Multifunction Timer
CT-MFS
Relay Output

Screw Clamp Connections

- 0.05 s ... 300 h in 10 Ranges
- ≤ +/-0.2% Repeat Accuracy
- 24 ... 240 V AC/DC Universal Voltage
- 4 A Isolated SPDT Relays
- 2nd SPDT Relay can be Time Delayed or Instantaneous
- 8 Switch Selectable Functions
- Select Onboard or External Time Adjustment
- Traditional or Accumulative Timing (most functions)
- 3 LED's to Display Operational Status

Description

Only 22.5 mm wide, the CT-MFS multifunction timer replaces many single function timers and reduces service/maintenance cost and inventory. The function, time range and actual time delay are all screwdriver adjustable. Eight functions can be selected using a rotary switch, which displays an international symbol for every function; e.g. ⊠ for "Delay on Make." The 10 time ranges from 0.05 s to 300 h are also selected using a rotary switch on the front of the unit. A desired time delay is then selected using an onboard potentiometer with a scale. When an external potentiometer is connected, the on board potentiometer is automatically disabled. During the time delay, the green LED flashes. Two red LED's indicate the internal relays are energized. A switch is provided to program the second relay R2 for time delayed or instantaneous operation.

■ Approvals:

10 Time Ranges

1	0.05 - 1 s*	6	15.0 - 300 s
2	0.15 - 3 s*	7	1.50 - 30 m
3	0.50 - 10 s	8	15.0 - 300 m
4	1.50 - 30 s	9	1.50 - 30 h
5	5.00 - 100 s	10	15.0 - 300 h

** Green LED does not flash during timing.*

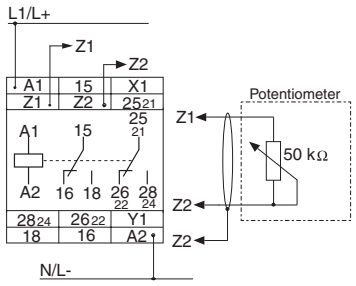
Input Voltage	Part Number
24 ... 240 V AC/DC	1SVR 430 010 R 0200

Accessories	Part Number
External potentiometer	1SVR 701 800 R 1000
Sealable transparent cover	1SVR 430 005 R 0100
Adaptor for screw mounting	1SVR 430 029 R 0100

Technical Data

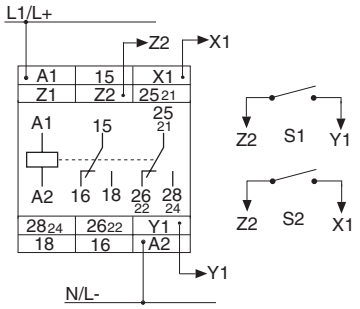
Input		
Voltage/Power Consumption	A1-A2	24 ... 240 V AC/DC / 2 ... 2.5 VA / W
Tolerance/Frequency		-15 % ... +10 % / 50 ... 60 Hz
Control Contact /Switch Connections	Y1-Z2	Initiate/Reset Switch
	X1-Z2	Stop & hold or accumulative timing switch
Voltage supplied at the Switch Inputs		10 ... 40 V DC
Switch Pulse Length		≥ 20 ms
Switching Current		< 1 mA
External Potentiometer Value	Z1-Z2	50 kΩ
Cable length to the remote potentiometer		≤ 80 ft (25 m) shielded, shield connected to Z2
Time Delay		
Range		0.05 s ... 300 h in 10 Ranges
Recycle Time		< 50 ms
Repeat Accuracy (constant parameters)		< 0.2 %
Time Delay vs Input Voltage Tolerance		< 0.008% / % Δ V
Time Delay vs Temperature		< 0.07% / °C
Display		
Input Voltage/Timing	U/T	Green LED steady/flashing during timing
Output Relay Energized	R1 & R2	2 Red LED's
Output	15-16/18, 25(21)-26(22)/28(24)	2 Relays, SPDT isolated contacts in each
Rating		4 A resistive @ 230 V AC (AC 12) 3 A inductive @ 230 V AC (AC 15) 4 A resistive @ 24 V DC (DC 12) 2 A inductive @ 24 V DC (DC 13)
Mechanical Life		≤ 30 x 10^6 operations
Electrical Life (4 A resistive @ 230 V AC)		≤ 1 x 10^5 operations
External Fuse for Contact Protection		≤ 10 A fast acting
General		
Rated Impulse Withstand Voltage (Vimp)		4 kV/1.2 ... 50 µs
Operating/Storage Temperature		-20°C ... +60°C / -40°C ... +85°C
Mounting of 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 mm²)
Accessories/Mechanical Outline		See Accessory Pages
Dimensions (W x H x D)		0.89 x 3.07 x 3.94 in. (22.5 x 78 x 100 mm)
Weight		≅ 5.3 oz (150 g)

