

## Installation and Operating Instructions

### Paladin Transducers Class 0.5 256-T Series Current, Voltage, Frequency, Power and DC Input

#### Product Covered

Model	Description
256-TAL	AC Current Transducer Average Sensing
256-TAR	AC Current Transducer RMS Sensing
256-TVL	AC Voltage Transducer Average Sensing
256-TVR	AC Voltage Transducer RMS Sensing
256-TW*	Watt Transducer
256-TX*	VAr Transducer
256-TY*	VA Transducer
256-TT*	DC / DC transducer

#### Introduction

Paladin Transducers give a dc output proportional to the input and up to three outputs from one transducer in the case of 256-TA and 256-TV. Zero and span adjustments are accessible without opening the transducer.

DC outputs of these transducers include an internal power supply and may be connected directly across a passive load as stated on the rating label.

DC output circuits are separated from metering inputs and auxiliary circuits by at least basic insulation. Such DC output circuit terminals are only suitable for connection to equipment which has no user accessible live parts.

For all models consideration should be given to the space required behind the units to allow for bends in the connecting cables. Additional protection to the panel may be obtained by the use of an optional gasket. The terminals at the rear of the case should be protected from liquids. Units should be mounted in a reasonably stable ambient temperature and in any event where the temperature is within the range 0-60 °C.

The unit should not be mounted where it is subjected to excessive direct sunlight; vibration should be kept to a minimum. Connection wires should be sized to comply to local regulations and should be terminated in tags suitable for the crew connections provided, labels are fixed to the units and carry full connection information and data including type number, input voltage, current, frequency and supply as appropriate. The products do not have internal fuses therefore external fuses **must** be used for safety protection under fault conditions

#### Fusing and Connections

This unit must be fitted with external fuses in voltage supply lines.

Voltage input lines must be fused with a quick blow fuse 1A maximum.

DC current inputs should be fused according to the rated current of the transducer.

Choose fuses of a type and with a breaking capacity appropriate to the supply and in accordance with local regulations.

Main terminal screws should be tightened to 1.35Nm or 1.0 ft/lbf only. Detachable terminal connector screws should be tightened to 0.9Nm or 0.7 ft/lbf only. Where fitted, terminal covers are held in place by miniature self tapping screws into plastic. These screws should be tightened by hand only, sufficiently to secure the terminal cover and prevent it vibrating.

#### Safety



Caution  
Risk of Electric Shock

#### Warnings

- During normal operation, voltages hazardous to life may be present at some of the terminals of this unit.
- At voltages below that specified in the Range of Use the meter may shut down. However, voltages hazardous to life may still be present at some of the terminals of this unit.
- Installation and servicing should be performed only by qualified, properly trained personnel abiding by local regulations.
- Ensure all supplies are de-energised before attempting connection or other procedures.
- Terminals should not be user accessible after installation and external installation provisions must be sufficient to prevent hazards under fault conditions.
- This unit is not intended to function as part of a system providing the sole means of fault protection - good engineering practice dictates that any critical function be protected by at least two independent and diverse means.
- The unit does not have internal fuses therefore external fuses must be used for protection and safety under fault conditions.
- Never open-circuit the secondary winding of an energized current transformer.
- This product should only be operated with the CT secondary connections earthed.
- If this equipment is used in a manner not specified by the manufacturer, protection provided by the equipment may be impaired.

***It is essential that the primary current is isolated BEFORE connecting or disconnecting the secondary current connections.***

The unit is designed in accordance with BS EN 61010-1

#### EMC Installation Requirements

- Whilst this unit complies with all relevant EU EMC (electromagnetic compatibility) regulations, any additional precautions necessary to provide proper operation of this and adjacent equipment will be installation dependent and so the following can only be general guidance:
  - Avoid routing wiring to this unit alongside cables and products that are, or could be, a source of interference.
  - The supply to the unit should not be subject to excessive interference. In some cases, a supply line filter may be required.
  - To protect the product against incorrect operation or permanent damage, surge transients must be controlled. It is good EMC practice to suppress transients and surges at the source. The unit has been designed to automatically recover from typical transients; however in extreme circumstances it may be necessary to temporarily disconnect the supply for a period of greater than 10 seconds to restore correct operation.
  - Screened communication leads are recommended and may be required. These and other connecting leads may require the fitting of RF suppression components, such as ferrite absorbers, line filters etc., if RF fields cause problems.
  - It is good practice to install sensitive electronic instruments that are performing critical functions in EMC enclosures that protect against electrical interference causing a disturbance in function.

