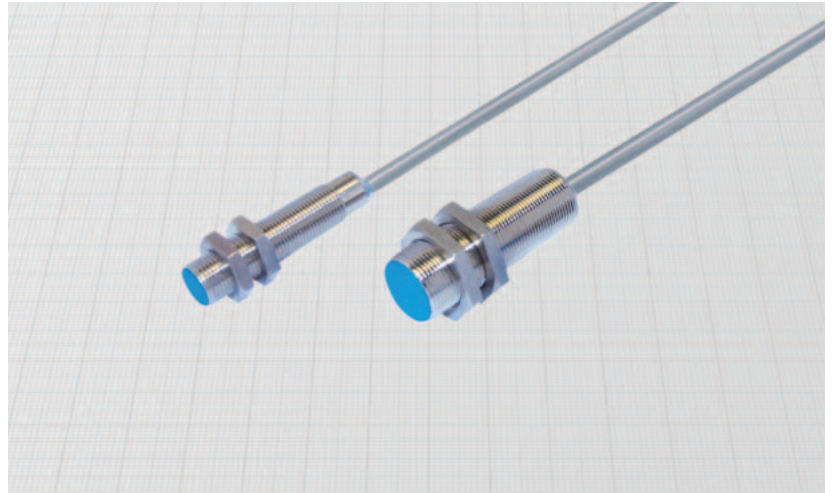
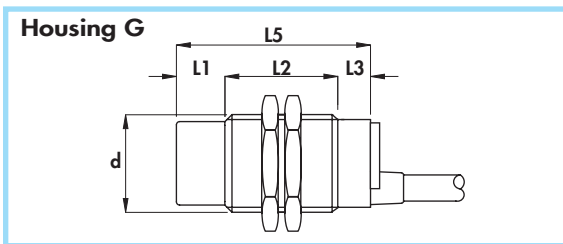
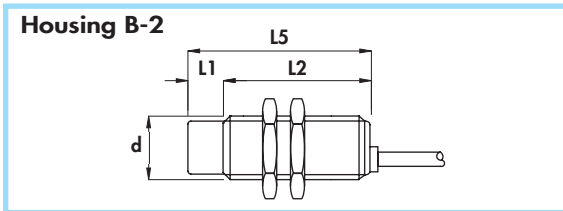
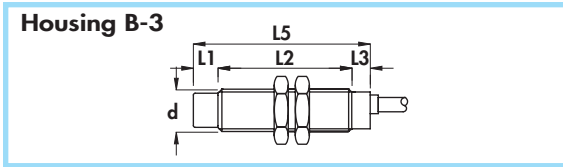
Technical data:

- Supply voltage: 10 ÷ 40 Vdc
- Max ripple: 20%
- Output current range: 0 ÷ 16 mA or 4 ÷ 20 mA
- Temperature range: -10° ÷ +70°C
- Max thermal drift: < 10%
- Degree of protection: IP67
- Electromagnetic compatibility (EMC) according to EN61000-6-2/-4
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Repeat accuracy	Maximum linearity error	No-load supply current	Measure range	ORDERING REFERENCES	
		mm	mm	mm	mm	mm								INVERSELY PROPORTIONAL Graph 1	DIRECTLY PROPORTIONAL Graph 2
A-2	•	-	65	15	8	88	6-8B-10	M30 x 1,5	250	0,5	5	4	4 ÷ 12	DCAL30/4309B	DCAL30/4319B
A-2	•	15	50	15	8	88	6-8B-10	M30 x 1,5	250	0,5	5	4	5 ÷ 18	DCAL30/5309B	DCAL30/5319B
P-1	•	-	-	-	-	-	6-8B-10	80	250	0,5	5	4	20 ÷ 60	DCAL80/5309	DCAL80/5319

Analogue with linear voltage output •

Cable output •



Diameter	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW17	SW24
	Thickness mm	4	4
Max tightening torque Nm	15	35	80

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R. shielded
- Housing: nickel plated brass
- Sensing face: plastic

General Features:

These inductive proximity sensors provide an output voltage 0÷10V directly or reversely proportional to the distance between the sensing face and the metal target. The output voltage is also dependent by the material of the target, so they can be used not only to detect distances, displacements, vibrations and wavings but also to recognize the composition of metals and alloys.

Technical data:

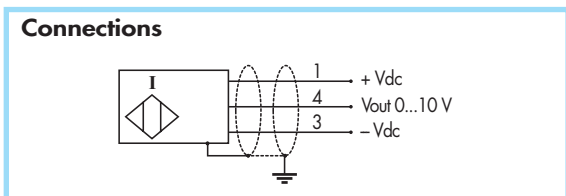
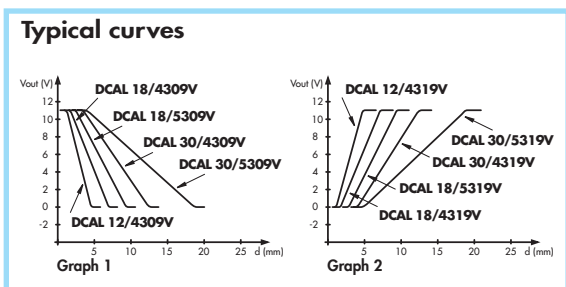
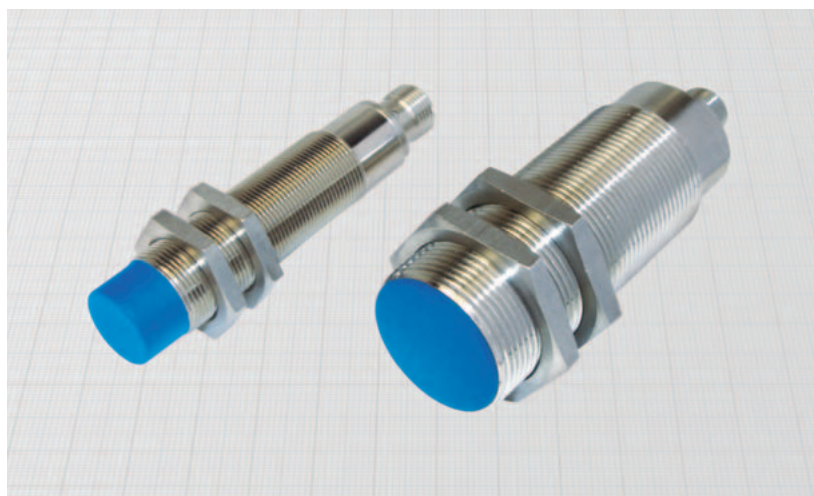
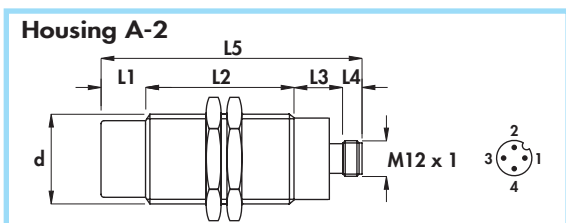
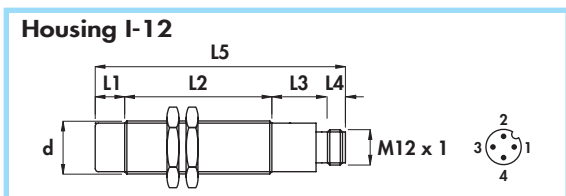
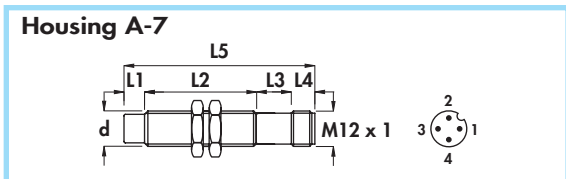
- Supply voltage: 15 ÷ 40 Vdc
- Max ripple: 20%
- Voltage drop output: 0 ÷ 10 V
- Temperature range: -10° ÷ +70°C
- Max thermal drift: < 10%
- Degree of protection: IP67
- Cable conductor cross section: 0,22 mm² + shield on 12 mm, 0,35 mm² + shield on 18 - 30 mm
- Electromagnetic compatibility (EMC) according to EN61000-6-2/-4
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Repeat accuracy	Maximum linearity error	No. load supply current	Measure range	ORDERING REFERENCES			
													INVERSELY PROPORTIONAL Graph 1		DIRECTLY PROPORTIONAL Graph 2	
													mm	mm	mm	mm
B-3	•	-	43	7	50	4	M12 x 1	250	0,5	3	4	1 ÷ 4	DCAL12/4609V	DCAL12/4619V		
B-2	•	-	50	-	50	5	M18 x 1	250	0,5	3	4	2 ÷ 7	DCAL18/4A09V	DCAL18/4A19V		
B-2	•	10	40	-	50	5	M18 x 1	250	0,5	3	4	3 ÷ 9	DCAL18/5A09V	DCAL18/5A19V		
G	•	-	50	10	60	5	M30 x 1,5	250	0,5	5	4	4 ÷ 12	DCAL30/4609V	DCAL30/4619V		
G	•	15	35	10	60	5	M30 x 1,5	250	0,5	5	4	5 ÷ 18	DCAL30/5609V	DCAL30/5619V		

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Analog with linear voltage output

- Connector output M12 x 1



Diámetro	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW17	SW24
	Thickness mm	4	4
Max tightening torque Nm	15	35	80

Materials:

- Housing: nickel plated brass
- Sensing face: plastic

General Features:

These inductive proximity sensors provide an output voltage $0 \div 10V$ directly or reversely proportional to the distance between the sensing face and the metal target. The output voltage is also dependent by the material of the target, so they can be used not only to detect distances, displacements, vibrations and wavings but also to recognize the composition of metals and alloys.

It is recommended the use of connectors without LED.

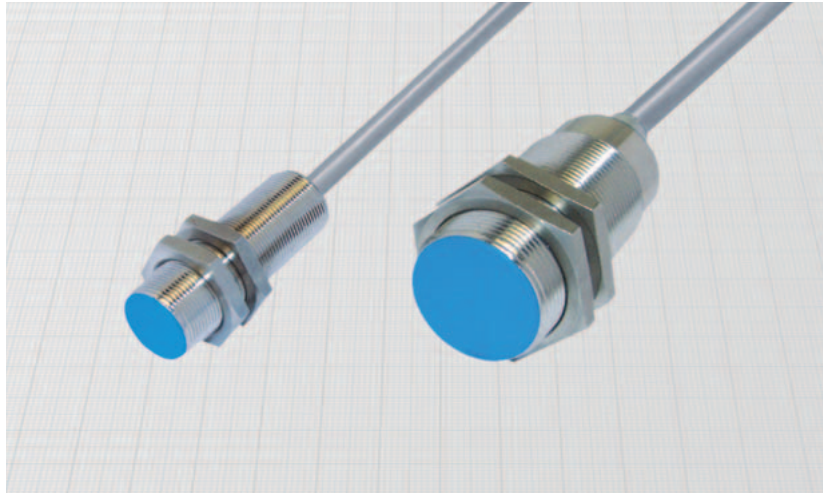
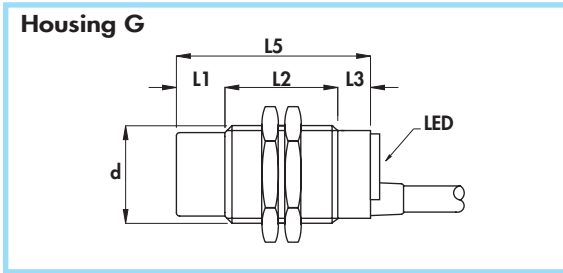
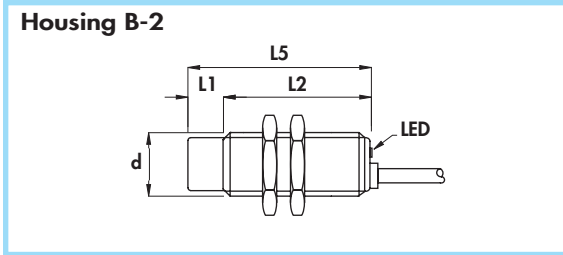
For applications subjected to high levels of electromagnetic interferences, it is recommended the use of the straight connector with shielded cable type C10/00...VS which offers a 360° shielding.

Technical data:

- Supply voltage: $15 \div 40 Vdc$
- Max ripple: 20%
- Output current range: $0 \div 10 V$
- Temperature range: $-10^\circ \div +70^\circ C$
- Max thermal drift: $< 10\%$
- Degree of protection: IP67
- Electromagnetic compatibility (EMC) according to EN61000-6-2/-4
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Repeat accuracy	Maximum linearity error	No-load supply current	Measure range	ORDERING REFERENCES	
														INVERSELY PROPORTIONAL Graph 1	DIRECTLY PROPORTIONAL Graph 2
														mm	mm
A-7	•	-	43	15	8	66	6-8B-10	M12 x 1	250	0,5	5	4	1 ÷ 4	DCAL12/4309V	DCAL12/4319V
I-12	•	-	50	14	10	74	6-8B-10	M18 x 1	250	0,5	3	4	2 ÷ 7	DCAL18/4309V	DCAL18/4319V
I-12	•	10	50	14	10	84	6-8B-10	M18 x 1	250	0,5	3	4	3 ÷ 9	DCAL18/5309V	DCAL18/5319V
A-2	•	-	65	15	8	88	6-8B-10	M30 x 1,5	250	0,5	5	4	4 ÷ 12	DCAL30/4309V	DCAL30/4319V
A-2	•	15	50	15	8	88	6-8B-10	M30 x 1,5	250	0,5	5	4	5 ÷ 18	DCAL30/5309V	DCAL30/5319V

- 5 output functions •
- Amplified in d.c. + a.c. 2 wires •
- Cable output •



Diameter		M18 x 1	M30 x 1,5
Nut	Size	SW24	SW36
	Thickness mm	4	5
Max tightening torque Nm		35	80

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: nickel plated brass
- Sensing face: plastic

General Features:

When used in a.c. they work as normally open. When used in d.c. they can work as normally open or normally closed simply by reversing the connection wires. The load can be connected indifferently on the positive or on the negative pole. These sensors put together the four functions of traditional 3 wires amplified sensors: PNP - NO; PNP - NC; NPN - NO; NPN - NC. Besides the a.c. working in many applications they can replace directly electromechanical microswitches.

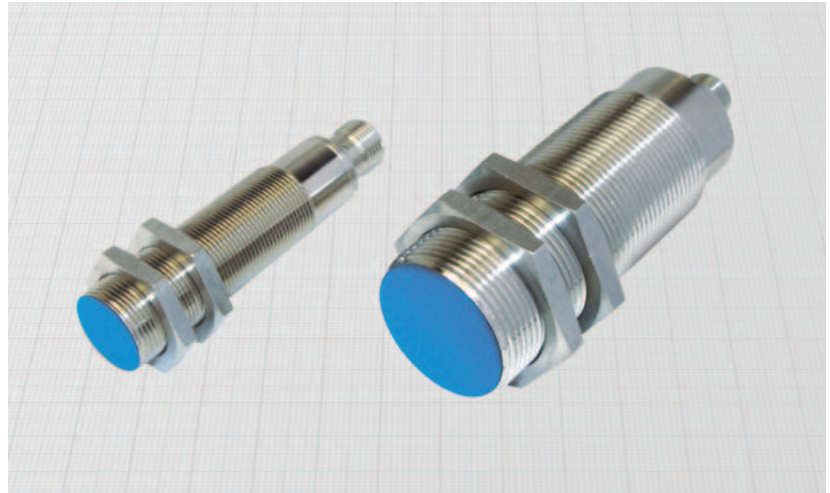
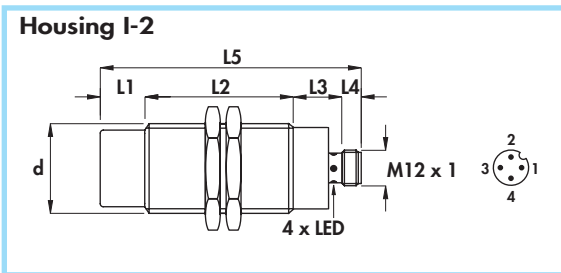
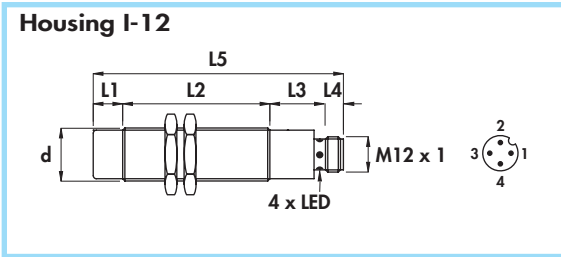
Technical data:

- Supply voltage (U_B): 10 ÷ 60 Vdc/Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Max ripple: 10%
- Off-state current (I_i): ≤ 0,6 mA
- Minimum operational current (I_m): 5 mA
- Rated operational current (I_o): 400 mA
- Voltage drop (U_d): ≤ 4 V
- Temperature range: -20° ÷ +70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- LED indication: yellow = output state
blinking red = output short circuit
- Cable conductor cross section: 0,75 mm²
- Protected against short-circuit and overload
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN61000-6-2/-4

Housing	Flush mounting Non flush mounting	L1	L2	L3	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES					
										PNP		NPN		A.C.	
										NO	NC	NO	NC	NO	
B - 2	•	-	50	-	50	5	M18 x 1	800	5		DX18/4A5XKS DX18/5A5XKS				
B - 2	•	10	40	-	50	5	M18 x 1	400	8						
G	•	-	50	10	60	5	M30 x 1,5	600	10	DX30/465XKS DX30/565XKS					
G	•	15	35	10	60	5	M30 x 1,5	300	15						

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- 5 output functions
- Amplified in d.c. + a.c. 2 wires
- Connector output M12 x 1



Diameter	M18 x 1	M30 x 1,5
Nut	Size	SW24
	Thickness mm	4
Max tightening torque Nm	35	80

Materials:

- Housing: nickel plated brass
- Sensing face: plastic

General Features:

When used in a.c. they work as normally open. When used in d.c. they can work as normally open or normally closed simply by reversing the connection wires. The load can be connected indifferently on the positive or on the negative pole. These sensors put together the four functions of traditional 3 wires amplified sensors besides the a.c. working. In many applications they can replace directly electromechanical microswitches.

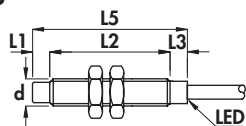
Technical data:

- Supply voltage (U_B): 10 ÷ 60 Vdc/Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Max ripple: 10%
- Off-state current (I_o): ≤ 0,6 mA
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 4 V
- Temperature range: -20° ÷ +70°C
- Max thermal drift of sensing distance S_s : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

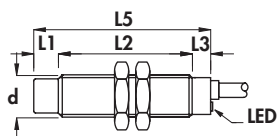
Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES				
												PNP		NPN		A.C.
												NO	NC	NO	NC	
I-12	•	-	50	19	8	77	6-8B-10	M18 x 1	800	400	5					
I-12	•	10	50	19	8	87	6-8B-10	M18 x 1	400	400	8					
I-2	•	-	65	17	8	90	6-8B-10	M30 x 1,5	600	400	10	DX18/435XKS DX18/535XKS DX30/435XKS DX30/535XKS				
I-2	•	15	50	17	8	90	6-8B-10	M30 x 1,5	300	400	15					

Voltage 10 ÷ 50 V_~ •
 Amplified in d.c. + a.c. 2 wires •
 Cable output •

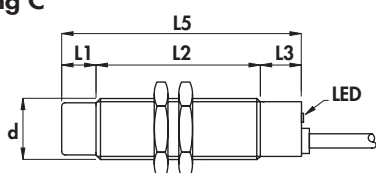
Housing B-6



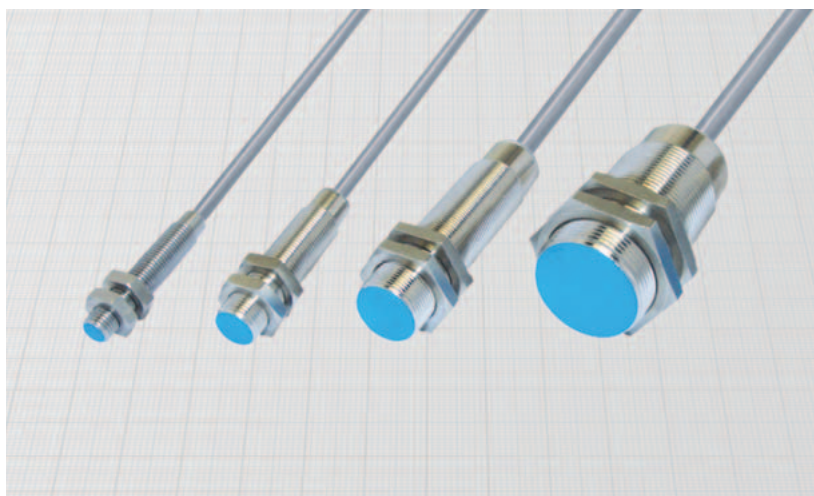
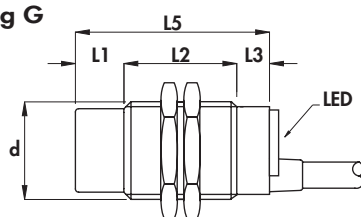
Housing B-3



Housing C



Housing G



Diameter		M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW13	SW17	SW24	SW36
	Thickness mm	4	4	4	5
Max tightening torque Nm		10	15	35	80

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing 8 mm: stainless steel
- Housing 12 - 18 - 30 mm: nickel plated brass
- Sensing face: plastic

General Features:

These sensors are able to work with either direct or alternate current. Voltage drop and residual current are very low. They are not polarized and the load can be connected on both the leads. In many applications they can be used to replace mechanical microswitches.

