

Overview

Through-beam sensor		Diffuse reflective sensor		
PNP L.A. / D.A.		PNP L.A. / D.A.		
SE	EE ≥ 20m var.	RT 600mm var.	RT 1500mm var.	RH 60 – 400mm var.
655.1086.003	655.1886.003	655.7886.001	655.7886.003	655.8886.002
OR20SE-DOOS-20.0-AV	OR20EE-DPTP-20.0-ALET	OR20RT-DPTP-0600-ALET	OR20RT-DPTP-01.5-ALET	OR20RH-DPTP-0400-ALET

Retroreflective sensor		Polarised retro sensor		
PNP L.A. / D.A.		PNP L.A. / D.A.		
RS ≥ 8m var.		PS ≥ 6m var.		
655.4886.001		655.5886.001		
OR20RS-DPTP-08.0-ALET		OR20PS-DPTP-06.0-ALET		

Abbreviations

SE = Through beam, transmitter only
 EE = Through beam, receiver only
 RT = Diffuse reflective sensor
 RH = Diffuse reflective sensor with background suppression
 RS = Retroreflective sensor
 PS = Polarised retro sensor

fix = sensing range is fixed
 var. = sensing range adjustable with potentiometer

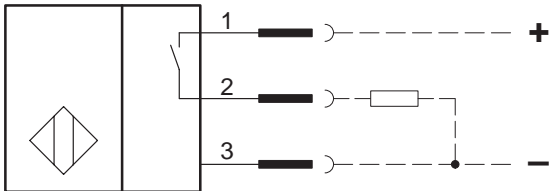
Switching function and wiring diagrams

The description refers to:

Sensors	Sensing types	Mounting conditions
Diffuse reflective sensor	RT, RH	without an object inside the sensing range
Retroreflective sensor	RS, PS	without reflector
Through-beam sensor	EE	without transmitter

Light activation (L.A.)

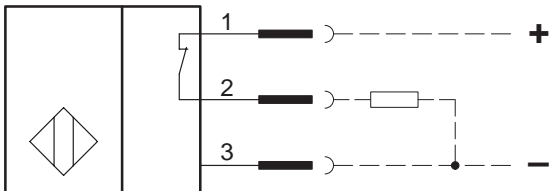
PNP – Sensors



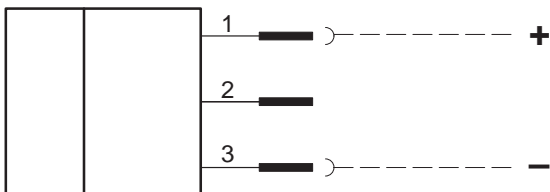
Light or dark activation is selectable by micro-switch

Dark activation (D.A.)

PNP – Sensors



Wiring diagram of the transmitter



Technical Data according to EN 60947–5–2

Electrical Data

Operational voltage range	U_B	10 – 36V DC, transient protection
No-load supply current	I_0	< 15mA; 655.8886.002: < 20mA
False polarity protection		yes
Output		permanent overload protection; Indication: LED yellow
Short-circuit protection		pulsed
Max. rated output current	I	200mA
Voltage drop	U_d	$\leq 1,8V$
Off-state current	I_r	< 0,1mA
Utilization category		DC 13 @ $I_e = 50mA$ and $U_e = 33V$ DC
Rated insulation voltage	U_i	75V DC
Type of protection		IP 65 (only with it's mounted cable gland and cable)
Pollution degree		3 (Pollution of the optic can cause impairments of the sensing range.)
Ambient air temperature		$-20^{\circ}C \dots +70^{\circ}C$
Ambient light proof		> 10kLux
Sensing range		see overview
Differential travel (hysteresis)	H	$\approx 10\%$; 655.8886.002: $\approx 5\%$
Repeat accuracy	R	10%
Frequency of operating cycles	f	> 100Hz; 655.8886.002: > 50Hz
Turn on time	t_{on}	< 6ms
Time delay before availability	t_v	< 60ms
ON-Delay		0 ... 10s (selectable, adjustable with potentiometer)
OFF-Delay		0 ... 8s (selectable, adjustable with potentiometer)

Elektromagnetic compatibility (EMC)

Electromagnetic field test	IEC 61000–4–3	$3V/m$
Electrostatic discharge test	IEC 61000–4–2	8kV
Electrical fast transient immunity test	IEC 61000–4–4	2kV
Radiated disturbance field strength	EN55011	$\leq 40dB$ ($\mu V/m$)

Materials

Housing	PA 6.6
Beam-output	PA 12 / Glass at PS
Connection	screw-type terminals

Typical sensing range

