

# DIN RAIL MOUNTED ISOLATED TEMPERATURE TRANSMITTER

— THERMOCOUPLE, RTD TEMPERATURE INPUT —

4-20mA, 0-20mA, 0-5VDC, 1-5VDC OUTPUT

Model No.: MSC80T



Ver2.0

# General Specifications

GS 19A16D01-01EN

## TEMPERATURE TRANSMITTER DIN RAIL MOUNTED

MSC80T

### ■ Overview

**MSC80T DIN Mounted Temperature Transmitter** is programmable thermocouple, RTD temperature input, with input-output-power isolated, transmitting the signal thermocouple, RTD sensor as analog signal output to various instruments or DCS, PLC etc control systems.

### ■ Feature

- 1 input 1 output, 1 input 2 outputs, 2 inputs 2 outputs
- Programmable thermocouple, RTD input by our programmer
- Transmission accuracy (20°C): (0.2%FS+1) digit
- Temperature shift: 0.0075%FS/°C
- Power-Input-Output isolation: 1.5KVrms, 1min, 50HZ
- Input /Output signal: 4-20ma, 0-20ma, 0-5VDC, 1-5VDC
- DIN35mm rail mounting with pluggable terminals
- Size:1121.2Xx108x13mm
- Independent power supply :20-32VDC

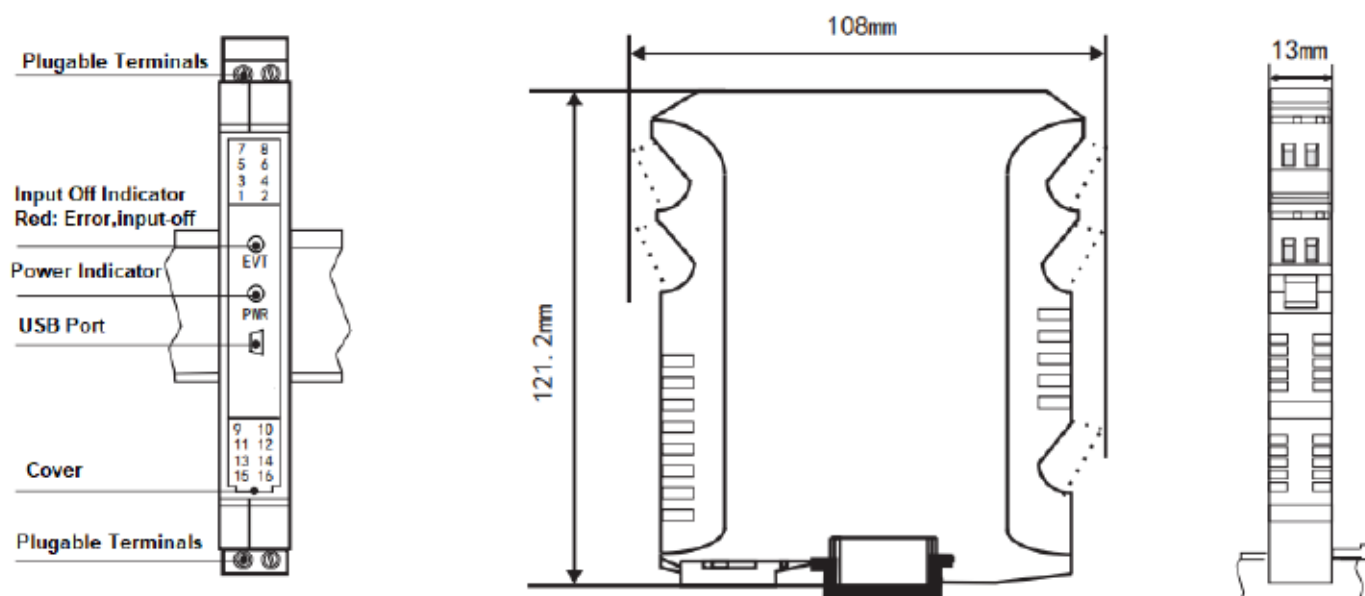
### ■ Specification

| Input type                   | Thermocouple, RTD                             | Input Type | Measured Range  |
|------------------------------|-----------------------------------------------|------------|-----------------|
| Output Signal                | 4-20mA, 0-10mA, 0-20mA; 0-5VDC, 1-5VDC        | Pt100      | -200 to 800°C   |
| Resistor Load (mA output)    | RL≤400Ω (4-20ma, 0-10ma, 0-20ma)              | CU50       | -50 to 150°C    |
| Resistor Load (Vdc output)   | RL≥250kΩ (1-5VDC, 0-5VDC)                     | CU100      | -50 to 150°C    |
| Accuracy                     | 0.2FS%+1 digit                                | CU53*      | -50 to 150.0°C  |
| Temperature shift            | 0.0075%FS/°C                                  | BA1        | -200 to 600.0°C |
| Min. Resolution              | 0.1°C                                         | BA2        | -200 to 600.0°C |
| Cold junction -compensation  | -10 to 50°C                                   | K          | -200 to 1300°C  |
| Cold junction-comp. accuracy | ±1°C                                          | T          | -200 to 400°C   |
| Response time                | 50ms up to 90% of final value                 | E          | -200 to 1000°C  |
| Isolated ability             | Input-output-power 1.5KV, 1min, 50Hz          | J          | 0 to 1200°C     |
| Insulation resistance        | Input-output-power≥100mΩ at 500VDC            | N          | 0 to 1300°C     |
| Power supply                 | DC20-32V                                      | R          | 0 to 1600°C     |
| Power Consumption            | ≤1W (1 input 1Output); ≤1.4W(1/2Input2Output) | S          | 0 to 1600°C     |
| Case material/Protection     | PC/ IP20                                      | B          | 400 to 1800°C   |
| Size                         | 121.2Xx108x13mm                               | Wre3-25    | 0-2300°C        |
| Working T&H                  | -10 to 50°C; 25% to 85%RH                     | Wre5-26    | 0-2300°C        |
| Storage temperature          | -10 to 60°C (No dew)                          | F2*        | 700-2000°C      |