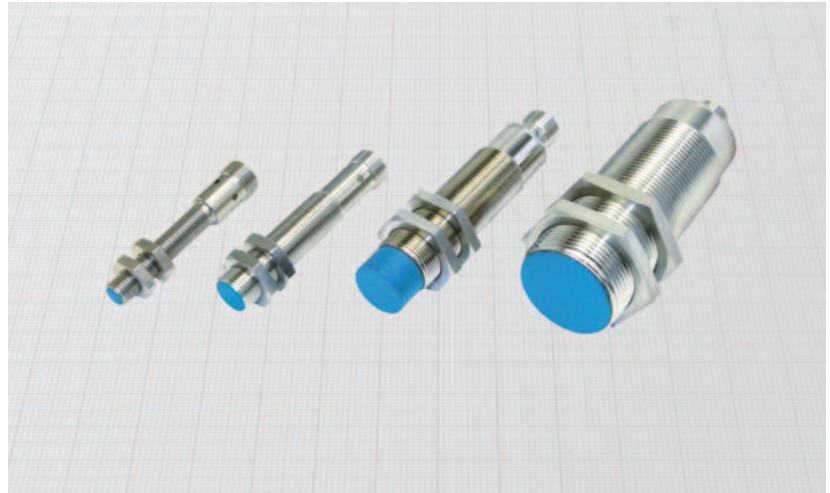
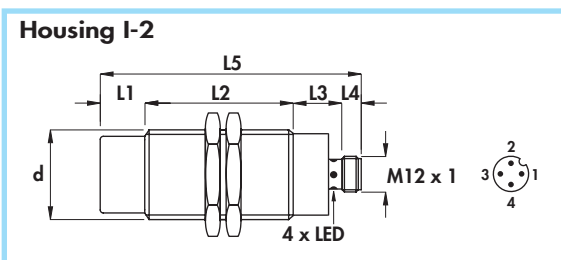
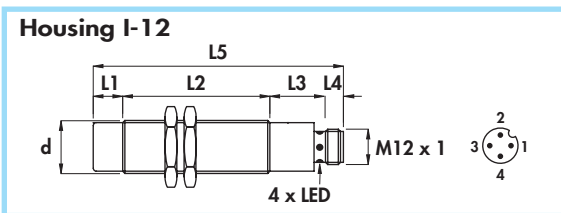
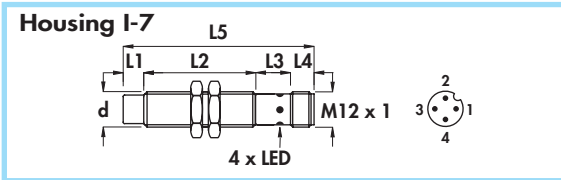
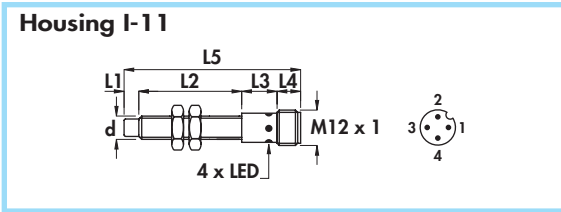
Technical data:

- Supply voltage (U_B): 10 ÷ 50 Vdc/Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤ 1 mA
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,35 mm² on 8 and 12 mm
0,50 mm² on 18 mm
0,75 mm² on 30 mm
- Protected against short-circuit and overload (versions with letter K)
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f) in d.c.	Max switching frequency (f) in a.c.	Rated operational current (I _o)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES	
													mm	mm
B-6	•	-	40	5	-	45	4	M8 x 1	1000	25	100	1,5	AXM8/4600S	AXM8/4610S
B-6	•	5	35	5	-	45	4	M8 x 1	800	25	100	2,5	AXM8/5600S	AXM8/5610S
B-3	•	-	43	7	-	50	4	M12 x 1	800	25	100	2	AXM12/4600KS	AXM12/4610KS
B-3	•	7	36	7	-	50	4	M12 x 1	600	25	100	4	AXM12/5600KS	AXM12/5610KS
C	•	-	58	12	-	70	5	M18 x 1	800	25	200	5	AXM18/4600KS	AXM18/4610KS
C	•	10	48	12	-	70	5	M18 x 1	400	25	200	8	AXM18/5600KS	AXM18/5610KS
G	•	-	50	10	-	60	6	M30 x 1,5	400	25	200	10	AXM30/4600KS	AXM30/4610KS
G	•	15	35	10	-	60	6	M30 x 1,5	200	25	200	15	AXM30/5600KS	AXM30/5610KS

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Supply 10 ÷ 50 V \approx
- Amplified in d.c. + a.c.
- Connector output M12 x 1



Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW13	SW17	SW24
	Thickness mm	4	4	4
Max tightening torque Nm	10	15	35	80

Materials:

- Housing 8 mm: stainless steel
- Housing 12 - 18 - 30 mm: nickel plated brass
- Sensing face: plastic

General Features:

These sensors are able to work with either direct or alternate current. Voltage drop and residual current are very low. They are not polarized and the load can be connected on both the leads. In many applications they can be used to replace mechanical microswitches.

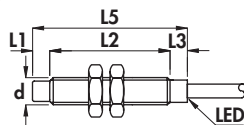
Technical data:

- Supply voltage (U_B): 10 ÷ 50 Vdc/Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤ 1 mA
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_T : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload (versions with letter K)
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

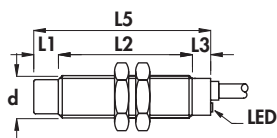
Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f) in d.c.	Max switching frequency (f) in a.c.	Rated operational current (I_e)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES		
													mm	mm	mm
I-11	•	-	40	12	8	60	6-8B-10	M8 x 1	1000	25	100	1,5		AXM8/4300S	AXM8/4310S
I-11	•	5	35	12	8	60	6-8B-10	M8 x 1	800	25	100	2,5		AXM8/5300S	AXM8/5310S
I-7	•	-	43	15	8	66	6-8B-10	M12 x 1	800	25	100	2		AXM12/4300KS	AXM12/4310KS
I-7	•	7	36	15	8	66	6-8B-10	M12 x 1	600	25	100	4		AXM12/5300KS	AXM12/5310KS
I-12	•	-	50	19	8	77	6-8B-10	M18 x 1	800	25	200	5		AXM18/4300KS	AXM18/4310KS
I-12	•	10	50	19	8	87	6-8B-10	M18 x 1	400	25	200	8		AXM18/5300KS	AXM18/5310KS
I-2	•	-	65	17	8	90	6-8B-10	M30 x 1,5	400	25	200	10		AXM30/4300KS	AXM30/4310KS
I-2	•	15	50	17	8	90	6-8B-10	M30 x 1,5	200	25	200	15		AXM30/5300KS	AXM30/5310KS

Voltage 20 ÷ 240 V_~ •
Amplified in d.c. + a.c. 2 wires •
Cable output •

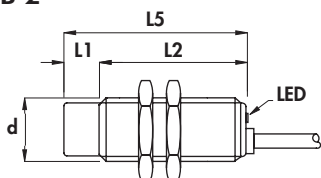
Housing B-6



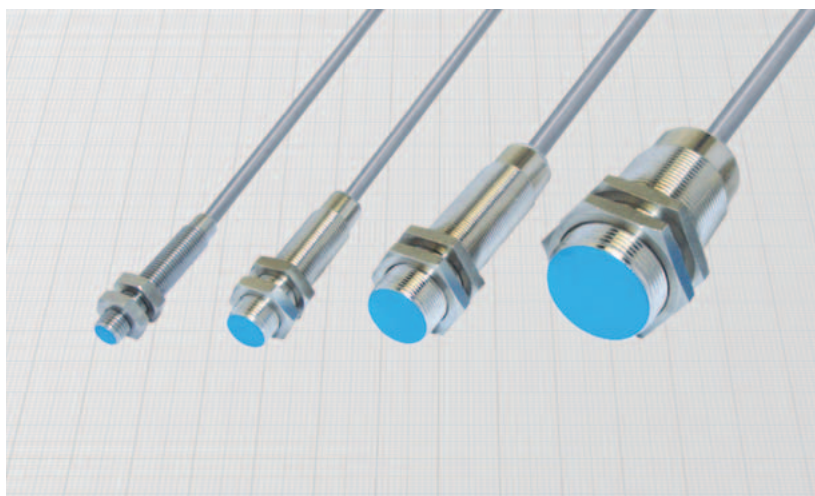
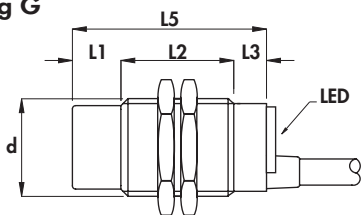
Housing B-3



Housing B-2



Housing G



Diameter		M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW13	SW17	SW24	SW36
	Thickness mm	4	4	4	5
Max tightening torque Nm		10	15	35	80

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing 8 mm: stainless steel
- Housing 12-18 - 30 mm: nickel plated brass
- Sensing face: plastic

General Features:

These sensors are able to work with either direct or alternate current. Voltage drop and residual current are very low. They are not polarized and the load can be connected on both the leads. In many applications they can be used to replace mechanical microswitches.

Technical data:

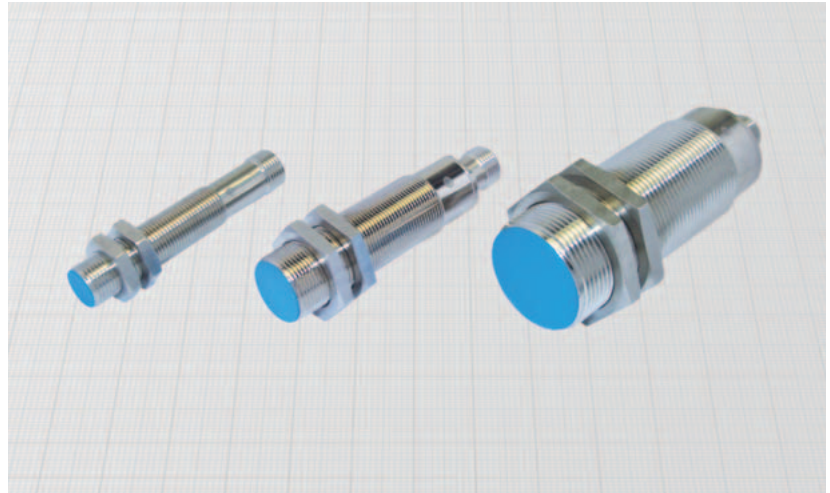
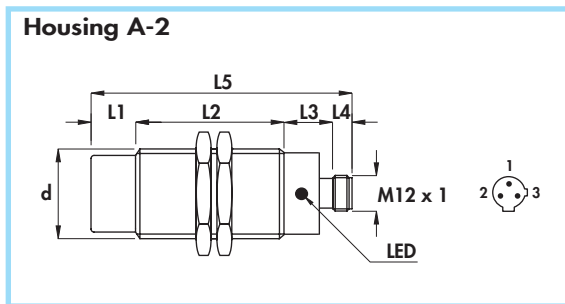
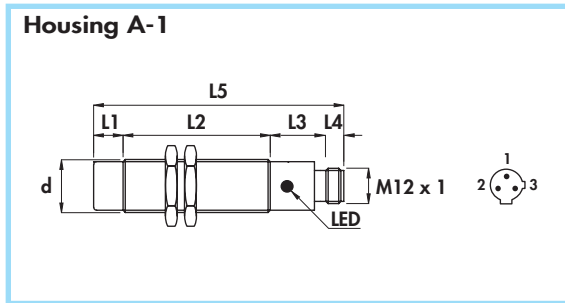
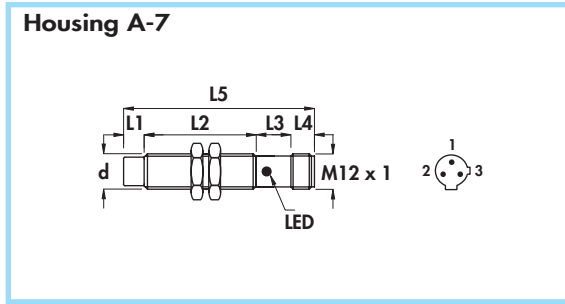
- Supply voltage (U_B): 20 ÷ 240 Vdc/Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o) at 24 V: ≤ 1 mA
- Off-state current (I_o) at 220 V: ≤ 1,5 mA
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_r: ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,35 mm² on 8 and 12 mm
0,50 mm² on 18 mm
0,75 mm² on 30 mm

- Protected against short-circuit and overload (versions with letter K)
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f) in d.c.	Max switching frequency (f) in a.c.	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES	
		mm	mm	mm	mm	mm							Hz	Hz
B-6	•	-	40	5	-	45	3,5	M8 x 1	1000	25	100	1,5	AX8/4609S	AX8/4619S
B-6	•	5	35	5	-	45	3,5	M8 x 1	800	25	100	2,5	AX8/5609S	AX8/5619S
B-3	•	-	43	7	-	50	4	M12 x 1	800	25	100	2	AX12/4609KS	AX12/4619KS
B-3	•	7	36	7	-	50	4	M12 x 1	600	25	100	4	AX12/5609KS	AX12/5619KS
B-2	•	-	50	-	-	50	5	M18 x 1	800	25	200	5	AX18/4A09KS	AX18/4A19KS
B-2	•	10	40	-	-	50	5	M18 x 1	400	25	200	8	AX18/5A09KS	AX18/5A19KS
G	•	-	50	10	-	60	6	M30 x 1,5	400	25	200	10	AX30/4609KS	AX30/4619KS
G	•	15	35	10	-	60	6	M30 x 1,5	200	25	200	15	AX30/5609KS	AX30/5619KS

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Voltage 20 ÷ 240 V \approx
- Amplified in d.c. + a.c.
- Connector output M12 x 1



Diameter		M12x 1	M18 x 1	M30 x 1,5
Nut	Size	SW17	SW24	SW36
	Thickness mm	4	4	5
Max tightening torque Nm		15	35	80

Materials:

- Housing: nickel plated brass
- Sensing face: plastic

General Features:

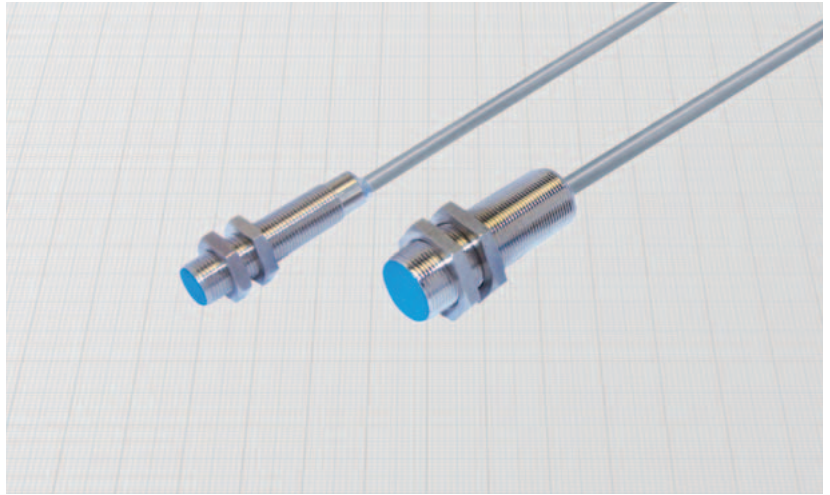
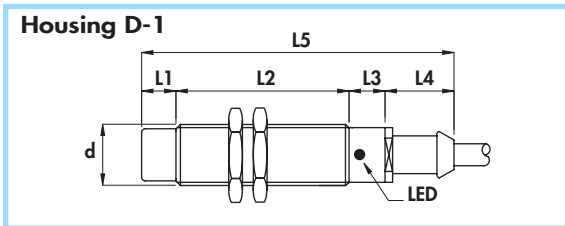
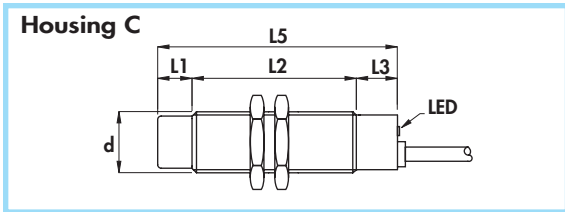
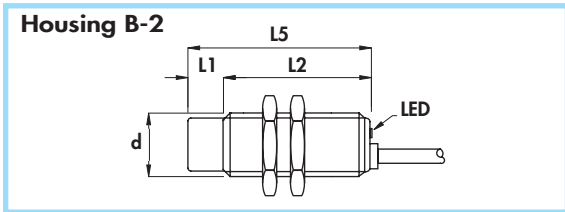
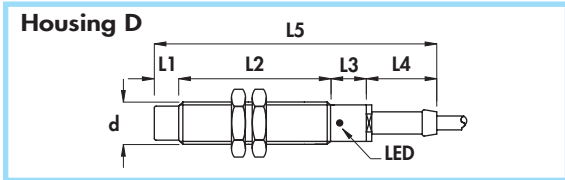
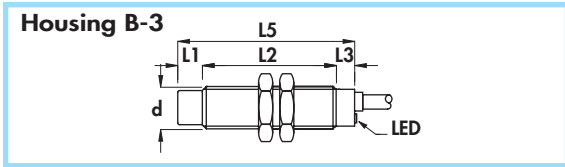
These sensors are able to work with either direct or alternate current. Voltage drop and residual current are very low. They are not polarized and the load can be connected on both the leads. In many applications they can be used to replace mechanical microswitches.

Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vdc/Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o) at 24 V: ≤ 1 mA
- Off-state current (I_o) at 220 V: $\leq 1,5$ mA
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_p : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f) in d.c.	Max switching frequency (f) in a.c.	Rated operational current (I_o)	Nominal sensing distance (S_p) $\pm 10\%$	ORDERING REFERENCES	
		mm	mm	mm	mm	mm							n°	mm
A-7	•	-	43	15	8	66	17-18	M12 x 1	800	25	100	2	AX12/4009KS	AX12/4019KS
A-7	•	7	36	15	8	66	17-18	M12 x 1	600	25	100	4	AX12/5009KS	AX12/5019KS
A-1	•	-	50	19	8	77	17-18	M18 x 1	800	25	200	5	AX18/4009KS	AX18/4019KS
A-1	•	10	50	19	8	87	17-18	M18 x 1	400	25	200	8	AX18/5009KS	AX18/5019KS
A-2	•	-	65	17	8	90	17-18	M30 x 1,5	400	25	200	10	AX30/4009KS	AX30/4019KS
A-2	•	15	50	17	8	90	17-18	M30 x 1,5	200	25	200	15	AX30/5009KS	AX30/5019KS

Diameters 12 - 18 mm •
 Amplified in a.c. 2 wires •
 Cable output •



Diameter	M12 x 1	M18 x 1
Nut	Size	SW17
	Thickness mm	4
Max tightening torque Nm	15	35

Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤1,5 mA at 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,35 mm² on 12 mm
0,50 mm² on 18 mm (Housing C)
0,75 mm² on 18 mm (Housing D - 1)

Materials:

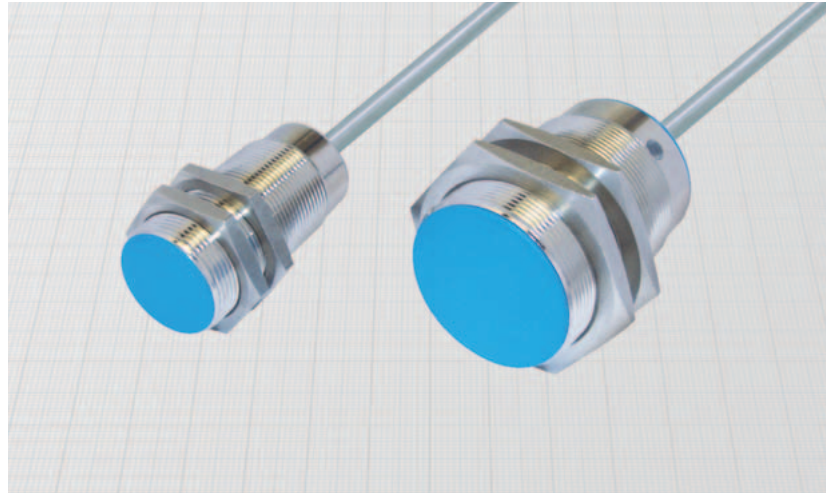
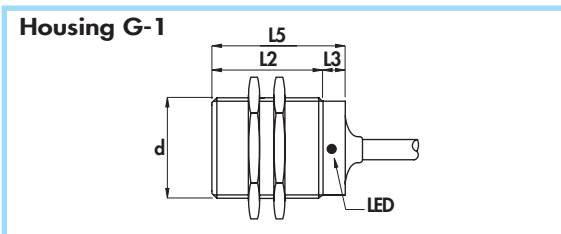
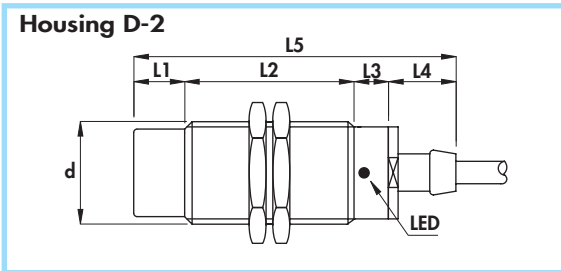
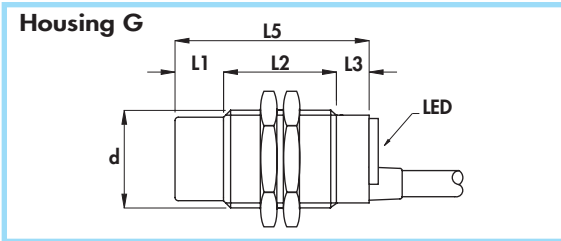
- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: nickel plated brass
- Sensing face: plastic

- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES	
												mm	mm
B - 3	•	-	43	7	-	50	4	M12 x 1	25	500	2	AC12/4609S	AC12/4619S
D	•	-	50	10	20	80	4	M12 x 1	25	500	2	AC12/4709S	AC12/4719S
B - 3	•	7	36	7	-	50	4	M12 x 1	25	500	4	AC12/5609S	AC12/5619S
D	•	7	43	10	20	80	4	M12 x 1	25	500	4	AC12/5709S	AC12/5719S
C	•	-	60	10	-	70	5	M18 x 1	25	500	5	AC18/4609S	AC18/4619S
B - 2	•	-	50	-	-	50	5	M18 x 1	25	500	5	AC18/4A09S	AC18/4A19S
D - 1	•	-	60	12	20	92	6	M18 x 1	25	500	5	AC18/4709S	AC18/4719S
B - 2	•	10	40	-	-	50	5	M18 x 1	25	500	8	AC18/5A09S	AC18/5A19S
D - 1	•	10	50	12	20	92	6	M18 x 1	25	500	8	AC18/5709S	AC18/5719S
C	•	10	50	10	-	70	5	M18 x 1	25	500	8	AC18/5609S	AC18/5619S

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Diameters 30 - 45 mm
- Amplified in a.c. 2 wires
- Cable output



