

MT-FD FREQUENCY Converter & Isolator

FEATURE

- 10 popular Inputs and 4 popular Output (Programmable by dip switches) Ranges
- Modular Design, Easy Maintain and Save Stock;
- Changeable Output Module Between V/mA, Trip Relay with difference programming module
- Dual difference signal output available even for trip relay
- CE Approved



SPECIFICATION

Input Range	Input Impedance	Output Range	Load Resistance
0 - 0.1 Hz	≥ 1M ohm	0 - 100 mV	≥ 100K ohm
0 - 1 Hz	≥ 1M ohm	0 - 1 V	≥ 100 ohm
0 - 10 Hz	≥ 1M ohm	0 - 5 V	≥ 500 ohm
0 - 20 Hz	≥ 1M ohm	0 - 10 V	≥ 1K ohm
0 - 50 Hz	≥ 1M ohm	1 - 5 V	≥ 500 ohm
0 - 100 Hz	≥ 1M ohm	-10 - 0 - +10 V	≥ 10K ohm
0 - 200 Hz	≥ 1M ohm	0 - 1 mA	≤ 7.5K ohm
0 - 500 Hz	≥ 1M ohm	0 - 10 mA	≤ 750 ohm
0 - 1K Hz	≥ 1M ohm	0 - 20 mA	≤ 500 ohm
0 - 2K Hz	≥ 1M ohm	4 - 20 mA	≤ 500 ohm
0 - 5K Hz	≥ 1M ohm		
0 - 10K Hz	≥ 1M ohm		
0 - 20K Hz	≥ 1M ohm		
0 - 50K Hz	≥ 1M ohm		

- Accuracy:** ±0.1% of F.S.
- Response time:** ≤ 250 msec. Plus one pulse cycle
- Span adjustment:** ≤ 10% of F.S.
- Zero adjustment:** ≤ 5% of F.S.
- Input mode:** Voltage pulse, Open collector, Mechanical contact (30 Hz maximum)
- Pulse width:** 10 msec. minimum at < 20 Hz
Duty ratio 20 - 80% at > 20 Hz
- Input level:** 5Vp/12Vp/24Vp/220Vac
- Output ripple:** ≤ 0.1% of F.S.
- Excitation supply:** DC 10V/24V, 40mA Changeable by dip switch
- Power Supply:** AC 115 or 230V ±10%, 50/60 Hz
Changeable by jumper inside
Option: DC 12V, 24V, 48V ±10%, (Isolated)
DC 5W, AC 6.5VA
- Power consumption:** DC 5W, AC 6.5VA
- Option range:** Ultra-low frequency: 0 - 0.1 Hz
Ultra-high frequency: 0 - 50K/100K Hz
- Relay contact:** AC 110V/5A, 220V/2A, Normal Open
- Operating temperature:** 0-60 °C
- Operating relative humidity:** 20-95 %RH, non-condensing
- Temperature coefficient:** ≤ 100 PPM/°C
- Storage temperature:** -10-70 °C
- Isolation:** Between Power / Input / Output1 / Output2
- Insulation resistance:** ≥ 100M ohm at 500Vdc
- Surge test:** 4 KV, 1.2 x 50 μsec.
Common mode & differential mode

Dielectric Strength: AC 2.0 KV for 1 min

Between Power / Input / Output / Case
Comply with EN50081-1, EN50082-2
50mm(W) x 87mm(H) x 123mm(D)-with socket
Surface and DIN rail 35mm wide
500g

Standard:

Dimensions:

Mounting:

Weight:

ADJUSTMENT

O/P 2 Span Adjust Pot (Clockwise: o/p2 increase)

O/P 2 Zero Adjust Pot (Clockwise: o/p2 increase)

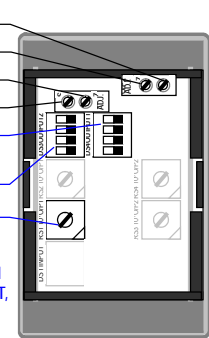
O/P 1 Zero Adjust Pot (Clockwise: o/p1 increase)