#### Symbols



Caution  
Risk of Electric Shock



Refer to Manual



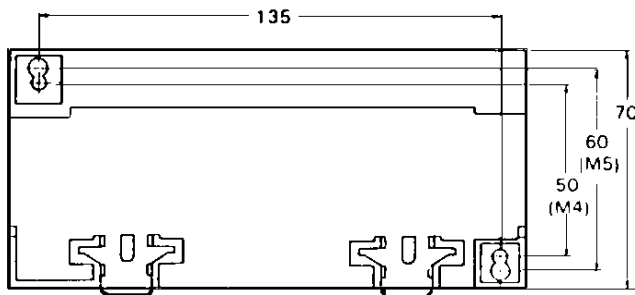
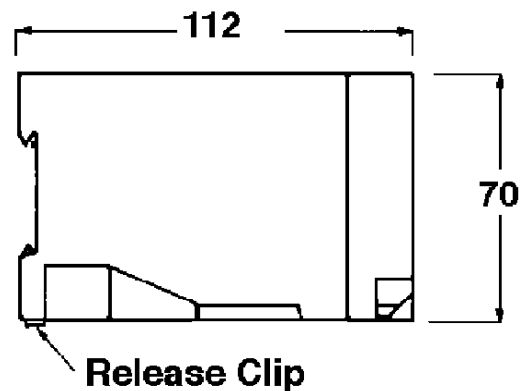
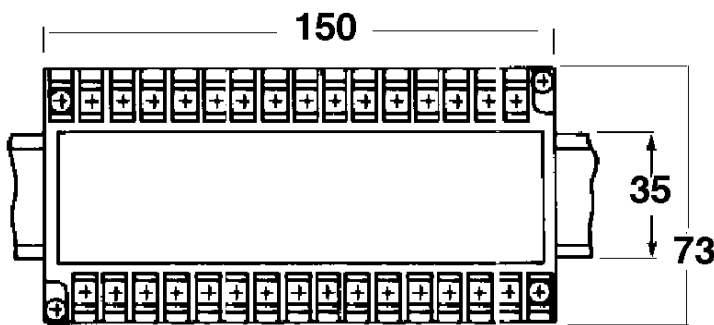
Do NOT Discard

## Installation

Transducers are designed for mounting on a 35mm rail to DIN 46277. Alternatively they may be screw fixed. These units may be mounted adjacent to other DIN rail products on the same rail, however at least 35mm (1.5 inches) of free air space should be allowed above and below the transducer.

To mount a Transducer on a DIN rail, position the transducer with the black release clip on the lowest face. Clip the transducer over the top edge of the rail and click the bottom edge carrying the release clip into place. Check that the unit is firmly fixed. Removal or repositioning may be achieved by levering down the release clip and lifting the unit up and off the rail. These units do not require a protective earth, but where fitted, current transformer (CT) secondaries must be connected to protective earth in accordance with local regulations.

## Dimensions



**Rear View Showing Panel Mounting Holes**

## Setup and Maintenance

### Setup

The units are calibrated at the factory for full accuracy. No further adjustments are required. Zero and span adjustment where provided are under the bungs on the front panel. Re-setting these will degrade the accuracy of this transducer, but may be used to compensate for system errors etc. Typically adjustment of 10% of span and 2% of zero is available, but this varies by model..

### Maintenance

No routine maintenance is required, beyond removing any accumulations of dust or other foreign matter and ensuring that connection screws remain tight.

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