

Photoelectric sensors OR20

DC types

- OR20 ES Through-beam sensors
- OR20 RS Retroreflective sensors
- OR20 PS Polarised retroreflective sensors
- OR20 RT Diffuse reflective sensors
- OR20 RH Diffuse reflective sensors with background suppression



88 x 63 x 24 mm

Through-beam sensors
20 m (65.6 ft)

88 x 63 x 24 mm

Retroreflective sensors
8 m (26.2 ft)

Sensing type	
Sensing distance / range	
Model description	
PNP selectable	Part number
	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
Model description	
NPN selectable	Part number
	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
Model description	
Transmitter	Part number
	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	

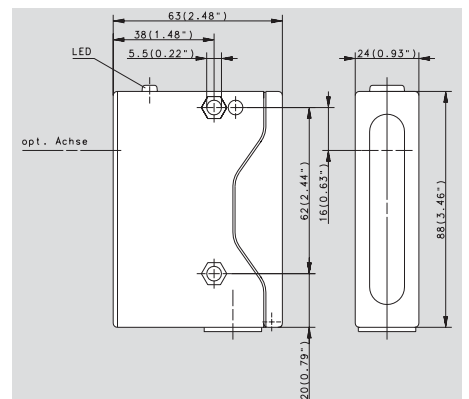
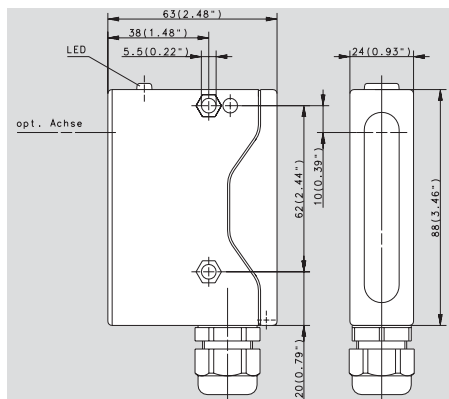
–	OR20 EE-DPTP-20.0-ALET	OR20 RS-DPTP-08.0-ALET
	655.1886.003	655.4886.001
	272/5	272/5
	●/–	●/–
–	–	–
OR20 SE-DOOS-20.0-AV	–	–
	655.1086.003	
	272/1	
	●/–	

Stock status: Ex stock/Built to order		
Voltage range		
Short-circuit protection		
Output current	max.	
Switching frequency	max.	
LED for output function/supply voltage/diagnostic		
Adjustable sensitivity		
Timer function		
Diagnostic function		
Temperature range	min./max.	
Protection type		
Screw-clamp termination	(page/Pos.)	
Cable length (2 m)	Cross section (mm ²)	
Plug (page/Pos.)		
Accessories (page/Pos.)		

SE: 10–36 V DC	EE: 10–36 V DC	10–36 V DC
–	●	●
–	200 mA	200 mA
–	>100 Hz	>100 Hz
–/●/–	●/–/–	●/–/–
–	●	●
–	●	●
–	–	–
–20 °C/+70 °C	–20 °C/+70 °C	–20 °C/+70 °C
–4 °F/+158 °F	–4 °F/+158 °F	–4 °F/+158 °F
IP 65/NEMA 12	IP 65/NEMA 12	IP 65/NEMA 12
272/1	272/5	272/5
–	–	–
–	–	–
273/2, 3	273/2, 3	273/2, 3; 274

Dimensions

All dimensions in mm (inch)





88 x 63 x 24 mm

Polarised retroreflective sensors
6 m (19.7 ft)

OR20 PS-DPTP-
06.0-ALET
655.5886.001
272/5
●/-

-



88 x 63 x 24 mm

Diffuse reflective sensors
600 mm (1.97 ft) 1.5 m (4.92 ft)

OR20 RT-DPTP-
0600-ALET
655.7886.001
272/5
-/●

-

OR20 RT-DPTP-
01.5-ALET
655.7886.003
272/5
●/-

-



88 x 63 x 24 mm

Background suppression
400 mm (1.31 ft)

