

## ZT501 SINGLE CHANNEL INDICATOR / CONTROLLER

### Introduction

Ztech's Digital Universal process indicator model ZT501 is designed to indicate process parameters like temperature, level, flow, pressure etc. as per the process requirement for various applications. It can display the process value with the resolution of maximum 4 or 5 (optional) digits. The range is selectable from -1999 to 99999 scale with selectable decimal resolution. It can generate max four relay output (on/off) for various application with hi/lo selection. The hysteresis is programmable throughout the range. It can generate analog output as retransmission & give computer connectivity port on Modbus protocol or GSM connectivity as an optional feature. They are very reliable, accurate employing the latest technology.

### Features

Input	: Universal inputs Linear Input :( 0-10VDC, 0-1VDC,0-100mV),Current(0-20mA,4-20mA) Non Linear Input: Thermocouple types, E, J, K, L, N, R, S, and T Non Linear input: Resistance thermometer: Pt100, CU53, And P46
Display	: 0.56"(12mm) Super Bright Red LED Display (4/ 5 Digit)
Display Range	: Linear Input:-1999 to 9999,-1999 to 99999 For RTD: -50.0 to 600.0 For Thermocouple J (-175 to 730 Degree),K (-250 to 1300 Degree) R (0 to 1800 Degree),S (0 to 1800 Degree) T (-200 to 400 Degree),N (-200 to 1300 Degree) B (0 to 1800 Degree),E (-200 to 1000 Degree)
High Accuracy	: 0.1% of Span (Linear),0.25% of Span(Non Linear)

### Configuration Functions/Parameters

Configuration Data	: 4 Tactile Membrane Keys for Data Configuration
Indication	: Alarm /Communication Indication
Message	: Error Message

### Output

Retransmission	: 4-20mA (Opto & Galvanic Isolated) (600 Ohms Loading Capacity) 0-10V DC(Opto & Galvanic Isolated) (600 Ohms Loading Capacity)
Control Alarm Relay	: Max 4 Relay (5A/230VAC)
Communications	: RS 485
Compatible with GPRS /GPS	: Yes

### Special Function (Optional)

- Universal input
- Field Calibration not require for change to other input
- Alarm output Hi/Lo, fail safe, with programmable hysteresis.
- All calibration/configuration can be done from front keys
- PC/GSM connectivity with SCADA software.
- Input sensor fail output upscale/downscale user define from front keys.
- Input Signal Filter Option
- Alarm Acknowledgment Function
- No Calibration require for different types of input in case of Universal Input
- Input /Output:4-20mA/20-4mA (Selectable) (Optional)
- Input: Linear /Square root Selectable (Optional)
- Damping Count (Optional)
- Time Delay for Alarm Activation(Optional)
- Alarm Reset/Acknowledgement(Optional)



**Single Channel Indicator / Controller  
ZT501**

**Specification :Environmental**

Ambient Temperature Range : 0 To 55 °C (For Integral Flow Meter)  
Ambient Humidity Range : 5 To 95 % Rh (Non-Condensing)

**Security** : Password Protection for Configuration of Data

**Power Supply** : 90 - 260 VAC 50/60Hz,24VDC,12VDC

**Specification : Physical**

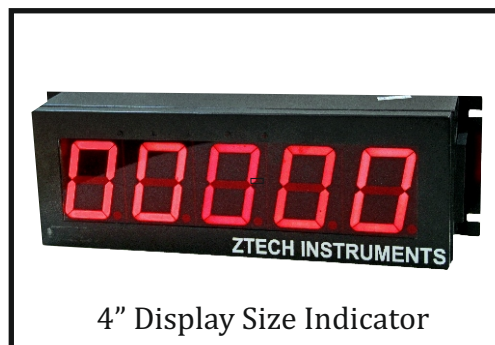
Weight : 500 to 900 gms.  
Enclosure : ABS plastic molded, Weather / Flame Proof  
Protection :  
Dimension : As per  
Mounting : Panel, Wall ,Pipe

**Application**

Pressure/ Level/ Flow Monitoring  
Pharmaceutical Application  
Power Industries  
Cement Industries  
Temperature & process indication  
Plastics moldings& temperature monitoring  
Heat treatment - furnace temperature monitoring  
Water heating boilers



