

TT Series Transmitters



Custom input and output signal adjustment can be recalibrated with **TT Configurator** software.



Transmitters can be configured without connecting to a power source.

MODEL OFFERED

- TT-1S1M** Single Channel input and Single 4-20mA output
- TT-2D2MM** Dual Inputs; Dual 4-20mA output
- TT-2D2MC** Dual Inputs; Single 4-20mA & Single RS-485 output
- TTM-2S2MM** Dual same signal Inputs; Single 4-20mA output and Single 4-20mA output with Math Function
- TTM-2S2MC** Dual same signal Inputs; Single 4-20mA output with math function & Single RS-485 output



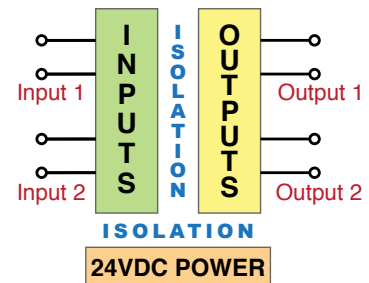
$$\text{Output} = \sqrt{\frac{A(\text{Input1}) + B(\text{Input2})}{C}}$$

A,B,C values adjustable via utility software.

Square root function may be switched ON or OFF.

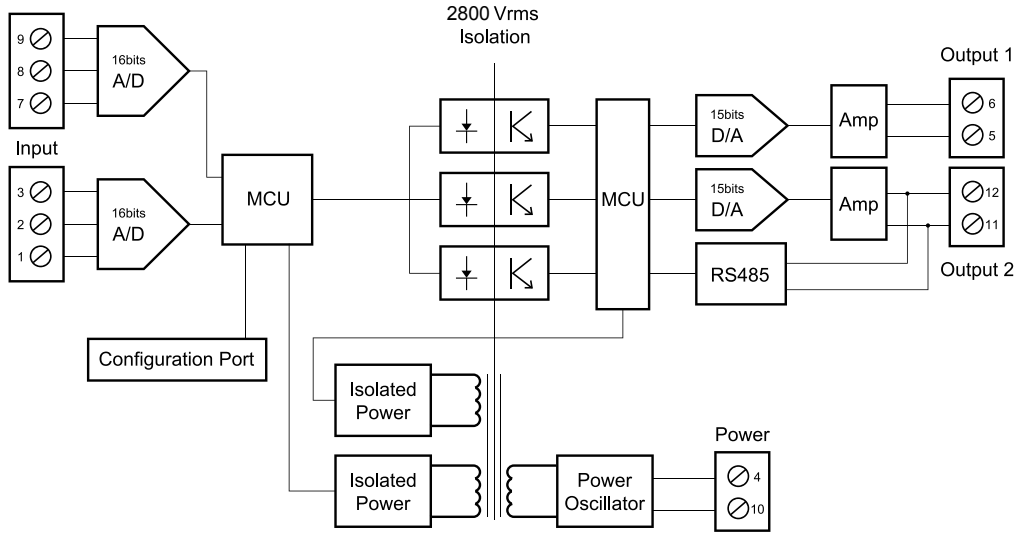
FEATURES

- ▶ **Various input signal**
 - Resistance thermometer (Pt100)
 - Thermocouple (J,K,T,E,B,R,S,N,C)
 - Voltage/Current transmitter (mV/V/mA)
- ▶ **Configurable without power connected**
- ▶ **Full 3-way isolation for 2800 Vrms.**
- ▶ **Compact, 18.5mm, DIN rail mount.**
- ▶ **Single or Dual 0/4 to 20 mA or optional 0 to 10V Analog output (dual inputs models only)**
- ▶ **Fault signal on sensor break presettable**
- ▶ **Optional RS485 communication interface with Modbus RTU**



