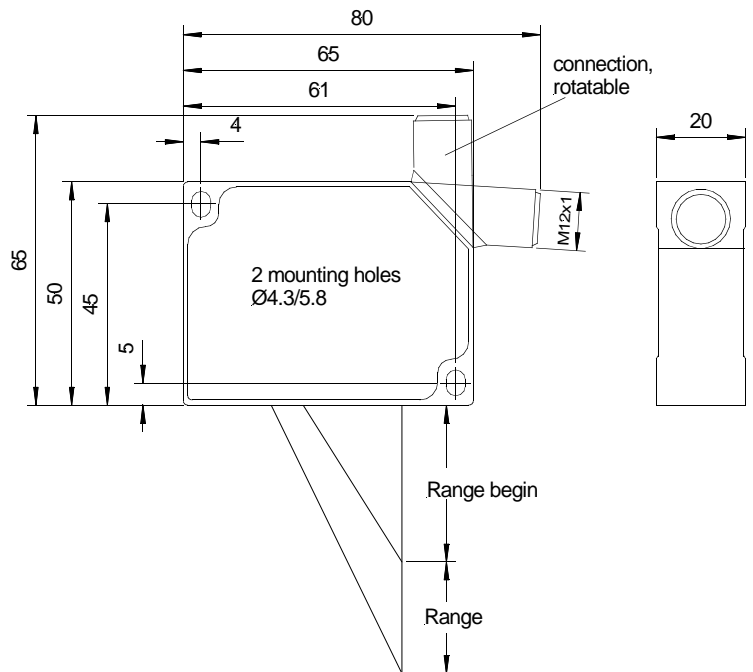


M3-2

Laser Distance Sensor

Measuring Rate up to 1,5 kHz
Measuring Ranges 5 ... 600 mm

Triangulation digital



- Compact design with integrated controller
- Adjustable measuring rate up to 1,5 kHz
- Configuration via Software
- Adjustable filter functions
- Trigger input / teach-in

Specifications

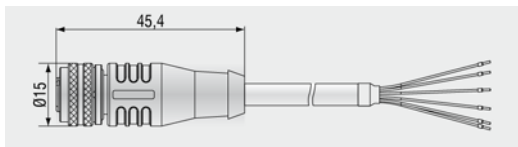
Sensor		M3-2/5	M3-2/10	M3-2/20	M3-2/50	M3-2/100	M3-2/200	M3-2/250V	M3-2/600
Measuring range		5 mm	10 mm	20 mm	50 mm	100 mm	200 mm	250 mm	600 mm
Begin of measuring range		20 mm	20 mm	30 mm	45 mm	50 mm	60 mm	100 mm	200 mm
Linearity		7 μ m	12 μ m	22 μ m	50 μ m	100 μ m	210 μ m	620 μ m	1650 μ m
Resolution*	averaged over 64 values dynamic 1.5 kHz	0.6 μ m 2 μ m	1 μ m 3 μ m	2 μ m 7 μ m	5 μ m 15 μ m	10 μ m 30 μ m	13 μ m 60 μ m	32 μ m 170 μ m	80 μ m 340 μ m
Light spot diameter**		0.4 mm	0.6 mm	0.5 mm	0.1 mm	0.1 mm	2 mm	5 mm	2.6x5mm
Measuring rate, programmable		1.5 kHz; 1 kHz; 750 Hz; 375 Hz; 50 Hz							
Exposure rate, programmable		0.6 ms; 1 ms; 1.3 ms; 2.6 ms; 20 ms							
Light source		semiconductor laser < 1 mW, wave length 670 nm (red)							
Laser protection class		2 (DIN EN 60825-1: 2001-11)							
Output	analog digital	4...20 mA (1...5 V with cable PC1402-x/); free scalable within the nominal range RS 422 / 14 bit							
Control I/O		1x open collector output (switching output, switch, error); 1x input (teach in, trigger); 1x laser on/off							
Temperature stability		0,03 % full scale output /°C				0,08 % full scale output /°C			
Operating temperature		0 ... +50 °C							
Storage temperature		-20...+70 °C							
Protection class		IP 67							
Vibration		15 g / 10 Hz...1 kHz						20 g / 10 Hz...1 kHz	
Shock		15 g / 6 ms							
Weight (without cable)		approx. 83 g						approx. 130 g	
Supply		11...30 VDC, 24 VDC / 50 mA							
Controller		integrated signal processor							

All specifications apply to a diffusely reflecting matt white ceramic target

* Resolution digital output 14 bit

** Light spot diameter at midrange

Connector axial



12 pin connector

(view on solder termination side of male inserts)

Pin	Description	colour PC1402-x/l
3	RS422 Rx+	serial input green
4	RS422 Rx-	serial input yellow
5	RS422 Tx+	serial output grey
6	RS422 Tx-	serial output pink
7	+U _B	11-30 DV 24 V MP red
8	Laser on/off	switch input black
9	Teach in	switch input violet
10	Error	switch output brown
11	I _{OUT}	4...20 mA white
12	GND	supply and signal ground blue
1/2	n.c.	

The cable screen is connected with the sensor housing. The interface and power supply cable are robot rated and UL certified. At one end is a 12 pin M12 connector, the other end is open.