SIGNAL TRANSMITTERS

Signal Transmitters are used for converting DC signals to DC signal useful for PLC / Scada or Control Circuits.

These Transmitters have excellent repeatability & reliability.

HIGH ACCURACY / STABILITY

✷ **FEATURES :**

- DC Isolating, Current Loop Supply, Frequency to DC Isolating, Potentiometer, Level.
- Aux. Power AC 85~265V or DC 85~300V
- High Accuracy: ± 0.1% Rated Output
  Position Transmitter ± 0.2% Rated Output for RTD, Thermocouple Transmitters.
- Input / Output User Selectable.
- Fire Retardant Poly Carbonate Case, DIN Rail or Wall Mounting.
- High Dielectric Strength (AC1.5 KV, between Input / Output / Power.)

✷ **TYPES OF TRANSMITTERS :**

- DC Isolating Transmitter with Dual Input & Dual output
- DC Current Loop Isolating Supply Transmitter with Dual Input & Dual output
- Frequency To DC Isolating Transmitter
- High Selector Isolating Transmitter
- Low Selector Isolating Transmitter
- Potentiometer / Level / Position Transmitter
- Transmitters with Display and Alarm Outputs.
- RTD Isolating Transmitter
- Current Loop Isolating Supply Transmitter
- Thermocouple Isolating Transmitter



MODEL - TAT

Transmitters With Display And Alarm Outputs



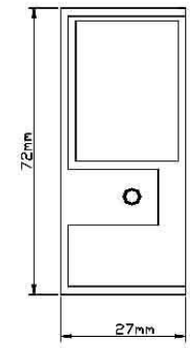
MODEL - TWD

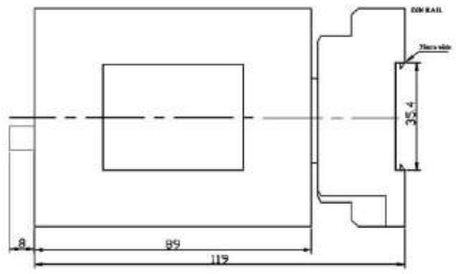
Industrial Process Transmitter

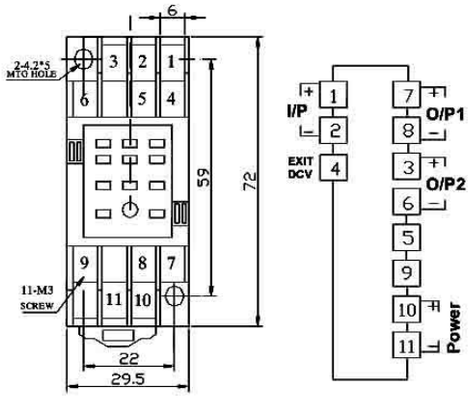
SPECIFICATIONS

Insulation Resistance	>100MΩ / DC 500V
Linearity & Repeatability	≤ 0.1 % Typical
Stability	≤ 0.2% / Year
Output Load	DC Current Mode : > 750Ω in output 20mA, DC Voltage Mode : 10mA Maximum
Dielectric Strength	AC 2 KV / Min, between Input / Output / Power
Common Mode Rejection	> 120dB DC to 60Hz.
Adjust Range	SPAN & ZERO ± 10%
Response Time	≤ 400mS
Ripple	≤ 0.1 % rms Rated Output
Temperature Coefficient	≤ 100ppm / °C from 0 ~ 60 °C; ≤ 50ppm / 25°C ± 5°C
Operation Condition	-5°C ~ +55°C, 20 ~ 95% RH Non-Condensed.
Storage Condition	-10°C ~ + 70°C, 20 ! 95% RH Non-Condensed
Aux. Power	AC / DC 85 ~ 265V or 22 ~ 72V
Aux. Power Effect	≤ 0.03 % / V
CE Conformity	EMI : EN61000-6-4 EMS : EN61000-6-2 LVE : EN61010-1
Housing Material	Non-Combustable PC Products, compliance with UL 94 CLASS V-0
Mounting	DIN Rail or Wall Mounting.
Dimensions	27mm(W) x 119mm(H) x 72mm(L)