2.3" Display Size Indicator



4" Display Size Indicator



6" Display Size Indicator



6" LED Display Size Indicator  
for External use

**Single Channel Indicator / Controller**  
**ZT501**

**Ordering Code**

**ZT501-XXXXXXXXXX (10 Digit Code)**

**Option 1:Input Signal**

- 0 - Universal (0/4 – 20mAdc, mV, V, Cu53, Pt.100),Tc
- 1 – Fix RTD
- 2 – Fix 4-20mA
- 3 – Fix 0-10VDC
- 4 – Fix Thermocouple
- 5 – Fix mV input
- 6 – Fix Voltage input
- 7 – User Define

**Option 2:Power**

- 0 – 90 to 260 VAC
- 1 – 24 VDC
- 2 – User Define

**Option 3:Digital Output**

- 0 - No relay
- 1 - One relay
- 2 - Two relay
- 3 - Three relay
- 4 - Four relay

**Option 4:Analog Output**

- 0 - None
- 1 - 4 – 20mAdc isolated (Single O/P)
- 2 - 4 – 20mAdc isolated (Dual O/P)
- 3 - 0-10Vdc isolated (Single O/P)
- 4 - 0-10Vdc isolated (Dual O/P)

**Option 5:Communication Output**

- 0 - None
- 1 – RS485 Modbus RTU
- 2 – GPRS/GSM Connectivity

**Option 6:No.'s of Digit**

- 0 – 4 Digit Display
- 1 – 5 Digit Display

**Option 7:Display Size**

- 0 – 0.56" Seven Segment Digit(Normal Display)
- 1 – 0.8" Seven Segment Digit
- 2 – 1.8" Seven Segment Display
- 3 – 2.3" Seven Segment Display
- 4 – 4.0" Seven Segment Display
- 5 – 6.0" Seven Segment Display
- 6 – 8.0" Seven Segment Display
- 7 – 4.0" Outdoor LED Display
- 8 – 6.0" Outdoor LED Display
- 9 – User Define Indoor/Outdoor LED/Seven segment Display

**Option 8:Dimension**

- 0 – 96(W) \* 48(H) \* 95(D)mm
- 1 – 96(W) \* 96(H) \* 95(D)mm
- 2 – Weather proof Sheet metal box
- 3 – Flame proof class IIA IIB without Push Button 2" Pipe Mounted(054 Drawing)
- 4 – Flame proof class IIA IIB with Push Button Wall Mounted(061 Drawing)
- 5 – Flame proof class IIA IIB without Push Button 2" Pipe Mounted
- 6 – Flame proof class IIA IIB Wall Mounted
- 7 – Special Enclosure