Diameter	M30 x 1,5	M45 x 1,5
Nut	Size	SW17
	Thickness mm	5
Max tightening torque Nm	80	70

Materials:

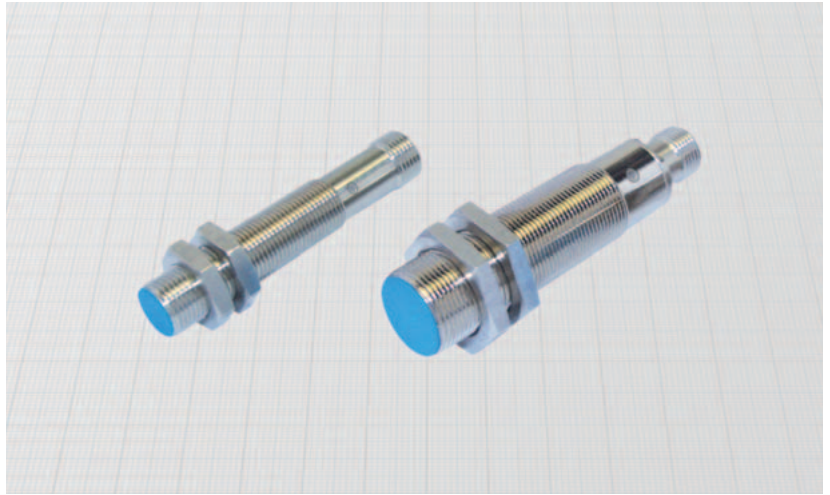
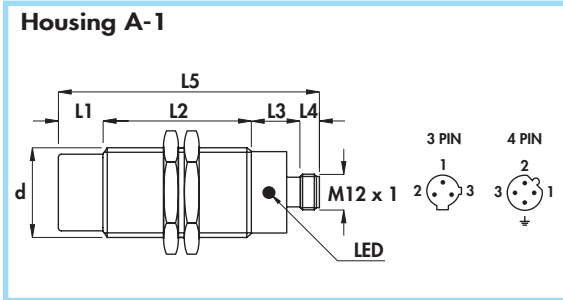
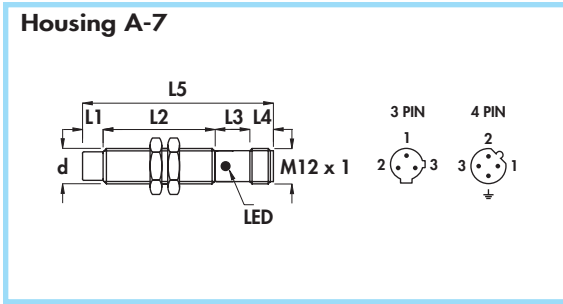
- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: nickel plated brass
- Sensing face: plastic

Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤ 1,5 mA at 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,75 mm²
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _o)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES			
		mm	mm	mm	mm	mm						mm	NO 	NC 	
G	•	-	50	10	-	60	6	M30 x 1,5	20	500	10	AC30/4609S	AC30/4619S		
D-2	•	-	65	10	20	95	6	M30 x 1,5	20	500	10			AC30/4709S	AC30/4719S
G	•	15	35	10	-	60	6	M30 x 1,5	20	500	15			AC30/5609S	AC30/5619S
D-2	•	15	50	10	20	95	6	M30 x 1,5	20	500	15	AC30/5709S	AC30/5719S		
G-1	•	-	50	10	-	60	6	M45 x 1,5	20	500	20	AC45/4609S	AC45/4619S		

Diameters 12 - 18 mm •
 Amplified in a.c. •
 Connector output M12 x 1 •



Diameter	M12 x 1	M18 x 1
Nut	Size	SW17
	Thickness mm	4
Max tightening torque Nm	15	35

Materials:

- Housing: nickel plated brass
- Sensing face: plastic

Technical data:

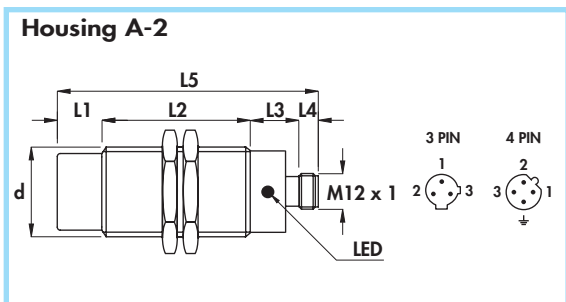
- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤ 1,5 mA at 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Suppression of initial false impulse
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _o)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES	
												4 PIN connector	
A - 7	•	-	43	15	8	66	15 - 16	M12 x 1	25	500	2		
A - 7	•	7	36	15	8	66	15 - 16	M12 x 1	25	500	4	AC12/4109S AC12/5109S	AC12/4119S AC12/5119S
A - 1	•	-	50	19	8	77	15 - 16	M18 x 1	25	500	5		
A - 1	•	10	50	19	8	87	15 - 16	M18 x 1	25	500	8	AC18/4109S AC18/5109S	AC18/4119S AC18/5119S

												3 PIN connector according to EN60947-5-2	
Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _o)	Nominal sensing distance (S _n) ± 10%	NO	NC
A - 7	•	-	43	15	8	66	17 - 18	M12 x 1	25	500	2		
A - 7	•	7	36	15	8	66	17 - 18	M12 x 1	25	500	4	AC12/4009S AC12/5009S	AC12/4019S AC12/5019S
A - 1	•	-	50	19	8	77	17 - 18	M18 x 1	25	500	5		
A - 1	•	10	50	19	8	87	17 - 18	M18 x 1	25	500	8	AC18/4009S AC18/5009S	AC18/4019S AC18/5019S

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Diameter 30 mm
- Amplified in a.c.
- Connector output M12 x 1



Diameter	M30 x 1,5	
Nut	Size	SW36
	Thickness mm	5
Max tightening torque Nm	80	



Materials:

- Housing: nickel plated brass
- Sensing face: plastic

Technical data:

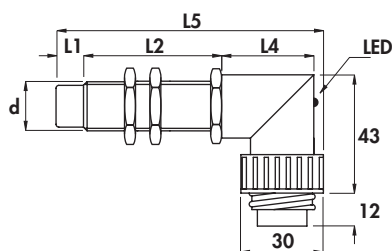
- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤ 1,5 mA a 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES	
												4 PIN connector	
A-2	•	-	65	17	8	90	15 - 16	M30 x 1,5	20	500	10		
A-2	•	15	50	17	8	90	15 - 16	M30 x 1,5	20	500	15	AC30/4109S AC30/5109S	AC30/4119S AC30/5119S

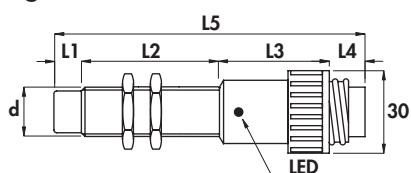
Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	3 PIN connector according to EN60947-5-2	
												3 PIN connector according to EN60947-5-2	
A-2	•	-	65	17	8	90	17 - 18	M30 x 1,5	20	500	10		
A-2	•	15	50	17	8	90	17 - 18	M30 x 1,5	20	500	15	AC30/4009S AC30/5009S	AC30/4019S AC30/5019S

Diameter 18 mm •
Amplified in a.c. •
Connector output C1 - C2 •

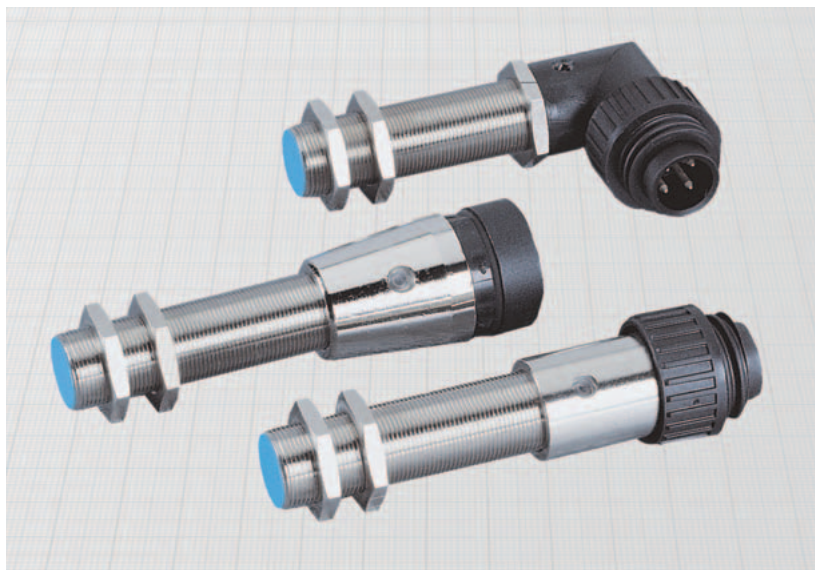
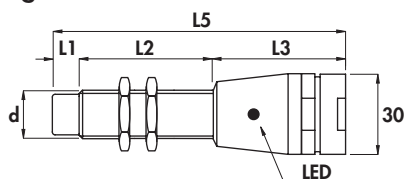
Housing M-1



Housing M-4



Housing M



Diameter	M18 x 1	
Nut	Size	SW24
	Thickness mm	4
Max tightening torque Nm	35	

Materials:

- Housing: nickel plated brass
- Sensing face and connector: plastic

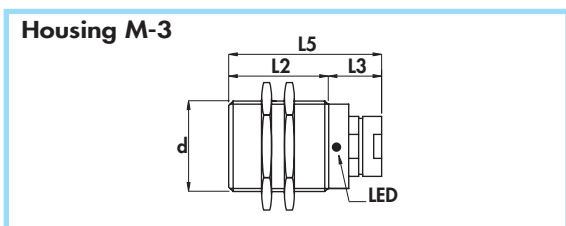
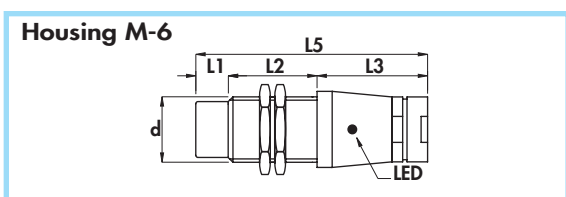
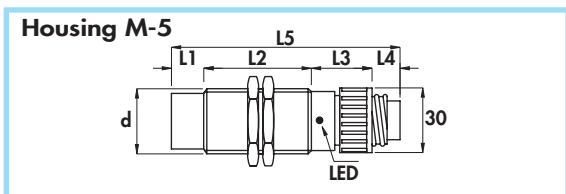
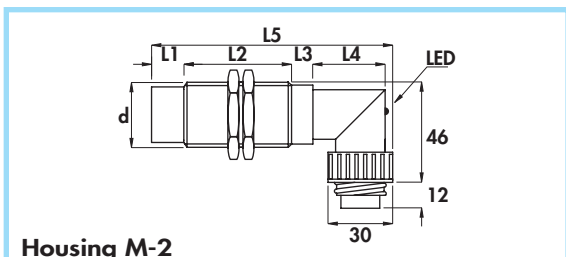
Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤ 1,5 mA at 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP65
- Switch status indicator: yellow LED
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Mounting Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _o)	Nominal sensing distance (S _r) ± 10%	ORDERING REFERENCES	
		mm	mm	mm	mm	mm						n°	mm
M-1	•	-	60	-	33	96	1	M18 x 1	25	500	5	AC18/4209S	AC18/4219S
M-4	•	-	60	40	13	113	1	M18 x 1	25	500	5	AC18/4409S	AC18/4419S
M-1	•	10	50	-	33	96	1	M18 x 1	25	500	8	AC18/5209S	AC18/5219S
M-4	•	10	50	40	13	113	1	M18 x 1	25	500	8	AC18/5409S	AC18/5419S
M	•	-	60	50	-	110	2	M18 x 1	25	500	5	AC18/4E09S	AC18/4E19S
M	•	10	50	50	-	110	2	M18 x 1	25	500	8	AC18/5E09S	AC18/5E19S

CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Diameters 30 - 45 mm
- Amplified in a.c.
- Connector output C1 - C2



Diameter	M30 x 1,5	M45 x 1,5
Nut	Size	SW36
	Thickness mm	5
Max tightening torque Nm	80	70

Materials:

- Housing: nickel plated brass
- Sensing face and connector: plastic

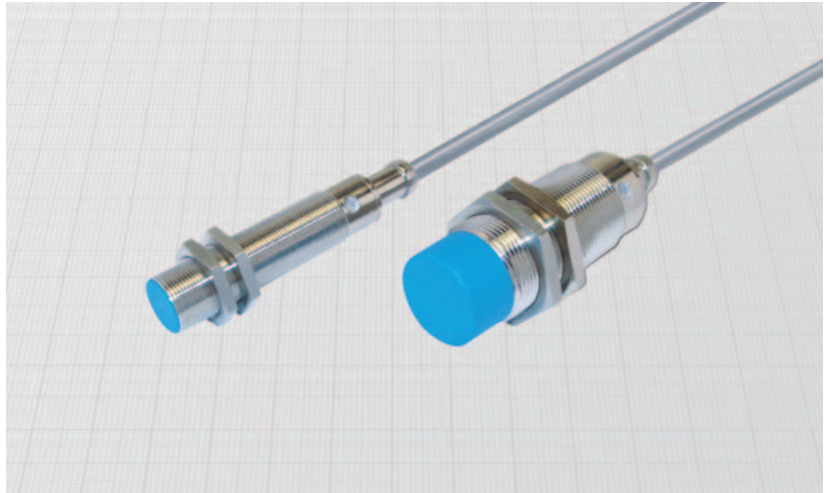
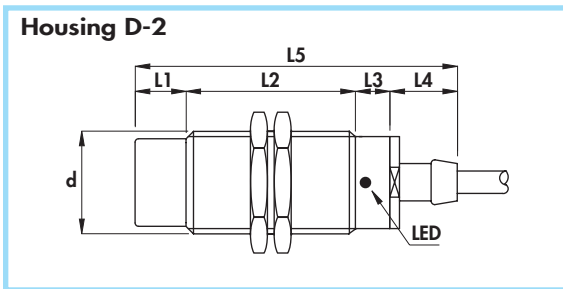
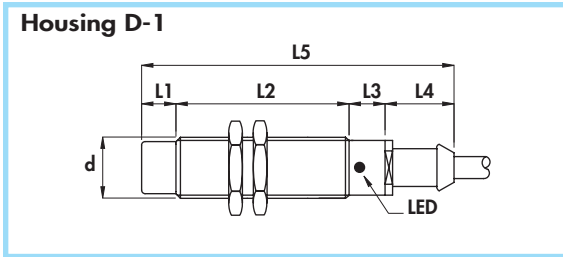
Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_f): ≤ 1,5 mA a 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP65
- Switch status indicator: yellow LED
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f ₁)	Rated operational current (I _e)	Nominal sensing dist. (S _n) ± 10%	ORDERING REFERENCES	
		mm	mm	mm	mm	mm						n°	mm
M-2	•	-	65	10	40	115	1	M30 x 1,5	20	500	10	AC30/4209S	AC30/4219S
M-5	•	-	65	28	13	106	1	M30 x 1,5	20	500	10	AC30/4409S	AC30/4419S
M-2	•	15	50	10	40	115	1	M30 x 1,5	20	500	15	AC30/5209S	AC30/5219S
M-5	•	15	50	28	13	106	1	M30 x 1,5	20	500	15	AC30/5409S	AC30/5419S
M-2	•	-	50	10	42	102	1	M45 x 1,5	20	500	20	AC45/4209S	AC45/4219S

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Female connector	Body diameter (d)	Max switching frequency (f ₁)	Rated operational current (I _e)	Nominal sensing dist. (S _n) ± 10%	ORDERING REFERENCES	
		mm	mm	mm	mm	mm						n°	mm
M-6	•	-	56	51	-	107	2	M30 x 1,5	20	500	10	AC30/4E09S	AC30/4E19S
M-6	•	15	41	51	-	107	2	M30 x 1,5	20	500	15	AC30/5E09S	AC30/5E19S
M-3	•	-	50	28	-	78	2	M45 x 1,5	20	500	20	AC45/4E09S	AC45/4E19S

ACB SERIES •
Amplified in a.c. 3 wires + earth •
Cable output •



Diameter		M18 x 1	M30 x 1,5
Nut	Size	SW24	SW36
	Thickness mm	4	5
Max tightening torque Nm		35	80

Materials:

- Cable: 2 m PVC
- Housing: nickel plated brass
- Sensing face: plastic

General Features:

These sensors have two wires for power supply and one for the output. They are able to drive very low current loads such as some kind of PLC with A.C. inputs.

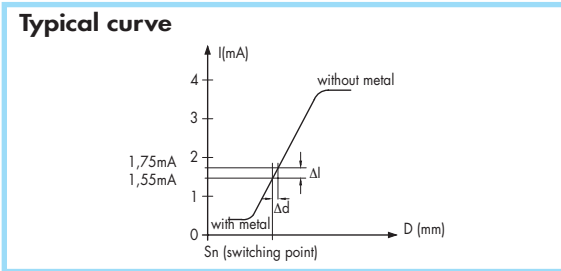
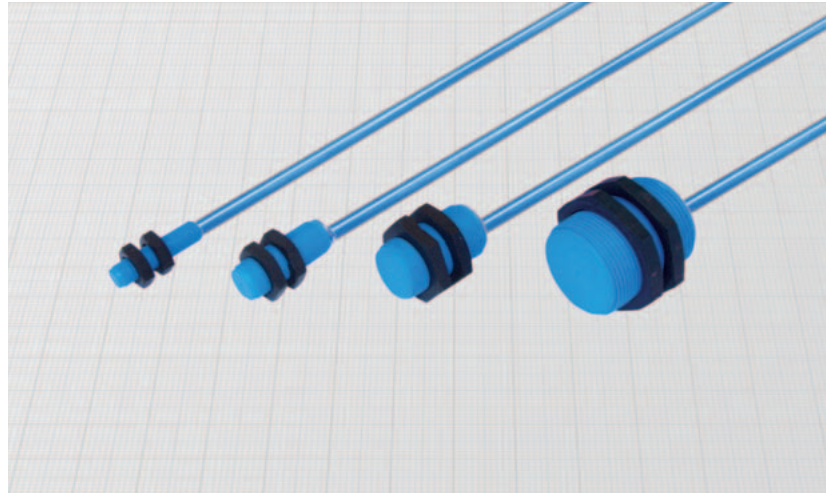
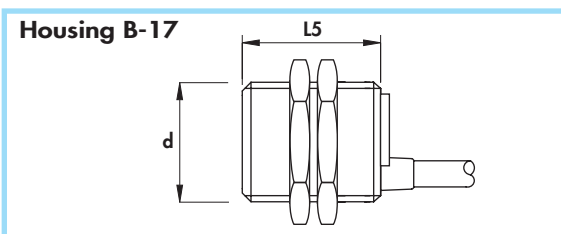
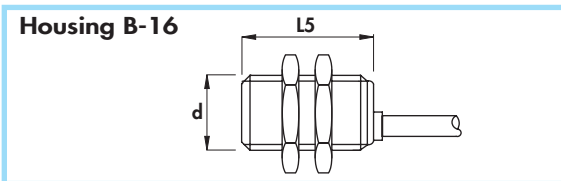
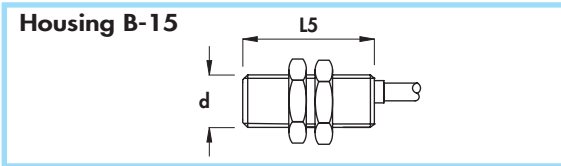
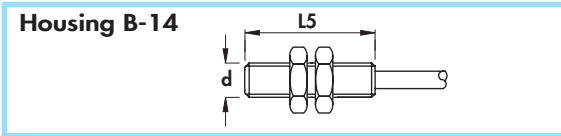
Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- No-load supply current (I_0): ≤ 4 mA
- Minimum operational current (I_m): 0,5 mA
- Voltage drop (U_d): ≤ 3 V
- Temperature range: -20° ÷ +70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,75 mm²
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _o)	Nominal sensing distance (S _r) ± 10%	ORDERING REFERENCES		
												mm	mm	mm
D - 1	•	-	60	12	20	92	6	M18 x 1	20	250	5		ACB18/4709S ACB18/5709S	ACB18/4719S ACB18/5719S
D - 1		10	50	12	20	92	6	M18 x 1	20	250	8		ACB30/4709S ACB30/5709S	ACB30/4719S ACB30/5719S
D - 2	•	-	65	10	20	95	6	M30 x 1,5	20	250	10			
D - 2	•	15	50	10	20	95	6	M30 x 1,5	20	250	15			

CYLINDRICAL INDUCTIVE SENSORS IN PLASTIC HOUSING

- **NAMUR SERIES**
- **Non-amplified in d.c. 2 wires**
- **Cable output**



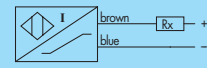
Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size SW13	SW17	SW24	SW36
	Thickness mm 4	4	4	5
Max tightening torque Nm	1	1	5	20

- Materials:**
- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
 - Housing: plastic
 - Sensing face: plastic

Technical data:

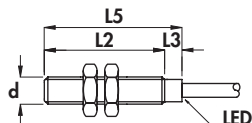
- Working voltage: 5 ÷ 30 Vdc
- Supply voltage according to NAMUR: 7,7 ÷ 9 Vdc
- Max ripple: 10%
- Consumption at 8,2 V con Rx = 1000 Ω
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_n: ± 10%
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- Cable conductor cross section:
 - 0,35 mm² on 8 and 12 mm
 - 0,75 mm² on 18 and 30 mm
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES
		mm	mm	mm	mm	mm					
B-14	•	-	-	-	-	30	4	M8 x 1	5	1,5	DC8P/4600 DC8P/5600
B-14	•	-	-	-	-	30	4	M8 x 1	3	2,5	
B-15	•	-	-	-	-	30	4	M12 x 1	5	2	DC12P/4600 DC12P/5600
B-15	•	-	-	-	-	30	4	M12 x 1	1	4	
B-16	•	-	-	-	-	30	5	M18 x 1	1	5	DC18P/4600 DC18P/5600
B-16	•	-	-	-	-	30	5	M18 x 1	0,5	8	
B-17	•	-	-	-	-	35	5	M30 x 1,5	0,3	10	DC30P/4600 DC30P/5600
B-17	•	-	-	-	-	35	5	M30 x 1,5	0,2	15	