EXTERNAL DIMENSIONS







DC ISOLATING TRANSMITTER WITH DUAL INPUT & OUTPUT MODEL - TW2D

MODEL: TW2D — □ — □ — □ — □ — □

INPUT 1		INPUT 2		OUTPUT 1		OUTPUT 2		AUX. POWER	
A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	C	DC 22 ~ 72V
B	DC 0 ~ 20mA	B	DC 0 ~ 20mA	B	DC 0 ~ 20mA	B	DC 0 ~ 20mA		
C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	F	AC/DC 85 ~ 265V
D	DC 0 ~ 5 V	D	DC 0 ~ 5 V	D	DC 0 ~ 5 V	D	DC 0 ~ 5 V		
E	DC 1 ~ 5 V	E	DC 1 ~ 5V	E	DC 1 ~ 5V	E	DC 1 ~ 5V		
F	DC 0 ~ 10V	F	DC 0 ~ 10V	F	DC 0 ~ 10V	F	DC 0 ~ 10V		
Y	OTHER	Y	OTHER	Y	OTHER	Y	OTHER		

SPECIFICATIONS :

Input Impedance : Voltage Input ≧1MΩ,
Current Input ≦ 50Ω.

Input Protection :

≧ 2V DC ≦ 300V rms Continuous;

≦ 2V DC ≦ 150V rms Continuous,

≦ 20mA DC ≦ 150mA Continuous.

DC CURRENT LOOP ISOLATING SUPPLY TRANSMITTER WITH DUAL INPUT & DUAL OUTPUT MODEL - TW2S

MODEL: TW2S — □ — □ — □ — □ — □

INPUT 1		INPUT 2		OUTPUT 1		OUTPUT 2		AUX. POWER	
A	DC 4 ~ 20mA 2 Wire EXT DC 24V	A	DC 4 ~ 20mA 2 Wire EXT DC 24V	A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	C	DC 22 ~ 72V
				B	DC 0 ~ 20mA	B	DC 0 ~ 20mA		
				C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	F	AC/DC 85 ~ 265V
				D	DC 0 ~ 5 V	D	DC 0 ~ 5 V		
				E	DC 1 ~ 5V	E	DC 1 ~ 5V		
				F	DC 0 ~ 10V	F	DC 0 ~ 10V		
				Y	OTHER	Y	OTHER		

SPECIFICATIONS :

Input Impedance : ≦ 50Ω.

Voltage supply : DC 22 ~ 28V (without Load)

Output Load :

DC Current Mode : >500Ω in output 20mA ;

DC Voltage Mode : 10mA Maximum

CURRENT LOOP SUPPLY ISOLATING TRANSMITTER MODEL - TWS, TWS2

MODEL : TWS — □ — □ ——— □ SINGLE OUTPUT

TWS2 — □ — □ — □ — □ DUAL OUTPUT

INPUT		OUTPUT 1		OUTPUT 2		AUX. POWER	
A	DC 4 ~ 20mA 2Wire EXT DC 24V	A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	C	DC 22 ~ 72V
		B	DC 0 ~ 20mA	B	DC 0 ~ 20mA		
		C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	F	AC/DC 85~265V
		D	DC 0 ~ 5 V	D	DC 0 ~ 5 V		
		E	DC 1 ~ 5V	E	DC 1 ~ 5V		
		F	DC 0 ~ 10V	F	DC 0 ~ 10V		
		Y	OTHER	Y	OTHER		

SPECIFICATIONS :

Input Impedance : ≦ 50Ω.

Voltage supply : DC 22 ~ 72V
AC / DC 85 ~ 265V

Output Load :

DC Current Mode : >500Ω in output 20mA ;

DC Voltage Mode : 10mA Maximum

DC ISOLATING TRANSMITTER MODEL - TWD, TWD2

MODEL : TWD — □ — □ ——— □ SINGLE OUTPUT

TWD2 — □ — □ — □ — □ DUAL OUTPUT

INPUT		OUTPUT 1		OUTPUT 2		AUX. POWER	
A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	C	DC 22 ~ 72V
B	DC 0 ~ 20mA	B	DC 0 ~ 20mA	B	DC 0 ~ 20mA		
C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	F	AC/DC 85~265V
D	DC 0 ~ 5 V	D	DC 0 ~ 5 V	D	DC 0 ~ 5 V		
E	DC 1 ~ 5 V	E	DC 1 ~ 5 V	E	DC 1 ~ 5 V		
F	DC 0 ~ 10V	F	DC 0 ~ 10V	F	DC 0 ~ 10V		
Y	OTHER	Y	OTHER	Y	OTHER		

SPECIFICATIONS :

Input Impedance : Voltage Input ≧1 MΩ,
Current Input ≦ 50Ω.