**Option 9:(X)**

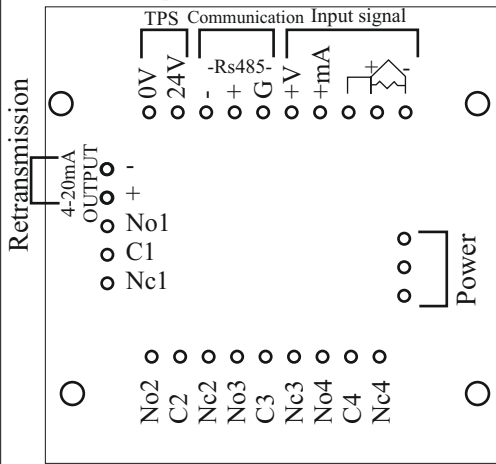
- 0 – None

**Option 10:(X)**

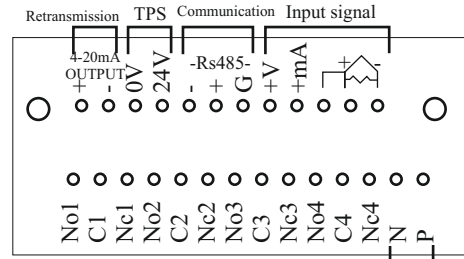
- 0 – None

**Terminal Details:**

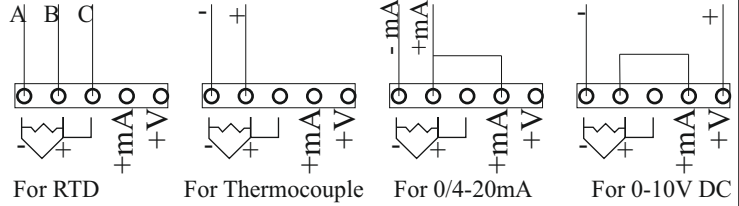
**Universal Input:**



Terminal details for Universal Input  
ZT501 Size:96\*96

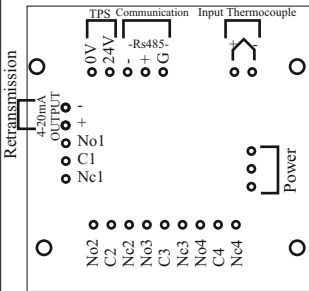


Terminal details for Universal Input  
ZT501 Size:96\*96

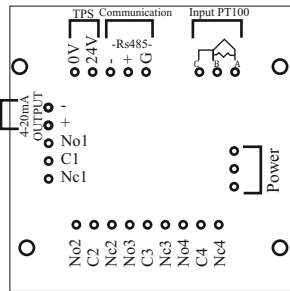


CONNECTION DIAGRAM FOR DEFERENT INPUT

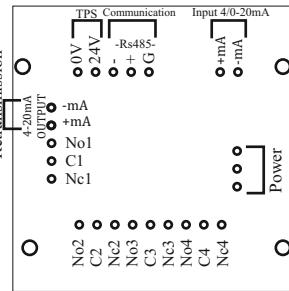
**Fix Input:**



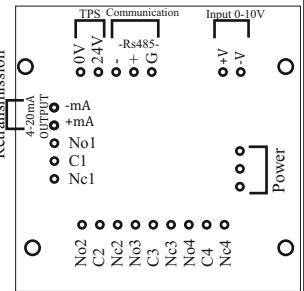
Terminal details for Fix Input:  
Thermocouple, mV:ZT501 Size:96\*96



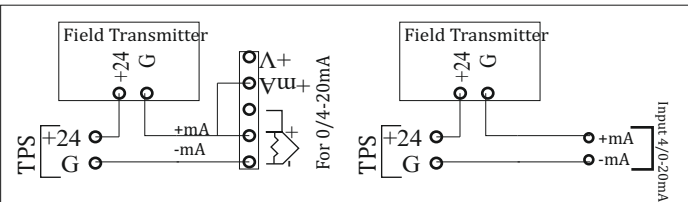
Terminal details for Fix Input:  
RTD:ZT501 Size:96\*96