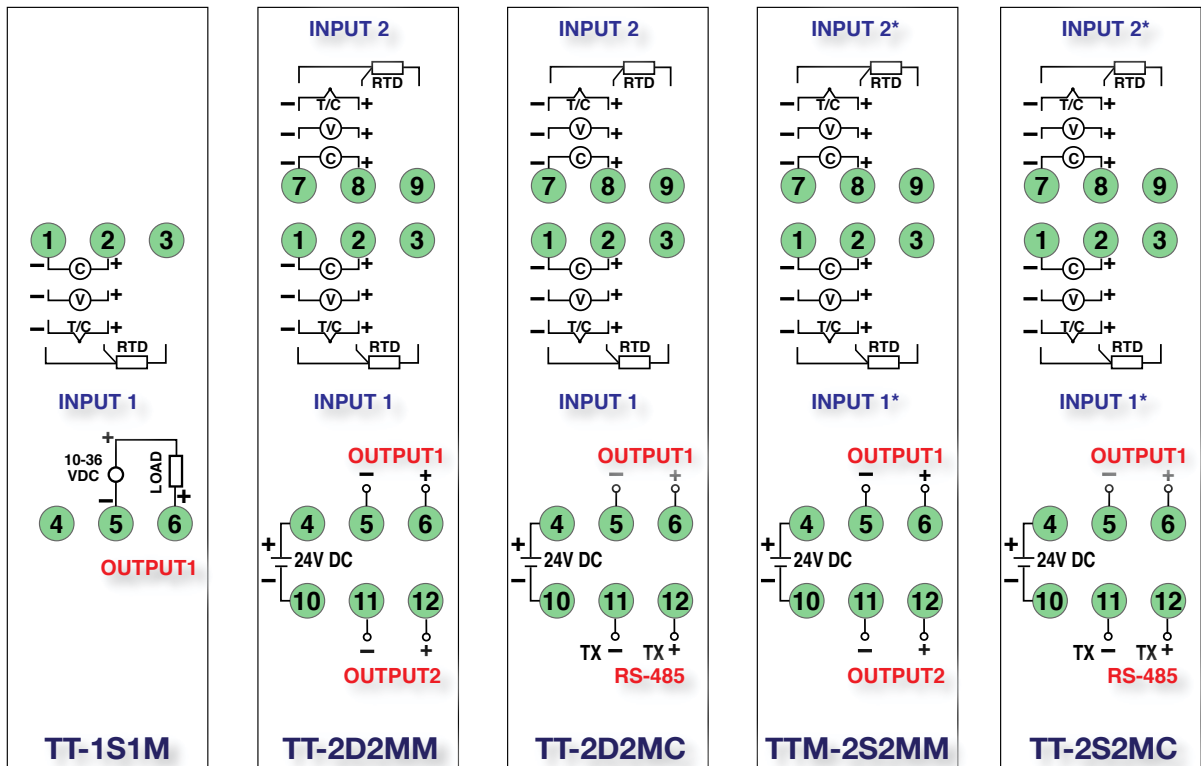
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FUNCTIONAL DIAGRAM



PINOUTS

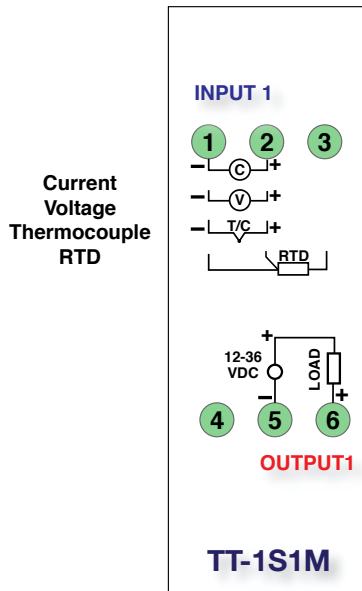
*Inputs must be of same type



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APPLICATIONS

Single Channel Transmitter

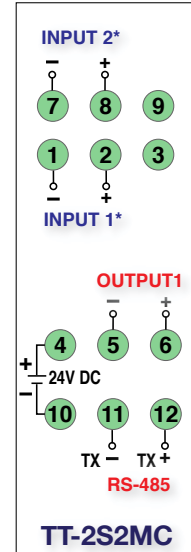


Dual Channel With Math

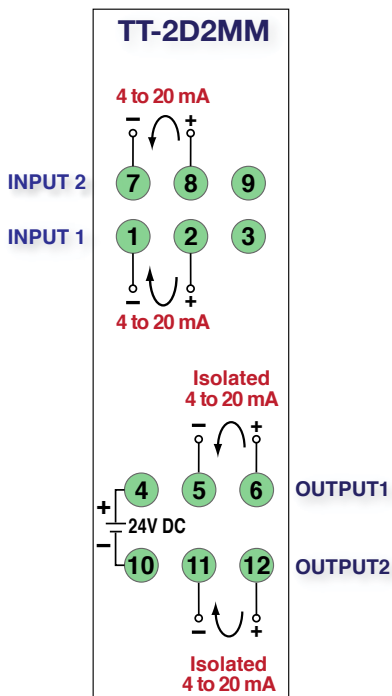
$$\text{Output} = \sqrt{\frac{A(\text{Input1}) + B(\text{Input2})}{C}}$$

