

# FREQUENCY SCALER

**TX8-FF**

## FEATURES

- Measures and Scales Frequencies up to 50kHz
- 8 Output Ranges Programmable
- Dual output available (isolated)
- Plugs into 8 pin Din Rail mounted base
- Low cost & high stability
- CE Approved



## SPECIFICATION

Input Range	Input Impedance	Output Range	Output Mode
0 - 0.1 Hz	≥ 1M ohm	0 - Input / 1 Hz	Open collect: 30Vdc; 40mA 0-50K Hz maximum; Pulse width: 50% duty cycle
0 - 1 Hz	≥ 1M ohm	0 - Input / 2 Hz	
0 - 10 Hz	≥ 1M ohm	0 - Input / 4 Hz	
0 - 20 Hz	≥ 1M ohm	0 - Input / 8 Hz	
0 - 50 Hz	≥ 1M ohm	0 - Input / 16 Hz	Voltage pulse: 5V, 12V, 24V; 10mA 0-50K Hz maximum; Pulse width: 50% duty cycle
0 - 100 Hz	≥ 1M ohm	0 - Input / 32 Hz	
0 - 200 Hz	≥ 1M ohm	0 - Input / 64 Hz	
0 - 500 Hz	≥ 1M ohm	0 - Input / 128 Hz	
0 - 1K Hz	≥ 1M ohm		Mech. Contact: 110Vac; 1A 0-130 pulse/minute maximum; On pulse width: 50% duty cycle
0 - 2K Hz	≥ 1M 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
- 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  
selectable by dip- switch on top
- Excitation:** DC 10V/24V, 40mA; Changeable by dip switch
- Output mode:** Voltage pulse, Open collector, Mechanical contact (30 Hz maximum)
- Power Supply:** AC 115 or 230V ±15%, 50/60 Hz  
Changeable by jumper inside  
Option: DC 12V, 24V, 48V ±10%, (Isolated)
- Power consumption:** DC 5W, AC 6.5VA
- Option range:** Ultra-low frequency: 0 - 0.1 Hz  
Ultra-high frequency: 0 - 50K/100K Hz
- Dual output:** Available when excitation supply was removed
- 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  
≥ 100M 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 Indication (LED)**

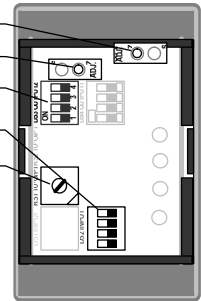
**O/P 1 Indication (LED)**

**Excitation Supply DC 10V or 24V (by dip-switch)**

**DS2: Programming for I/P Level / 4 Ranges (by Dip-Switch)**

**RS1: Programming for O/P / 8 Ranges (by Rotary-Switch)**

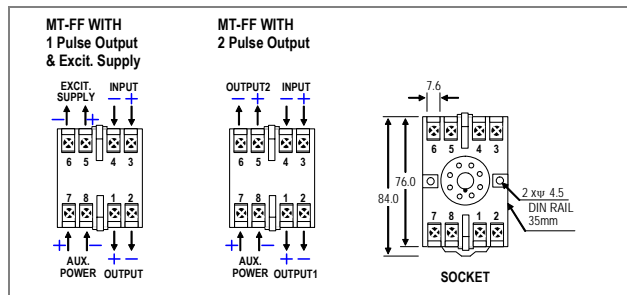
\* MT-FF SINGLE OUTPUT ONLY WITH EXCITATION



### PROGRAMMING FOR OUTPUT:

INPUT LEVEL	DS2 (1)	OUTPUT SIGNAL	OUTPUT RS1 (2)	EXCIT. SUPPLY	OUTPUT DS2 (3)
5 Vp		0 ~ Input / 1 Hz	0	10 V	
		0 ~ Input / 2 Hz	1		
12 Vp		0 ~ Input / 4 Hz	2	24 V	
		0 ~ Input / 8 Hz	3		
24 Vp		0 ~ Input / 16 Hz	4		
		0 ~ Input / 32 Hz	5		
220 Vac		0 ~ Input / 64 Hz	6		
		0 ~ Input / 128 Hz	7		

## CONNECTION DIAGRAM & SOCKET (8 PIN)



## ORDER CODING

**TX8-FF** Output No. — Input Range — Input Mode — Output 1 Range — Output 2 Range — Output Mode — Aux. Power

CODE	OUTPUT LOOP	CODE	INPUT	CODE	INPUT	CODE	INPUT MODE	CODE	OUTPUT	CODE	OUTPUT MODE	CODE	AUX. POWER
1	Single Output	H1	0 - 0.1 Hz	HA	0 - 10K Hz	OC	Open collect	P	Programmable 8 Ranges: 0-Input / 1 Hz to 0-Input / 128 Hz (please specify)	OC	Open collect	A1	AC 115 V
2	Dual Output	H2	0 - 1 Hz	HB	0 - 20K Hz	MC	Mech. contact	E	Excitation	MC	Mech. contact	A2	AC 230 V
The excitation supply option is removed when you select dual o/p mode.													
		H3	0 - 10 Hz	HC	0 - 50k Hz	V	Volt pulse	F	Specify(Hz o/p)	V	Volt pulse	A3	AC 380 V
		H4	0 - 20 Hz	HD	0 - 100K Hz	05	5 Vp	N	None	05	5 Vp	D12	DC 12 V
		H5	0 - 50 Hz	HO	Specify (Hz)	12	12 Vp			12	12 Vp	D24	DC 24 V
		H6	0 - 100 Hz			24	24 Vp			24	24 Vp	D48	DC 48 V
		H7	0 - 200 Hz			22	220 Vac			VO	Specify	AD1	20-90Vdc/ac
		H8	0 - 500 Hz			VO	Specify					AD2	90-265Vdc/a
		H9	0 - 1K Hz										