

Transducer Conditioning Module

Type: TCM

The TCM is a universal transducer conditioning module designed for use with most LVDT and half bridge transducers from the small gauging probe to the very long stroke displacement transducers currently available from IMT or other manufacturers.

The module is configurable with on board handbag links to enable coverage of a wide range of measurement applications. These links enable setting of sensitivity and energising frequency as well as offset zero which is fully 100% adjustable, also the selection of LVDT or half bridge is also by simple link placement. Most offset and gain settings are catered for without the need for additional components.

The output from the TCM is nominally ± 10 V dc (max ± 11 V dc) to correspond with the transducer stroke. When in 100% offset mode the output is then zero to 10vdc corresponding to a typical transducer range of, for example, 0 to 10mm when using a transducer with a measurement stroke of ± 5 mm.

TCM is shown in the illustration as boxed but is also popular taken just as a PCB for many applications. The PCB version being small in size and of low cost will be a very attractive option to the OEM manufacturer for inclusion in electronic equipment needing an inductive transducer front end, especially with the various options for power input that are available for this unit.



Technical Data

Conditioner Type	T.C.M			
Transducer Input	LVDT & Halfbridge inductive			
Input Sensitivity	TBA			
Transducer Energising: - Frequency - Amplitude	5kHz, 10kHz and 13 kHz $\pm 10\%$ (selectable) 2Vrms, 2.2Vrms and 2.4Vrms			
Power Requirements:	Min	Typical	Max	Units
A)	4.8	5	5.2	Volts @ 120mA
B)	11.8	12	12.2	Volts @ 65mA
C)	23.8	24	24.2	Volts @ 25mA
D)	13.8	15	18	\pm Volts @ 25mA
Voltage Output: -Span - Zero Offset	-11 V dc -100%	0 0		+11V dc +100%
Cable Lengths: - Transducer to TCM	Max. 50 m with some loss of linearity			
Distance from TCM output	Max. 250 m with suitable cable			
PCB dimensions	88.5mm x 42 mm			
Case size	105mm x 65mm x 45.8mm			