Connecting an external potentiometer



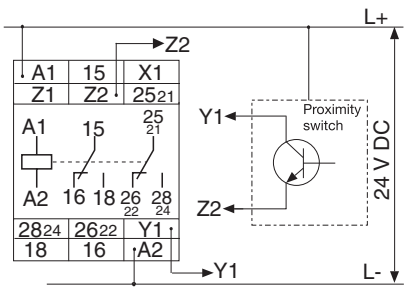
Use shielded cable
Shield connected to Z2

Connecting control switches or contacts



S1 = Control Contact or Initiate Switch
S2 = Stop and Hold or Accumulative Timing Switch

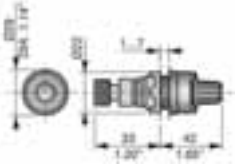
Connecting a 3 wire, 24 V DC proximity switch as the initiate (control) switch S1



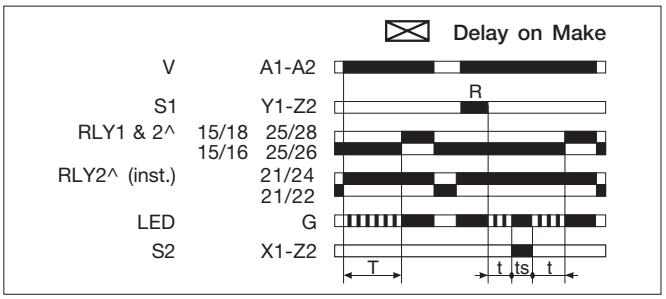
External Potentiometer

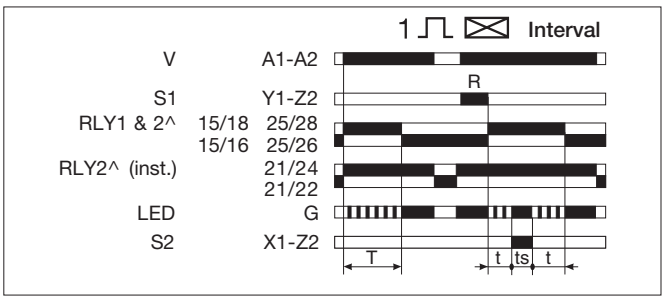
P/N 1SVR 701 800 R 1000

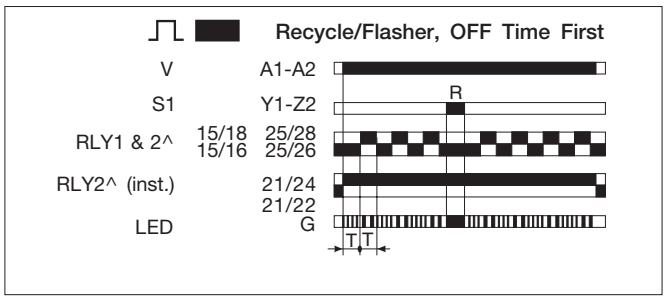
External potentiometer with graduated dial supplied for 22.5 mm (.886") panel cut-out.
Degree of protection IP 65 (NEMA 5) fastened with a locking ring. 50 kΩ ±20%