Terminal details for Fix Input:  
0/4-20mA:ZT501 Size:96\*96

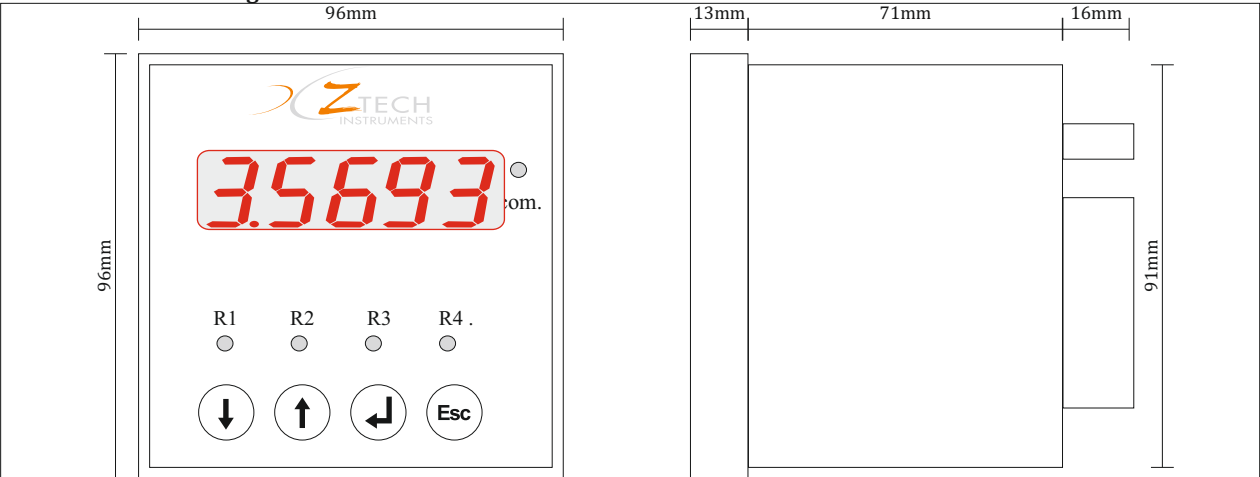


Terminal details for Fix Input:  
0-10VDC:ZT501 Size:96\*96



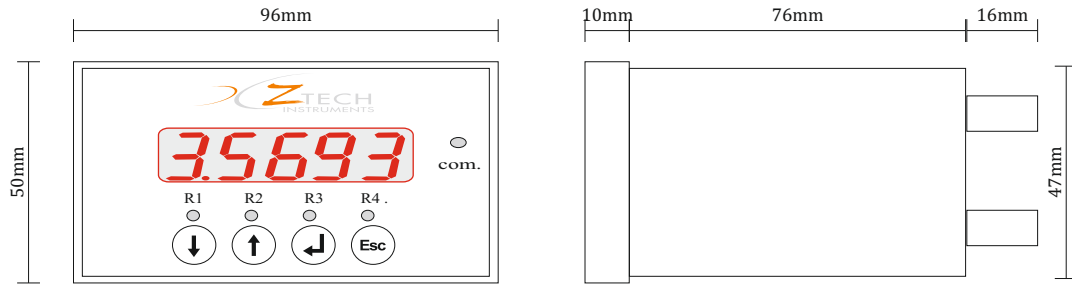
CONNECTION DIAGRAM FOR FIELD TRANSMITTER AND INPUT 4-20mA

**Dimensions Drawing:**



Dimensions Drawing: Size:96\*96

**Single Channel Indicator / Controller  
ZT501**



Dimensions Drawing: Size:96\*48



2"Pipe Mounting/Wall Mounting  
FLP Enclure:054 Model

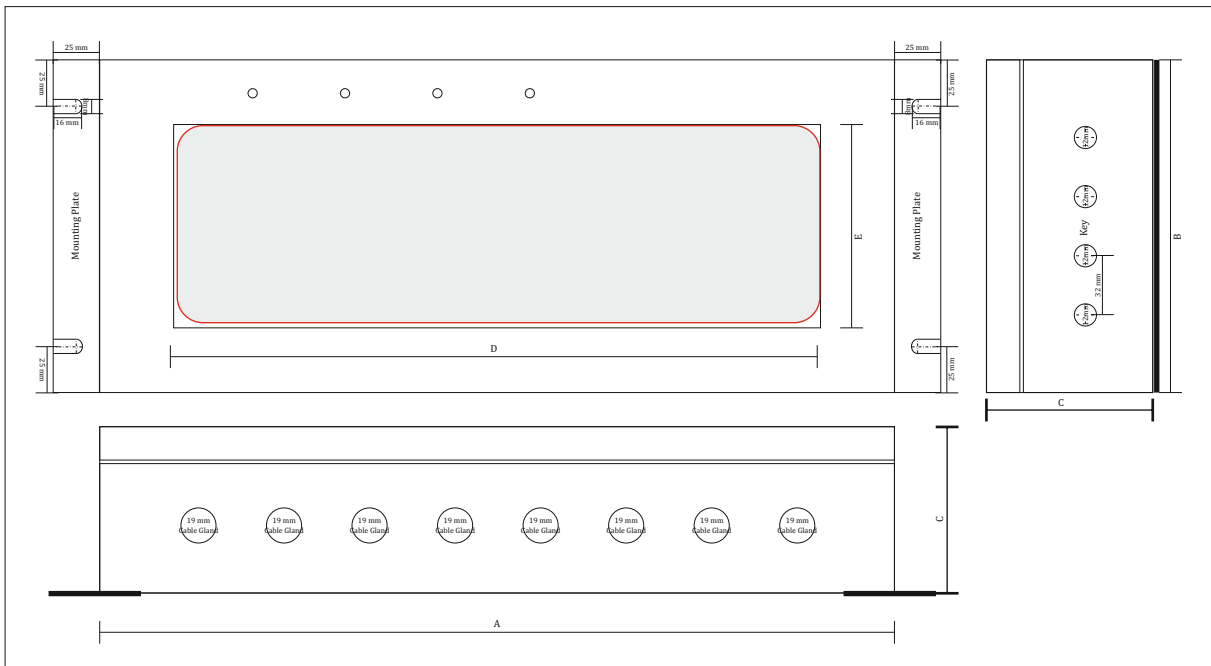


ABS Plastic Panel



Sheet Metal Panel

**Metal Plate Jumbo Display Dimensions**



Digit Size	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
1.8"(4-Digit)	225	160	90	150	50
1.8"(5-Digit)	265	160	90	190	50
2.3"(4-Digit)	265	160	90	195	65
2.3"(5-Digit)	310	160	90	242	65
4"(4-Digit)	430	180	90	350	110
4"(5-Digit)	520	180	90	440	110
6"(4-Digit)	520	240	90	440	160
6"(5-Digit)	630	240	90	550	160
6"(5-Digit)LED	675	280	125	635	160

Note: All Dimension are in mm  
Error: +/-5mm

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