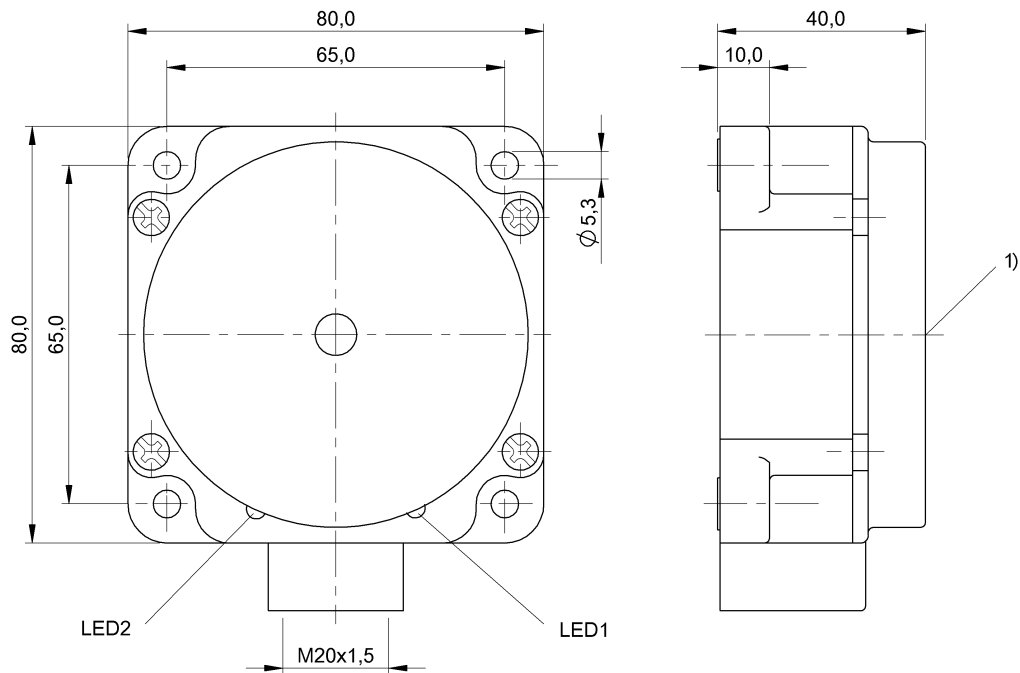




1) Sensing surface



Basic features

Approval/Conformity	CE
	EAC
	WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Inductive sensor

Display/Operation

Function indicator	yes
Power indicator	yes

Electrical connection

Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at U _e	1 µF
Min. operating current I _m	0 mA
No-load current I _o max., damped	20 mA
No-load current I _o max., undamped	12 mA
Operating voltage U _b	10...55 VDC
Output resistance R _a	33.0 kOhm + D/33.0 kOhm + D
Protection class	II
Rated insulation voltage U _i	250 V AC
Rated operating current I _e	200 mA
Rated operating voltage U _e DC	24 V
Rated short circuit current	100 A
Ready delay t _v max.	10 ms
Residual current I _r max.	80 µA
Ripple max. (% of U _e)	15 %
Switching frequency	50 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

Inductive Sensors
BES 517-140-M4-H
Order Code: BES020R

BALLUFF

Environmental conditions

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Interface

Cable fitting, thread size	M20x1.5
Switching output	NPN normally open/normally closed (NO/NC)

Material

Housing material	PBT
Material sensing surface	PBT

Mechanical data

Connection cross-section	2.5 mm ²
Dimension	80 x 80 x 40 mm
Installation	for flush mounting
Size	80x80
Tightening torque	4...5 Nm (M20x1.5)
Tightening torque clamping screw	0.8 Nm

Range/Distance

Assured operating distance S _a	32 mm
Hysteresis H max. (% of S _r)	15.0 %
Rated operating distance S _n	40 mm
Real switching distance s _r	40 mm
Repeat accuracy max. (% of S _r)	5.0 %
Temperature drift max. (% of S _r)	10 %
Tolerance S _r	10 %

Remarks

LED 1: Function
LED 2: Operating voltage
Cutout for flush mounting in steel: min Ø75 mm, non-ferrous metals: min. 80 x 80 mm.
The sensor is functional again after the overload has been eliminated.

Wiring Diagrams (Schematic)

