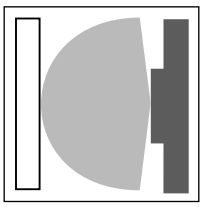
Series -F20

Optical scanner

OSD3000-F20-M4



3000 mm

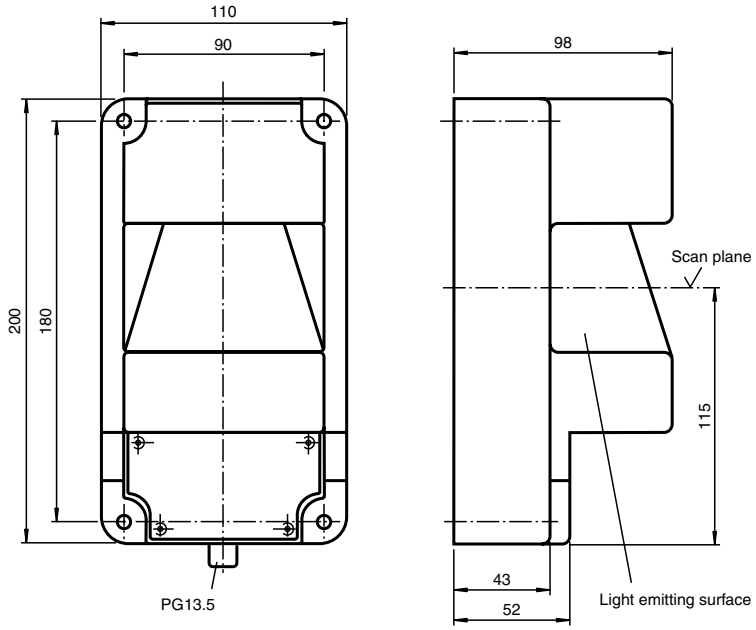
Laser Class I

CE

Features

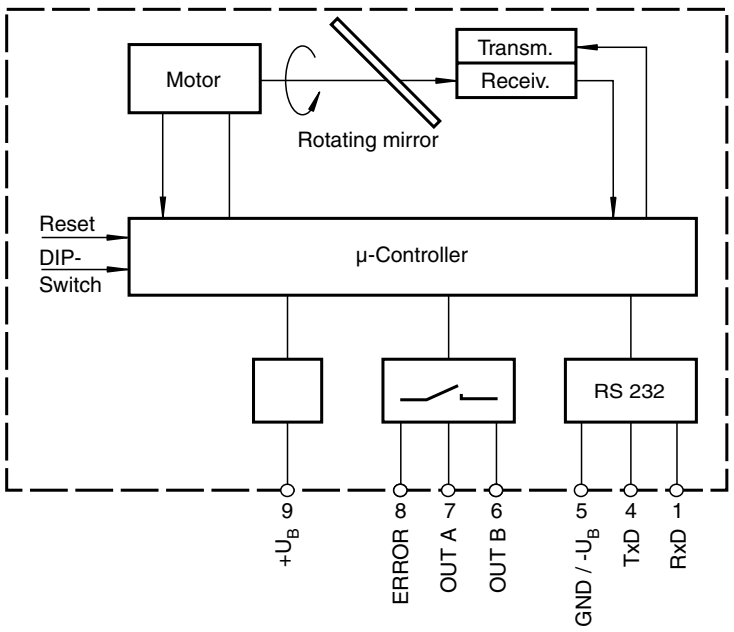
- Scanning zone 174°
- Choice of 2 free switching zones
- Supplied with control software
- TEACH-IN at the optimum threshold adjustment
- Self test
- Factory settings reset function
- Laser class 1, eyesafe
- Internal function monitoring

Dimensions



Mounting accessories etc., see section "accessories"

Electrical connection



Date of issue 31.7.99

Technical data

Model number

OSD3000-F20-M4

Valid for the whole family

General specifications		
Sensing range		0 ... 3000 mm
Reference target		Grey card 18 % (grey) ... 90 % (white) reflection, 200 mm x 200 mm
Light type		IR laser 780 nm . Laser class 1, eyesafe
Lifetime		Light source: ≥ 20000 h Motor: ≥ 40000 h
Ambient light limit		≤ 15000 Lux sun light ≤ 10000 Lux halogen light
Sampling frequency		10 Hz
temperature influence		Temperature compensation
Standard conformity		EN 60947-5-2
Electrical specifications		
Rated operational voltage	U_e	18 ... 30 V DC , ripple 10 $\%_{SS}$
Indicating/operating means		
LED yellow		Object in zone A
LED green		Power on
LED red 1		Object in zone B
LED red 2		System fault
DIP-switch		Choice of 8 zone combinations programmed in an EEprom
Output		
Output type		2 switch outputs pnp, NO/NC
Rated operational current	I_e	200 mA , short circuit/overload protected
Voltage drop	U_d	≤ 2.5 V
Switch-on delay	t_{on}	100 ms
Range hysteresis	H	adjustable
Repeat accuracy		≤ 2 %
Ambient conditions		
Ambient temperature		0 ... 50 °C (273 ... 323 K)
Storage temperature		-40 ... 80 °C (233 ... 353 K)
Mechanical specifications		
Protection degree		IP66 according to EN 60529
Connection type		Terminal compartment Pg13.5, core cross-section ≤ 2.5 mm^2
Material		
Housing		ABS
Light exit		PMMA
Mass		1200 g

Note

Measuring principle

The laser beam of an optical distance measuring unit samples cyclicly through the scanning zone by means of a motor driven rotating mirror. When the measuring beam is reflected by objects within the sensing range, their distance and direction is determined. A series-connected microcontroller compares the positions of all detected objects with two freely configurable switching zones. If one or more objects lie within one switching zone, then the associated switch output responds.

Date of issue 31.7.99