MARLIN® QuickConnect (MQC) Stud

MARLIN's QuickConnect Stud (MQC) and patented Condition Detector (MCD).

Overview

The MARLIN QuickConnect (MQC) stud ensures accurate and dependable data collection, and in its "smart" version provides measurement point identification and point-specific alarm control for MCD probe vibration and temperature indication.

The MQC is a small stud like device that mounts permanently to a machine measurement point, typically a bearing cap. The patented MARLIN Condition Detector Probe (MCD) connects quickly and securely to the installed MQC stud by a simple 1/4 turn (hence the name, MARLIN QuickConnect). When collecting data, this mounting method helps ensure proper probe location and orientation, and provides for repeatable and accurate measurements, especially for higher frequency rolling element bearing defect and gear vibration signals. The MQC is an integral part of a MARLIN program implementation.

Mechanical Stud

The MQC mechanical stud does not house a programmable memory. It is a mechanical interface only, used to help ensure proper probe location and orientation, and to attain the best possible measurement quality for periodic monitoring purposes.

Computerized Stud

In addition to providing a secure mechanical interface between the MCD probe and the measured machine, the patented MQC computerized stud houses a memory chip and a temperature sensor. The chip has an ample 256 bits of memory and is programmable for point I.D. information (for automatic point identification) and for six (6) alarm setpoints specific to the monitored point, i.e. an alert and a danger setpoint for each of the three MCD measurements performed at the point (velocity vibration, enveloped acceleration vibration, and temperature). The chip also stores the last measurement reading with a date/time stamp for instant in-the-field trending.

The MQC stud temperature indication range is 0 to +85°C (+32°F to +185°F) and it provides a trendable indication of temperature. The absolute accuracy of the MQC stud temperature indication is variable in nature due to factors including mounting orientation and exposure to changing ambient conditions. These factors are beyond the control of SKF and it is recommended that the customer determine their feasibility for use.

When monitoring different types of machines, mount computerized studs on machine bearings and other points of interest, and using the MARLIN data manager to set each POINT's measurement alarm setpoints in the MQC's memory.

Data Collection

During data collection, when the MCD probe is connected and measurements performed:

- The MQC computerized stud's six (6) alarm setpoints and the values with date/time stamp of the previous reading are temporarily uploaded into the MCD's memory.
- In the MCD, the POINT's current measurement values are compared to the POINT's alarm setpoints, and MCD alarm lights (green/yellow/red LED) and LCD indicators react appropriately. For comparison/ trending, the previous readings can be displayed with the MCD Mode button.

Installed MARLIN QuickConnect Stud (MQC) with protective cap.

Installation

(Detailed Installation Instructions are provided with each MQC package.)

1. **Prepare Surface**

   Within a two (2) inch square area, prepare a flat surface and clean with a hand tool.

2. **Drilling**

   Drill pilot hole with a 6.7mm drill bit for the M8 x 1.25 thread or a #3 drill for the 1/4 x 28 thread, then enlarge the pilot hole with the drill bit (M8 x 1.25 or 1/4-28).

3. **Insert Pilot**

   Insert the pilot (M8 x 1.25 or 1/4-28) into the counter bore.

4. **Spot Face Mounting Area**

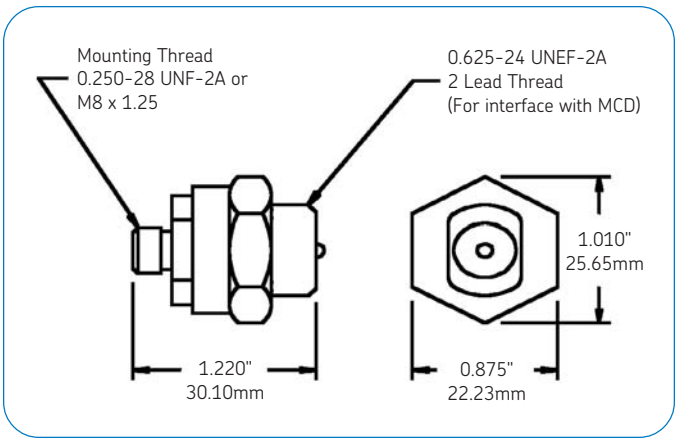
   Using the piloted counter bore, spot face the surface until smooth and approximately one (1) inch in diameter.

5. **Tap Hole**

   Use the tap (M8 x 1.25 or 1/4-28) to hand tap the hole to the desired thread depth.

6. **Mount MQC**

   Mount and tighten the MQC stud (24 in.-lb/2.0 Nm). (Loctite or equivalent recommended.)



Ordering Information

The Mechanical and Computerized studs are available in both English and Metric mounting thread configurations:

Mechanical:

- CMSS 2600-3 MARLIN QuickConnect, (3-pack) M8 x 1.25 Mounting Thread.
- CMSS 2610-3 MARLIN QuickConnect, (3-pack) 1/4-28 Mounting Thread.

Computerized:

- CMSS 2601-3 MARLIN Computerized QuickConnect, (3-pack) M8 x 1.25 Mounting Thread.
- CMSS 2611-3 MARLIN Computerized QuickConnect, (3-pack) 1/4-28 Mounting Thread.

These kits include three (3) MQCs, three (3) molded protection caps, and one (1) printed installation instruction sheet. Maximum storage temperature for the smart MQC is +120°C (+248°F).

Tool Kits for spot facing, drilling, and tapping are available in two (2) configurations:

- CMAC 9600-01 Kit, for 1/4-28 mounting.
- CMAC 9600-02 Kit, for M8 x 1.25 mounting.

Additional drill bits, end mills, and taps are also available.

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