

Technical data sheet

Diffuse sensor with background suppression

Part no.: 50107496

HRTR 55/66-XL-S8



For illustration purposes only

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Technical data

Basic data

Series	55
Operating principle	Diffuse reflection principle with background suppression

Special version

Special version	All stainless steel housing Extra long light spot (XL)
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Optical data

Operating range	Guaranteed operating range
Operating range, white 90%	0.005 ... 0.1 m
Operating range, gray 18%	0.005 ... 0.09 m
Operating range, black 6%	0.005 ... 0.08 m
Operating range limit	0.005 ... 0.1 m (typical operating range)
Beam path	Divergent
Light source	LED, Red
Wavelength	620 nm
Transmitted-signal shape	Pulsed
LED group	1
Light spot size [at sensor distance]	3 mm x 40 mm [50 mm]
Type of light spot geometry	Rectangular

Electrical data

Protective circuit	Polarity reversal protection Short circuit protected
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Performance data

Supply voltage U_B	10 ... 30 V, DC
Residual ripple	0 ... 15 %, From U_B
Open-circuit current	0 ... 15 mA

Outputs

Number of digital switching outputs	2 Piece(s)
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Switching outputs

Type	Digital switching output
Voltage type	DC
Switching current, max.	100 mA
Switching voltage	high: $\geq(U_B - 2V)$ low: $\leq 2 V$

Switching output 1

Assignment	Connection 1, pin 4
Switching element	Transistor, Push-pull
Switching principle	Light switching (PNP)/dark switching (NPN)

Switching output 2

Assignment	Connection 1, pin 2
Switching element	Transistor, Push-pull
Switching principle	Dark switching (PNP)/light switching (NPN)

Time behavior

Switching frequency	1,000 Hz
Response time	0.5 ms
Readiness delay	300 ms

Connection

Number of connections	1 Piece(s)
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Connection 1

Function	Signal OUT Voltage supply
Type of connection	Connector
Thread size	M8
Type	Male
Material	Stainless steel
No. of pins	4 -pin
Encoding	A-coded

Mechanical data

Dimension (W x H x L)	14 mm x 35.5 mm x 25 mm
Housing material	Stainless steel
Stainless steel housing	AISI 316L
Lens cover material	Plastic with scratch-resistant Indium protective coating
Net weight	40 g
Housing color	Silver
Type of fastening	Through-hole mounting Via optional mounting device
Compatibility of materials	CleanProof+ ECOLAB

Operation and display

Type of display	LED
Number of LEDs	2 Piece(s)
Operational controls	Multiturn potentiometer

Environmental data

Ambient temperature, operation	-30 ... 55 °C
Ambient temperature, storage	-30 ... 55 °C

Certifications

Degree of protection	IP 67 IP 69K
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

Classification

Customs tariff number	85365019
ECLASS 5.1.4	27270904
ECLASS 8.0	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ECLASS 13.0	27270903
ECLASS 14.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
ETIM 9.0	EC002719

Electrical connection

Connection 1

Function	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M8
Type	Male
Material	Stainless steel
No. of pins	4 -pin
Encoding	A-coded

Pin	Pin assignment
1	V+
2	OUT 2
3	GND
4	OUT 1

Operation and display

LED	Display	Meaning
1	Green, continuous light	Operational readiness
2	Yellow, continuous light	Object detected

Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50106153	K-D M8A-4P-5m-FAB	Connection cable	Application: Hygienic and wet areas Connection 1: Connector, M8, Axial, Female, 4 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
	50106155	K-D M8W-4P-5m-FAB	Connection cable	Application: Hygienic and wet areas Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50118542	BT 200M.5	Mounting bracket	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type, Suited for M3 screws Type of mounting device: Adjustable Material: Stainless steel

Accessories

	Part no.	Designation	Article	Description
	50040269	BT 25	Mounting device	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal

Note	
	A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.