

FT 25-C


RGB colour sensor in miniature housing



FT 25-C

RGB colour sensor in miniature housing with high switching frequency



 made in Germany



Reliable colour detection:

The main task of the FT 25-C RGB colour sensor is the detection of a defined colour. It is also suitable for very rapid applications thanks to its high switching frequency. Mounting by means of a dovetail and the MBD F25ST mounting rod, available as an accessory, allows easy and precise fine alignment.

TYPICAL FT 25-C

- Smallest cubic colour sensor on the market (34 x 20 x 12 mm³)
- High switching frequency of 10 kHz for rapid applications
- Detection of a taught-in colour
- Detection of "non-colours", e.g. black, white and grey
- Bright light spot with sharp contour for easy alignment and precise front-edge detection
- Static or external teach-in
- "Communicating" light spot for simplest setup
- Hermetically sealed housings (IP 69K & IP 67)

The FT 25-C RGB colour sensor is not only the smallest cubic colour sensor currently available on the market, but is also one of the quickest: with a switching frequency of up to 10 kHz it is as fast as a contrast sensor and thus also suitable for the most rapid printed mark applications. The FT 25-C can identify any colour in the visible spectrum including all the “non-colours” and also very reliably detects the smallest of colour differences. It keeps even the narrowest print marks and smallest markings in view thanks to its bright light spot with a sharp elongated contour (1 × 5 mm²).

Fits into every space

Thanks to its miniature design, SensoPart’s smallest colour sensor is also easily accommodated in very restricted installation spaces, whereby the patented dovetail mounting allows user-friendly fine

alignment. The operating concept is also clever: the FT 25-C is rapidly and easily configured via teach-in or control line. The quality of the colour detection is signalled via a “communicating” light spot: the blinking of the red, blue or green transmission LED provides you with a clear statement on the stability of your process.

As a result of its space-saving design and rapidity, the FT 25-C is suitable for use in numerous sectors and applications, for example, packaging and labeling machines as well as bottling lines.

FT 25-C – Product Overview				
	Type of light	Scanning distance	Special features	Page
FT 25-C	Red LED, green LED, blue LED	12 ± 3 mm	The world’s smallest RGB colour sensor with a switching frequency of ≤ 10 kHz	4

FT 25-C

RGB colour sensor



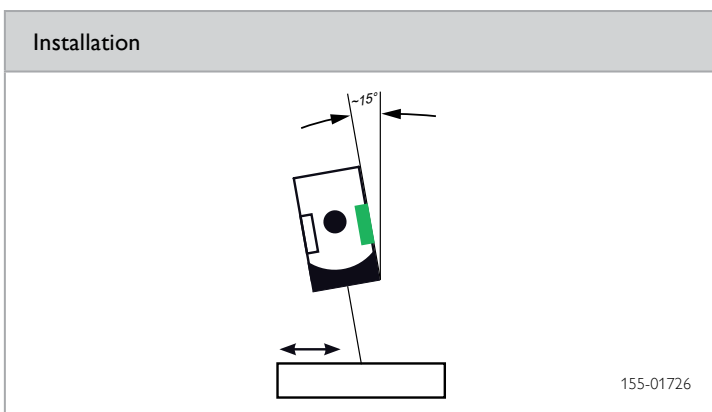
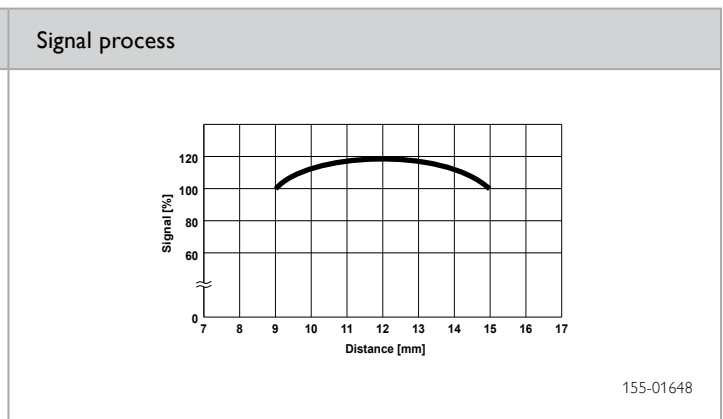
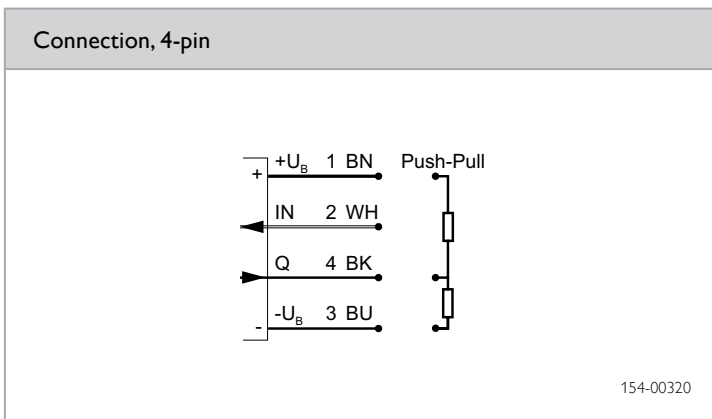
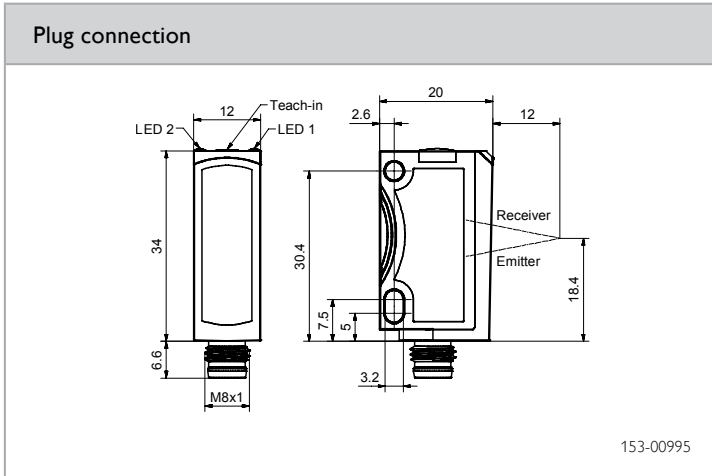
PRODUCT HIGHLIGHTS

