

# Techtrol Universal Indicator Controller - "TUIC"



SINCE 1984

Is an advanced microcontroller based monitoring and alarm system. It can be used in conjunction with any 2-wire transmitter for remote display /control variables like Level, Temperature, Pressure & Flow in their corresponding units.

## Features:

- Accuracy  $\pm 0.25\%$  of FSD.
- Two character tank identification.
- Volume calculations for linear & non-linear tanks.
- RS232 or RS485 serial interface with modbus RTU protocol.
- Four relay outputs independently configurable on alarms or set-reset.
- Password protection.
- 2 line x 16 character dotmatrix backlit LCD display.
- Re-transmission.
- Option of Dual channel input (4-20mA).

## Construction & Operation :

It operates on an input signal of 4-20mA or 1- 5 VDC from the transmitter. This analog input is digitized through A to D converter and then calibrated through its microcontroller, to control the output functions of display and relays. Input and output terminals are pluggable type, hence detachable from 'TUIC' without removing field connections, resulting in saving valuable time during servicing, maintenance & calibration. It has password protection for all configurable data.

## Specifications:

Display	: 2 line x 16 character dotmatrix backlit LCD display, 4mm height 4 Red LED's for alarm status.
Accuracy	: $\pm 0.25\%$ of FSD.
Input	: 4-20 mA or 1-5 V DC or T/C type E, J, L or RTD Pt 100 No of Input 1 or 2.
Calibration	: Zero and Span adjustment through 5 push button keys.
Relays	: 4 relays, Relay rating : SPDT x 5A, 230VAC Independently programmed for alarms, Set-Reset.
Interface	: 4-digit security code, 5 Push Button Keys.
Protection	: Optical isolation for Input & Output. Lightening protection using MOV.
Resolution	: 1mm.
General	: Power Supply 90-270VAC or 24VDC Amb. Temperature : 0 to 70°C Amb. Humidity : 95% Rh Non Condensing Power Consumption : 7VA Supply to transmitter 24VDC, 30mA (Current i/p version)
Instrument Enclosure :	a) ABS Panel Mounting, Protection: IP 41 Size : 96L x 96W x 150mm depth, Panel cutout : 92H x 92Wor
Type	b) Glass Polyester Wall Mounting, Protection: W proof IP-65 Size : 160L x 160W x 90mm height or
	c) AI Wall Mounting, Protection : Ex proof Gr IIA & IIB Size : 275L x 185W x 175mm height
Serial communication :	RS232 or RS485 interface with modbus (RTU) protocol, Baud rate programmable.
Special features	: 4-20mA re-transmission.(only current input version)



**Panel (IP41)**



**Wall (W proof)**



**Wall (Ex proof)**

**Model Identification No. TUIC -**

### Enclosure

- ABS, Panel mtd, IP 41 ————— **P**
- Glass polyester, Wall mtd IP-65 ————— **J**
- Cast Al, Ex proof Gr IIA & IIB ————— **E**

### Input Type

- 4 to 20 mA ————— **A**
- Thermocouple ————— **M**
- RTD ————— **R**
- 1 to 5 VDC ————— **V**
- Others ————— **O**

### Power Supply

- 90 to 270 VAC ————— **1**
- 24 VDC ————— **2**

### Serial Communication

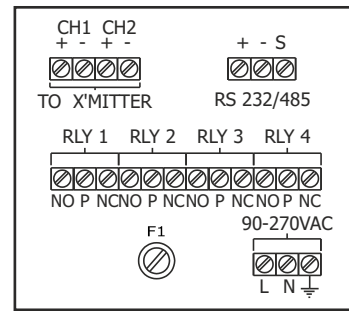
- Without ————— **W**
- RS 232 ————— **1**
- RS 485 ————— **2**

### Special Features

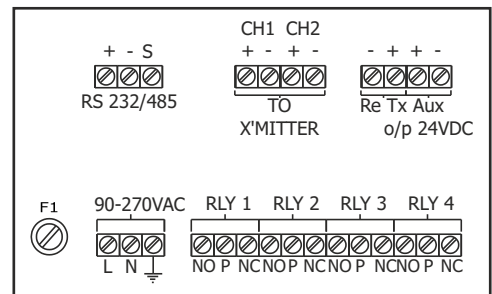
- Without ————— **W**
- Re-transmission ————— **R**

## Termination

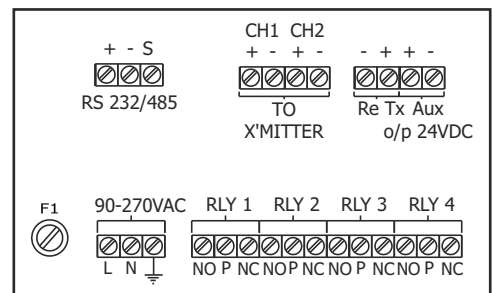
### Panel (IP 41)



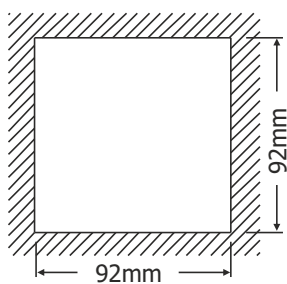
### Wall (IP 65)



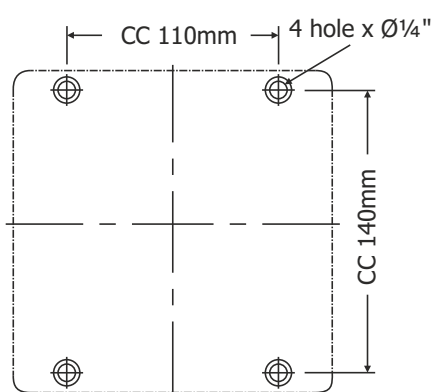
### Wall (Ex proof)



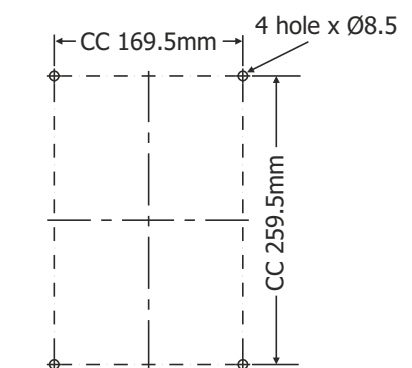
## Enclosure Mounting Details :



Panel cutout for Panel mtd (IP-41)



Configuration of drilled holes for Wall mtd (IP-65)



Configuration of drilled holes for wall mtd (Ex proof)

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