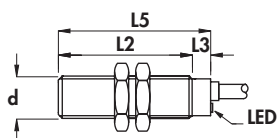


Diameters 8 - 12 - 18 mm •
 Amplified in d.c. 3 and 4 wires •
 Cable output •

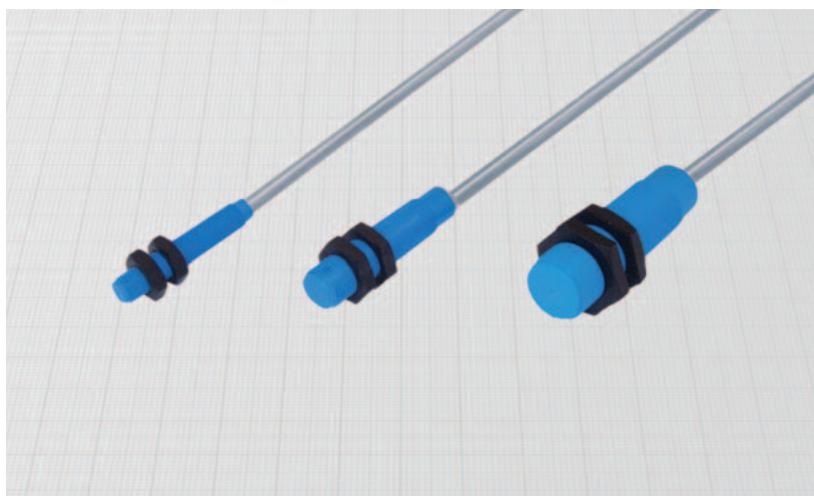
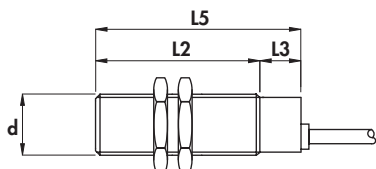
Housing B-18



Housing B-19



Housing C-1



Diameter	M8 x 1	M12 x 1	M18 x 1
Nut	Size	SW13	SW17
	Thickness mm	4	4
Max tightening torque Nm	1	1	5

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Sensing face: plastic

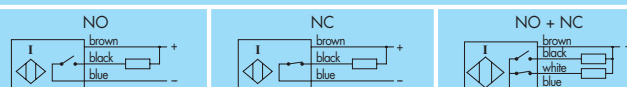
Technical data:

- Supply voltage (U_B): see ordering references
 - Max ripple: 10%
 - No-load supply current (I_0): ≤ 10 mA
 - Voltage drop (U_d): on 8 and 12 mm $\leq 1,5$ V
 - Temperature range: on 18 mm $\leq 2,2$ V
 - Max thermal drift of sensing distance S_T : $-25^\circ \div +70^\circ\text{C}$
 - Repeat accuracy (R): $\pm 10\%$
 - Switching hysteresis (H): 2%
 - Degree of protection: 10%
 - Switch status indicator: IP67
 - Cable conductor cross section: yellow LED
 - 0,22 mm² on 8 mm
 - 0,35 mm² on 12 mm
 - 0,50 mm² on 18 mm
- Protected against short-circuit and overload
 - Protected against any wrong connection
 - Suppression of initial false impulse
 - Electromagnetic compatibility (EMC) according to EN60947-5-2
 - Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Mounting Flush mounting Non flush mounting	L2	L3	L5	Cable diameter	Body diameter (d)	Supply di alimentazione (U_B)	Max switching frequency (f)	Rated operational current (I_0)	Nominal sensing distance ($S_n \pm 10\%$)	ORDERING REFERENCES		
											V (min-max)	KHz	mA
B-18	•	40	7	47	3,5	M8 x 1	7÷30	4	200	1,5	DCA8P/4609KS	DCA8P/4619KS	DCA8P/4629KS
B-18	•	40	7	47	3,5	M8 x 1	7÷30	3	200	2,5	DCA8P/5609KS	DCA8P/5619KS	DCA8P/5629KS
B-19	•	42	8	50	4	M12 x 1	5÷40	2	200	2	DCA12P/4609KS	DCA12P/4619KS	DCA12P/4629KS
B-19	•	42	8	50	4	M12 x 1	5÷40	1,5	200	4	DCA12P/5609KS	DCA12P/5619KS	DCA12P/5629KS
C-1	•	50	10	60	5	M18 x 1	5÷60	1	400	5	DCA18P/4609KS	DCA18P/4619KS	DCA18P/4629KS
C-1	•	50	10	60	5	M18 x 1	5÷60	1	400	8	DCA18P/5609KS	DCA18P/5619KS	DCA18P/5629KS

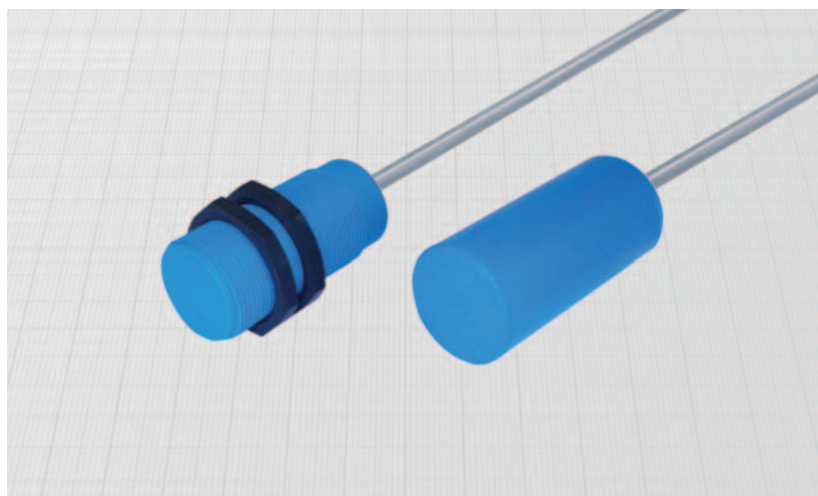
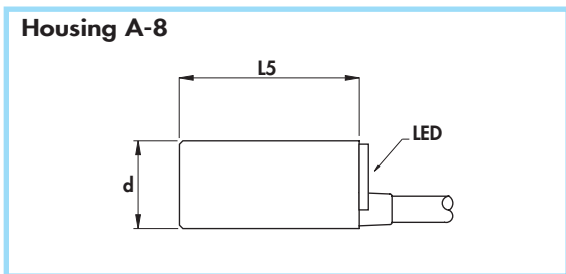
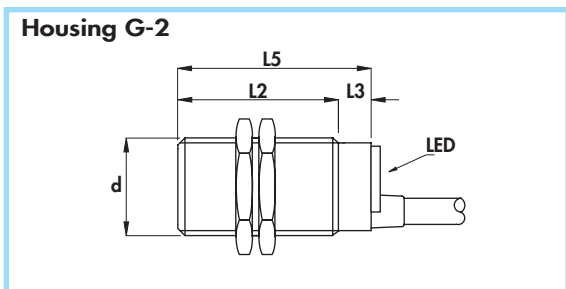
NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie. DCA8P/4608KS)



CYLINDRICAL INDUCTIVE SENSORS IN PLASTIC HOUSING

- Amplified in d.c. 3 or 4 wires
- Diameters 30 - 34 mm
- Cable output



Diameter	M30 x 1,5	
Nut	Size	SW36
	Thickness mm	5
Max tightening torque Nm	20	

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Sensing face: plastic

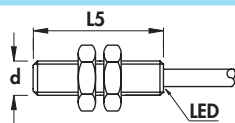
Technical data:

- Supply voltage (U_B): 7 ÷ 60 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 2,2 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,50 mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

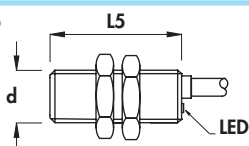
Housing	Mounting	L2	L3	L5	Cable diameter	Body diameter (d)	Max switching frequency (F)	Rated operational current (I_e)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES		
										PNP (positive switching)		
G-2	Flush mounting	50	10	60	6	M30 x 1,5	0,8	400	10			
G-2	Non flush mounting	50	10	60	6	M30 x 1,5	0,4	400	15	DCA30P/4609KS	DCA30P/4619KS	DCA30P/4629KS
										DCA30P/5609KS	DCA30P/5619KS	DCA30P/5629KS
A-8		-	-	70	6	34	0,2	400	20	DCA34P/5609LKS	DCA34P/5619LKS	DCA34P/5629LKS
										NPN (negative switching)		
										Use the above mentioned part number changing the last number 9 with 8 (ie. DCA30P/4608KS)		

SHORT SERIES • Amplified in d.c. 3 wires • Cable output •

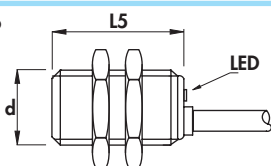
Housing B-14



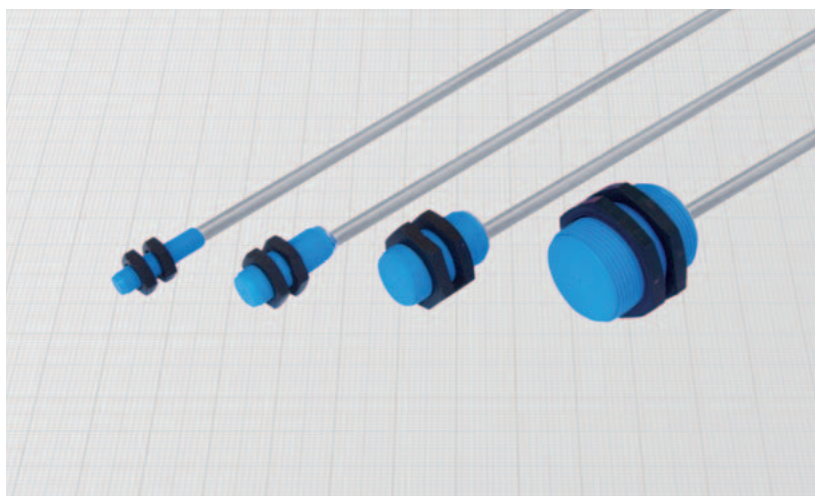
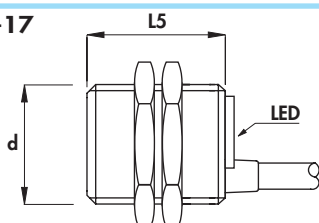
Housing B-15



Housing B-16



Housing B-17



Diameter	M8 x 1	M12 x 1	M18 x 1	M30 x 1,5	
Nut	Size	SW13	SW17	SW24	SW36
	Thickness mm	4	4	4	5
Max tightening torque Nm	1	1	5	20	

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Sensing face: plastic

Technical data:

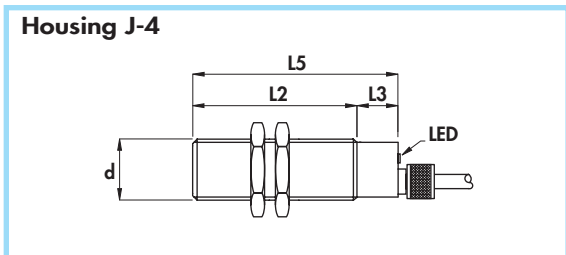
- Supply voltage (U_B): see ordering references
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 1,5$ V
- Temperature range: $-25^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_r : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,22 mm² on 8 mm
0,35 mm² on 12 mm
0,50 mm² on 18 and 30 mm

- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Supply di alimentazione (U_B)	Max switching frequency (f)	Rated operational current (I_e)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES	
													PNP (positive switching)	
		mm	mm	mm	mm	mm	mm	mm	V (min - max)	KHz	mA	mm		
B-14	•	-	-	-	-	30	3,5	M8 x 1	7 ÷ 30	4	200	1,5	DSA8P/4609KS	DSA8P/4619KS
B-14	•	-	-	-	-	30	3,5	M8 x 1	7 ÷ 30	3	200	2,5	DSA8P/5609KS	DSA8P/5619KS
B-15	•	-	-	-	-	30	4	M12 x 1	7 ÷ 30	2	200	2	DSA12P/4609KS	DSA12P/4619KS
B-15	•	-	-	-	-	30	4	M12 x 1	7 ÷ 30	1,5	200	4	DSA12P/5609KS	DSA12P/5619KS
B-16	•	-	-	-	-	30	5	M18 x 1	5 ÷ 40	0,8	200	5	DSA18P/4609KS	DSA18P/4619KS
B-16	•	-	-	-	-	30	5	M18 x 1	5 ÷ 40	0,6	200	8	DSA18P/5609KS	DSA18P/5619KS
B-17	•	-	-	-	-	35	6	M30 x 1,5	7 ÷ 40	0,8	200	10	DSA30P/4609KS	DSA30P/4619KS
B-17	•	-	-	-	-	35	6	M30 x 1,5	7 ÷ 40	0,4	200	15	DSA30P/5609KS	DSA30P/5619KS
													NPN (negative switching)	
Use the above mentioned part number changing the last number 9 with 8 (ie. DSA8P/4608KS)														
		mm	mm	mm	mm	mm	mm	mm	V (min - max)	KHz	mA	mm		

CYLINDRICAL INDUCTIVE SENSORS IN PLASTIC HOUSING

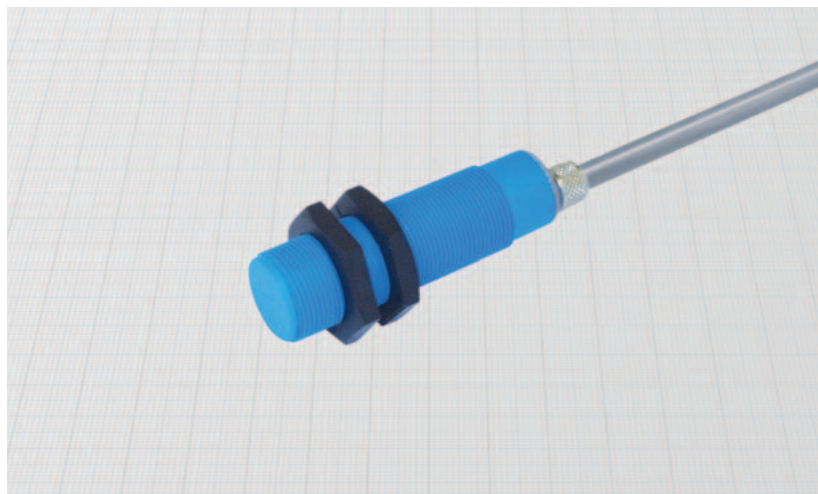
- Degree of protection IP68
- Amplified in d.c. 3 and 4 wires
- Cable output



Diameter	M18 x 1	
Nut	Size	SW24
	Thickness mm	4
Max tightening torque Nm	5	

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Gland: nickel plated brass
- Sensing face: plastic



General Features:

This new series solves definitively the problem of the ingress of liquids to the inner parts of the sensors. Thanks to the inner hermetic sealing they can be submitted to no-stop jets of liquids under pressure even in presence of temperature changes. They find application in automatic washing machinery, in machines subject to water jets and in continuous immersion applications.

Technical data:

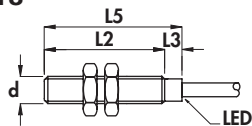
- Supply voltage (U_B): 5 ÷ 60 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): 2,2 V
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP68
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,50 mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	L2	L3	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _o)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES		
										PNP (positive switching)		
										NO	NC	NO + NC
J-4	•	50	10	60	5	M18 x 1	1	400	5	DCA18P/4609KSJ	DCA18P/4619KSJ	DCA18P/4629KSJ
J-4	•	50	10	60	5	M18 x 1	1	400	8	DCA18P/5609KSJ	DCA18P/5619KSJ	DCA18P/5629KSJ
										NPN (negative switching)		
										Use the above mentioned part number changing the last number 9 with 8 (ie. DCA18P/4608KSJ)		
										NO	NC	NO + NC

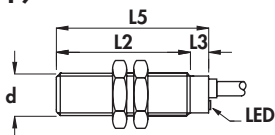
Amplified in a.c. 2 wires •

Cable output •

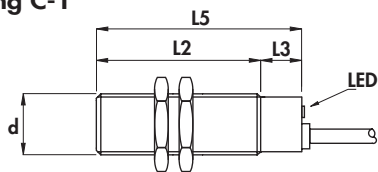
Housing B-18



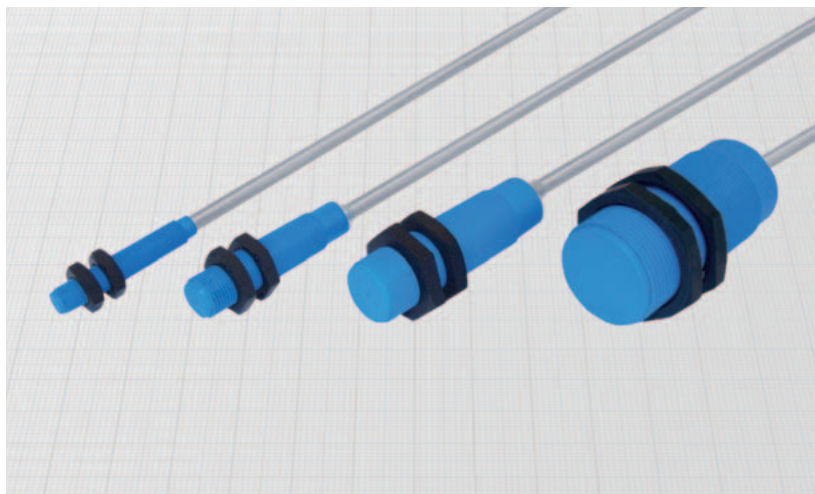
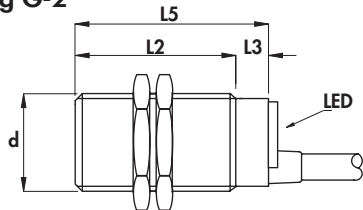
Housing B-19



Housing C-1



Housing G-2



Diameter		M8 x 1	M12 x 1	M18 x 1	M30 x 1,5
Nut	Size	SW13	SW17	SW24	SW36
	Thickness mm	4	4	4	5
Max tightening torque Nm		1	1	5	20

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Sensing face: plastic

Technical data:

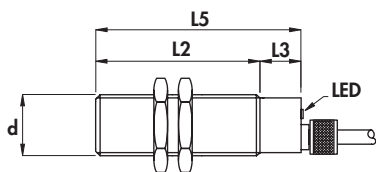
- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤ 1,5 mA at 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,35 mm² on 8 and 12 mm
0,50 mm² on 18 mm
0,75 mm² on 30 mm
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _o)	Nominal sensing distance (S _r) ± 10%	ORDERING REFERENCES	
												mm	mm
B-18	•	-	40	7	-	47	4	M8 x 1	25	100	1,5	AC8P/4609S	AC8P/4619S
B-18	•	-	40	7	-	47	4	M8 x 1	25	100	2,5	AC8P/5609S	AC8P/5619S
B-19	•	-	42	8	-	50	4	M12 x 1	25	500	2	AC12P/4609S	AC12P/4619S
B-19	•	-	42	8	-	50	4	M12 x 1	25	500	4	AC12P/5609S	AC12P/5619S
C-1	•	-	50	10	-	60	5	M18 x 1	25	500	5	AC18P/4609S	AC18P/4619S
C-1	•	-	50	10	-	60	5	M18 x 1	25	500	8	AC18P/5609S	AC18P/5619S
G-2	•	-	50	10	-	60	6	M30 x 1,5	25	500	10	AC30P/4609S	AC30P/4619S
G-2	•	-	50	10	-	60	6	M30 x 1,5	25	500	15	AC30P/5609S	AC30P/5619S

CYLINDRICAL INDUCTIVE SENSORS IN PLASTIC HOUSING

- Degree of protection IP68
- Amplified in a.c. 2 wires
- Cable output

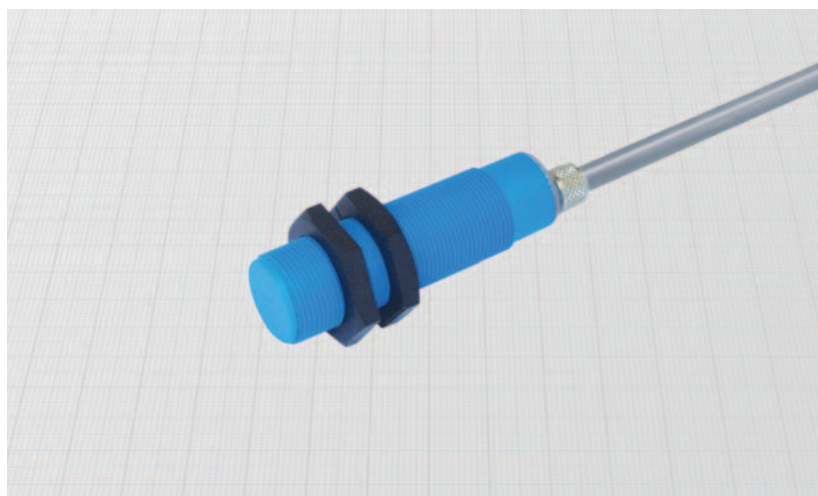
Housing J-4



Diameter		M18 x 1
Nut	Size	SW24
	Thickness mm	4
Max tightening torque Nm		5

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Gland: nickel plated brass
- Sensing face: plastic



General Features:

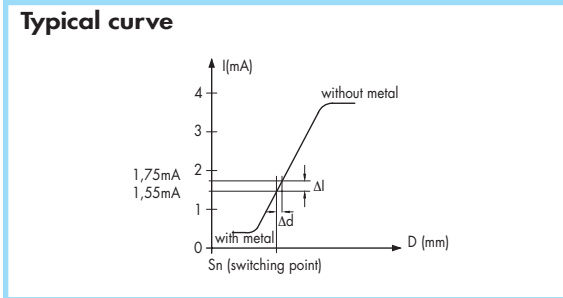
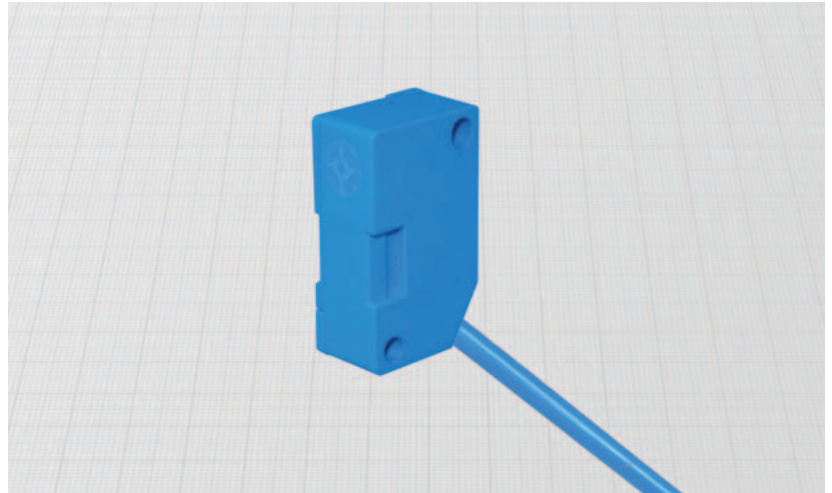
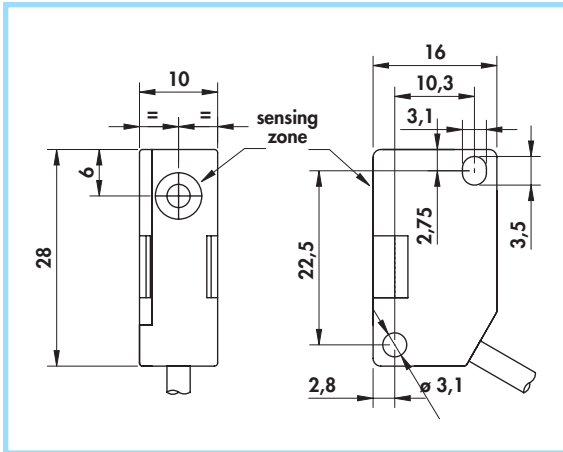
This new series solves definitively the problem of the ingress of liquids to the inner parts of the sensors. Thanks to the inner hermetic sealing they can be submitted to no-stop jets of liquids under pressure even in presence of temperature changes. They find application in automatic washing machinery, in machines subject to water jets and in continuous immersion applications.

Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤ 1,5 mA at 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_p : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP68
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,50 mm²
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Housing	Flush mounting Non flush mounting	L1	L2	L3	L4	L5	Cable diameter	Body diameter (d)	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES			
		mm	mm	mm	mm	mm						mm	Hz	mA	mm
J-4	•	-	50	10	-	60	5	M18 x 1	25	500	5			AC18P/4609SJ	AC18P/4619SJ
J-4	•	-	50	10	-	60	5	M18 x 1	25	500	8			AC18P/5609SJ	AC18P/5619SJ

NAMUR SERIES - Type Z •
Non-amplified in d.c. 2 wires •
 Cable output •



Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic

General Features:

This sensor has the same shape and fixing holes as V3 standard microswitches. The particular cable position allows the mounting on every side of the housing.

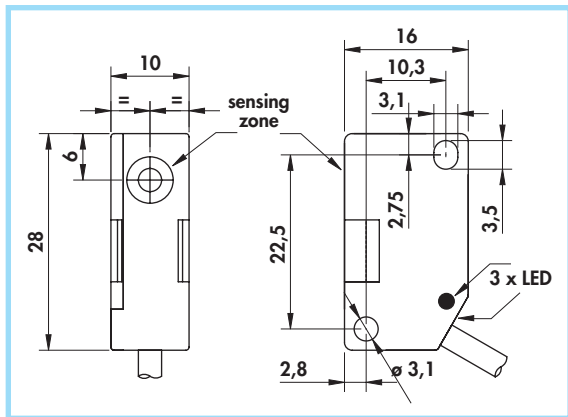
Technical data:

- Working voltage: $5 \div 30$ Vdc
- Supply voltage according to NAMUR: $7,7 \div 9$ Vdc
- Max ripple: 10%
- Consumption at 8,2 V con $R_x = 1000 \Omega$
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: $-25^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_r : $\pm 10\%$
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- Cable conductor cross section: $0,15 \text{ mm}^2$
- According to EN 60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX versions see ATEX Catalogue

Flush mounting Non flush mounting	Cable diameter	Sensing zone diameter	Max switching frequency (f)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES
	mm	mm	KHz	mm	
•	3	9	2	2	DCZ/4600
•	3	9	1	4	DCZ/5600

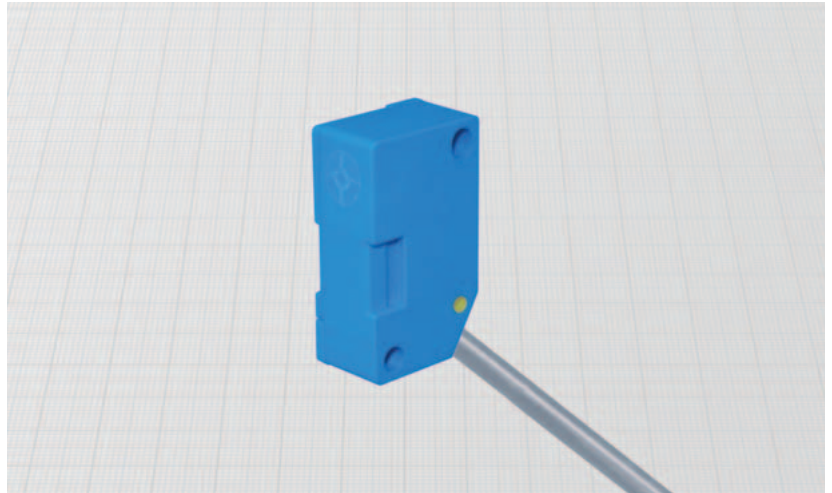
RECTANGULAR INDUCTIVE SENSORS

- **Type Z**
- **Amplified in d.c. 3 wires**
- **Cable output**



Materials:


- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic

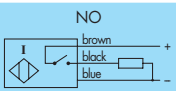
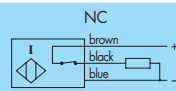
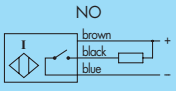
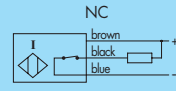


General Features:

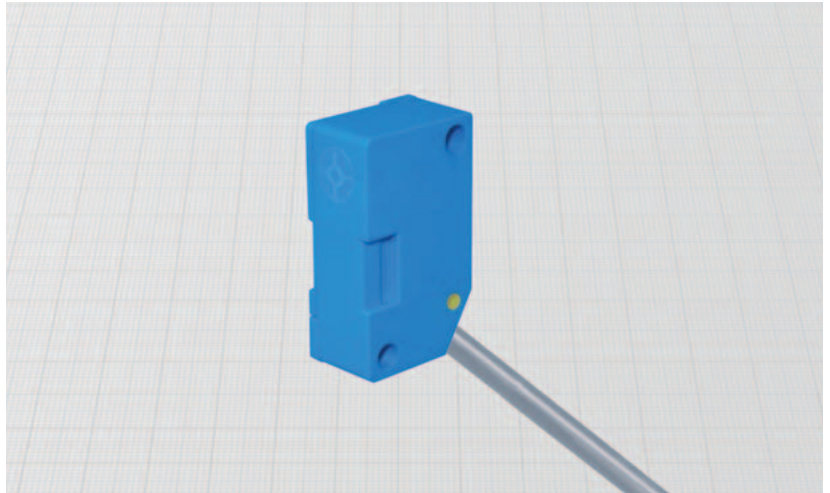
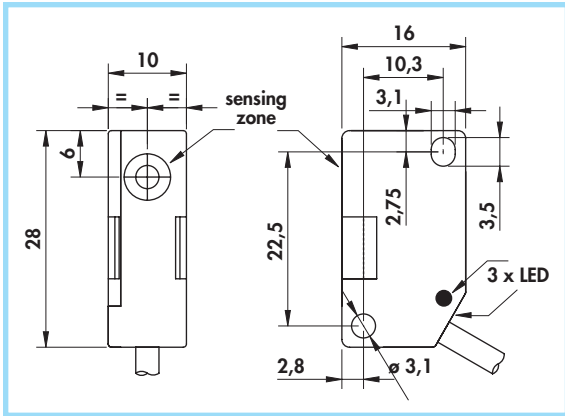
This sensor has the same shape and fixing holes as V3 standard microswitches. The particular cable position allows the mounting on every side of the housing. The output status is indicated by LED visible from 3 sides.

Technical data:

- Supply voltage (U_B): 7 ÷ 30 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 1,5 V
- Temperature range: - 25° ÷ + 75°C
- Max thermal drift of sensing distance S_s : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,15 mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2 
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Mounting	Cable diameter	Sensing zone diameter	Rated operational current (I_e)	Max switching frequency (f)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES	
						PNP (positive switching)	
Flush mounting Non flush mounting	mm	mm	mA	KHz	mm		
	• 3	9	200	2	2	DCAZ/4609KS	DCAZ/4619KS
• 3	9	200	200	1,5	4	DCAZ/5609KS	DCAZ/5619KS
						NPN (negative switching)	
						Use the above mentioned part number changing the last number 9 with 8 (ie. DCAZ/4608KS)	
							

Type Z •
Amplified in d.c. 2 wires non polarized •
Cable output •



Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic

General Features:

These sensors are not polarized and the load can be connected on both positive and negative lead (function PNP or NPN). So they can replace traditional mechanical microswitches in many applications. They have shape and fixing holes as V3 standard microswitches. The particular cable position allows the mounting on every side of the housing. The output status is indicated by LED visible from 3 sides.

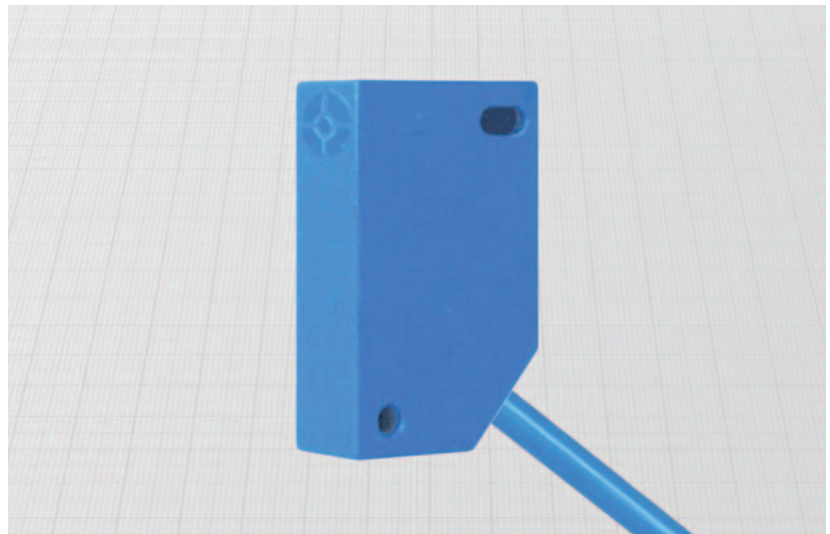
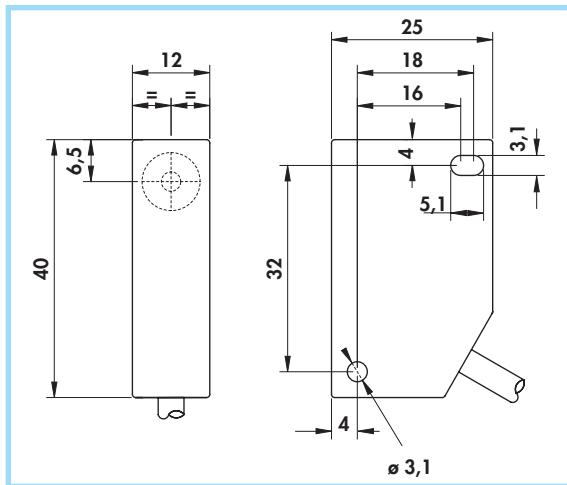
Technical data:

- Supply voltage (U_B): 10 ÷ 48 Vdc
- Max ripple: 10%
- Off-state current (I_o): ≤ 1 mA
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d) con $I_e = 10$ mA: ≤ 5 V
- Voltage drop (U_d) con $I_e = 100$ mA: ≤ 6 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,35 mm²
- Protected against short-circuit and overload
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

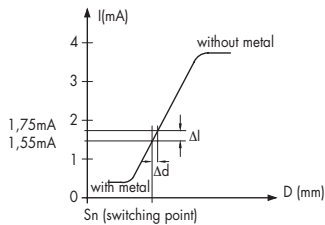
Flush mounting Non flush mounting	Cable diameter	Sensing zone diameter	Rated operational current (I_e)	Max switching frequency (f)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES	
						NO	NC
•	4 mm	9 mm	100 mA	2 KHz	2 mm	DCMZ/4600KS	DCMZ/4610KS
•	4 mm	9 mm	100 mA	1,5 KHz	4 mm	DCMZ/5600KS	DCMZ/5610KS

RECTANGULAR INDUCTIVE SENSORS

- **NAMUR SERIES - Type T**
- **Non-amplified in d.c. 2 wires**
- **Cable output**




Typical curve




Materials:

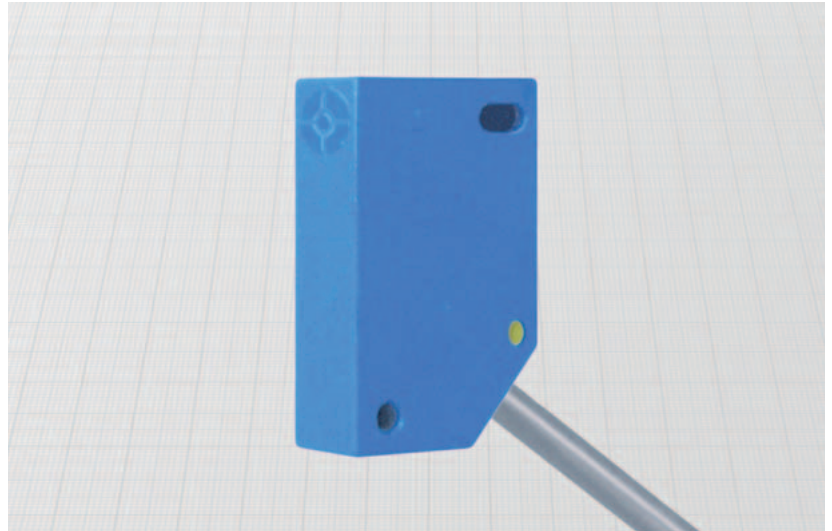
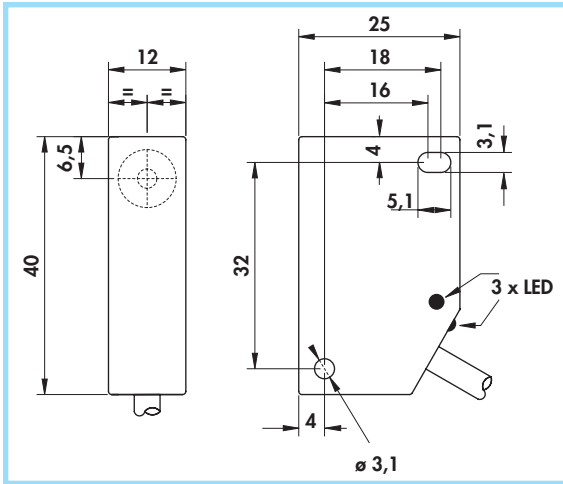
- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic

Technical data:

- Working voltage: $5 \div 30$ Vdc
- Supply voltage according to NAMUR: $7,7 \div 9$ Vdc
- Max ripple: 10%
- Consumption at 8,2 V with $R_x = 1000 \Omega$
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: $-25^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_s : $\pm 10\%$
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- Cable conductor cross section: $0,35 \text{ mm}^2$
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2 
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Flush mounting Non flush mounting	Cable diameter	Sensing zone diameter	Max switching frequency (f)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES 
	mm	mm	KHz	mm	
•	4	9	1	2	DCT/4700
•	4	9	0,8	4	DCT/5700

Type T •
Amplified in d.c. 3 and 4 wires •
Cable output •



Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic

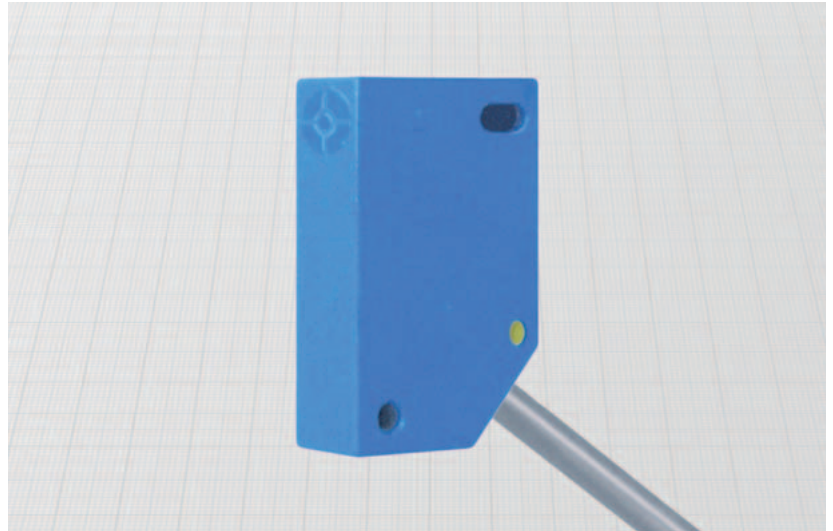
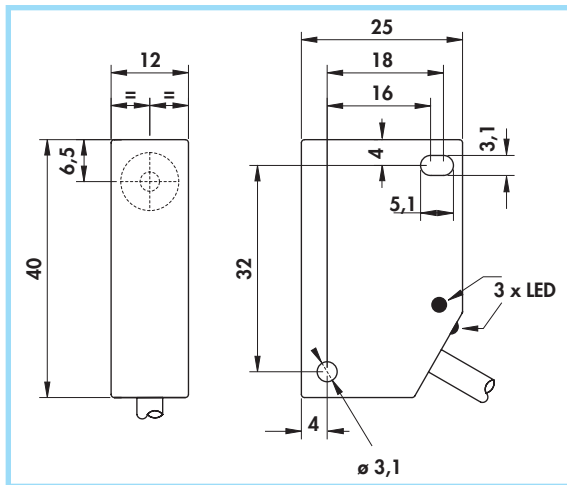
Technical data:

- Supply voltage (U_B): 5 ÷ 40 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 1,5 V
- Temperature range: -25° ÷ +75°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,25 mm² on 4 wires versions
0,35 mm² on 3 wires versions
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Montaggio a filo Montaggio sporgente	Cable diameter mm	Sensing pzone diameter mm	Max switching frequency (f) KHz	Rated operational current (I _e) mA	Nominal sensing distance (S _n) ± 10% mm	ORDERING REFERENCES		
						PNP (positive switching)		
•	4	9	1	200	2	DCAT/4709KS	DCAT/4719KS	DCAT/4729KS
•	4	9	0,8	200	4	DCAT/5709KS	DCAT/5719KS	DCAT/5729KS
						NPN (negative switching)		
						Use the above mentioned part number changing the last number 9 with 8 (ie. DCAT/4708KS)		

RECTANGULAR INDUCTIVE SENSORS

- **Type T**
- **Amplified in a.c. 2 wires**
- Cable output



Materials:

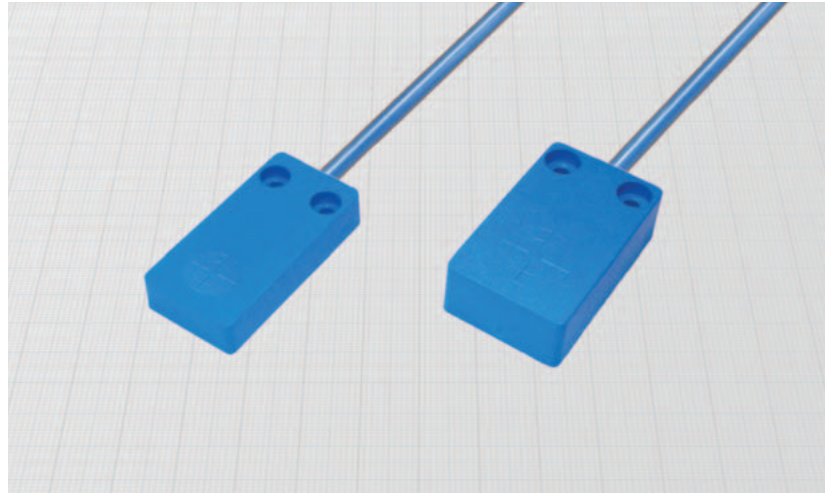
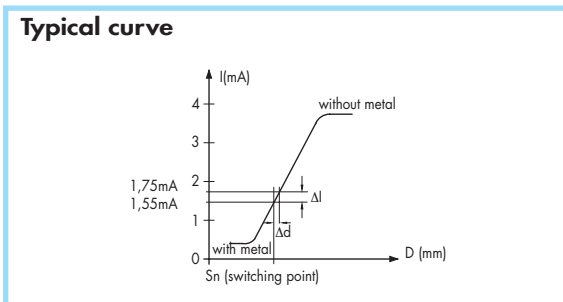
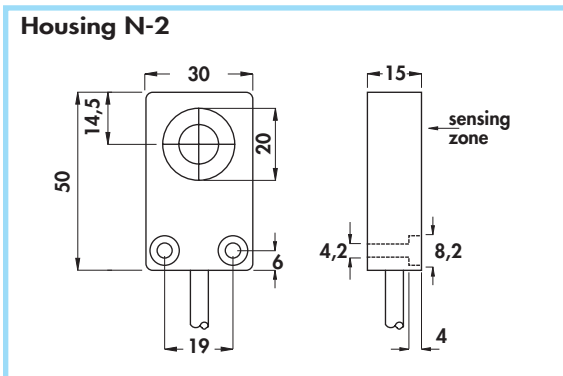
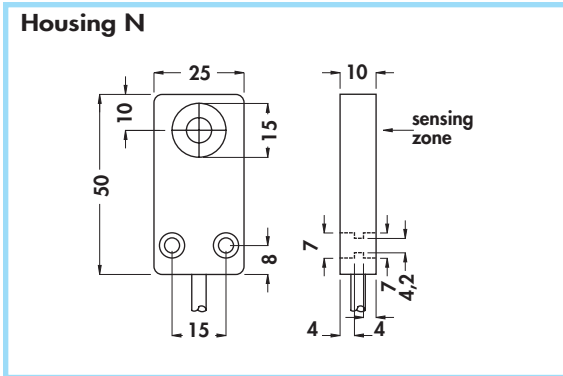
- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic

Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤ 1,5 mA a 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_s : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,35 mm²
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Flush mounting Non flush mounting	Cable diameter	Sensing pzone diameter	Max switching frequency (f)	Rated operational current (I_e)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES	
	mm	mm	Hz	mA	mm	NO 	NC
•	4	9	25	500	2	ACT/4709S	ACT/4719S
•	4	9	25	500	4	ACT/5709S	ACT/5719S

NAMUR SERIES - Type X and Y •
Non-amplified in d.c. 2 wires •
Cable output •



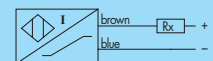
Materials:

- Cable: 2m PVC - CEI 2022 II- 90°C 300V.O.R.
- Housing: plastic

Technical data:

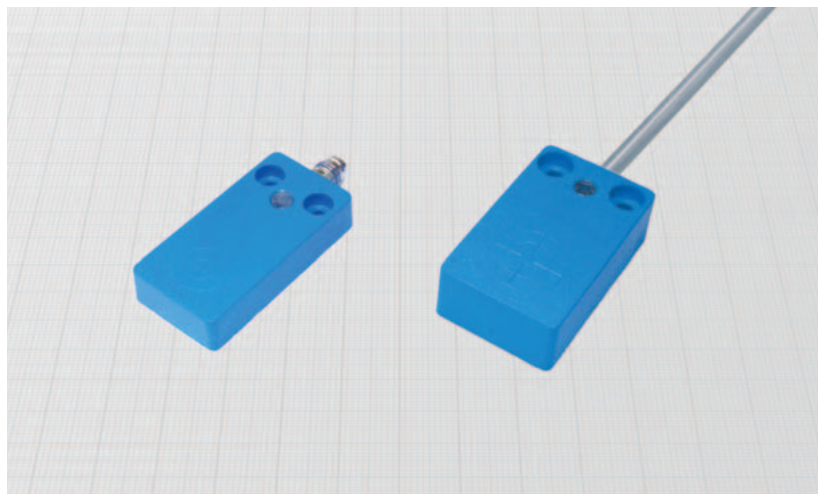
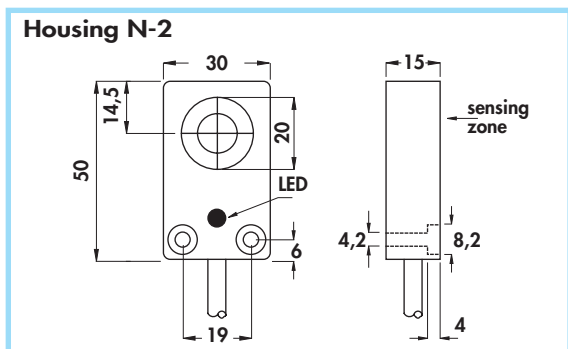
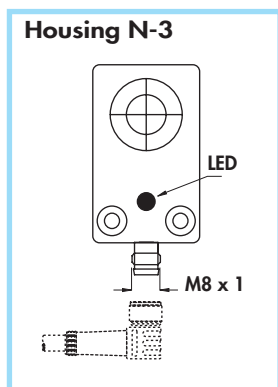
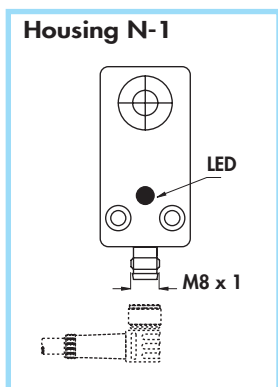
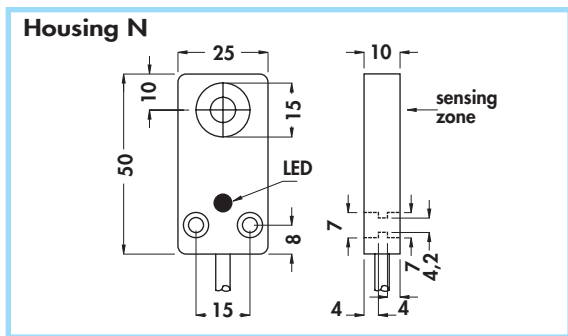
- Working voltage: $5 \div 30$ Vdc
- Supply voltage according to NAMUR: $7,7 \div 9$ Vdc
- Max ripple: 10%
- Consumption at 8,2 V con $R_x = 1000 \Omega$
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: $-25^\circ \div +70^\circ$ C
- Max thermal drift of sensing distance S_r : $\pm 10\%$
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- Cable conductor cross section: $0,75$ mm²
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Housing	Montaggio a filo	Montaggio sporgente	Cable diameter	Sensing zone diameter	Max switching frequency (f)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES
			mm	mm	KHz	mm	
Z	•	•	5	15	2	5	DCX/4700 DCX/5700
			5	15	1	8	
N-2	•	•	5	23	0,8	10	DCY/4700 DCY/5700
			5	23	0,4	15	



RECTANGULAR INDUCTIVE SENSORS

- Type X and Y
- Amplified in d.c. 3 and 4 wires
- Cable and connector output M8 x 1



Technical data:

- Supply voltage (U_b): $5 \div 60$ Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 2,2$ V
- Temperature range: $-25^\circ \div +75^\circ$ C
- Max thermal drift of sensing distance S_r : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section (cable version): $0,50$ mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

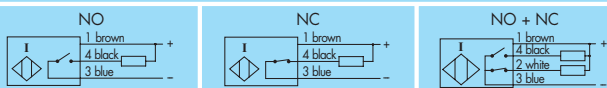
Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Connector: nickel plated brass

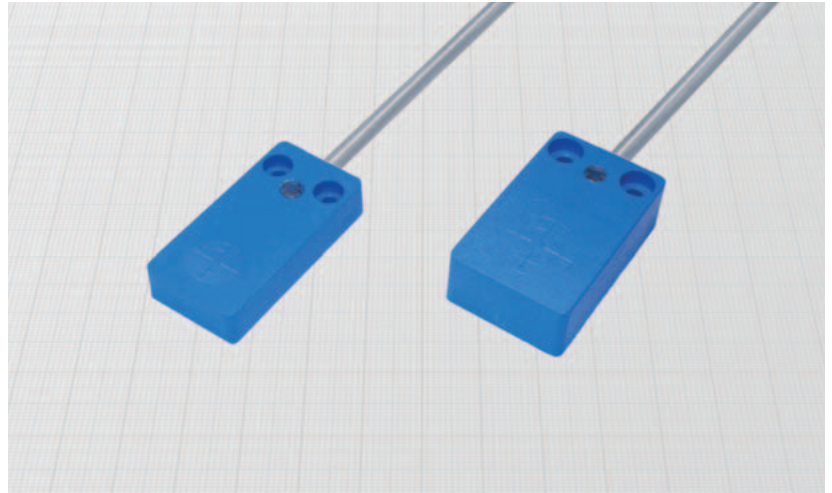
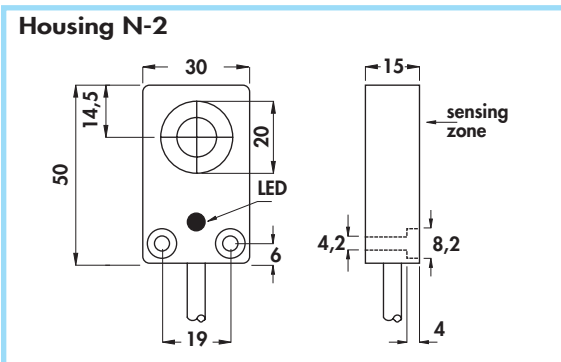
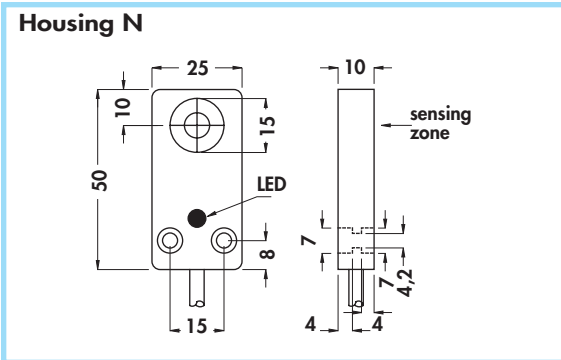
Housing	Flush mounting Non flush mounting	Cable diameter mm	Female connector n°	Sensing zone diameter mm	Max switching frequency kHz	Rated operational current (I_e) mA	Nominal sensing distance (S_n) $\pm 10\%$ mm	ORDERING REFERENCES		
								PNP (positive switching)		
								NO	NC	NO + NC
N	•	5	-	15	1	400	5	DCAX/4609KS	DCAX/4619KS	DCAX/4629KS
N	•	5	-	15	1	400	8	DCAX/5609KS	DCAX/5619KS	DCAX/5629KS
N-1	•	-	11-12	15	1	400	5	DCAX/4909KS	DCAX/4919KS	DCAX/4929KS
N-1	•	-	11-12	15	1	400	8	DCAX/5909KS	DCAX/5919KS	DCAX/5929KS
N-2	•	5	-	23	0,8	400	10	DCAY/4609KS	DCAY/4619KS	DCAY/4629KS
N-2	•	5	-	23	0,4	400	15	DCAY/5609KS	DCAY/5619KS	DCAY/5629KS
N-3	•	-	11-12	23	0,8	400	10	DCAY/4909KS	DCAY/4919KS	DCAY/4929KS
N-3	•	-	11-12	23	0,4	400	15	DCAY/5909KS	DCAY/5919KS	DCAY/5929KS

NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie. DCAX/4608KS)



Type X and Y •
 Amplified in a.c. 2 wires •
 Cable output •

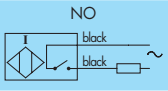
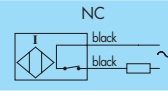
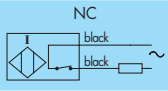


Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic

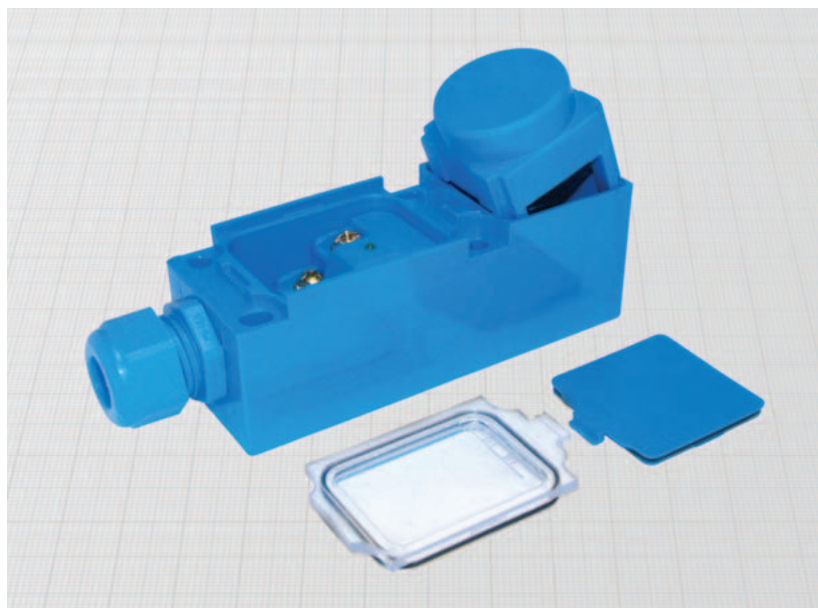
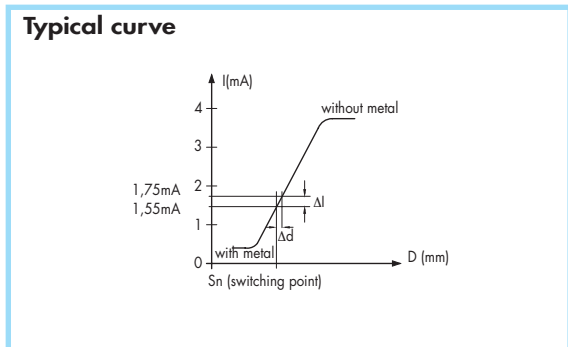
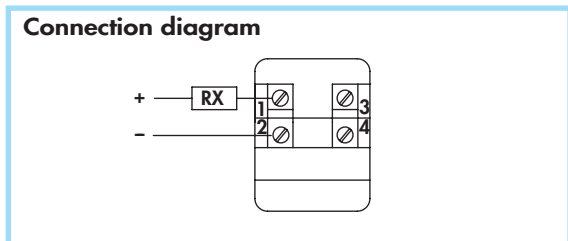
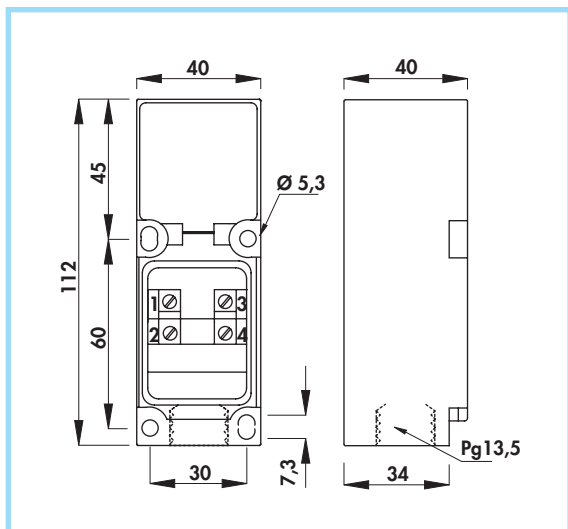
Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_f): ≤ 1,5 mA a 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,50 mm²
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Housing	Flush mounting Non flush mounting	Cable diameter	Sensing zone diameter	Max switching frequency (f)	Rated operational current (I_e)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES	
							mm	mm
Z	• •	5	15	20	500	5		
N-2	• •	5	23	20	500	10		

RECTANGULAR INDUCTIVE SENSORS

- **NAMUR SERIES - Type P - 5 Positions head**
- **Non-amplified in d.c.**
- **Terminal block output**



General Features:

These sensors are called "turnable sensing head" because the sensing head, inside the plastic housing can be positioned on 5 different positions. To choose the desired sensing face it is enough to remove the cover and set the sensing head in the proper position.

The internal terminal block can be easily reached by removing the transparent cover. The included plastic gland Pg13.5 is suited for cables diameter up to 9 mm.

Materials:

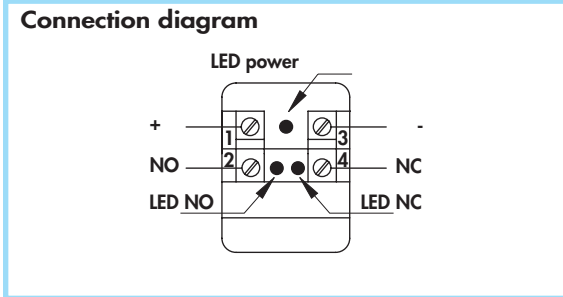
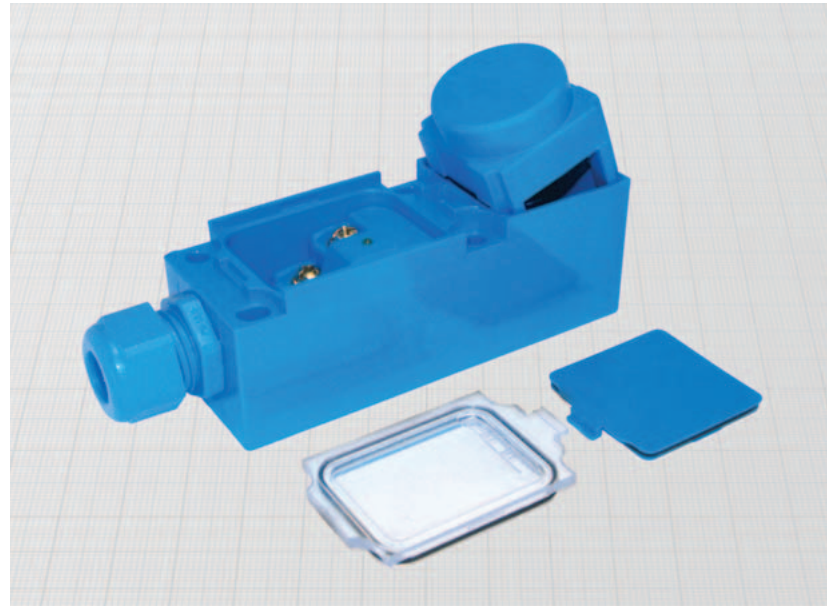
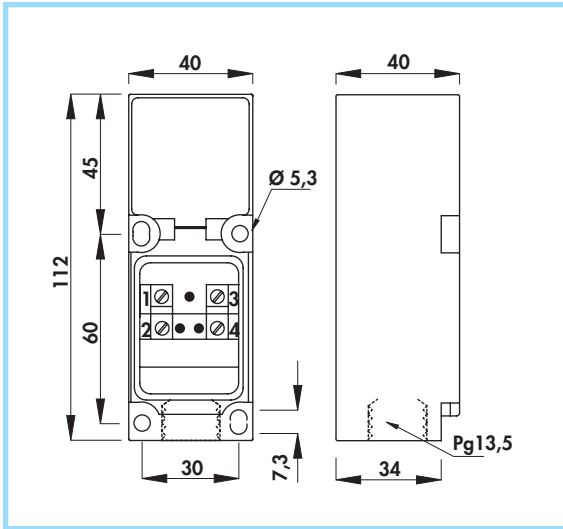
- Housing: plastic
- Terminal block cover: polycarbonate

Technical data:

- Working voltage: 5 ÷ 30 Vdc
- Supply voltage according to NAMUR: 7,7 ÷ 9 Vdc
- Max ripple: 10%
- Consumption at 8,2 V con $R_x = 1000 \Omega$
 - with metal: $\leq 1 \text{ mA}$
 - without metal: $\geq 3 \text{ mA}$
- Temperature range: $-25^\circ \div +70^\circ \text{C}$
- Max thermal drift of sensing distance S_r : $\pm 10\%$
- Repeat accuracy (R): 4%
- Degree of protection (with fully locked gland): IP65
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Flush mounting Non flush mounting	Sensing zone diameter	Max switching frequency (f)	Nominal sensing distance (S_n) $\pm 10\%$	ORDERING REFERENCES
	mm	KHz	mm	
•	30	0,2	15	DCP/4700
•	30	0,2	20	DCP/5700

Type P - 5 Positions head •
Amplified in d.c. •
Terminal block output •



Materials:

- Housing: plastic
- Terminal block cover: polycarbonate

General Features:

These sensors are called "turnable sensing head" because the sensing head, inside the plastic housing can be positioned on 5 different positions. To choose the desired sensing face it is enough to remove the cover and set the sensing head in the proper position.

The internal terminal block can be easily reached by removing the transparent cover. The included plastic gland Pg13.5 is suited for cables diameter up to 9 mm.

Technical data:

- Supply voltage (U_B): 10 ÷ 60 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 2,2 V
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection (with fully locked gland): IP65
- Indications:
 - output n.o. yellow LED
 - output n.c. red LED
 - power green LED

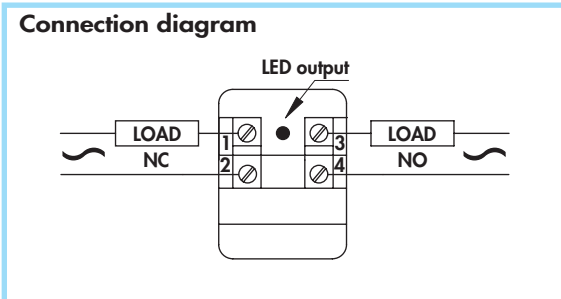
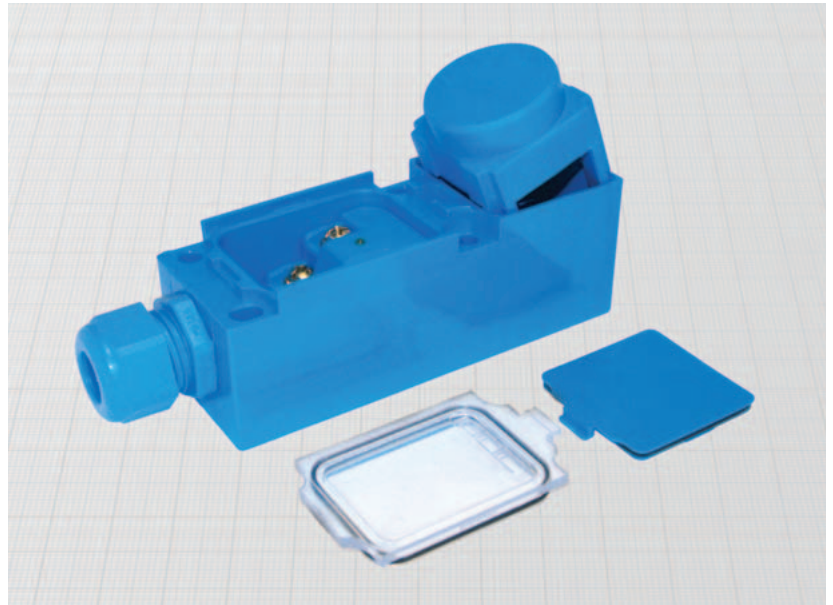
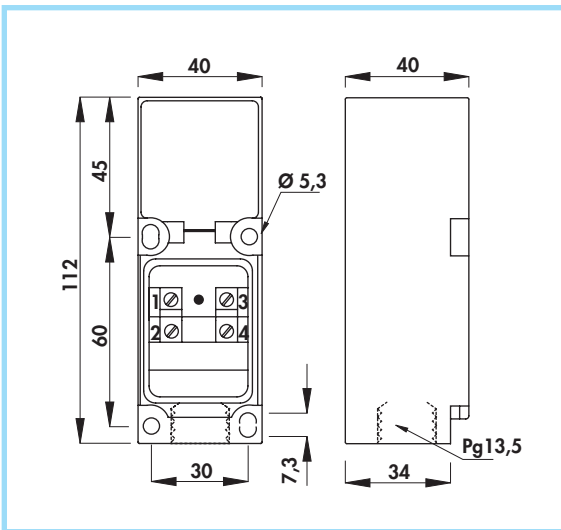
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6



Flush mounting Non flush mounting	Sensing zone diameter	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES	
					PNP	NPN
					NO + NC	NO + NC
•	30	0,1	400	15	DCAP/4729KS	DCAP/4728KS
•	30	0,1	400	20	DCAP/5729KS	DCAP/5728KS

RECTANGULAR INDUCTIVE SENSORS

- **Type P - 5 Positions head**
- **Amplified in a.c.**
- **Terminal block output**



Materials:

- Housing: plastic
- Terminal block cover: pycarbonate

General Features:

These sensors are called "turnable sensing head" because the sensing head, inside the plastic housing can be positioned on 5 different positions. To choose the desired sensing face it is enough to remove the cover and set the sensing head in the proper position.

