

Multifunction Timer CT-MFD Relay Output

4



- 17.5 mm Wide, 35 mm DIN Rail Mounting
- Universal Voltage 24 ... 240 V AC; 24...48 V DC
- 7 Time Ranges From 0.05s ... 100 h
- Function and Time Range Selectable
- 7 Functions: Delay on Make, Delay on Break, Interval, Recycle/Flasher, Single Shot, Trailing Edge Interval
- Repeat Accuracy $\leq \pm 0.5\%$
- 6 A Isolated SPDT Relay Output
- 2 LED's Indicate Status

Approvals: us

Operation

The CT-MFD includes 7 popular functions: Delay On Make, Delay On Break, Interval, Trailing Edge Interval, Recycling - Equal Times, ON or OFF first. The time diagrams for these functions are shown. Complete function descriptions can be found in the Timer Function Section.

The function and time delay range are selected with rotary switches on the product. The time delay is adjusted with an onboard trimmer. The screw terminals used for connection are touch proof and can accept up to two wires.

Delay On Make (ON Delay)

LED Operation	Green LED	Red LED
Voltage Applied/Timing	ON/Flashing	OFF
Relay Energized	ON	ON

Delay On Break (OFF Delay)

LED Operation	Green LED	Red LED
Voltage Applied	ON	N/A
Relay Energized/Timing	ON/Flashing	ON

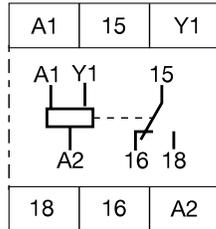
Single Shot, Interval, and Trailing Edge Interval

LED Operation	Green LED	Red LED
Voltage Applied	ON	N/A
Relay Energized/Timing	Flashing	ON

Recycling

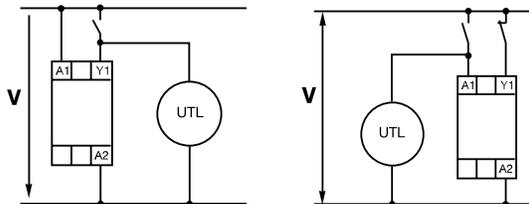
LED Operation	Green LED	Red LED
Voltage Applied	Flashing	N/A
Relay Energized	N/A	ON

Connection Diagrams



Y1 is not used for some functions

Wiring Diagrams



NOTE: An optional untimed parallel load can be connected to A1 or Y1 as shown.

Ordering Table

Supply Voltage	Time Ranges	Part Number
	0.05 ... 1 s	1SVR 500 020 R 0000
	0.5 ... 10 s	
24 ... 240 V AC	5.0 ... 100 s	
24...48 V DC	0.5 ... 10 m	
	5.0 ... 100 m	
	0.5 ... 10 h	
	5.0 ... 100 h	

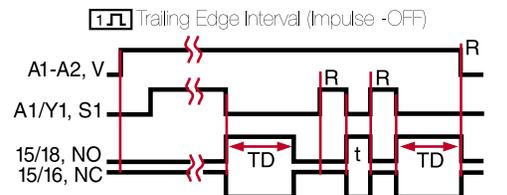
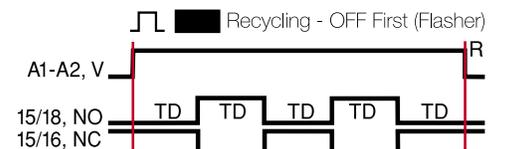
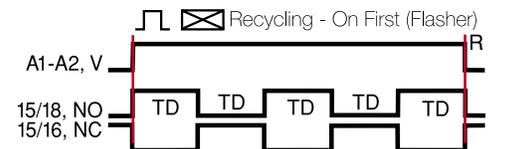
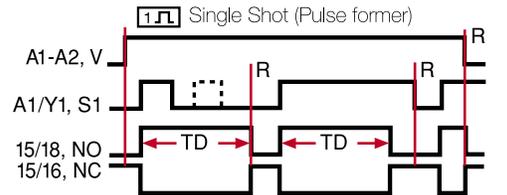
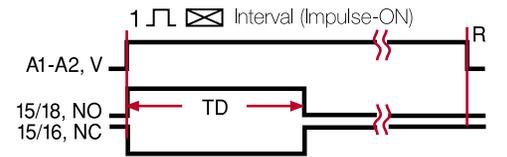
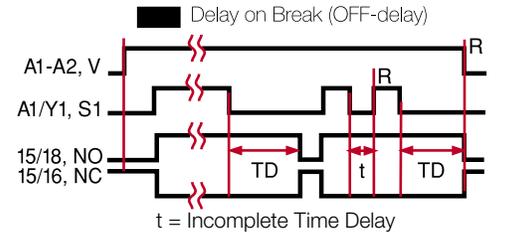
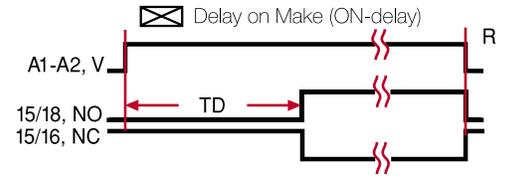
Accessories



See accessory pages for specifications.

