FM Torque Control Verifier – TCV-FM 2.4

TCV-FM front view

TCV bottom view with connectors

Error Proofing – robust, simple, reliable.

The Sturtevant Richmont **Torque Control Verifier (TCV)** is used in conjunction with a wireless -> SLTC-FM torque wrench in order to provide a means of confirmation that a fastener has been installed correctly.

Each time a SLTC-FM wrench is used, a FM signal is transmitted. The TCV is designed to receive these transmissions and make decisions based upon their duration. If the TCV receives signals that satisfy its timers, an Accept signal will be generated. If the timers are violated, a Reject will occur.

Four LEDs in the face of the unit provide visual feedback to operators. The LEDs indicate power, signal strength, programming modes, Accept and Reject statuses.

This unit may also be easily integrated into systems that utilize Programmable Logic Controllers (PLCs). The TCV will supply a digital indication to an external control when an accept or reject status occurs. PLCs can also tell the TCV when to drop these statuses through the use of the reset line. Batch counting can also be performed by a PLC. For many users, this is the perfect solution approach.

The automobile brake line assembly is just one example where the TCV-FM 2.4 GHz process monitor provides an outstanding return on investment. In applications where you need a simple OK/NOK check the TCV ensures quality in a high-speed operation.

The TCV-FM monitors the tools and provides the operator with feedback for each fastening. Plus 24 VDC relays communicate status with your production system.

The outputs can be assigned and the wrench specifications parameterized on the PC using the Device Programmer software supplied.

Optional Components

☐ R 10416 = TCV to PFCS cable

☐ R 10395 = TCV to PFCS interface box

- Line integration of wireless torque wrenches (SLTC-FM) with low setup effort.
- Two-way communication between the SLTC 2.4 FM Preset Clicker Torque Wrench. (**XBee Pro – no WLAN, no ZigBee**).
- Parameter to be programmed via supplied PC software ***Device Programmer*** (for Windows®).
- Monitoring of the entire torque wrench cycle.
- Immediately informs the operator via lights and buzzer of proper (Accept) or improper (Reject) wrench use with each fastening.
- Indication of operating status and actions by four LEDs.
- Optionally, an external 'signal light' can also be controlled.
- Pairing of a second FM clicker wrench for backup operation.
- Device access lockable via security key.
- Connection to PLC or similar via 24 volt I/O port.
- A data encryption scheme eliminates cross talk between wrenches operating on the same frequency.
- Operates on either 110-120 VAC or 220-240 VAC power.

Application example: SLTC-FM sending OK

TCV-FM

Model	Item No.	Number of Wrenches to pair	Frequency FM	E/A Port 24V	PC Port USB [1]	PC Port RS-232
TCV-24FM (Mk II)	R 10467	1-2	2.4 GHz XBee	5-Pin (npn)	Typ B	RJ-11 / DE-9

Note: The 2.4 GHz wireless modules in Sturtevant Richmont's products are XBee Pro wireless modules that operate on the IEEE 802.15.4 wireless standard. These devices do not comply with the ZigBee protocol.

Further info on our website. 24/7