

QS Proximity Switches (QS132, QS133, and QS134)

Installation & Operation Manual

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Mounting Bracket

The QS132 Proximity Switch Package includes the mounting bracket (shown below). The QS132 is held in position by tightening the two nuts on the threaded body of the switch. This allows for finer adjustment of the proximity switch (in relation to the metal target being sensed) for optimum performance of the total control package. For all other models, mounting brackets are not included.



Mounting Bracket for QS132

Installation Check

The installation of the proximity switch can be easily checked by using a DC volt meter. Connect the negative lead of the meter to common and the positive lead to VS+. It should read approximately 12 VDC. Now, connect the positive lead to theoutput.

1. When the target is out of the sensing field, the reading should be approximately 6 V. If it is reading 1 V or less, there is non-target metal in the field. Examin e your installation.

2. When the target is in the field, the reading should be approximately 1 V or less. If not, either the target is too small or the target is too far from the sensing face.

3. At high speed the sensitivity of the sensor is decreased. In these applications, the target should be moved closer to the sensor face while still maintaining the reading in step 1.



Minimum Distance to Nearby Non-Target Metal

QS Proximity Switches

QS132 QS133 QS134



Introduction

The proximity sensor is an R.F. device that detects the absence and presence of metal in the R.F. field, protruding from the face of a sensor. This, in turn, provides a digital pulse in relation to the field being broken.

Specifications

Input Voltage: 12-24 VDC Output: Logic True: 0 to 1 V @ 200 mA max Logic False: 6 VDC to 24 VDC

Note: The sensitivity of the sensors changes $\pm 15\%$ over the full temperature range. The installation of the sensor should allow for this variation.

Installation

The proximity sensor is to be installed in such a manner that there is no non-target metal (e.g., guards or enclosures in the sensing field). The metal target could be a 1/2-inch bolt heard or a piece of metal welded onto a shaft or to a spoke of a wheel. For applications under 100 RPM, a shielded sensor can be used to count teeth on a sprocket or gear. The proximity sensor comes with a 6 foot cable. If the cable is not long enough, use an 18 gauge or heavier wire in a separate conduit. (See diagram next page.)

Wiring

Wire the proximity switch in accordance with the wiring diagram shown to the right.

How to Order

SMC-QS132-010	Proximity Sensor, unshielded,
	0.60" sensing range. Includes
	mounting bracket
SMC-QS133-010	Proximity Sensor, shielded,
	0.250" sensing range
SMC-QS134-020	Proximity Sensor, shielded,
	0.20" sensing range
SMC-QS200-010	Ferrous Proximity Sensor, Class
	I, Division II, Hazardous area
SMC-QS220-010	Ferrous Proximity Sensor, Class
	I, Division II, Hazardous area,
	explosion proof

Dimensions

The mounting dimensions for QS series of switches are provided in the table below.

Switch	A	В	C	D	E	N
QS132	M30P=1.5	57	38	13	50	5
QS133	M30P=1.5	57	38	-	50	5
QS134	M30P=1.0	47	29	-	40	4





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