Function

For Function Descriptions, See Timer Function Section



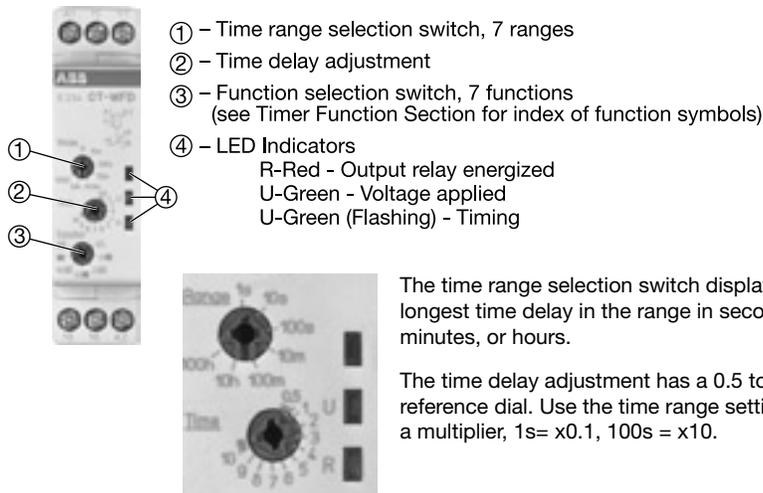
V = Voltage NO = Normally Open
TD = Time Delay NC = Normally Closed
R = Reset S1 = Initiate Switch
≡ = Undefined Time t = Incomplete TD

Multifunction Timer CT-MFD Relay Output

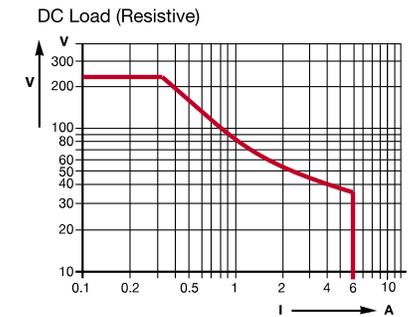
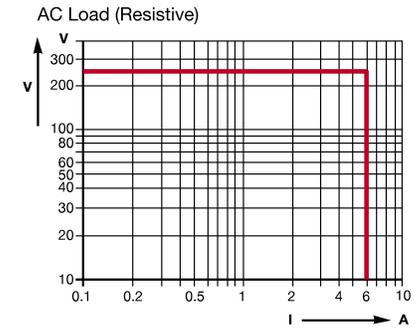
Technical Data

Input		
Voltage/Power Consumption	A1-A2	24 ... 240 V AC; 24...48 V DC/ \approx 2.0 VA / W
Tolerance		-15% ... +10%
Frequency		DC or 50 ... 60 Hz
Initiate Time		\geq 20 ms
Time Delay		
Range		0.05 s ... 100 h in 7 ranges
Reset Time		\leq 50 ms
Repeat Accuracy		\leq +/- 0.5%
Time Delay vs Input Voltage Tolerance		\leq 0.5%
Time Delay vs Temperature		\leq 0.06%/°C
Status Display		
Supply Voltage		LED green
Output Relay Energized		LED red
Output		
Rated Voltage	15-16/18 VDE 0100, IEC947-1	Isolated SPDT Relay 250 V
Rating		6 A resistive @ 230 V AC (AC 12) 3 A inductive @ 230 V AC (AC 15) 6 A resistive @ 24 V DC (DC 12) 2 A inductive @ 24 V DC (DC 13)
Switching Voltage		\leq 240 V AC
Mechanical Life		\leq 30 x 10 ⁶ operations
Electrical Life (4A resistive @ 230 V AC)		\leq 1 x 10 ⁶ operations
External Fuse For (NO) Contact Protection		\leq 10 A fast acting
General		
Rated Impulse Withstand Voltage (Vimp)		4 kV/1.2 ... 50 μ S
Operating/Storage Temperature		-20°C ... +60°C / -40°C ... +85°C
Mounting on DIN Rail (EN 50022)		Snap-on mounting/Screw mounting with adaptor
Wire Size Stranded with Wire End Ferrule		2 x 14 AWG (2 x 2.5 mm ²)
Weight		\approx 2.1 oz (60 g)
Dimensions (W x H x D)		0.69 x 2.76 x 2.48 in. (17.5 x 70 x 63 mm)

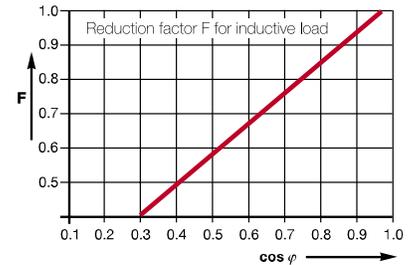
Face View



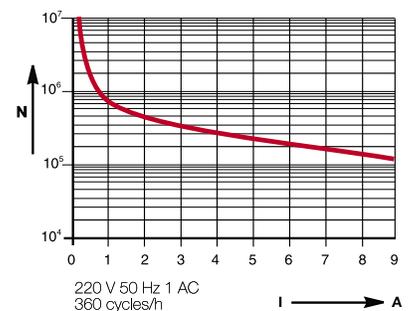
Load Limit Curves



Reduction Factor for Inductive AC Load



Contact Lifetime



Mechanical View

