

# FT 55-CM

High-end color sensor



**COLAB**

**IO-Link**

## 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: 18 ... 32 mm ...CM-3: 18 ... 60 mm ...CM-4: 20 ... 150 mm	Indicator LED 1, green	Power supply indicator, IO-Link
Light used	LED, white	Indicator LED 2, yellow	Switching output indicator
LED class	LED risk group 2 (EN 62471:2008)	Adjustment sensor	Via display or IO-Link
		Adjustment options	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- functions; speed / averaging
Electrical data		IO-Link	
Operating voltage, +U <sub>b</sub>	18 ... 30V DC	Communication mode	COM 2
No-load current, I <sub>0</sub>	≤ 60 mA / 24V DC	Min. cycle time	4 ms
Output current, I <sub>e</sub>	< 100 mA	SIO mode	Compatible
Protective circuits	Reverse polarity protection U <sub>b</sub> / short-circuit protection (Q)	Length of process data	2 bytes / 6 bytes
Protection class	2	Specification	1.1
Power on delay	< 150 ms		
Switching output, Q	Auto-Detect (Q <sub>1</sub> ) <sup>1</sup> / NPN / PNP		
Output function	N.O./N.C.		
Max. capacitive load	< 100 nF		
Switching frequency, f (ti/tp 1:1)	CM-1: ≤ 500 Hz CM-3 / CM-4: ≤ 3000 Hz		
Response time Q	CM-1: ≤ 540 μs (at 500 Hz) CM-3 / CM-4: ≤ 180 μs (at ≥1500 Hz)		
Warm-up time	300 s		
Control input	Trigger; keylock		
Mechanical data			
Dimensions	50 x 25 x 50.5 mm	Ambient temperature: operating	-20 ... +55°C
Enclosure rating <sup>2</sup>	IP 67, IP 69	Ambient temperature: storage	-20 ... +80 °C
Material, housing	Zinc die-cast, matt chrome	Weight (plug-in device)	150 g
Material, front screen	PMMA	Vibration and impact resistance	EN 60947-5-2
Material, display	PMMA	Display	LCD, 75 x 71 pixels
Type of connection	See selection table		

<sup>1</sup>With automatic selection of PNP or NPN with Q<sub>1</sub>    <sup>2</sup>With connected IP 67 / IP 69 plug

Scanning distance	Switching output	Type of connection	Part Number	Article number
18 to 32 mm	3	Plug, M12, 5-pin, IO-Link	FT 55-CM-1-PNSDL-L5M <sup>1</sup>	625-11001
18 to 60 mm	5	Plug, M12, 8-pin	FT 55-CM-3-PNSD-L8M	625-11010
18 to 60 mm	3	Plug, M12, 5-pin, IO-Link	FT 55-CM-3-PNSDL-L5M	625-11011
18 to 60 mm	1	Plug, M12, 4-pin, IO-Link	FT 55-CM-3-PNSDL-L4M	625-11012
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, IO-Link	FT 55-CM-4-PNSDL-L5M	625-11021
20 to 150 mm	1	Plug, M12, 4-pin, IO-Link	FT 55-CM-4-PNSDL-L4M	625-11022

<sup>1</sup> Not for black objects

### Plug connection

Dimensions: 25, 50, 4.3, 46, 44, 16, 17, 50.5, 11.6, 16.4, 4, 153-01301

Labels: Receiver, Emitter, Buttons, Display, LED 1, LED 2

Connection, 4-pin, Auto-Detect <sup>3</sup>	Connection, 5-pin, Auto-Detect <sup>2/3</sup>	Connection, 8-pin, Auto-Detect <sup>3</sup>
<p>154-00566</p>	<p>154-00569</p>	<p>154-00568</p> <p>Pin colors after EN 60947-5-2</p>

<sup>2</sup> In IO-Link mode, a 4-pin cable must be used <sup>3</sup> The sensor must be used with shielded cables <sup>4</sup> Can be used as output or input

Size of light spot	Installation	Preferred direction
<p>155-02384</p>	<p>155-02563</p> <p>155-02569</p>	<p>155-02568</p>

### Accessories

For 8-pin types, use cables according to EN 60947-5-2	
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 MBD F 55ST2 (579-50012)	From Page A-4
SensoIO (901-01000)	From Page A-4