OR20 RH-DPTP-
0400-ALET
655.8886.002
272/5
-/●

-

10–36 V DC

●

200 mA

>100 Hz

●/-/-

●

●

-

-20 °C/+70 °C

-4 °F/+158 °F

IP 65/NEMA 12

272/5

-

-

273/2, 3; 274

10–36 V DC

●

200 mA

>100 Hz

●/-/-

●

●

-

-20 °C/+70 °C

-4 °F/+158 °F

IP 65/NEMA 12

272/5

-

-

273/2, 3

10–36 V DC

●

200 mA

>100 Hz

●/-/-

●

●

-

-20 °C/+70 °C

-4 °F/+158 °F

IP 65/NEMA 12

272/5

-

-

273/2, 3

10–36 V DC

●

200 mA

>100 Hz

●/-/-

●

●

-

-20 °C/+70 °C

-4 °F/+158 °F

IP 65/NEMA 12

272/5

-

-

273/2, 3

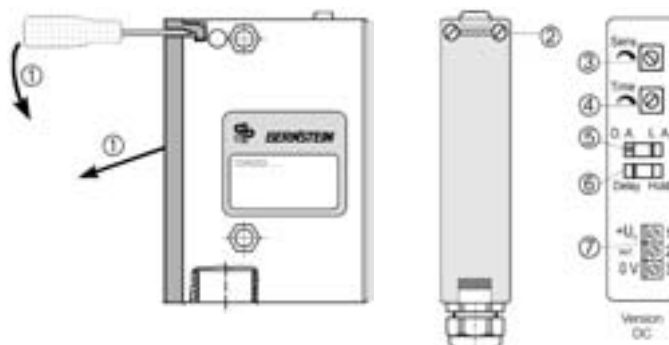
Notes on operation of OR20 series (DC types)

Housing types:

- ① Snap-cover housing
(to be opened with screwdriver)
- ② Screw-cap housing
(with M 16-cable gland)

Operating elements

- ③ Sensitivity potentiometer
- ④ Time potentiometer
- ⑤ Operation-mode micro switch
- ⑥ Delay-type micro switch
- ⑦ Connection terminals



Photoelectric sensors OR20

AC/DC types

- OR20 ES Through-beam sensors
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88 x 63 x 24 mm

Through-beam sensors
20 m (66.2 ft)

88 x 63 x 24 mm

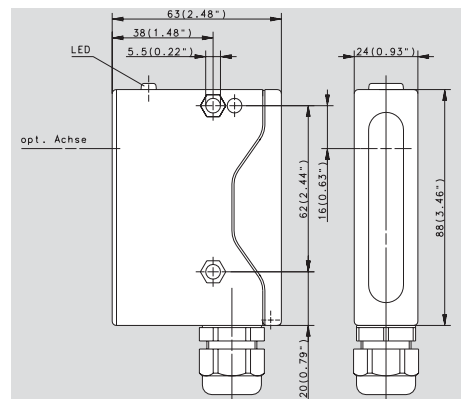
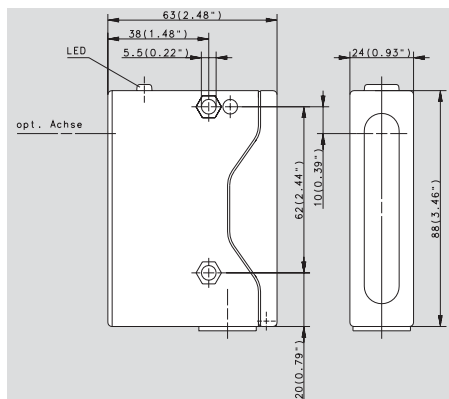
Retroreflective sensors
8 m (26.2 ft)