Set square root A,B,C constants via Utility software

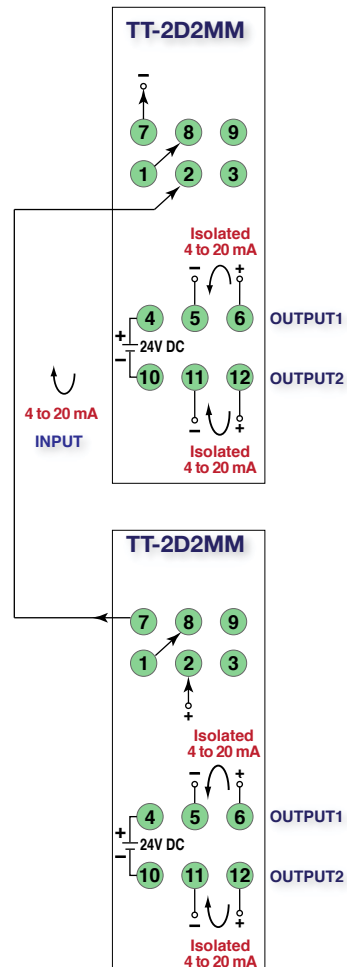
*Inputs must be of same type



Dual Loop Repeater



Quad Loop Splitter

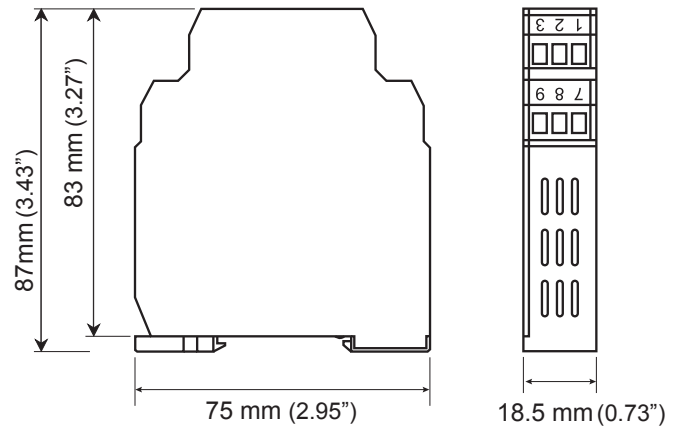


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SPECIFICATIONS

Output signal : DC 4/0~20mA or optional DC 0~10V
Output resolution : 0.6uA.
Output response time : <200mS.
Communication : Modbus RS485 RTU protocol, 4800~38400 bps
Power supply : 18~36 VDC, internal protection against polarity inversion

CASE DIMENSIONS



Input signal	Maximum Range	Accuracy
Thermocouple J	-50 to 1000°C (-58 to 1832°F)	±1°C
Thermocouple K	-50 to 1370°C (-58 to 2498°F)	
Thermocouple T	-270 to 400°C (-454 to 752°F)	
Thermocouple E	-50 to 700°C (-58 to 1292°F)	
Thermocouple B	0 to 1750°C (32 to 3182°F)	±2°C ①
Thermocouple R	-50 to 1750°C (-58 to 3182°F)	±2°C
Thermocouple S		
Thermocouple N	-50 to 1300°C (-58 to 2372°F)	
Thermocouple C	-50 to 1800°C (-58 to 3272°F)	
Pt100*	-200 to 600°C (-328 to 1112°F)	±0.2°C
mV	-60.00 mV to 60.00 mV	±0.01mV
DC volt ②	-10.000 to 10.000 Vdc	±1mV
DC mA ②	0.000 to 24.000 mAdc	±3µA

* Factory setting

- ① Accuracy is not guaranteed between 0 and 400°C (0 and 752°F) for type B, R and S.
- ② Range set by an internal DIP switch.

ORDERING INFORMATION

List	Model No.	Number of Inputs	Description of Outputs	Math
\$ 129	TT-1SIM	Single Input Only	Single 4-20mA Output	NO
\$ 189	TT-2D2MM	Two Independent Inputs	Output1 = 4-20mA, DC 0~10V* (IN1) Output2 = 4-20mA, DC 0~10V* (IN2)	
\$ 199	TT-2D2MC	Two Independent Inputs	Output1 = 4-20mA, DC 0~10V* (IN1) Output2 = RS-485 (IN2)	
\$ 159	TTM-2S2MM	Two Inputs (must be of same type)	Output1 = 4-20mA, 0~10V* (IN1 or f(IN1,IN2))	Yes
			Output2 = 4-20mA, DC 0~10V* (IN2)	No
\$ 175	TTM-2S2MC	Two Inputs must be of same type)	Output1 = 4-20mA, 0~10V* (IN1 or f(IN1,IN2))	Yes
			Output2 = RS-485 (IN2)	No
\$ 45	URC-1020	USB Mini-B Interface Cable		

*Optional