Input Protection : ≧ 2V DC ≦ 300V rms Continuous;

≦ 2V DC ≦ 150V rms Continuous,

≦ 20mA DC ≦ 150mA Continuous.

RTD ISOLATING TRANSMITTER MODEL - TWR, TWR2

MODEL : TWR — □ — □ —— □ SINGLE OUTPUT

TWR2 — □ — □ — □ — □ DUAL OUTPUT

INPUT SIGNAL		OUTPUT 1		OUTPUT 2		AUX. POWER	
A	PT100Ω 3 Wire -100~400°C/ -150~800°F	A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	C	DC 22 ~ 72V
		B	DC 0 ~ 20mA	B	DC 0 ~ 20mA		
		C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	F	AC 85 ~ 265V
		D	DC 0 ~ 5 V	D	DC 0 ~ 5 V		
		E	DC 1 ~ 5V	E	DC 1 ~ 5V		
		F	DC 0 ~ 10V	F	DC 0 ~ 10V		
Y	OTHER	Y	OTHER	Y	OTHER		

SPECIFICATIONS :

Input Impedance : Voltage Input ≧1MΩ,
Current Input ≦ 50Ω.
Aux. Power : AC 85 ~ 265V or
DC 85 ~ 300V

POTENTIOMETER - LEVEL - POSITION TRANSMITTER MODEL - TWP, TWP2

MODEL : TWP — □ — □ —— □ SINGLE OUTPUT

TWP2 — □ — □ — □ — □ DUAL OUTPUT

INPUT SIGNAL		OUTPUT 1		OUTPUT 2		AUX. POWER	
A	0 ~ X Ω 2 Wire (X=0~10K) Fixed Range	A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	C	DC 22~72V
		B	DC 0 ~ 20mA	B	DC 0 ~ 20mA		
		C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	F	AC/DC 85~265V
		D	DC 0 ~ 5 V	D	DC 0 ~ 5 V		
B	0 ~ (200...10KΩ) 3 Wire Programm-able Range	E	DC 1 ~ 5V	E	DC 1 ~ 5V		
		F	DC 0 ~ 10V	F	DC 0 ~ 10V		
		Y	OTHER	Y	OTHER		

SPECIFICATIONS :

Output Load :
DC Current Mode : > 750Ω in output 20mA
DC Voltage Mode : 10mA Maximum

CE Confirmity : EMI : EN 61000-6-4
EMS: EN 61000-6-2
LVD : EN 61010-1

FREQUENCY TO DC ISOLATING TRANSMITTER MODEL - TWF, TWF2

MODEL : TWF — □ — □ —— □ SINGLE OUTPUT

TWF2 — □ — □ — □ — □ DUAL OUTPUT

INPUT SIGNAL		OUTPUT 1		OUTPUT 2		AUX. POWER	
A	Open Collect (NPN)	A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	C	DC 22 ~ 72V
B	Voltage Pulse	B	DC 0 ~ 20mA	B	DC 0 ~ 20mA		
C	Relay Contact	C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	F	AC/DC 85 ~ 265V
D	PNP	D	DC 0 ~ 5 V	D	DC 0 ~ 5 V		
		E	DC 1 ~ 5V	E	DC 1 ~ 5V		
		F	DC 0 ~ 10V	F	DC 0 ~ 10V		
Y	OTHER	Y	OTHER	Y	OTHER		

SPECIFICATIONS :

Addition Power : DC 12V, 30mA Maximum.
Measuring Range : 50Hz~20KHz User Selectable.
Input Type : Open Collect : DC12V, 3mA.
Voltage Pulse : 2VP-P ~ 50V P-P.
Relay Contact : DC 12V, 3mA.
Cold-Point Compensation :
≦ 0.03°C/ °C, from 0 ~ 40°C.

