

# RESISTANCE TRANSDUCER

TX-140



## OVERVIEW

The ASHE TX series of Signal Conditioners, Isolators, Transducers and Transmitters comprise a wide range of high quality and reliable instruments for the conversion, amplification and isolation of analog and digital signals.

The instruments accept standard industrial process input signals such as DC/AC Voltage, DC/AC Current, 4 to 20 mA DC, RTD Pt-100 sensor, Thermocouple sensor, Frequency [Pulse], Resistance, Strain-gauge, etc. and provide a buffered and isolated output with enhanced load driving capacity. The instruments find wide usage in single loop or distributed process measurement and control applications.

The new Series TX-140 Resistance Signal Isolating Transducers measure a variable Resistance in Ohms and buffer the signal into an isolated current loop signal of 4 to 20 mA DC [or as required]. The Output signal is linear with respect to the Input signal and is galvanically and optically isolated to a potential level of 1.5 KV rms for one minute.

The instruments operate on 110 or 230 Volts AC mains power supply or 20 to 70 VDC Power Supply. Optional features include Signal repeating [multiple isolated outputs], higher load driving capability, digital indication facility, control relay outputs, two-wire operation with auxiliary power output, etc.

The instruments are available in compact industrial grade enclosures in DIN Rail / Wall-mounting execution, or optionally in IP65 protected field mount weather-proof enclosures, or in CIMFR certified explosion-proof enclosures. Absence of any moving parts provides these instruments inherent advantages like immunity to mechanical shocks, dust, ambient temperature, humidity and corrosive atmosphere.

## SPECIFICATIONS

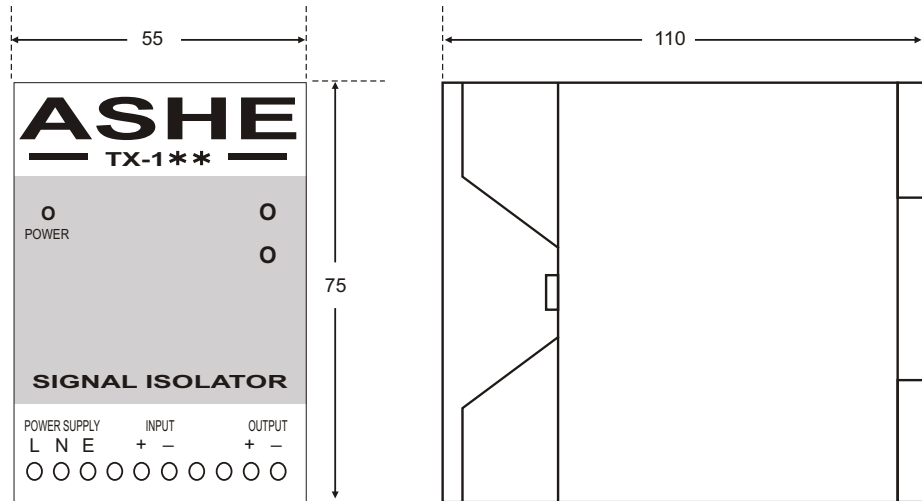
<b>Model</b>	ASHE TX-140.
<b>Type</b>	Resistance signal Isolating Transducer.
<b>Principle</b>	Optical Isolation and Signal Conditioning.
<b>Input Signal</b>	0 to 1 K-Ohm [or as required].
<b>Output Signal</b>	4 to 20 mA DC [or as required].
<b>Linearity</b>	0.1%.
<b>Isolation</b>	Between Input // Output // Power Supply.
<b>Isolation type</b>	Optical and Galvanic.
<b>Isolation level</b>	1.5 kV rms for one minute.
<b>Output protection</b>	Short / Open Circuit protection.
<b>Calibration facility</b>	Zero and Span settings [external].
<b>Accuracy</b>	0.1%.
<b>Indication</b>	Red LED for Power On.
<b>Power Supply</b>	110 V AC or 230 V AC, 50 hz. [Optionally 20 to 70 V DC].
<b>Initial warm-up time</b>	One minute.
<b>Dimensions</b>	75 x 55 x 110 mm. [H x W x D].
<b>Execution</b>	DIN-Rail / Rear panel mounting.
<b>Enclosure</b>	Industrial grade ABS.
<b>Enclosure colour</b>	Light Grey [RAL 7035]
<b>Weight</b>	Approximately 0.4 Kgs.
<b>Operating Temperature</b>	0 to 50 °C.

## FEATURES

- Optical & Galvanic Isolation between Input, Output & Power Supply.
- High accuracy and linearity to input signal
- Very low power consumption and heat dissipation
- Options of multiple [upto four] isolated outputs
- High load driving capacity of retransmitted signal
- Configurable output option of current / voltage
- Short-circuit / Open-circuit protection of outputs
- Front accessible Zero and Span calibration for all channels
- Digital Indication option with/without control relay outputs
- Auxiliary power for two-wire transmitters
- AC or DC Power Supply options
- Rugged, industrial grade ABS enclosure
- Panel / Field / Hazardous area installation in IP65 execution
- Current limiting for I/O protection
- Customized outputs offered
- Proven record of several thousand installations
- Lifetime warranty on design and workmanship

### DIMENSIONAL DIAGRAM

Dimensions : 75 x 55 x 110 mm  
Execution : DIN Rail mount.



### HOW TO ORDER

#### RESISTANCE TRANSDUCER

TX-140

Input (pre-specified) : Variable Resistance.  
Output : 4 to 20 mA DC.  
Isolation : Optical and Galvanic.  
Power Supply : 230 V AC, 50 Hz / 24 V DC.  
Dimensions : 75 x 55 x 110 mm.

#### Configuration and Add-on options w

#### 1 OPTICAL AND GALVANIC ISOLATION

- ▶ Required
- ▶ Not Required

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#### 2 POWER SUPPLY

- ▶ 230 V AC ( $\pm 10\%$ ), 50 Hz ( $\pm 10\%$ ).
- ▶ 110 V AC ( $\pm 10\%$ ), 50/60 Hz ( $\pm 10\%$ ).
- ▶ 24 V DC ( $\pm 10\%$ ).
- ▶ Other (to be specified).

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#### 3 EXECUTION

- ▶ DIN Rail mounting [75 x 55 x 110 mm]
- ▶ Field mounting in Weather-proof execution (Polycarbonate enclosure, IP65 protection)
- ▶ Field mounting in Flame/Explosion-proof execution (Cast Aluminum Alloy LM6 enclosure, for Gas groups IIA, IIB)

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#### 4 RETRANSMISSION

- ▶ Retransmission of 0 to 10 V DC
- ▶ No Retransmission
- ▶ Other (to be specified)

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### OUR OTHER PRODUCTS



PROCESS CONTROLLER



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