- Smallest RGB colour sensor with high switching frequency ≤ 10 kHz
- Precise detection of the slightest of contrast differences
- Very robust operation despite fluttering and glossy objects
- Feedback via „responding light spot“ about quality of taught-in colour value

Optical data		Functions	
Scanning distance	12 mm	Indicator LED, green	Operating voltage indicator
Depth of field	± 3 mm	Indicator LED, yellow	Switching output indicator
Type of light	Red LED, 633 nm Green LED, 525 nm Blue LED, 460 nm	Sensitivity adjustment	Via Teach-in button and control input
Light spot size	1×5 mm ²	Adjustment possibilities	N.O./N.C. via Teach-in button and control input
		Default settings	Button lock via control input
			N.O.
Electrical data		Mechanical data	
Operating voltage, +U _B	10 ... 30V DC ¹	Dimensions	34 x 20 x 12 mm ³
No-load current, I ₀	≤ 30 mA	Enclosure rating	IP 67 / IP 69K ³
Output current, I _e	≤ 100 mA	Material, housing	ABS
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection (Q)	Material, front screen	PMMA
Protection class	2	Type of connection	(See Selection Table)
Standby time	< 300 ms	Ambient temperature: operation	-20 ... +55 °C ⁴
Switching output, Q	Push-Pull	Ambient temperature: storage	-20 ... +80 °C
Output function	N.O. / N.C.	Weight (metal plug device)	10 g
Switching frequency, f (ti/tp 1:1) ²	(See Selection Table)	Vibration and impact resistance	EN 60947-5-2
Response time	(See Selection Table)		

¹ Max. 10 % ripple, within U_B, ~ 50 Hz / 100 Hz ² $f = 1 / (T \times Nyq \times 2)$ ³ With connected IP 67 / IP 69K plug ⁴ UL: -20 ... +50 °C

Switching frequency, f (ti/tp 1:1) ²	Response time	Scanning distance	Type of connection	Part number	Article number
≤ 10000 Hz	≤ 50 μ s	12 ± 3 mm	Metal plug, M8x1, 4-pin	FT 25-C1-GS-M4M	607-21020
≤ 2500 Hz	≤ 200 μ s	12 ± 3 mm	Metal plug, M8x1, 4-pin	FT 25-C2-GS-M4M	607-21021


