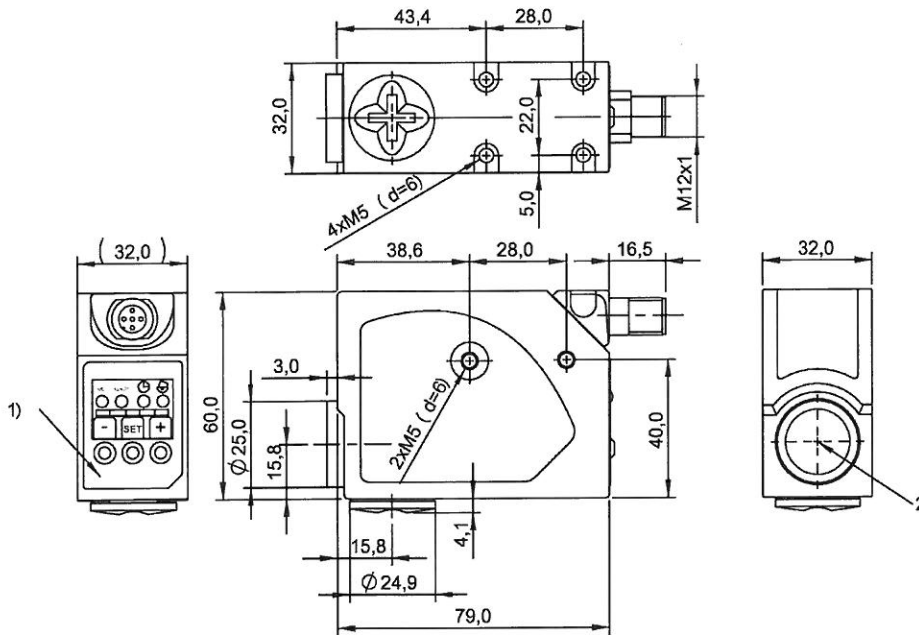
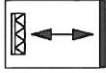


Contrast sensors
Series 67M
Working Range: 6...12 mm

PNP/NPN (1x), antivalent, 1...5.5 V
Blue/green/red light
DC, direct current



1) Display and control panel, 2) 270° rotatable, 3) Cover cap, removable, 4) Standard lens, removable, 5) Light exit standard, 6) Light exit optionally

Characteristic data

Operating voltage	10...30 V DC
Connection	Connector, M12x1-S92
Switching freq. f max.	20000 Hz
Indicator	Switching point - bar display
Duration of time function	20 ms
Input function	Same function as SET-key
Setting	Contrast (switching point), Factory setting (Reset), Key lock off, Time function on/off, Light-on/dark-on, Switching output PNP/NPN, Teach-in stat./man.
Time function	Turn-off delay
Adjuster	Key (3x)
Short-circuit protected	Yes
Protected against polarity reversal	Yes
Enclosure Type per IEC 60529	IP67
Protection class	II

Optical data

Principle of optical operation	Light scanner, focused
Switching function, optical	Light-on/dark-on
Light spot size, typical	1.5 mm x 5 mm at 9 mm
Light type	Blue/green/red light

Wavelength	465 nm / 520 nm / 630 nm
Ambient light max.	5,000 Lux
Sensing range	6...12 mm
Sensing distance Sn	Sn = 9 ±3 mm
LED group per IEC 62471	Exempt group

Electrical data

Rated operating voltage Ue DC	24 V DC
Effective operating current Ie	100 mA
Rated insulation voltage Ui	75 V DC
Ripple max. (% of Ue)	8
Switching output	PNP/NPN (1x)
Switching function	NO/NC
Load resistance RL min.	2,2 kOhm
Turn-off delay toff max.	0,025 ms
Turn-on delay ton max.	0,025 ms
No-load current max. Io at Ue	85 mA
Voltage drop Ud max. (at Ie)	2,0 V
Analogue output	Analog U
Value range analogue	1...5.5 V

Mechanical data

Beam characteristic	Focused
Connector type	M12x1-S92

Internet	: www.balluff.com
Balluff Germany	: +49 (0) 7158 173-0, 173-370
Balluff USA	: 1-800-543-8390
Balluff China	: +86 (0) 21-50 644131

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Sensing surface material	Glass
Housing material	GD-Al
Oberflächenschutz	Painted
Mounting type	Screw M5
Design	Block, rotatable connection
Ambient temperature	-10...55 °C

Basic data

Basic standard	IEC 60947-5-2
Additional features	Optical can be rotated (light exit 0°/90°), vertical light spot.

The sensor is functional again after the overload has been eliminated.
Reference object (target): Color bar card, 100 x 100, contrast yellow/white and blue/black, lateral approach of color bars, direction of movement vertical to color spot length.
Reference object (target): Gray card, 100 x 100, 90 % remission, axial approach.
For additional information, refer to user's guide.
Order accessories separately.
Do not press key using a pointed tool.