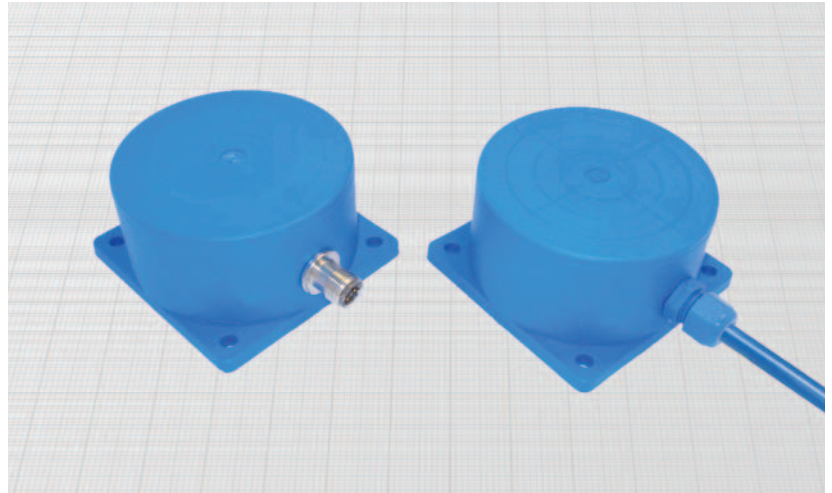
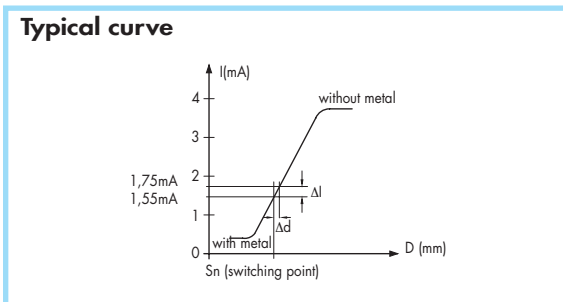
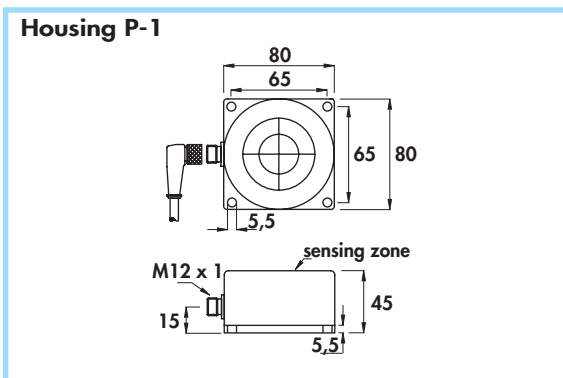
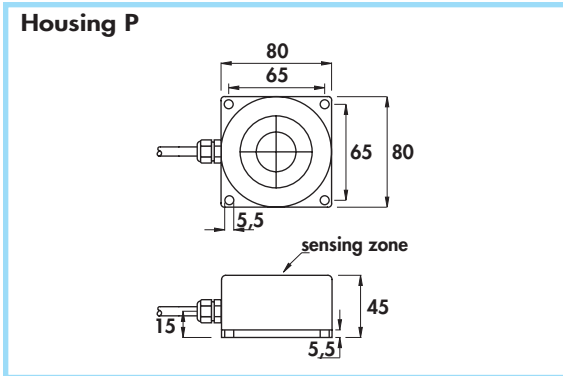
The internal terminal block can be easily reached by removing the transparent cover. The included plastic gland Pg13.5 is suited for cables diameter up to 9 mm.

Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤ 1,5 mA at 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_s : ± 10%
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection (with fully locked gland): IP65
- Switch status indicator: yellow LED
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Mounting	Sensing zone diameter	Max switching frequency (f)	Rated operational current (I_e)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES	
					NO	NC
Flush mounting	mm	Hz	mA	mm		
Non flush mounting	mm	Hz	mA	mm		
•	30	25	500	15	ACP/4709S	ACP/4719S
•	30	25	500	20	ACP/5709S	ACP/5719S

NAMUR SERIES - diameter 80 mm •
Non-amplified in d.c. 2 wires •
 Cable and connector output M12 x 1 •



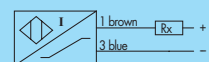
Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Connector: nickel plated brass

Technical data:

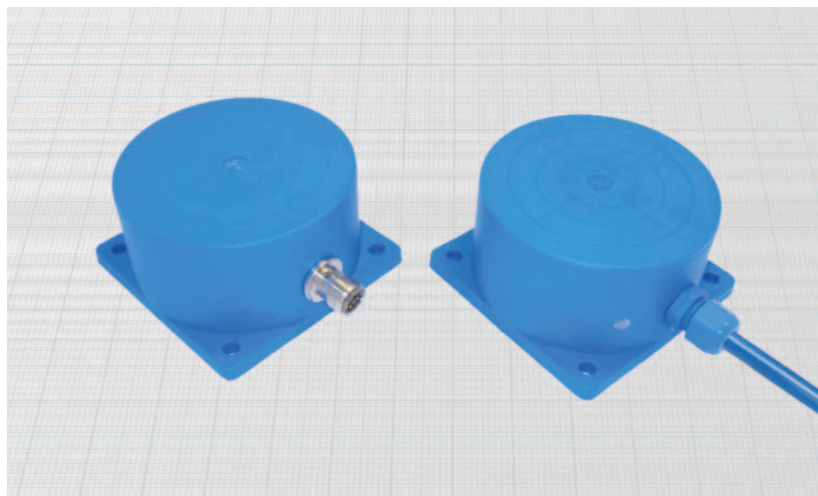
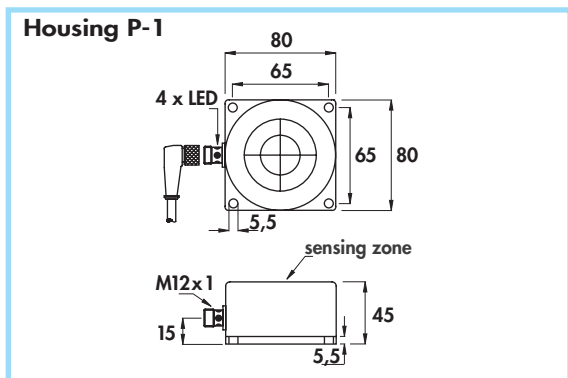
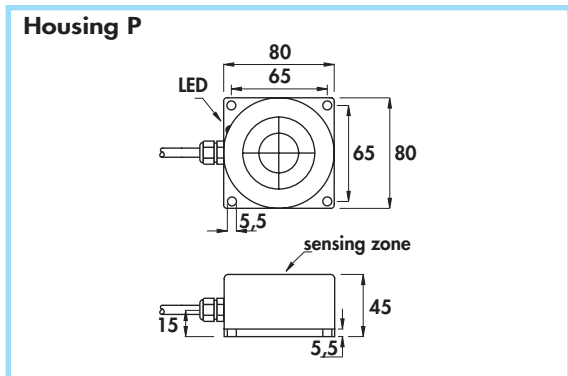
- Working voltage: $5 \div 30$ Vdc
- Supply voltage according to NAMUR: $7,7 \div 9$ Vdc
- Max ripple: 10%
- Consumption at 8,2 V con $R_x = 1000 \Omega$
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: $-25^\circ \div +70^\circ$ C
- Max thermal drift of sensing distance S_n : $\pm 10\%$
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- Cable conductor cross section (cable version): $0,75$ mm²
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Housing	Flush mounting Non flush mounting	Cable diameter	Female connector	Sensing zone diameter	Max switching frequency (f)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES
		mm	n°	mm	KHz	mm	
P	•	5	-	80	0,5	40	DC80B/5800
P-1	•	-	6-8B-10	80	0,5	40	DC80B/5300



RECTANGULAR INDUCTIVE SENSORS

- Diameter 80 mm
- Amplified in d.c. 3 and 4 wires
- Cable and connector output M12 x 1



Materials:

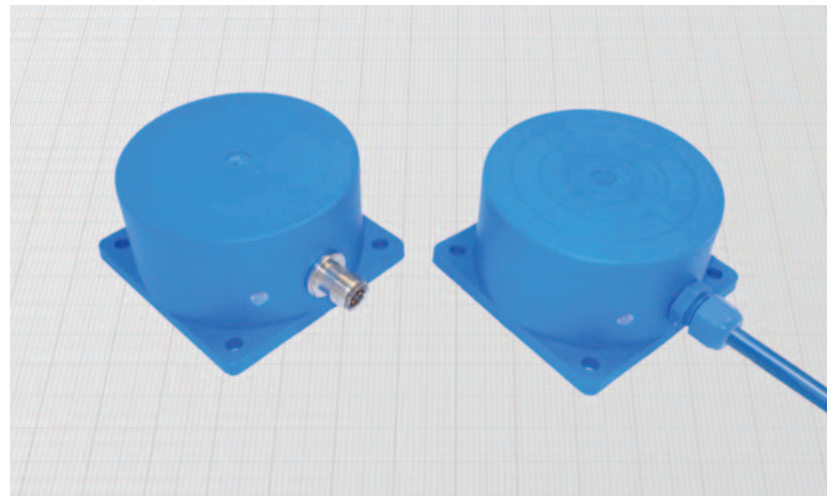
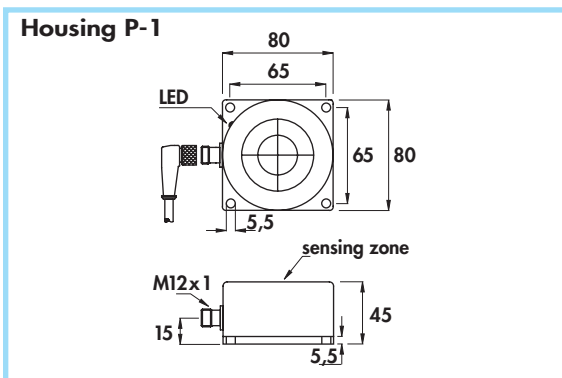
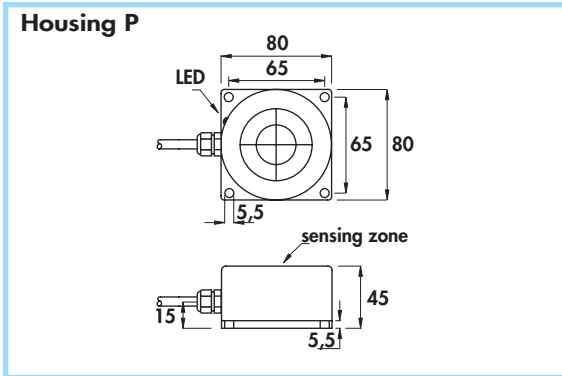
- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Connector: nickel plated brass

Technical data:

- Supply voltage (U_b): 10 ÷ 60 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 2,2 V
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section (cable version): 0,50 mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Flush mounting Non flush mounting	Cable diameter	Female connector	Sensing zone diameter	Max switching frequency (F)	Rated operational current (I_e)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES		
								PNP (positive switching)		
								NO	NC	NO + NC
P	•	6	-	80	0,5	400	40			
P-1	•	-	6-8B-10	80	0,5	400	40			
								NPN (negative switching)		
								Use the above mentioned part number changing the last number 9 with 8 (ie. DCA80B/5808KS)		
								NO	NC	NO + NC

Diameter 80 mm •
 Amplified in a.c. 2 wires •
 Cable and connector output M12 x 1 •



Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Connector: nickel plated brass

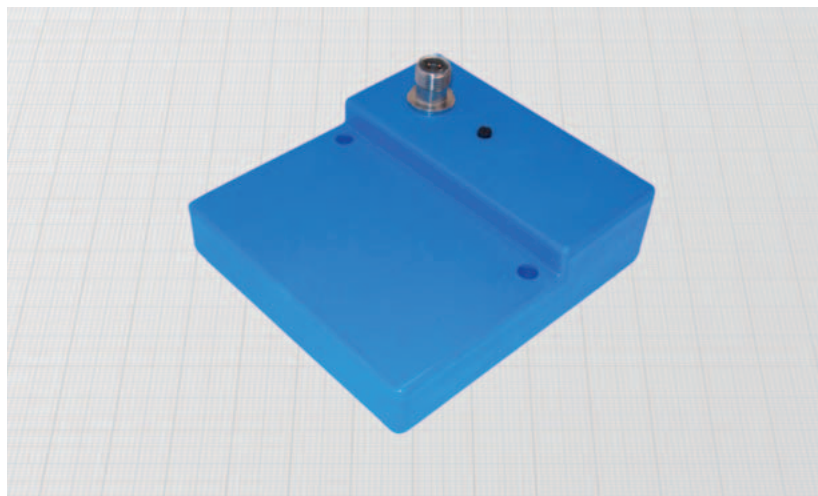
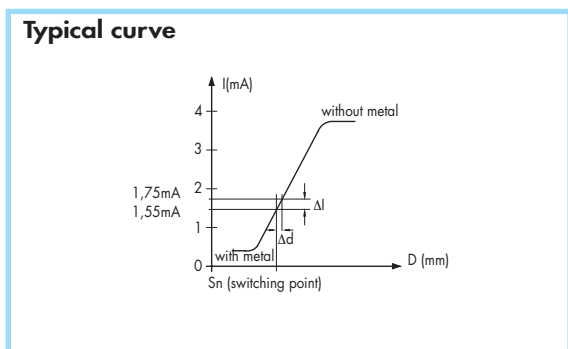
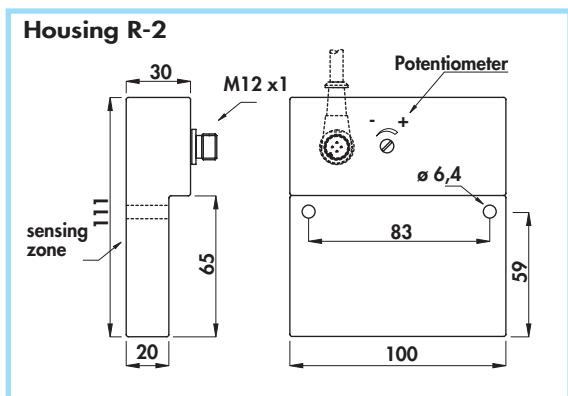
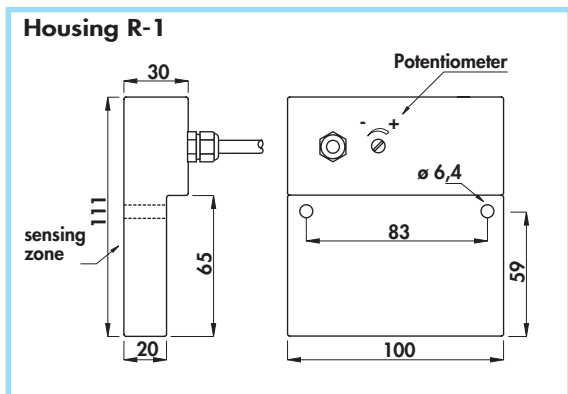
Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_0): ≤ 1,5 mA at 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section (cable version): 0,75 mm²
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Housing	Flush mounting Non flush mounting	Cable diameter	Female connector	Sensing zone diameter	Max switching frequency (f)	Rated operational current (I _e)	Nominal sensing distance (S _n) ± 10%	ORDERING REFERENCES	
								Cable output	
P	•	6	-	80	15	500	40		
								AC80B/5809S	AC80B/5819S
P-1	•	-	15-16	80	15	500	40	4 PIN connector	
								AC80B/5109S	AC80B/5119S
P-1	•	-	17-18	80	15	500	40	3 PIN connector according to EN60947-5-2	
								AC80B/5009S	AC80B/5019S

RECTANGULAR INDUCTIVE SENSORS

- **NAMUR SERIES - Type R - Adjustable sensing distance**
- **Non-amplified in d.c. 2 wires**
- Cable and connector output M12 x 1



General Features:

These sensors are suitable for non flush mounting and have the adjustable sensing distance turning a multiturn potentiometer.

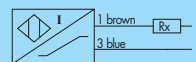
Technical data:

- Working voltage: $5 \div 30$ Vdc
- Supply voltage according to NAMUR: $7,7 \div 9$ Vdc
- Max ripple: 10%
- Consumption at 8,2 V con $R_x = 1000 \Omega$
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: $-20^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_p : $\pm 10\%$
- Repeat accuracy (R): 4%
- Degree of protection: IP65
- Cable conductor cross section (cable version): $0,75 \text{ mm}^2$
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

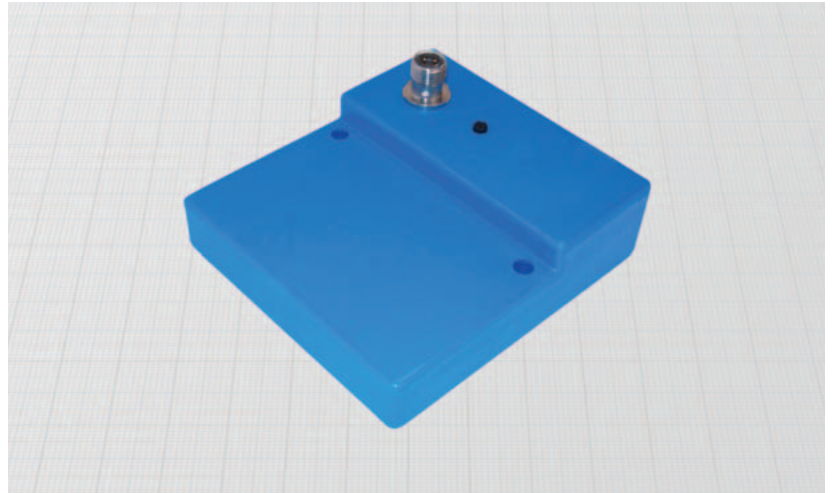
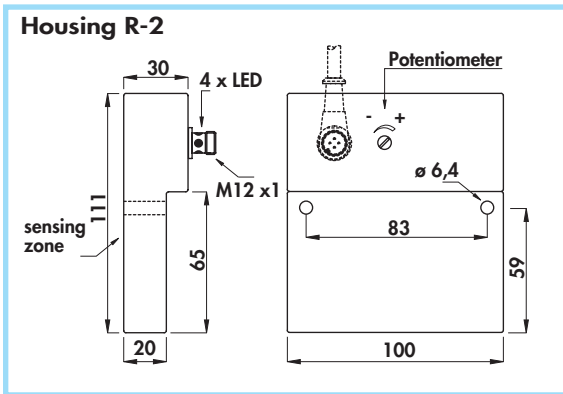
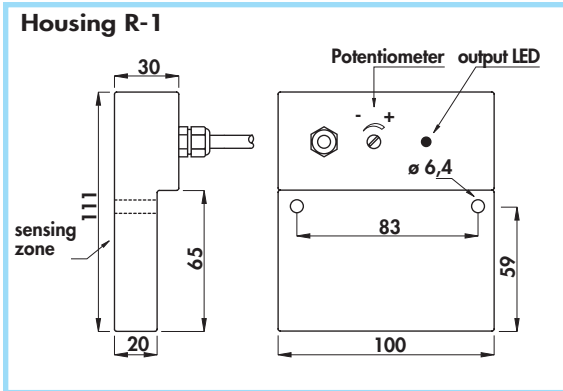
Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C ; 300 V; O.R.
- Housing: plastic
- Connector: nickel plated brass

Housing	Flush mounting Non flush mounting	Cable diameter	Female connector	Sensing zone diameter	Max switching frequency (f)	Distanza nominale di mt. (S _n)	ORDERING REFERENCES
							mm
R - 1	•	5	-	75	0,3	10 ÷ 55	DCR/5800
R - 2	•	-	6 - 8B - 10	75	0,3	10 ÷ 55	DCR/5300



Type R - Adjustable sensing distance •
Amplified in d.c. 3 and 4 wires •
Cable and connector output M12 x 1 •



Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Connector: nickel plated brass

General Features:

These sensors are suitable for non flush mounting and have the adjustable sensing distance turning a multiturn potentiometer.