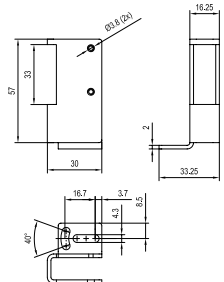

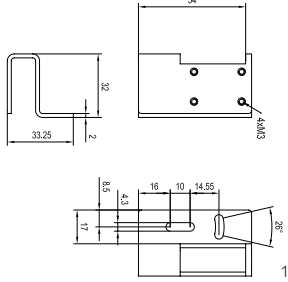

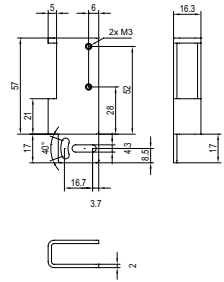

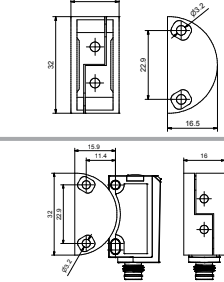

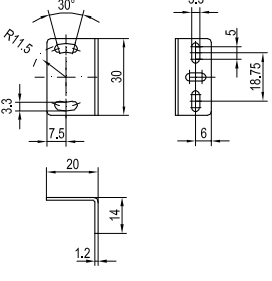

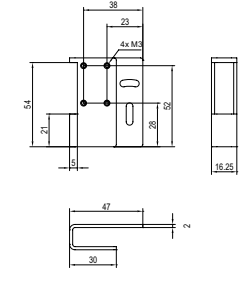


Accessories

Connection cables	See product catalogue/ accessories
Brackets	

Accessories

Brackets

Brackets			
	 <p>153-01017</p>	<p>Part number / Article number</p> <p>MSP F 20-11 / 558-41006</p> <p>Description</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>Suitable for</p> <p>F 20 UT 20-150 F 25 UT 20-S150 FL 20 UT 20-240</p>	
	 <p>153-00908</p>	<p>Part number / Article number</p> <p>MSP F 20-23 / 558-41011</p> <p>Description</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>Suitable for</p> <p>F 20 UT 20-150 F 25 UT 20-S150 FL 20 UT 20-240</p>	
	 <p>153-00973</p>	<p>Part number / Article number</p> <p>MSP F 20-13 / 558-41008</p> <p>Description</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>Suitable for</p> <p>F 20 UT 20-150 F 25 UT 20-S150 FL 20 UT 20-240</p>	
	 <p>153-00945</p> <p>153-00946</p>	<p>Part number / Article number</p> <p>MBD F 25 / 661-01000</p> <p>Description</p> <p>Dovetail clamp mounting, adjustable $\pm 15^\circ$, with screws Material: anodised aluminium</p> <p>Suitable for</p> <p>F 25</p>	
	 <p>153-00241</p>	<p>Part number / Article number</p> <p>MS F 20 / 558-41000</p> <p>Description</p> <p>Mounting bracket with screws Material: nickel-plated steel</p> <p>Suitable for</p> <p>F 20 F 25 UT 20 FL 20</p>	
	 <p>153-000974</p>	<p>Part number / Article number</p> <p>MSP F 20-21 / 558-41009</p> <p>Description</p> <p>Protective sensor angle bracket with screws, very robust Material: stainless steel V2A</p> <p>Suitable for</p> <p>F 20 UT 20-150 F 25 UT 20-S150 FL 20 UT 20-240</p>	

Brackets								
	1 153-01001	Part number / Article number Description Suitable for	MBD F 25ST / 661-01001 Bracket for dovetail on mounting rod, with clamping screw Material: aluminium F 25FT 25-RGB1-GS-KL4					
	 153-01002	Part number / Article number Description Suitable for	F 25FT 25-RGB1-GS-KL4					
	2 <table border="1" style="margin-left: 20px;"> <tr> <td>x = 200</td> <td>MST 45-20</td> </tr> <tr> <td>x = 300</td> <td>MST 45-30</td> </tr> <tr> <td>x = 400</td> <td>MST 45-40</td> </tr> </table> 153-00545	x = 200	MST 45-20	x = 300	MST 45-30	x = 400	MST 45-40	Part number / Article number Description Suitable for
x = 200	MST 45-20							
x = 300	MST 45-30							
x = 400	MST 45-40							
3 153-01000	Part number / Article number Description Suitable for	MB ST1 / 661-01002 Bracket for mounting rods, with clamping screw Material: aluminium MST 45-20 MST 45-30 MST 45-40						

Cables		
Part number	Article number	Description
M8, 4-pin		
K4-2m-G-PUR	902-50801	2 m, straight, PUR
K4-5m-G-PUR	902-51617	5 m, straight, PUR
K4-10m-G-PUR	902-51610	10 m, straight, PUR
K4-2m-W-PUR	902-50803	2 m, 90°, PUR
K4-5m-W-PUR	902-51618	5 m, 90°, PUR
K4-10m-W-PUR	902-51629	10 m, 90°, PUR
K4-2m-W-PL-PUR	902-51642	2 m, 90°, PUR, with indicator LED
K4-5m-W-PL-PUR	902-51643	5 m, 90°, PUR, with indicator LED
CM4 FG-E-5m-PVC	902-50221	5 m, straight, PVC, with hex nut SW 9 stainless steel (IP 69K)
CM4 FW-E-5m-PVC	902-50222	5 m, 90°, PVC, with hex nut SW 9 stainless steel (IP 69K)

For further accessories see SensoPart's Complete Catalogue, chapter Accessories or www.sensopart.com

We look ahead.

Yesterday, today and in the future.



“We gauge ourselves not by what is possible today, but by our vision of what can be achieved” – this has been our motto since the foundation of SensoPart in 1994. Our goal is to always be a step ahead and to be able to offer our customers the most innovative sensor for industrial automation.

With our easy to integrate VISOR® Vision sensors and our compact laser sensors with an amazing background suppression made in Germany, we stick up to this motto.

Get ready – we still have a lot of ideas for the future.

SENSOR TECHNOLOGY

- Light barriers
- Proximity switches
- Laser sensors
- Miniature sensors
- Distance sensors
- Colour sensors
- Contrast sensors
- Anti-collision sensors
- Slot sensors
- Fibre-optic amplifiers
- Inductive sensors
- Capacitive sensors
- Ultrasonic sensors

VISION

- Vision sensors
- Smart cameras
- Vision systems
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