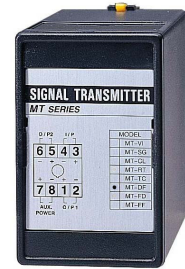


MT-DF DC to FREQUENCY CONVERTER & ISOLATOR

■ FEATURE

- 4 popular Input and 8 Output Ranges Programmable by dip switches
- Dual isolated output is available
- CE Approved



■ SPECIFICATION

Input Range	Input Impedance	Output Range	Output Mode
0 ~ 10 mV	$\geq 1M \text{ ohm}$	0 ~ 78.1 Hz	Open collect: 30Vdc; 40mA 0 ~ 50K Hz maximum Pulse width: 50% duty cycle
0 ~ 50 mV	$\geq 1M \text{ ohm}$	0 ~ 156.3 Hz	
0 ~ 1 V	$\geq 1M \text{ ohm}$	0 ~ 315.2 Hz	
0 ~ 5 V	$\geq 1M \text{ ohm}$	0 ~ 625 Hz	
0 ~ 10 V	$\geq 1M \text{ ohm}$	0 ~ 1.25K Hz	Voltage pulse: 5V, 12V, 24V(Specify); 10mA 0 ~ 50K Hz maximum Pulse width: 50% duty cycle
1 ~ 5 V	$\geq 1M \text{ ohm}$	0 ~ 2.5K Hz	
2 ~ 10 V	$\geq 1M \text{ ohm}$	0 ~ 5K Hz	
-10 ~ 0 ~ +10 V	$\geq 1M \text{ ohm}$	0 ~ 10K Hz	
0 ~ 1 mA	$\leq 100 \text{ ohm}$	0 ~ 20K Hz	Mech. Contact: 110Vac; 1A 0~130 pulse/minute maximum; On pulse width: 50% duty cycle
0 ~ 10 mA	$\leq 20 \text{ ohm}$	0 ~ 50K Hz	
0 ~ 20 mA	$\leq 10 \text{ ohm}$		
4 ~ 20 mA	$\leq 10 \text{ ohm}$		

Accuracy:	$\pm 0.1\%$ of F.S.
Response time:	≤ 250 msec. Plus one pulse cycle
Coarse Span adjustment:	$\leq 50\%$ of F.S.
Fine Span adjustment:	$\leq 1\%$ of F.S.
Zero adjustment:	$\leq 5\%$ of F.S.
Low-end cutout adjustment:	0 ~ 10%; a red LED assists in adjusting the Cutout point; turns on during the cutout
Output range adjustment:	Changeable by rotary switch on top and fine Tune with dual span adjust pot
Option range:	Ultra-low frequency: 0 ~ 0.1 Hz Ultra-high frequency: 0 ~ 50K Hz
Excitation supply:	DC 10V/24V, 40mA; Changeable by dip switch
Dual output:	Available when excitation supply was removed
Voltage Output level:	5Vp, 12Vp, 24Vp specify
Power Supply:	AC 115 or 230V $\pm 10\%$, 50/60 Hz Changeable by jumper inside Option: DC 12V, 24V, 48V $\pm 10\%$, (Isolated) DC 5W, AC 6.5VA
Power consumption:	
Operating temperature:	0~60 °C
Operating relative humidity:	20~95 %RH
Temperature coefficient:	≤ 100 PPM/°C
Storage temperature:	-10~70 °C
Isolation:	Between Power / Input / Output1 / Output2
Insulation resistance:	$\geq 100M \text{ ohm}$ at 500Vdc
Surge test:	4 KV, 1.2 x 50 μ sec. Common mode & differential mode
Dielectric Strength:	AC 2.0 KV for 1 min Between Power / Input / Output / Case

Standard:	Comply with EN50081-1, EN50082-2
Dimensions:	50mm(W) x 87mm(H) x 123mm(D)-with socket
Mounting:	Surface and DIN rail 35mm WIDE
Weight:	500g