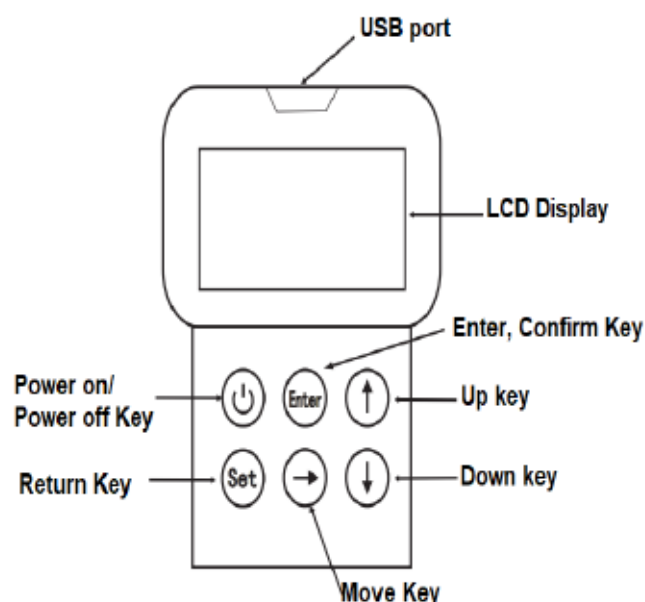


**MSC80T Isolated Temperature Transmitter**  
**DIN Rail Mounted**  
**Signal Isolator, Signal Converter**

## ■ Size (mm)



## ■ Programmer for Input & Output Type and Range Setting

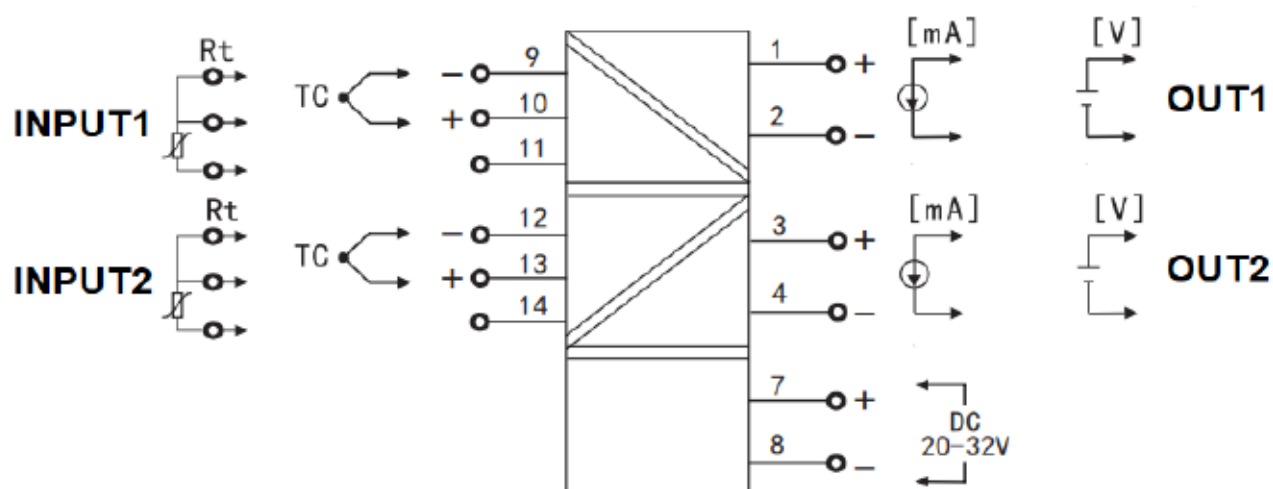


. The input & output type and range and other parameters can be set by this programmer through USB port

. PV the real time value can be displayed in this programmer.

\*Notes: If signal isolator is required to be programmable This programmer should be required to order together.

