

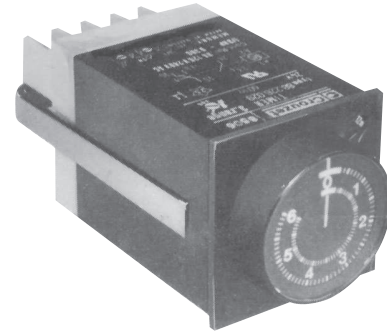
88220 SERIES

MULTIFUNCTION MOTOR

TIMER WITH MEMORY

UL listed CSA recognized

- Five Functions in One Unit
- Timing Range from 0.3 sec to 12 hours
- DIN-Rail, Plug-in, or Panel Mounting



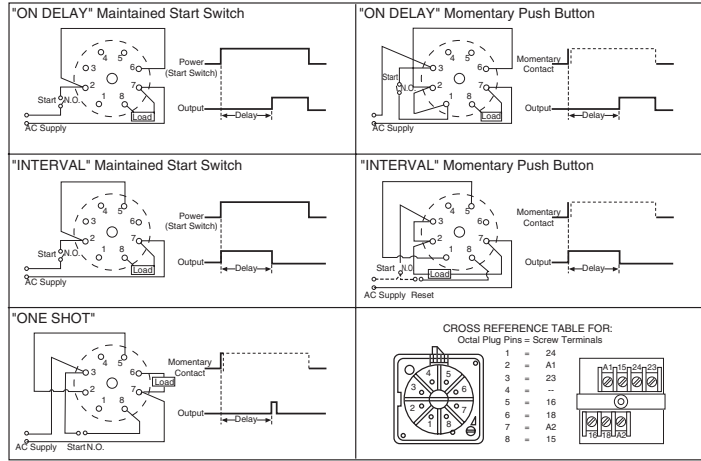
DESCRIPTION:

The 88220 Series is a synchronous motor driven reset timer. The timer is available in 2 standard time ranges from 0.3 sec to 12 hours. Time ranges are knob adjustable and all have a progress pointer which displays the remaining time. Different functions (ON Delay, Interval, One Shot) selectable through external wiring.

SPECIFICATIONS:

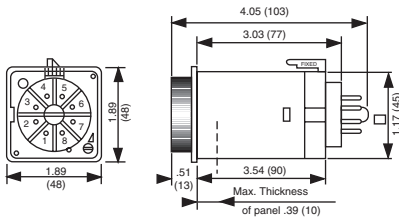
Input Power	24 VAC, 110 VAC, 220 VAC ±10%, 60 Hz
Maximum power consumption	3 VA
Output	1 x SPST Relay & 1 x SPDT Relay
Contact material	AgCdO
Maximum loading	8 Amp 1/3 HP
Maximum switching voltage	220 VAC
Mechanical life of relay	2.5 million operations
Repeat accuracy	±1.5% (except 4% on 6 sec range)
Setting Accuracy	±2% (except 5% on 6 sec range)
Reset time	200 ms
Storage temp. rating	-20° to +70°C (-4° to 158°F)
Operating temp. rating	-20° to +55°C (-4° to 131°F)

FUNCTION AND WIRING DIAGRAMS:
(Octal plug-in mounting shown)

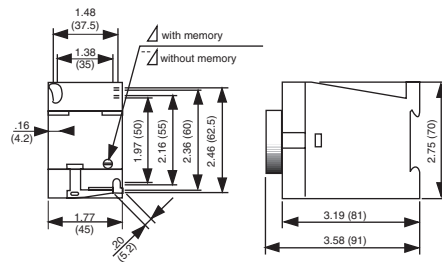


DIMENSIONS: inches (mm)

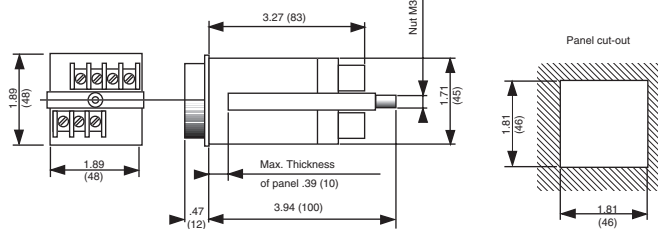
Type 88 226 5 (octal plug-in)



Type 88 225 0 (DIN - rail mounting)



Type 88 226 0 (paneling mounting)



Products and specifications subject to change without notice.