■ ADJUSTMENT

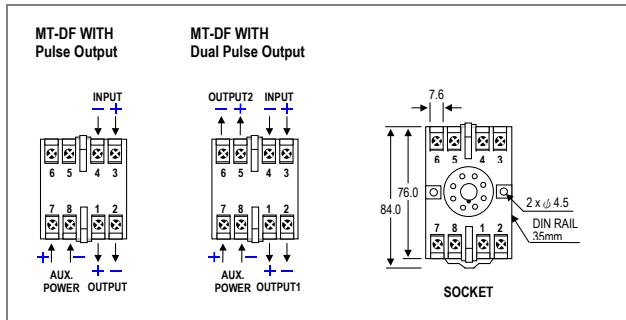
O/P 2 Output Indication (LED)	1
O/P 1 Output Indication (LED)	8
O/P Zero Adjust Pot (Clockwise: o/p increase)	2
Excitation Supply DC 10V or 24V (by dip-switch)	3
O/P Span Coarse Adjust Pot (Clockwise: o/p increase)	4
O/P Span Fine Adjust Pot (Clockwise: o/p increase)	5
Low-end Cutout Adjust Pot (Clockwise: increase)	6
LED Indication for Low-end Cutout	7
RS1: Programming for O/P / 8 Ranges (by Rotary-Switch)	
DS2: Programming for I/P / 4 Ranges (by Dip-Switch)	

* MT-DF IS AVAILABLE IN DUAL OUTPUT WITH SAME RANGE.

PROGRAMMING FOR INPUT AND OUTPUT:

INPUT RANGE	DS2(7)	OUTPUT SIGNAL	OUTPUT RS1(6)	EXCIT. SUPPLY	OUTPUT DS3(8)
1 ~ 5 V		0 ~ 78.1 Hz	7	10 V	
0 ~ 10 V		0 ~ 156.3 Hz	6	24 V	
0 ~ 20 mA		0 ~ 315.2 Hz	5		
4 ~ 20 mA		0 ~ 625 Hz	4		
		0 ~ 1.25K Hz	3		
		0 ~ 2.5K Hz	2		
		0 ~ 5K Hz	1		
		0 ~ 10K Hz	0		

■ CONNECTION DIAGRAM & SOCKET



■ ORDERING INFORMATION

MT-DF											
Output Loop		Input Range		Output1 Range		Output2 Range		Output Mode		Aux. Power	
		Current		Voltage		O/P ranges		O/P ranges		O/P Mode	
CODE	OUTPUT LOOP	CODE	INPUT	CODE	INPUT	CODE	OUTPUT	CODE	OUTPUT	CODE	O/P MODE
1	Single Output	A1	0 ~ 100 μ A	V1	0 ~ 10 mV	P	Programmable 8 Ranges: 0-78.1 Hz to 0-10K Hz (please specify)	1	0 ~ 0.1Hz	OC	Open Collect
2	Dual Output	A2	0 ~ 1 mA	V2	0 ~ 50 mV			2	0 ~ 1 Hz	MC	Mech. contact
The excitation supply was removed when you select dual o/p mode.		A3	0 ~ 10 mA	V3	0 ~ 1 V			3	0 ~ 10 Hz	V	Volt pulse
		A4	0 ~ 20 mA	V4	0 ~ 5 V			4	0 ~ 50 Hz	05	5 Vp
		A5	4 ~ 20 mA	V5	0 ~ 10 V	5	0 ~ 20K Hz	12	12 Vp		
		AO	Specify (mA i/p)	V6	1 ~ 5 V	6	0 ~ 50K Hz	24	24 Vp		
		P1	Programmable 6 Ranges (by D-S) 4~20/0~20 mA 0~5/0~10/1~5/ 2~10 V	V7	2 ~ 10 V	E	Excitation	VO	Specify		
				V8	-10 ~ +10 V	N	None				
				VO	Specify (V)						
										CODE	AUX. POWER
										A1	AC 115 V
										A2	AC 230 V
										A3	AC 380 V
										A4	AC 415 V
										D12	DC 12 V
										D24	DC 24 V
										D48	DC 48 V
										DO	Specify DC
										AO	Specify AC

Remark: > When you select coding P1 or P for input and output range, please specify initial range.
> After change input or output range by dip or rotary switches (D-S or R-S), re-calibration is to be requested.