O/P 1 Span Adjust Pot (Clockwise: o/p1 increase)

DS4: Programming for O/P 1/4 Ranges (by Dip-Switch)

DS3: Programming for O/P 2/4 Ranges (by Dip-Switch) or selecting for excitation supply / 2 Ranges (DC 24V: Dip-Switch 1&2 ON; DC 10V: Dip-Switch 3&4 ON)

RS1: Programming for I/P / 10 Ranges (Rotary-Switch)



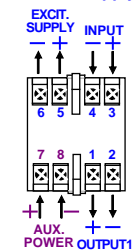
* MT-FD IS ONLY SINGLE OUTPUT WITH EXCITATION SUPPLY. IT COULD BE SPECIFIED IN DUAL OUTPUT, WHEN EXCITATION SUPPLY WAS REMOVED.

PROGRAMMING FOR INPUT AND OUTPUT:

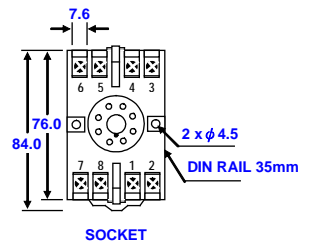
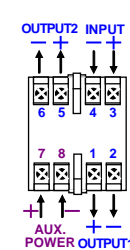
INPUT RANGE			OUTPUT SIGNAL	O/P1 DS4 (5)	O/P2 DS3 (6)
J1 Close	J1 Open	RS1 (7)			
0 - 1 Hz	0 - 10 Hz	0	1 - 5 V		
0 - 2 Hz	0 - 20 Hz	1	0 - 10 V		
0 - 5 Hz	0 - 50 Hz	2			
0 - 10 Hz	0 - 100 Hz	3	0 - 20 mA		
0 - 20 Hz	0 - 200 Hz	4			
0 - 50 Hz	0 - 500 Hz	5	4 - 20 mA		
0 - 100 Hz	0 - 1K Hz	6			
0 - 200 Hz	0 - 2K Hz	7			
0 - 500 Hz	0 - 5K Hz	8			
0 - 1K Hz	0 - 10K Hz	9			

CONNECTION DIAGRAM & SOCKET

MT-FD WITH Analogue O/P & Excit. Supply



MT-FD WITH Dual Analogue O/P



ORDERING INFORMATION

Remark: ▶ When you select coding P0, P1 or P for input and output range, please specify initial range.
▶ After change input or output range by rotary or dip switches (R-S or D-S), re-calibration is to be requested.

MT-FD		Output Loop	Input Range	Input Mode	Output1 Range	Output2 Range	Aux. Power				
CODE	OUTPUT LOOP	CODE	INPUT	CODE	INPUT	CODE	OUTPUT	CODE	OUTPUT	CODE	AUX. POWER
1	Single Output	P0	J1 Close: Programmable 1 - 1K Hz 10 ranges (please specify)	H1	0 - 0.1 Hz	OC	0 - 1 mA	1	0 - 100 mV	A1	AC 115 V
2	Dual Output	P1	J1 Open: Programmable 10 - 10K Hz 10 ranges (please specify)	H2	0 - 20K Hz	MC	0 - 10 mA	2	0 - 1 V	A2	AC 230 V
	The excitation supply was removed when you select dual o/p mode.			H3	0 - 50K Hz	V	0 - 20 mA(*P)	3	0 - 5 V		
				HO	Specify(Hz)	05	4 - 20 mA(*P)	4	0 - 10 V(*P)		
						12	Specify (mA o/p)	5	1 - 5 V(*P)		
						24	Specify (Vo/p)	6	2 - 10 V		
						22	Programmable 4 ranges(by D-S)	7	-10 - +10 V		
						VO		N	None		