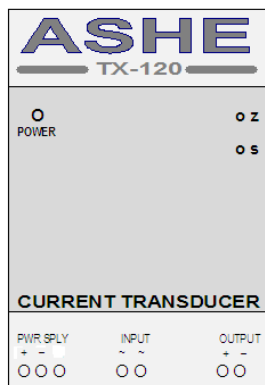


CURRENT TO CURRENT TRANSDUCER

TX-120



DESCRIPTION

The Current to Current Transducer unit is a compact and reliable instrument used in process control applications where it is desired to convert an AC Ampere signal to a DC Current loop signal for purposes such as indication, feedback, control or recording. The instrument buffers the input current signal and provides an optically isolated current output with an enhanced load driving capacity.

Functionally, the ASHE TX-120 Current to Current Transducer is essentially a Signal Transducer, providing buffering and filtering of the input Current signal from transients, then converting the pulses into a variable analog output signal which is isolated from the input. The Output signal is linear with respect to the Input signal and is Galvanically and Optically Isolated to a potential level of 2.2 KV.

The instrument accepts any Voltage signal between 0 and 1 Ampere or 5 Ampere AC (see Technical Specifications for calibration details) from the Current Transformer (CT) and provides a DC current output signal of 4 to 20 mA DC, capable of driving an independent load of upto 600 Ohms. The instrument operates on 110 or 230 Volts AC mains power supply or DC Power Supply of 20 to 70 V DC.

The instrument is available in standard and rugged industrial grade enclosures in DIN Rail / Rear-panel mounting execution. Absence of any moving parts provides these instruments inherent advantages like immunity to Mechanical Shocks, Dust, Ambient Temperature, Humidity and mildly Corrosive ambiances.

INSTALLATION

The instrument should be mounted on a standard DIN Rail using the snap-on bracket on the rear of the instrument. All interconnections to the instrument should be made using strong, multi-stranded shielded cable preferably of twisted-pair type. The instrument should be earthed to a proper ground-point. The ends of the wires should be properly ferruled and suitably terminated.

The cables carrying the input and output signals should be properly isolated and insulated from the power line cables to prevent any electromagnetic interferences or noise-related malfunctions from the mains power line.

OPERATION & SETTINGS

The Current to Current Transducers are easy to connect and operate. The terminals bear self-explanatory wiring details for Mains Power, Input Signal and Output signal (See Termination Diagram for details). Once wired as per the specified configuration, the instruments should operate smoothly under normal circumstances for many years, without any trouble or requirements of maintenance.

The instrument should first be mounted either on a standard DIN Rail, or alternatively wall-mounted on a vertical panel surface by direct bolting at the base. A Red LED on the front panel indicates *POWER ON* status of the instrument.

All inter-connections to the instrument should be made using strong, multi-stranded Shielded cable preferably of twisted-pair type. Control and Power Cables must be routed separately. The instrument should be earthed to a proper "true-earth" Ground-point. Care should be taken to ensure correct polarities of the input and output signals.

An initial warm-up time of approximately two minutes is recommended since the Integrated Circuits and other temperature sensitive and compensated components are optimised to operate at the continuous-run temperature.

The Zero and Span calibration settings for the Output signal are accessible externally.

TERMINAL DETAILS

1	2	3	4	5	6	7
+	-		~	~	+	-
20 to 70 VDC PS		X	0 to 5 A AC Input		0 to 10 VDC Output	

operation manual

TECHNICAL SPECIFICATIONS

Model	:	ASHE TX-120.
Type	:	Current to Current Transducer.
Principle	:	Optical Isolation and Signal Conditioning
Input Signal	:	0 to 5 A AC
Output Signal	:	0 to 10 VDC
Linearity	:	$\pm 0.1\%$.
Isolation	:	Between Input and Output.
Isolation type	:	Optical.
Isolation level	:	2.2 kV
Calibration facility	:	Zero and Span settings (external).
Accuracy	:	$\pm 0.1\%$.
Indication	:	Red LED for <i>POWER ON</i> .
Power Supply	:	20 to 70 VDC
Dimensions	:	75 (H) x 55 (W) x 110 (D) mm.
Initial warm-up time	:	Two minutes.
Execution	:	DIN-Rail / Rear panel mounting.
Weight	:	Approximately 0.6 Kgs
Operating Temperature	:	0 to 50 °C.