



DESCRIPTION

A low cost, highly accurate and rugged vibration transmitter, the **Balmac Model 140T** is ideal for use with all machines, even those that previously may have been considered uneconomical to monitor. The **Model 140T** easily mounts by use of a standard 1/4-20 stud. It is a two-wire, loop-powered transmitter that can feed the vibration level of operating machinery to a data logger, milliamp monitor, or process control computer. Solid-state accelerometer and circuit design provide a 4-20 mA signal proportional to vibration velocity. Intrinsically safe, it can safely be used in hazardous environments when coupled with a **Model MTL7706** intrinsic safety barrier.

FEATURES

- **Reliable performance**
- **Easy to install**
- **4-20 mA signal compatible with BAS controllers**
- **Intrinsically safe Class I, Division 1, Groups A, B, C; Class II, Division 1, Groups E, F, G**
- **Two year warranty**

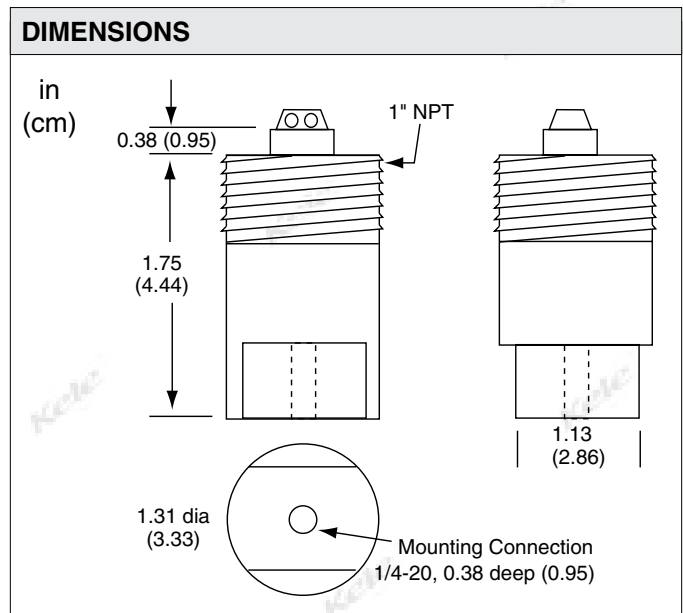
APPLICATION

Vibration monitoring can provide help in alerting for the destructive effects of vibration on mechanical system equipment, such as the following:

- **Air handler fans**
- **Cooling tower fans**
- **Pumps**
- **Compressors**



140T



SPECIFICATIONS

Supply Voltage	14-50 VDC, black=negative, red=positive, reverse polarity protection	Isolation	500V, circuit-to-case
Accuracy	5% to 10% of scale	Mounting	1/4"-20 stud, 3/8" deep
Signal Output	4-20 mA @ 600Ω	Process Connection	1" MNPT
Measurement Range		Wiring Termination	Terminals
140T-1	0-1 in/sec vibration (0-25.4 mm/sec)	Operating Temperature	-4° to 185°F (-20° to 85°C)
140T-2	0-2 in/sec vibration (0-50.8 mm/sec)	Enclosure Rating	NEMA 4, weatherproof, Cadmium-plated steel
Frequency Range	7-1300 Hz ±3% (420-78,000 rpm)	Weight	0.4 lb (0.18 Kg)
Vibration Range		Approvals	UL file #E126345
140T-1	Output 4-20 mA, proportional to vibration level, 0-1 in/sec (0-25.4 mm/sec)	Warranty	2 years
140T-2	Output 4-20 mA, proportional to vibration level, 0-2 in/sec (0-50.8 mm/sec)		



GAS & SPECIALTY SENSORS

VIBRATION TRANSMITTER

140T

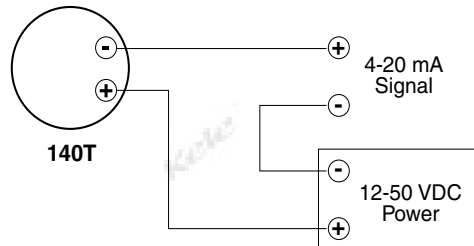
INSTALLATION

The mounting orientation can be in any position. This position should be in an area for the best vibration signal definition or where there is a good transfer of the machine's (fan's, pump's, etc.) vibrations. The best location will vary from machine to machine. The location of the transmitter should be selected carefully. When selecting the site for the mounting location, it is helpful to survey the site with the aid of a vibration meter.

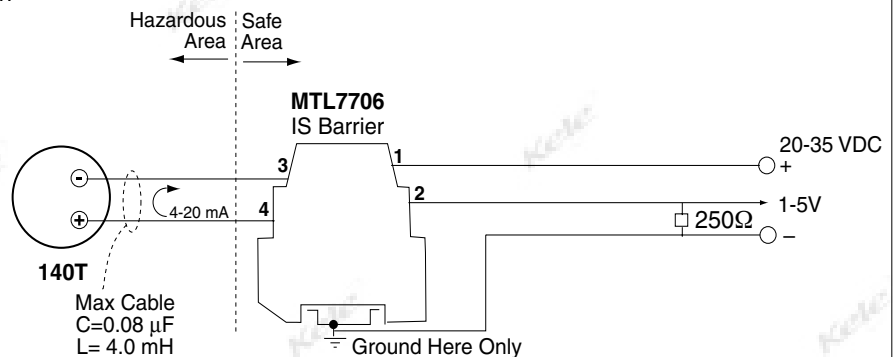
WIRING

Wiring subject to physical damage should be adequately protected. When installing electrical conduit, it is recommended that a short length (12") of flexible conduit be used between the transmitter and an associated junction box. This construction will provide some vibration isolation in the conduit line. Conduit and fittings should conform to the environment of the transmitter location. Weather-resistant or rain-tight fittings should be used to protect the transmitter wiring from a humid or corrosive atmosphere.

Note: Make all connections in accordance with national and local codes.



Standard Wiring



Intrinsically Safe Wiring

NOTE: Ensure that the transmitter is rigidly attached to the monitoring point for the proper sensing of the vibration.

ORDERING INFORMATION

MODEL	DESCRIPTION
140T-1	Intrinsically-safe vibration transmitter, range 0-1 in/sec (25.4 mm/sec)
140T-2	Intrinsically-safe vibration transmitter, range 0-2 in/sec (50.8 mm/sec)

MTL7706+	RELATED PRODUCTS
	Intrinsic safety barrier, 4-20 mA two-wire transmitters

Note: Each application should be evaluated on an individual basis. Consult equipment manufacturers for specific details concerning safe vibration levels.

	ACCESSORIES
DGP-1.5-W	Power supply, 24 VAC IN to 24 VDC OUT
DGPA-1.2	Power supply, 120 VAC IN to 24 VAC/24 VDC OUT