THERMOCOUPLE ALARM SETTER TRANSMITTER WITH DISPLAY MODEL - TAT

MODEL : TAT — □ — □ — □ — □

Input Signal		Alarm Setting		Output Signal		Aux. Power	
K	K Type..-270~1370°C/ -520~2500°F	A	2 Alarm Setting	A	DC 0 ~ 10mA	C	DC 22 ~ 72V
E	E Type..-270~800°C/ -520~1500°F			B	DC 0 ~ 20mA	F	AC/DC 85 ~ 265V (AC & DC Share)
J	J Type..-210~700°C/ -410~1300°F			C	DC 4 ~ 20mA		
T	T Type..-210~400°C/ -410~760°F			D	DC 0 ~ 5V		
R	R Type..0~1700°C/ 32~3100°F	N	None	E	DC 1 ~ 5V		
S	S Type..0~1700°C/ 32~3100°F			F	DC 0 ~ 10V		
B	B Type..0~1750°C/ 32~3200°F			N	None	Y	Other
				Y	Other		

SPECIFICATIONS :

Input Impedance : Voltage Input ≧1MΩ,
Current Input ≦ 50Ω.

Input Protection :

≧ 2V DC ≦ 300V rms Continuous;

≦ 2V DC ≦ 150V rms Continuous,

≦ 20mA DC ≦ 150mA Continuous.

HIGH SELECTOR ISOLATING TRANSMITTER MODEL - TWH

MODEL: TWH — □ — □ — □ — DUAL INPUT

INPUT SIGNAL		OUTPUT SIGNAL		AUX. POWER	
A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	C	DC 22 ~ 72V
B	DC 0 ~ 20mA	B	DC 0 ~ 20mA		
C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	F	AC/DC 85 ~ 265V
D	DC 0 ~ 5 V	D	DC 0 ~ 5 V		
E	DC 1 ~ 5 V	E	DC 1 ~ 5V		
F	DC 0 ~ 10V	F	DC 0 ~ 10V		
Y	OTHER	Y	OTHER		

SPECIFICATIONS :

Input Impedance : Voltage Input ≧1MΩ,
Current Input ≦ 50Ω.

Input Protection : ≧ 2V DC ≦ 300V rms Continuous;
≦ 2V DC ≦ 150V rms Continuous,
≦ 20mA DC ≦ 150mA Continuous.

LOW SELECTOR ISOLATING TRANSMITTER MODEL - TWL

MODEL: TWL — □ — □ — □ — DUAL INPUT

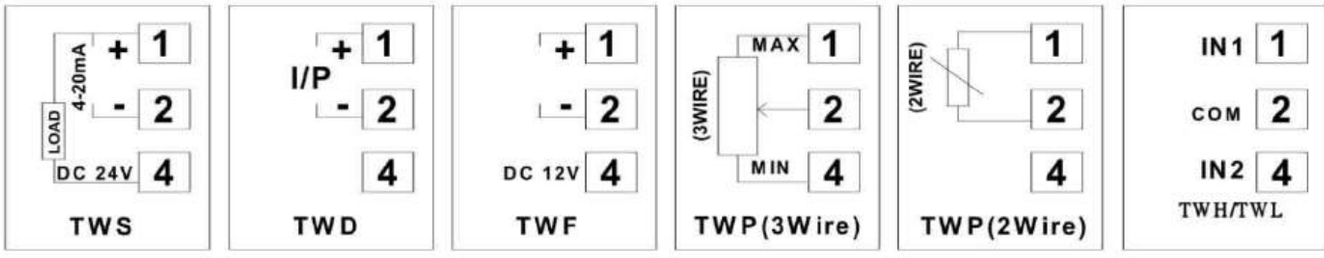
INPUT SIGNAL		OUTPUT SIGNAL		AUX. POWER	
A	DC 0 ~ 10mA	A	DC 0 ~ 10mA	C	DC 22 ~ 72V
B	DC 0 ~ 20mA	B	DC 0 ~ 20mA		
C	DC 4 ~ 20mA	C	DC 4 ~ 20mA	F	AC/DC 85 ~ 265V
D	DC 0 ~ 5 V	D	DC 0 ~ 5 V		
E	DC 1 ~ 5 V	E	DC 1 ~ 5V		
F	DC 0 ~ 10V	F	DC 0 ~ 10V		
Y	OTHER	Y	OTHER		

