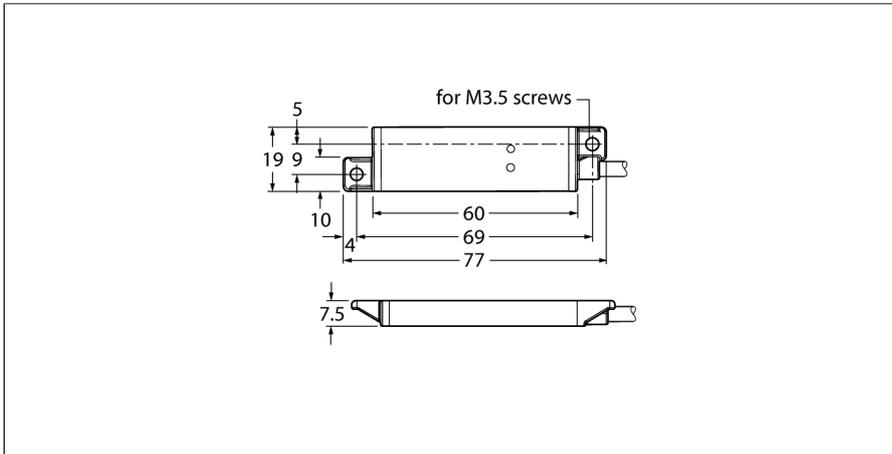


# Magnetic Field Sensor With Switching Output Q7MB W/100



Type	Q7MB W/100
ID	3071498
Operating voltage $U_s$	10...30 VDC
Short-circuit protection	yes/Cyclic
Reverse polarity protection	yes
Readiness delay	$\leq 0.5$ s
Response time typical	$< 20$ ms

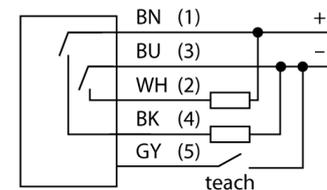
Design	Rectangular, Q7M
Housing material	Aluminium, AL
Electrical connection	Cable, 30 m, PVC
Number of cores	5
Core cross-section	0.5 mm <sup>2</sup>
Ambient temperature	-40...+70 °C
Protection class	IP68 IP69K

Power-on indication	LED, Green
Switching state	LED, Yellow

Tests/approvals	
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- Compact, robust design in a flat aluminum housing
- Protection classes IP67/IP69K
- Cable connection
- Operating voltage 10...30 VDC
- Switching outputs, bipolar (PNP/NPN)
- Measuring range adjustable via teach-in

## Wiring Diagram



## Functional principle

This sensor features three magneto-resistance transducers vertically to each other. Every transducer detects changes in the magnetic field along its axis. Maximum sensor sensitivity is achieved by the use of three measuring elements. A ferrous object changes the local magnetic field (surrounding magnetic field) which surrounds the object. The strength of this change in the magnetic field depends on the actual object (size, shape, orientation) as well as on the surrounding magnetic field (strength and orientation). The sensor measures the surrounding magnetic field by simple programming. If a ferrous object changes this magnetic field, it is detected by the sensor.