Sensing type	
Sensing distance / range	
Model description	
Relay output	Part number
– Contacts: change-over (1 x)	Wiring diagram (page/pos.)
– Switching current 3 A	Stor./deliv.: on requ.
– Connection compartment cover with quick snap release	Model description
	Part number
	Wiring diagram (page/pos.)
	Stor./deliv.: on requ.
Model description	
Relay output	Part number
– Contacts: change-over (1 x)	Wiring diagram (page/pos.)
– Switching current 3 A	Stor./deliv.: on requ.
– Connection compartment cover with screws	Model description
– Cable gland	Part number
	Wiring diagram (page/pos.)
	Stor./deliv.: on requ.
Voltage range	
Short-circuit protection	
Output current	max.
Switching frequency	max.
LED for output function/supply voltage/diagnostic	
Adjustable sensitivity	
Timer function	
Diagnostic function	
Temperature range	min./max.
Protection type	
Screw-clamp termination	(page/Pos.)
Cable length (2 m)	Cross section (mm ²)
Plug	(page/Pos.)
Accessories	(page/Pos.)

OR20 SE-MOOS-20.0-AV	–	–
655.1086.001		
272/1		
●/–		
–	OR20 EE-MAR5-20.0-ALET	OR20 RS-MAR5-08.0-ALET
	655.1686.003	655.4686.001
	272/3	272/3
	●/–	●/–
OR20 SE-MOOS-20.0-AV	–	–
655.1086.002		
272/1		
–/●		
–	OR20 EE-MAR5-20.0-ALET	OR20 RS-MAR5-08.0-ALET
	655.1686.004	655.4686.002
	272/3	272/3
	–/●	–/●
SE: 12–265 V AC/DC	EE: 12–265 V AC/DC	12–265 V AC/DC
–	–	–
–	3 A	3 A
–	>50 Hz	>50 Hz
–/●/–	●/–/–	●/–/–
–	●	●
–	●	●
–	–	–
–20 °C/+70 °C	–20 °C/+70 °C	–20 °C/+70 °C
–4 °F/+158 °F	–4 °F/+158 °F	–4 °F/+158 °F
IP 65/NEMA 12	IP 65/NEMA 12	IP 65/NEMA 12
272/1	272/3	272/3
–	–	–
–	–	–
273/2, 3	273/2, 3	273/2, 3; 274

Dimensions

All dimensions in mm (inch)





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Polarised retroreflective sensors

6 m (19.7 ft)



88 x 63 x 24 mm

Diffuse reflective sensors

600 mm (1.97 ft)

1.5 m (4.92 ft)



88 x 63 x 24 mm

Background suppression

400 mm (1.31 ft)

OR20 PS-MAR5-

06.0-ALET

655.5686.001

272/3

●/-

-

OR20 RT-MAR5-

0600-ALET

655.7686.001

272/3

●/-

-

OR20 RT-MAR5-

01.5-ALET

655.7686.003

272/3

●/-

-

OR20 RH-MAR5-

0400-ALET

655.8686.002

272/3

●/-

-

OR20 PS-MAR5-

06.0-ALET

655.5686.002

272/3

●/-

12-265 V AC/DC

-

3 A

>50 Hz

●/-/-

●

●

-

-20 °C/+70 °C

-4 °F/+158 °F

IP 65/NEMA 12

272/3

-

-

273/2, 3; 274

-

12-265 V AC/DC

-

3 A

>50 Hz

●/-/-

●

●

-

-20 °C/+70 °C

-4 °F/+158 °F

IP 65/NEMA 12

272/3

-

-

273/2, 3

OR20 RT-MAR5-

01.5-ALET

655.7686.004

272/3

-/●

12-265 V AC/DC

-

3 A

>50 Hz

●/-/-

●

●

-

-20 °C/+70 °C

-4 °F/+158 °F

IP 65/NEMA 12

272/3

-

-

273/2, 3

-

12-265 V AC/DC

-

3 A

>50 Hz

●/-/-

●

●

-

-20 °C/+70 °C

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IP 65/NEMA 12

272/3

-

-

273/2, 3

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