SPECIFICATIONS :

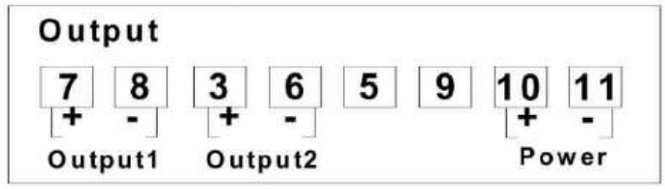
Input Impedance : Voltage Input ≧1MΩ,
Current Input ≦ 50Ω.

Input Protection : ≧ 2V DC ≦ 300V rms Continuous;
≦ 2V DC ≦ 150V rms Continuous,
≦ 20mA DC ≦ 150mA Continuous.

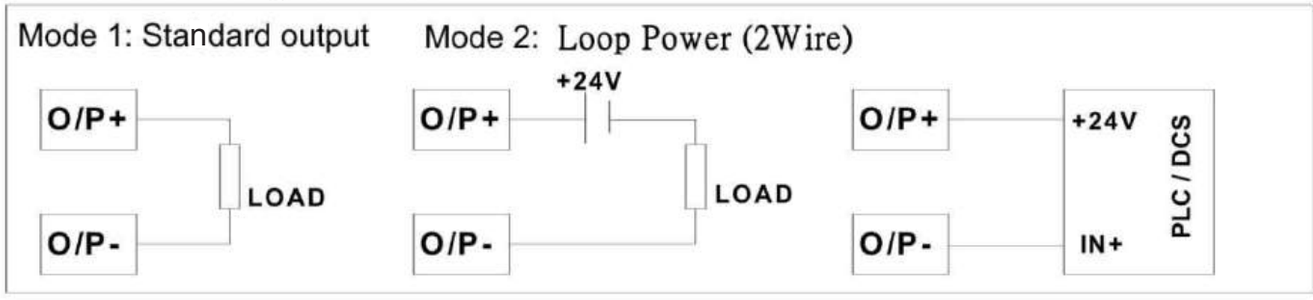
☐ Connection Diagram



NOTE: **TWS DCV 24V LOAD (35mA max.)**
TWF DCV 12V LOAD (35mA max.)



DC 4-20mA Output Modes:



☐ Dip Switch Instruction

- ■This unit is calibrated at the factory to meet the ordered specifications , usually it doesn't need any calibration.
- ■After you change the dip switch , the accuracy will be ≥ 1%,so we recommend you re-calibrate the product.
- ■Dip switch is only applicable to products with standard input and output signals.

INPUT DIP SWITCH							OUTPUT DIP SWITCH						
	S1	S2	S3	S4	S5	S6		S1	S2	S3	S4	S5	S6
0-20mA	ON	ON	OFF	ON	OFF	OFF	0-20mA	ON	ON	OFF	ON	ON	OFF
4-20mA	OFF	ON	OFF	ON	ON	ON	4-20mA	OFF	OFF	ON	ON	ON	ON
0-5V	ON	ON	ON	OFF	OFF	OFF	0-5V	ON	ON	ON	ON	OFF	OFF
1-5V	ON	OFF	ON	OFF	OFF	ON	1-5V	ON	ON	ON	OFF	ON	ON
0-10V	ON	ON	OFF	ON	OFF	OFF	0-10V	ON	OFF	ON	OFF	OFF	OFF

☐ Calibration Instruction

Please calibrate the signal with standard signal source and follow below steps.

1. Warm up the unit for at least 10 minutes.

2. ZERO:Apply 0% input signal and adjust output to 0% of corresponding signal.
   (If input signal is 0~5V,0~10V or 0-20mA,please apply 10% input signal to calibrate)

3. SPAN: Apply 100% input signal and adjust output to 100% of corresponding signal.