## ■ Diagram



## Order Code

| MSC80T: DIN Rail Mount Universal Temperature Transmitter |       |    |    |   |   |   |                                                         |
|----------------------------------------------------------|-------|----|----|---|---|---|---------------------------------------------------------|
| Order Code: E.g.: MSC80T-11-PN1N                         |       |    |    |   |   |   | Description                                             |
| MSC80T                                                   | -X    | -X | -X | X | X | X | MSC80T Universal Temperature Transmitter                |
| Input-Output Number                                      | 11    |    |    |   |   |   | 1 Input 1 output                                        |
|                                                          | 12    |    |    |   |   |   | 1 input 2 output                                        |
|                                                          | 22    |    |    |   |   |   | 2 Input 2 Output                                        |
| Input 1                                                  | P     |    |    |   |   |   | Pt100 (default)                                         |
|                                                          | ...   |    |    |   |   |   | Please see below order code list to choose input type   |
|                                                          | -X    |    |    |   |   |   | Customized                                              |
| Input 2                                                  | N     |    |    |   |   |   | None                                                    |
|                                                          | ....  |    |    |   |   |   | Please see below order code list to choose correct code |
| OUT1                                                     | 1     |    |    |   |   |   | 4-20ma (default)                                        |
|                                                          | ....  |    |    |   |   |   | Please see order code list to choose output type        |
| OUT 2                                                    | N     |    |    |   |   |   | None                                                    |
|                                                          | 1     |    |    |   |   |   | 4-20ma (default)                                        |
|                                                          | ..... |    |    |   |   |   | Please see below order code list to choose output type  |
|                                                          | X     |    |    |   |   |   | Customized                                              |

| Input Order Code List                                                                                           |            |                |       |          |            |             |                |        |          |
|-----------------------------------------------------------------------------------------------------------------|------------|----------------|-------|----------|------------|-------------|----------------|--------|----------|
| Input Code                                                                                                      | Type (RTD) | Measured Range | Range | Accuracy | Input Code | Type (T.C.) | Measured Range | Range  | Accuracy |
| P                                                                                                               | Pt100      | - 200 to 650℃  | ≤100℃ | 0.2%     | K          | K           | -200 to 1300℃  | ≤300℃  | 0.2%     |
|                                                                                                                 |            |                | 100≥℃ | 0.1%     |            |             |                | 300≥℃  | 0.1%     |
| C                                                                                                               | CU50       | -50 to150℃     | ≤100℃ | 0.2%     | T          | T           | -200 to 400℃   | ≤300℃  | 0.2%     |
|                                                                                                                 |            |                | 100≥℃ | 0.1%     |            |             |                | 300≥℃  | 0.1%     |
| C1                                                                                                              | CU100      | -50 to150℃     | ≤100℃ | 0.2%     | E          | E           | -200 to 1000℃  | ≤300℃  | 0.2%     |
|                                                                                                                 |            |                | 100≥℃ | 0.1%     |            |             |                | 300≥℃  | 0.1%     |
| C2*                                                                                                             | CU53*      | -50 to 150.0℃  | ≤100℃ | 0.2%     | J          | J           | 0 to 1200℃     | ≤300℃  | 0.2%     |
|                                                                                                                 |            |                | 100≥℃ | 0.1%     |            |             |                | 300≥℃  | 0.1%     |
| B1                                                                                                              | BA1        | -200 to 600.0℃ | ≤100℃ | 0.2%     | N          | N           | 0 to 1300℃     | ≤500℃  | 0.2%     |
|                                                                                                                 |            |                | 100≥℃ | 0.1%     |            |             |                | 500≥℃  | 0.1%     |
| B2                                                                                                              | BA2        | -200 to 600.0℃ | ≤100℃ | 0.2%     | R          | R           | 0 to 1600℃     | ≤500℃  | 0.2%     |
|                                                                                                                 |            |                | 100≥℃ | 0.1%     |            |             |                | 500≥℃  | 0.1%     |
| Output Order Code list                                                                                          |            |                |       |          | S          | S           | 0 to 1600℃     | ≤500℃  | 0.2%     |
| Order Code                                                                                                      |            | Output Type    |       |          |            |             |                | 500≥℃  | 0.1%     |
| 1                                                                                                               |            | 4-20mA         |       |          | B          | B           | 400 to 1800℃   | ≤500℃  | 0.2%     |
| 2                                                                                                               |            | 0-10mA         |       |          |            |             |                | 500≥℃  | 0.1%     |
| 3                                                                                                               |            | 0-20mA         |       |          | W3         | Wre3-25     | 0-2300℃        | ≤500℃  | 0.2%     |
| 4                                                                                                               |            | 0-5VDC         |       |          |            |             |                | 500≥℃  | 0.1%     |
| 5                                                                                                               |            | 1-5VDC         |       |          | W5         | Wre5-26     | 0-2300℃        | ≤500℃  | 0.2%     |
| X                                                                                                               |            | Customized     |       |          |            |             |                | 500≥℃  | 0.1%     |
| Note: above accuracy is based 20±2℃, thermocouple cold junction compensation' accuracy should be considered ≤1℃ |            |                |       |          | F2*        | F2*         | 700-2000℃      | ≤1000℃ | 0.2%     |
|                                                                                                                 |            |                |       |          |            |             |                | 1000≥℃ | 0.1%     |



DISTRIBUIDOR:

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