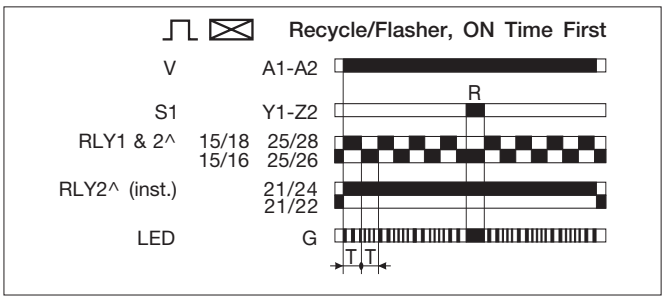


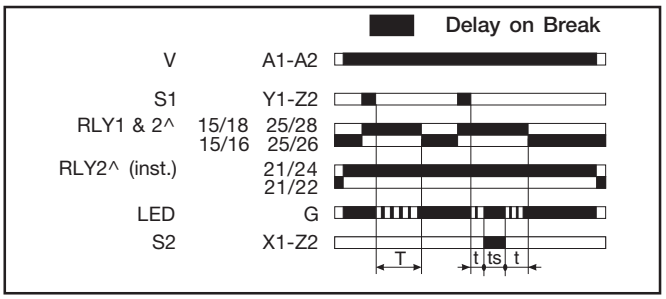
Timer Functions

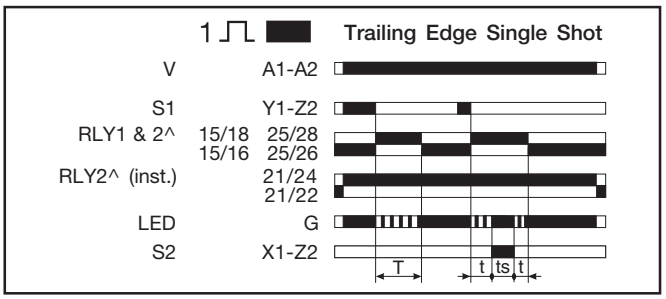












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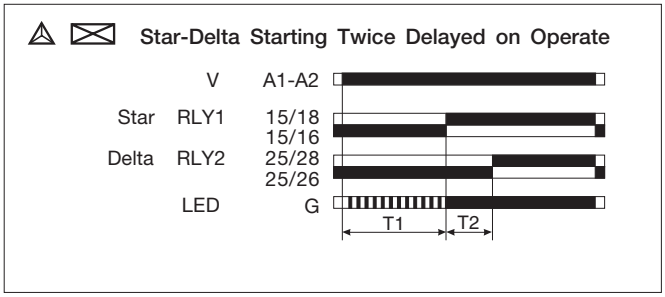
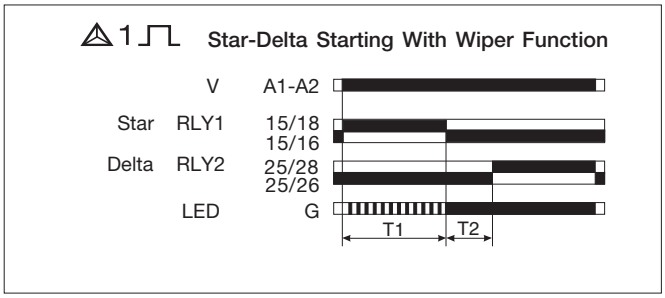
Motor Starting Functions



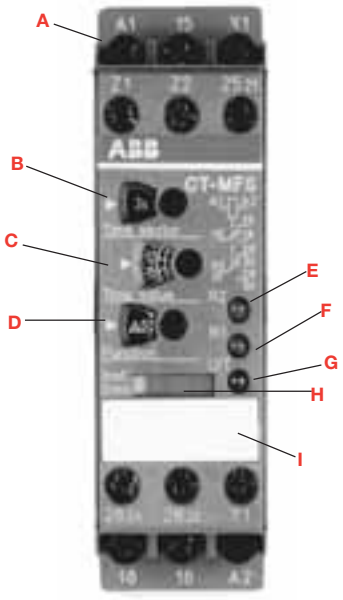


T1 = Adjustable Star (Wye) Start Time; T2 = fixed at ≅ 50 ms
Star = Wye Connection (starting); Delta = Delta Connection (running)

Settings

KEY

- **A** Screw terminals for up to 2 X 14 AWG (2 x 2.5 mm²)
- **B** Time Range Selector Switch
- **C** Time Delay Adjustment
- **D** Function Selector Switch
- **E** R 2 Red LED - Relay 2, SPDT (25/26, 25/28) or (21/22, 21/24)
- **F** R 1 Red LED - Relay 1, SPDT (15/16, 15/18)
- **G** U/T Green LED - Input voltage, timing
- **H** Switch R2 Relay from timed to instantaneous contacts.
- **I** Identification label



Legend

V	= Voltage	R	= Reset
S1	= Initiate Switch	RLY1	= Relay 1
S2	= Stop and hold or Accumulative Timing	RLY2	= Relay 2
T	= Complete Time Delay	G	= Green (LED)
t	= Incomplete Time Delay	^	= The operation of Relay 2 is switch selectable; instantaneous or time delayed
ts	= Closing S2 stops and holds timing		= OFF, open, de-energized
			= ON, closed, energized