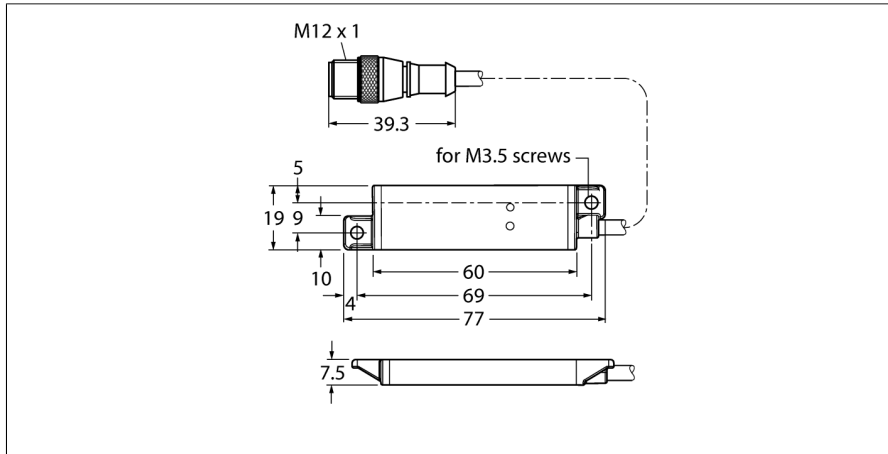


Magnetic Field Sensor With Switching Output Q7MBQ



| | |
|-----------------------------|--------------|
| Type | Q7MBQ |
| ID | 3072491 |
| Operating voltage U_s | 10...30 VDC |
| Short-circuit protection | yes/Cyclic |
| Reverse polarity protection | yes |
| Readiness delay | ≤ 0.5 s |
| Response time typical | < 20 ms |

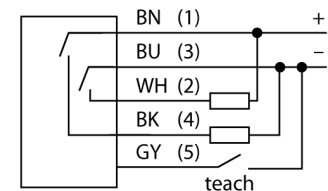
| | |
|-----------------------|---|
| Design | Rectangular, Q7M |
| Housing material | Aluminium, AL |
| Electrical connection | Cable with connector, M12 \times 1, 0.15 m, PVC |
| Number of cores | 5 |
| Core cross-section | 0.5 mm ² |
| Ambient temperature | -40...+70 °C |
| Protection class | IP68 IP69K |

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

| | |
|-----------------|--|
| Tests/approvals | |
|-----------------|--|

- Compact, robust design in a flat aluminum housing
- Protection classes IP67/IP69K
- Cable connection with male connector
- 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.