S100 IO-Link sensor family

The link to object detection

Standard miniature case 20x32x12mm

Improved detection features for the Background Suppressor models (M10) NEW

Improved operating frequency for polarized RRX (B10) NEW

Through-beam 12m
Retroreflective 8m
Polarized 2m and 5m
Diffuse 30 and 50cm
Fixed Focus 70mm
Backgr. Suppr. 100 and 200 mm

Visible Red and RGB LED emission for an easier adjustment

Improved cross talk and EMI immunity NEW

Bright Yellow LED output indicator

Same backwards compatible mounting features

NEW **IO-Link connectivity with separate configurable I/O**

NEW **Smart sensor profile with smart functions**

NEW **High frequency contrast sensor (W00) with low jitter**

NEW **No jitter on the digital output with active I/O-Link communications**

IO-Link
New ASIC

S100 the easiest reliable and cost-effective sensor family

S100 sensor line is enriched by IO-link models which are making this family the IO-Link sensor by definition.
The new Datalogic state of the art ASIC enhance the S100 family by high-speed high-resolution contrast sensor ensuring quick packing solutions and great process reliability.

The S100 features at a glance

- Front and rear standard mounting hole layout
- Sturdy and robust enclosure and connector
- Bright output signalization
- Anti-tampering prevention thanks IO-Link communication
- New ASIC platform to ensure state of the art product performance
- New Contrast sensors (W00) model with and without IO-Link
- High frequency and low jitter contrast sensor
- Bright and precise RGB spot selectable by IO-Link
- Extended Output delay function by IO-Link
- Configurable Output setting and AUX I/O setting
- Extended Teach procedure via IO-Link
- Temperature and lifetime monitoring
- Analog signal reading (on W00 IO-Link)
- IO-Link V1.1 COM2 with smart sensor profile and data storage

Datalogic IO-Link Master

S100

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EMPOWER YOUR VISION

TECHNICAL DATA

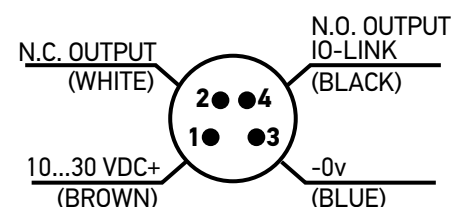|		
Through beam		12 m
Retroreflective		7 m
Polarized Retroreflective (long range)		5,5 m
Polarized Retroreflective (short range) ⟳		3 m
Transparent Retroreflective (short range)		500 mm
Transparent Retroreflective (long range) ⟳		2 m
Diffused proximity (short range)		300 mm
Diffused proximity (long range)		500 mm
Fixed focus		70 mm
Background Suppression (short range)		100 mm
Background Suppression (long range) ⟳		200 mm
RGB Mark Reader ⟳		12,5mm+/-2mm
Power supply	Vdc	10...30 Vdc
Output	PNP	•
	NPN	•
Connectivity	IO-Link	IO-Link V1.1.2 Smart Sensor Profile Fully programmable double output stage through IO-Link parametrization
Connection	cable	2 m cable, 4 wires
	connector	M8 conn., 4-pole
Approximate dimensions (mm)		32x20x12
Housing material		Plastic
Mechanical protection		IP67
Ripple		10% max.
Consumption (output current excluded)		35 mA max. (mod. S100...W) 30 mA max. (mod. S100...B/M/ T io-link)
Light emission		red LED 632 nm (mod. S100...B/C/D/M01) IR LED 860 nm (mod. S100...A/G/Txx/M10) RGB LED (mod. S100-W00)
Setting		remote teach-in (mod. S100...Mxx/Txx/W00)
Spot size		1.5mm x 6.5mm (mod. S100-W00)
Operating mode		LIGHT/DARK selectable by wire (mod. S100...A/B/C/D/F)
Indicators		yellow OUTPUT LED (excl. mod. G) green POWER LED (mod. S100...G)
Output		PNP or NPN Fully programmable output stage only in IO-Link model Pin 2 I/O progrmmable only for IO-Link models
Output current		100 mA
IO-Link Connectivity		V1.1.2
IO-Link COM		COM2
IO-Link min cycle		2.3ms
Saturation voltage		2 V max.
Response time		2 ms (mod. S100...FG) 1 ms (mod. S100...A/Bxx/C/D/Mxx/Txx/T IO-Link), 500µs B IO-Link, 25µs (W00-xx)
Switching frequency		250 Hz (mod. S100...FG) 500 Hz (mod. S100...A/Bxx/C/D/Mxx/Txx/T IO-Link), 1KHz B IO-Link, 20kHz (W00-xx)
Jitter		13µs(W00-xx)
Connection		2 m cable 3,5 mm, M8 4-pole connector
Dielectric strength		500 Vac, 1 min between electronics and housing
Insulating resistance		>20 MΩ, 500 Vdc between electronics and housing
Mechanical protection		IP67
Ambient light rejection		according to EN 60947-5-2
Vibrations		0,5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)
Shock resistance		11 ms (30 G) 6 shock for every axis (EN60068-2-27)
Housing material		ABS body, PMMA indicators cover
Lens material		PC lens, PMMA window
Operating temperature		-25... 55 °C
Storage temperature		-40 ... 70 °C
Weight		50 g max. cable vers., 10 g max. connector vers.

APPLICATIONS

- Processing and packaging machines
- Conveyors
- Automatic warehousing
- Intralogistic lines
- Bottling
- Cosmetic and Pharma machinery
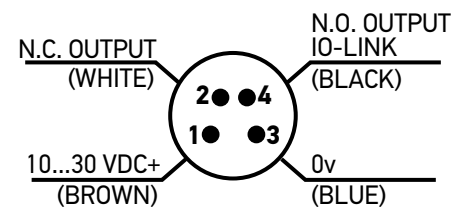- Industry 4.0 application compliant

CONNECTIONS

S100W IO-Link

N.C. OUTPUT (WHITE) — 2
N.O. OUTPUT IO-LINK (BLACK) — 4
10...30 VDC+ (BROWN) — 1
-0v (BLUE) — 3

S100 B10, T10, M10

N.C. OUTPUT (WHITE) — 2
N.O. OUTPUT IO-LINK (BLACK) — 4
10...30 VDC+ (BROWN) — 1
0v (BLUE) — 3

Pin 2 I/O progrmmable only for IO-Link models

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