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GENERAL FEATURES:

MULTI-FUNCTION

on-delay, interval and single shot in on timer

MULTI-RANGE

2 model/3 time ranges each cover from 0.3 sec to 12 hours

TRANSIENT IMMUNITY

Built-in

CYCLE PROGRESS

dial shows time remaining in cycle

±2% SETTING ACCURACY

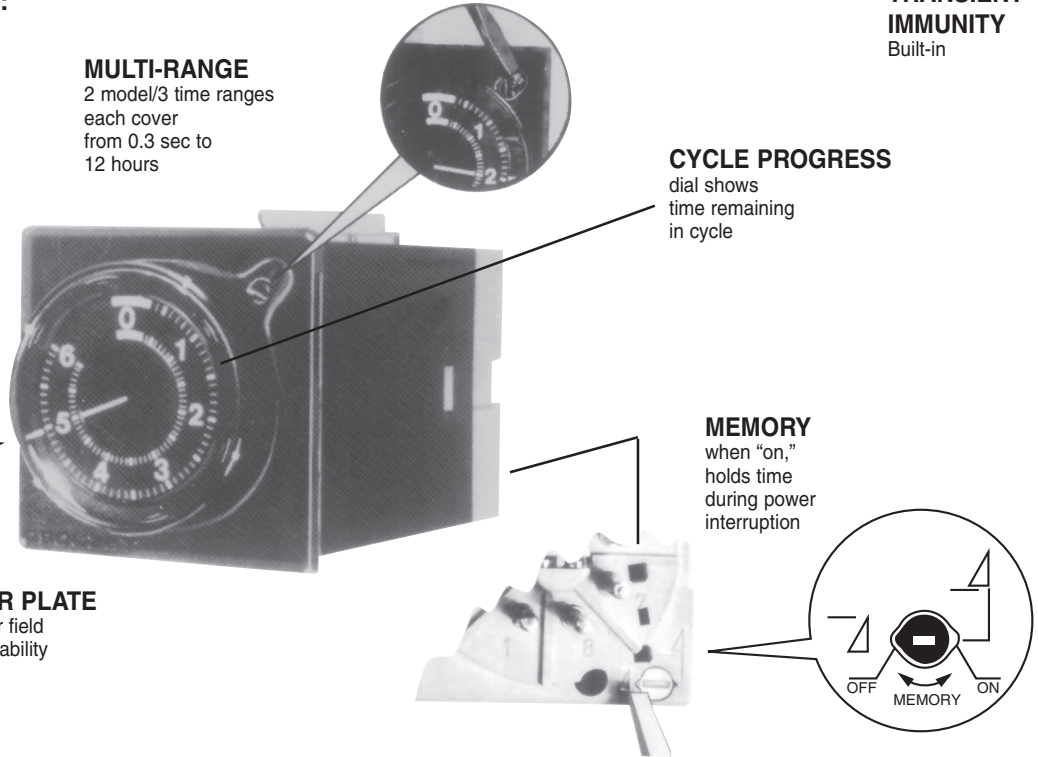
±1.5% REPEAT ACCURACY

ADAPTER PLATE

available for field interchangeability (not shown)

MEMORY

when "on," holds time during power interruption



TIME RANGES

Model 1 (12 min.): .3 to 6 s., .5 to 12 min.
 Model 2 (12 hrs.): .3 to 6 min., 3 to 60 min., .5 to 12 hrs.

