

FT 55-CM

High-end colour sensor



ECOLAB



PRODUCT HIGHLIGHTS

- Stable processes thanks to intelligent color detection, regardless of distance
- Economical solutions through up to twelve storable colors or jobs.
- Dependable switching behaviour through reliable glare suppression (depending on model)
- Intuitive sensor setup with integrated LCD display
- Customised adjustment to applications through digital color value output using IO-Link

Optical data		Functions	
Measurement range	...CM-1: 12 to 32 mm ...CM-3: 18 to 32 mm ...CM-4: 20 to 150 mm	Indicator LED, green	Power supply indicator, IO-Link
Light used	LED, white	Indicator LED, yellow	Switching output indicator
LED class	LED risk group 2 (DIN EN 62471:2009-03)	Scanning range adjustment	via display or IO-Link
		Adjustment options	Teach-in of up to 7/12 colors (5-/8-pin); different detection modes; N.O./N.C.; binary output; auto-detect / NPN / PNP; keypad lock through control input; switch-on/ switch-off delay; extensive IO-Link-func- tions; speed /averaging
Electrical data		IO-Link	
Operating voltage, +UB	18 to 30V DC	Communication mode	COM 2
No-load current, I ₀	≤ 60 mA / 24V DC	Min. cycle time	4 ms
Output current, I _e	< 100 mA	SIO mode	is supported
Protective circuits	protection, U ^B / short-circuit protection (Q)	Length of process data	6 bytes
Protection class	2	IO-Link specification	1.1
Power on delay	< 150 ms		
Switching output, Q	auto-detect (Q1) ¹ / NPN / PNP		
Output function	N.O. / N.C.		
Max. capacitive load	<100 nF		
Switching frequency, f (ti/tp 1:1)	<= 3000 Hz		
Response time Q	180 μs		
Warm-up time	300 sec		
Control input	trigger; keylock		
Mechanical data			
Dimensions	50x25x50,5 mm	Ambient temperature: ope- rating	-20 to +55°C
Enclosure rating	IP 67, IP 69 ²	Ambient temperature: storage	-20 to +80 °C
Material, housing	Die-cast zinc, matt chrome	Weight (plug-in device)	160g
Material, front screen	PMMA	Vibration and impact resistance	EN 60947-5-2
Material, display	PMMA	Display	LCD, 75x71 pixels
Type of connection	(See selection table)		

¹ with automatic selection of PNP or NPN with Q1 ² With connected IP 67 / IP 69 plug

Scanning distance	Switching output	Type of connection	Part Number	Article number
12 to 32 mm	5	Plug, M12, 8-pin	FT 55-CM-1-PNSD-L8M ¹	625-11000
12 to 32 mm	3	Plug, M12, 5-pin	FT 55-CM-1-PNSDL-L5M ¹	625-11001
18 to 32 mm	5	Plug, M12, 8-pin	FT 55-CM-3-PNSD-L8M	625-11010
18 to 32 mm	3	Plug, M12, 5-pin	FT 55-CM-3-PNSDL-L5M	625-11011
20 to 150 mm	5	Plug, M12, 8-pin	FT 55-CM-4-PNSD-L8M	625-11020
20 to 150 mm	3	Plug, M12, 5-pin	FT 55-CM-4-PNSDL-L5M	625-11021

¹ not for black objects

Plug connection

153-01272

Connection	Size of light spot
<p>5-pin* </p> <ul style="list-style-type: none"> +U_B 1 BN Q₂/IN TR 2 WH Q₂/IN KL 5 GY Q₂/IO-Link 4 BK -U_B 3 BU <p>Auto-Detect 154-00363</p> <p>8-pin* </p> <ul style="list-style-type: none"> +U_B 1 BN Q₂/IN TR 2 WH Q₂ 5 GY Q₁ 4 BK -U_B 3 BU Q₂ 6 PK Q₂/IN KL 7 VT GND 8 OG <p>Auto-Detect 154-00363</p> <p>* Use shielded cables only. Pin colors after norm DIN EN 60947-5-2 / IEC = 2007</p>	<p>Size [mm] vs Distance [mm]</p> <p>Labels: C1 width / height, C3 height, C3 width, C4 width / height</p> <p style="text-align: right;">155-02384</p>

Installation	Distance correction
<p style="text-align: right;">155-02365</p>	<p>Energy received by sensor</p> <p>Energy correction up to distance of 65 mm</p> <p style="text-align: right;">155-02385</p>

Accessories

For 8-pin types, use cables fulfilling norm DIN EN 60947-5-2 / IEC = 2007

Connection cable 8-pin to 4-pin for SensoIO (L8/L4-2m-PUR / 902-51857)	From Page A-38
Further connection cables	From Page A-38
Bracket SensoClip MDB F 55ST2 (579-50012)	From Page A-4
SensoIO (901-01000)	From Page A-4