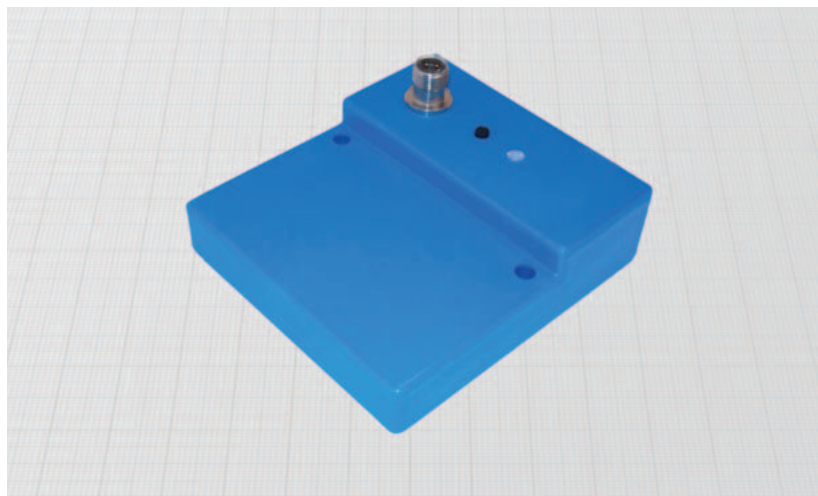
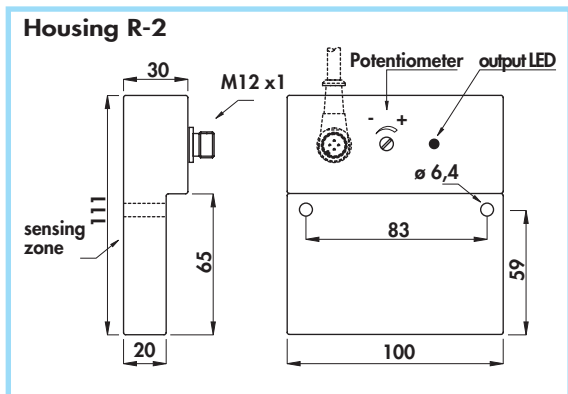
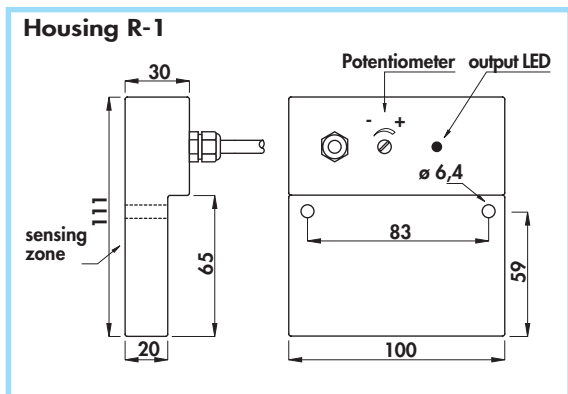
Technical data:

- Supply voltage (U_b): 10 ÷ 60 Vdc
- Max ripple: 10%
- No-load supply current (I_o): ≤ 10 mA
- Voltage drop (U_d): ≤ 2,2 V
- Temperature range: -20° ÷ +70°C
- Max thermal drift of sensing distance S_r : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP65
- Switch status indicator: yellow LED
- Cable conductor cross section (cable version): 0,50 mm²
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Mounting	Cable diameter	Female connector	Sensing zone diameter	Max switching frequency (f)	Rated operational current (I_o)	Nominal sensing distance (S_n) ± 10%	ORDERING REFERENCES		
								PNP (positive switching)		
R - 1	Flush mounting	6	-	75	0,3	400	10 ÷ 55	NO	NC	NO + NC
	Non flush mounting							DCAR/5809KS	DCAR/5819KS	DCAR/5829KS
R - 2	Non flush mounting	-	6 - 8B - 10	75	0,3	400	10 ÷ 55	DCAR/5309KS	DCAR/53C9KS	DCAR/5329KS
								NPN (negative switching)		
								Use the above mentioned part number changing the last number 9 with 8 (ie DCAR/5808KS)		
								NO	NC	NO + NC

RECTANGULAR INDUCTIVE SENSORS

- **Type R - Adjustable sensing distance**
- **Amplified in a.c. 2 wires**
- Cable and connector output M12 x 1



General Features:

These sensors are suitable for non flush mounting and have the adjustable sensing distance turning a multiturn potentiometer.

Technical data:

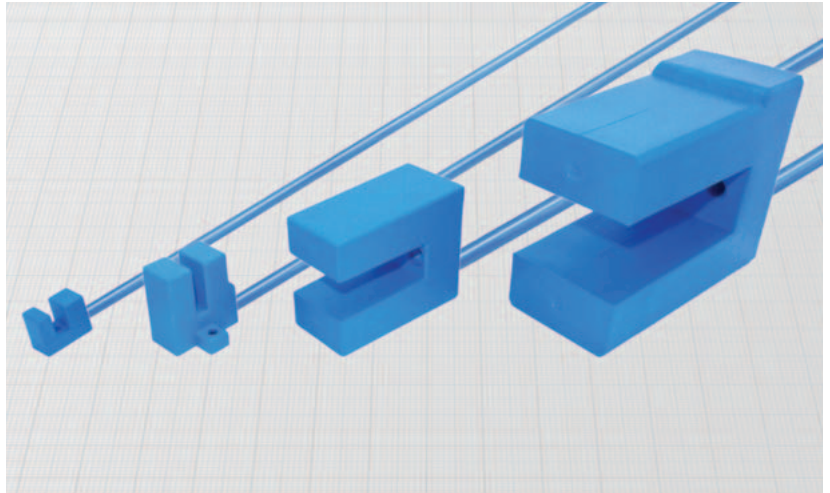
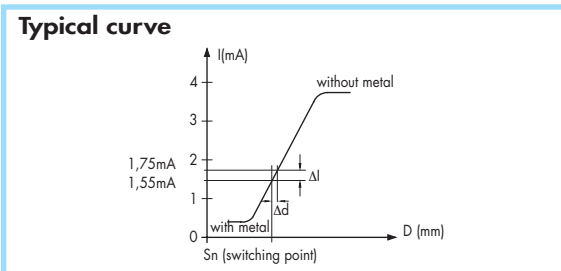
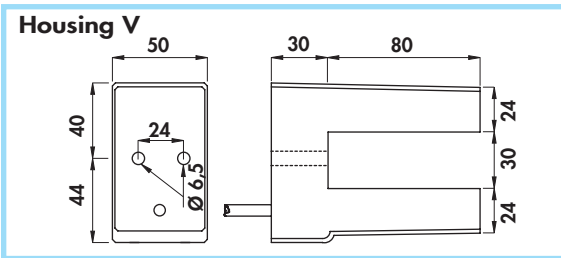
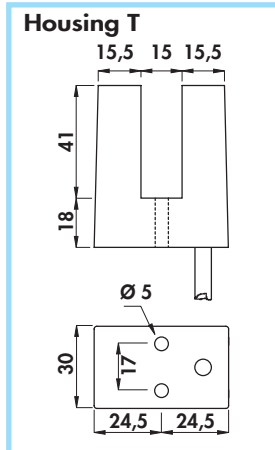
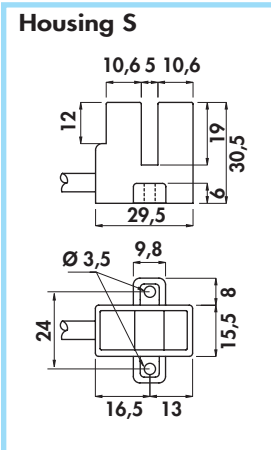
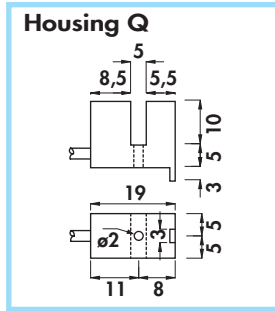
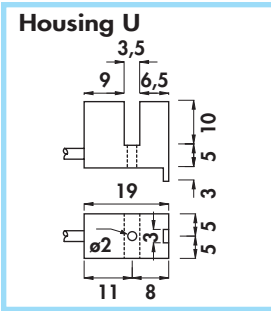
- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_o): ≤ 1,5 mA at 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: -20° ÷ +70°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP65
- Switch status indicator: yellow LED
- Cable conductor cross section (cable version): 0,75 mm²
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Connector: nickel plated brass

Housing	Flush mounting Non flush mounting	Cable diameter	Female connector	Sensing zone diameter	Max switching frequency (f)	Rated operational current (I _e)	Distanza nom. di int. (S _n)	ORDERING REFERENCES	
								Cable output	
		mm	n°	mm	Hz	mA	mm		
R - 1	•	6	-	75	20	500	10 ÷ 55	ACR/5809S	ACR/5819S
		mm	n°	mm	Hz	mA	mm	4 PIN connector	
R - 2	•	-	15 - 16	75	20	500	10 ÷ 55	ACR/5109S	ACR/5119S
								3 PIN connector according to EN60947-5-2	
R - 2	•	-	17 - 18	75	20	500	10 ÷ 55	ACR/5009S	ACR/5019S

NAMUR SERIES •
Non-amplified in d.c. 2 wires •
 Cable output •



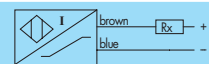
Technical data:

- Working voltage: $5 \div 30$ Vdc
- Supply voltage according to NAMUR: $7,7 \div 9$ Vdc
- Max ripple: 10%
- Consumption at 8,2 V con $R_x = 1000 \Omega$
 - with metal: ≤ 1 mA
 - without metal: ≥ 3 mA
- Temperature range: $-25^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_s : $\pm 10\%$
- Repeat accuracy (R): 2%
- Degree of protection: IP67
- Cable conductor cross section:
 - 0,15 mm² on DF3,5/... and DF5/...
 - 0,75 mm² on DF6/..., DF15/... and DF30/...
- According to EN60947-5-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6
- For certified ATEX version see ATEX Catalogue

Materials:

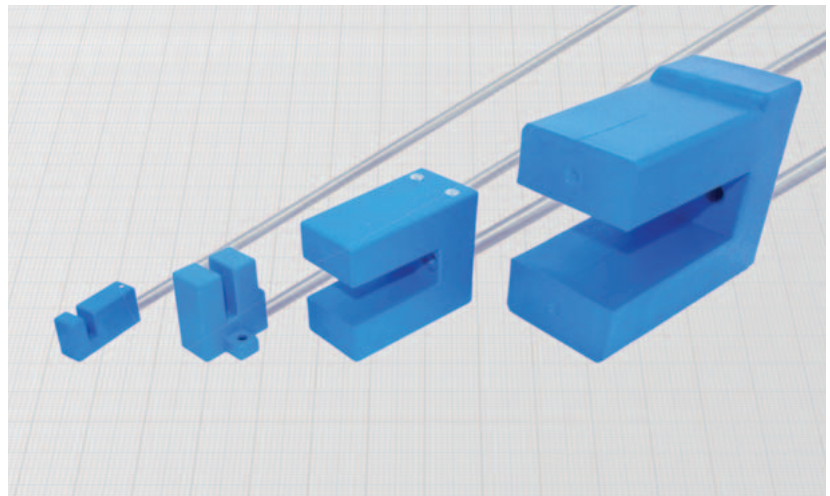
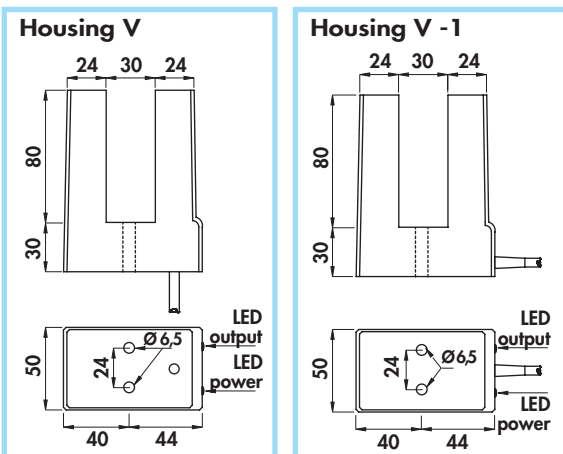
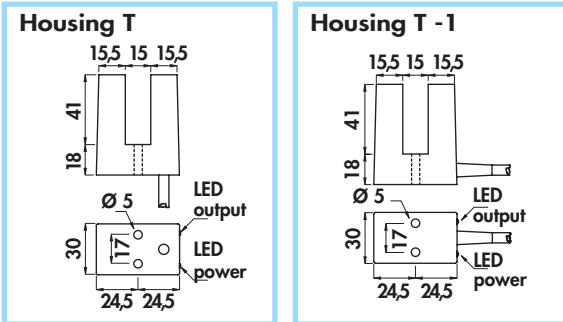
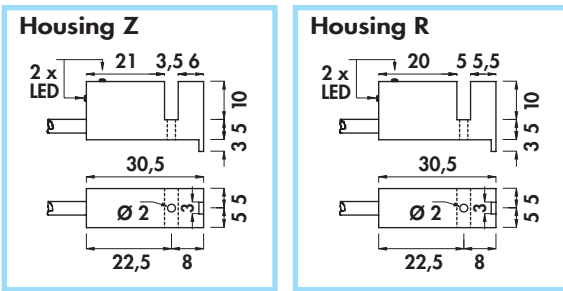
- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Screw and nut (included on DF3,5... and DF5...) brass

Housing	Cable diameter	Gap width	Max switching frequency (f)	Minimum penetration	ORDERING REFERENCES
	mm	mm	KHz	mm	
U	3	3,5	3	5	DF3,5/4600
Q	3	5	3	5	DF5/4600
S	5	5	1	9	DF6/4600
T	5	15	0,8	16	DF15/4600
V	5	30	0,3	30	DF30/4600



INDUCTIVE SLOT SENSORS

- Amplified in d.c. 3 and 4 wires
- Cable output



Technical data:

- Supply voltage (U_B) tipi DCF3,5/... and DCF5/... 10 ÷ 30 Vdc
- Supply voltage (U_B) tipi DCF15/... and DCF30/... 10 ÷ 60 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): $\leq 2,2$ V
- Temperature range: $-25^\circ \div +70^\circ\text{C}$
- Max thermal drift of sensing distance S_r : $\pm 10\%$
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section:
 - 0,22 mm² on DCF3,5/... and DCF5/...
 - 0,50 mm² on DCF15/... and DCF30/...

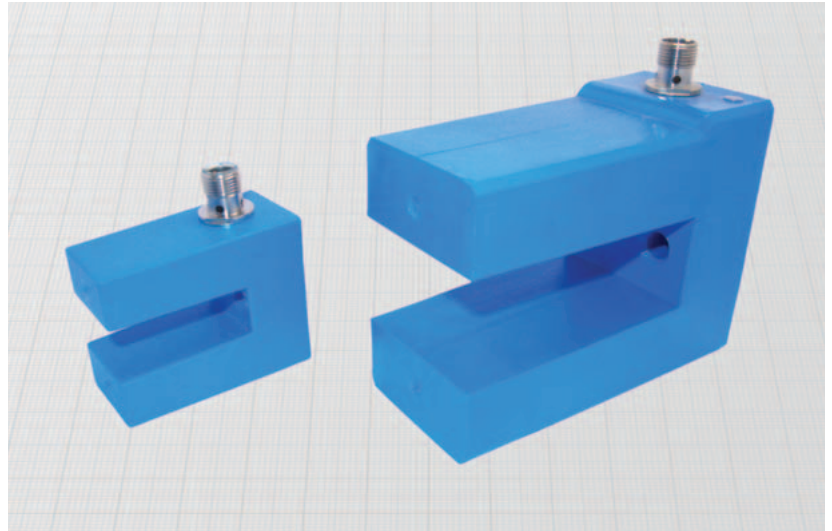
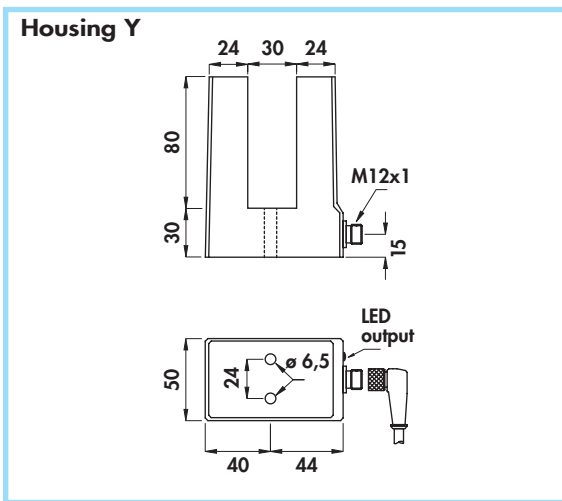
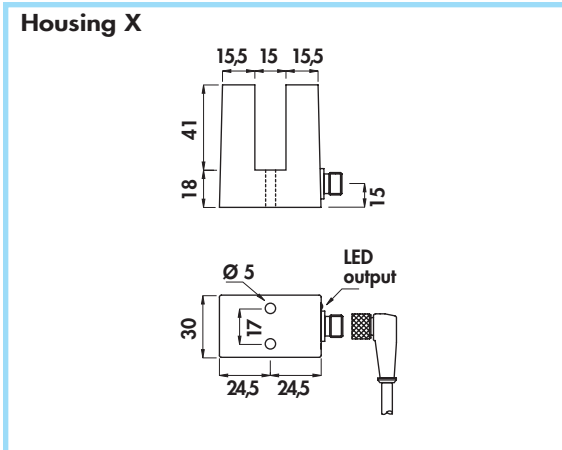
Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic
- Screw and nut (included on mod. DF3,5... and DF5...) brass

- Protected against short-circuit and overload (versions with letter K)
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Cable diameter	Gap width	Rated operational current (I_e)	Max switching frequency (f)	Minimum penetration	ORDERING REFERENCES		
						PNP (positive switching)		
	mm	mm	mA	KHz	mm			
Z	3,5	3,5	200	1	5	DCF3,5/4609KS	DCF3,5/4619KS	DCF3,5/4629KS
R	3,5	5	200	1	5	DCF5/4609KS	DCF5/4619KS	DCF5/4629KS
T	6	15	400	0,5	16	DCF15/4609KS	DCF15/4619KS	DCF15/4629KS
T-1	6	15	400	0,5	16	DCF15/4L09KS	DCF15/4L19KS	DCF15/4L29KS
V	6	30	400	0,2	30	DCF30/4609KS	DCF30/4619KS	DCF30/4629KS
V-1	6	30	400	0,2	30	DCF30/4L09KS	DCF30/4L19KS	DCF30/4L29KS
						NPN (negative switching) Use the above mentioned part number changing the last number 9 with 8 (ie. DCF3,5/4608KS)		

Amplified in d.c. •
Connector output M12 x 1 •



Materials:

- Housing: plastic
- Connector: nickel plated brass

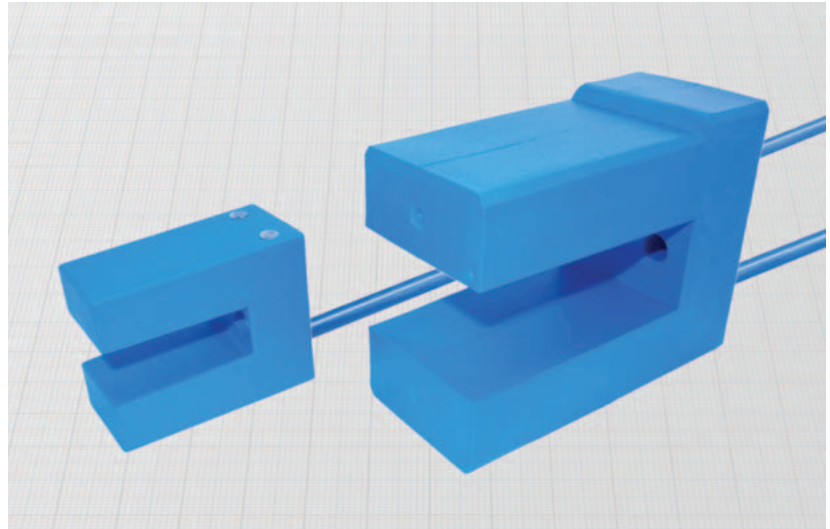
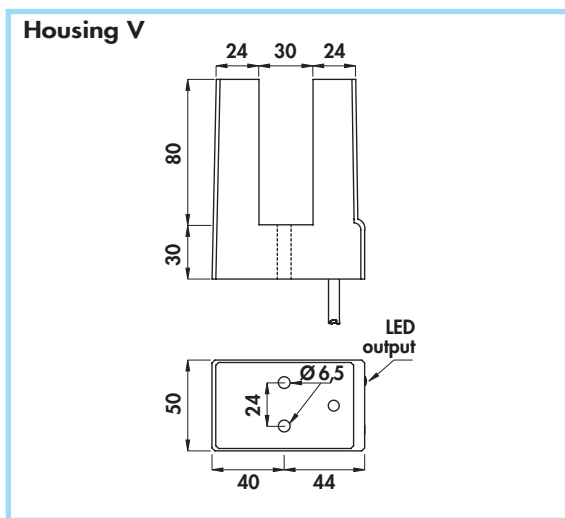
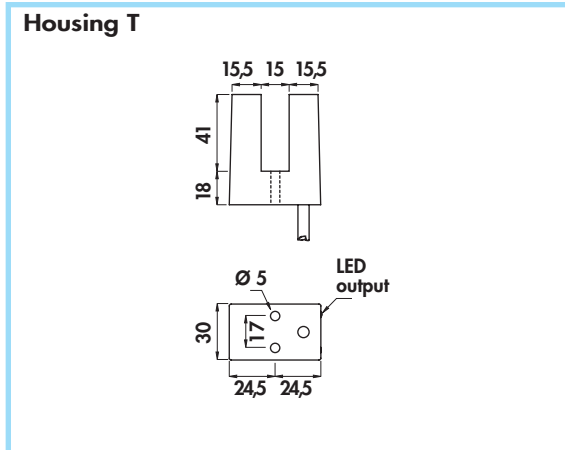
Technical data:

- Supply voltage (U_B): 10 ÷ 60 Vdc
- Max ripple: 10%
- No-load supply current (I_0): ≤ 10 mA
- Voltage drop (U_d): ≤ 2,2 V
- Temperature range: -25° ÷ +70°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection con connettori costampati: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

Housing	Female connector	Gap width	Rated operational current (I_0)	Max switching frequency (f)	Minimum penetration	ORDERING REFERENCES		
						PNP (positive switching)		
n°	mm	mA	KHz	mm	NO	NC	NO + NC	
X	6-8B-10	15	400	0,5	16			
Y	6-8B-10	30	400	0,2	30	DCF15/4309KS	DCF15/43C9KS	DCF15/4329KS
						DCF30/4309KS	DCF30/43C9KS	DCF30/4329KS
						NPN (negative switching)		
						Use the above mentioned part number changing the last number 9 with 8 (ie. DCF15/4308KS)		

INDUCTIVE SLOT SENSORS

- Amplified in a.c. 2 wires
- Cable output



Materials:

- Cable: 2 m PVC CEI 20 - 22 II; 90°C; 300 V; O.R.
- Housing: plastic

Technical data:

- Supply voltage (U_B): 20 ÷ 240 Vac
- Electrical system frequency: 40 ÷ 60 Hz
- Off-state current (I_f): ≤ 1,5 mA at 110 Vac
- Minimum operational current (I_m): 5 mA
- Voltage drop (U_d): ≤ 5 V
- Temperature range: - 25° ÷ + 70°C
- Max thermal drift of sensing distance S_T : ± 10%
- Repeat accuracy (R): 2%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Cable conductor cross section: 0,75 mm²
- Suppression of initial false impulse
- Class 2 equipment according to IEC 536
- Shock and vibration according to EN60068-2-27 EN60068-2-6
- Electromagnetic compatibility (EMC) according to EN60947-5-2

Housing	Cable diameter	Gap width	Rated operational current (I_e)	Max switching frequency (f)	Minimum penetration	ORDERING REFERENCES	
						NO	NC
T	6	15	500	15	16	ACF15/4609S	ACF15/4619S
V	6	30	500	15	30	ACF30/4609S	ACF30/4619S