ORDERING INFORMATION:

When ordering, select model, voltage/frequency and mounting to determine part number in chart below

EXAMPLE

MODEL 1 (12 MIN.), 115V/60Hz, OCTAL PLUG-IN, 88 226 510

MODEL	VOLTAGE/FREQ.*	MODELING		
		OCTAL PLUG-IN (PART NUMBER)	PANEL MOUNTING (PART NUMBER)	BASE MOUNTING (PART NUMBER)
MODEL 1 (12 MIN.)	24 V/60 Hz	88 226 509	88 226 029	88 225 029
MODEL 1 (12 MIN.)	115 V/60 Hz	88 226 510	88 226 030	88 225 030
MODEL 1 (12 MIN.)	220 V/60 Hz	88 226 511	88 226 031	88 225 031
MODEL 1 (12 MIN.)	220 V/50 Hz	88 226 504	88 226 011	88 225 011
MODEL 2 (12 HRS.)	24 V/60 Hz	88 226 512	88 226 032	88 225 032
MODEL 2 (12 HRS.)	115 V/60 Hz	88 226 513	88 226 033	88 225 033
MODEL 2 (12 HRS.)	220 V/60 Hz	88 226 514	88 226 034	88 225 034
MODEL 2 (12 HRS.)	220 V/50 Hz	88 226 508	88 226 014	88 225 014

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TMR 48 Analog Timers



- **Multi-function or monofunction**
- **Multi-timing ranges from 0.02 Sec to 300 Hrs**
- **Multi voltage from 12-240 Vdc / 24-240 Vac**
- **Time setting displayed on dial**
- **2 output relays 5A / 250 Vac**
- **2 LED indicators 1 for power and 1 for relay status**

Type	Functions	Output	Supply Voltage	Part Number
TMR 48 U	A, B, C, W, Ac, Bw	2 SPDT relays, 11 pin plug in 5A / 250 Vac	12 - 250 Vdc 24 - 240 Vac	88 886 016
TMR 48 A	A	2 SPDT relays, 8 pin plug in 5A / 250 Vac	12 - 250 Vdc 24 - 240 Vac	88 886 106
TMR 48 X	A1, A2, H1, H2, Q1, Q2, D-Di	2 SPDT relays, 8 pin plug in 5A / 250 Vac 2 timed or 1 timed & 1 instantaneous	12 - 250 Vdc 24 - 240 Vac	88 886 116
TMR 48 L	L, Li, G, Gi	2 SPDT relays, 11 pin plug in 5A / 250 Vac	12 - 250 Vdc 24 - 240 Vac	88 886 516

General Specifications

Supply Voltage Un	12 - 250 Vdc 24 - 240 Vac		
Operating Range	+/- 10% DC Supply -15% / +10% AC Supply		
Frequency	50 / 60 Hz		
Power Consumption	4.8 VA / 230 Vac 2.5 VA / 110 Vac 1.1 VA / 24 Vac 0.5 W / 24 Vdc 0.8 W / 12 Vdc		
14 Timing Ranges Available	0.02 - 1.2 s	0.2 - 12 m	0.2 - 12 H
	0.05 - 3 s	0.5 - 3 m	0.3 - 5 H
	0.2 - 1.2 s	2 - 12 m	2 - 12 H
	0.5 - 30 s	5 - 300 m	5 - 300 H
	2 - 120 s		
	5 - 300 s		
Repetition Accuracy	+/- 0.5% of full scale at 25°C (typical with constant parameters)		
Temperature drift according to IEC / EN 61812	+/- 0.05% of full scale		
Display Accuracy	+/-5% of full scale at 25°C		
Minimum required START pulse duration	25ms		
Minimum required GATE pulse duration	60ms		
Minimum required RESET pulse duration	60ms		
Minimum required START pulse duration	50ms		
Output Specifications			
Nominal Rating	2 x 5A		
Nominal insulation voltage	250Vac		
Rated power (resistive load)	2000VA		
Minimum Current	10mA		
Electrical life at max / Vac resistive (# of operations)	10 ⁵		
Mechanical Life	30 x 10 ⁶		
Function & Use			
Display of output state by 2 LED's	Green : Power ON, Flashing during timing Yellow : On output ON, OFF output OFF		
Operating Temperature range	-20 to +55°C		
Storage Temperature range	-40 to +70°C		
Breakdown Voltage	2 KV		
Protection Class (IEC 60529) - Panel Mounted	IP 50		
Protection Class (IEC 60529) - Casing	IP40		
Housing Material	Self extinguishing		
Weight (g)	140		

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