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BULLETIN 700-FE ECONOMY TIMING RELAY

Product Overview

Bulletin 700-FE — Economy Timing Relay



- Adjustable function and timing range timing relays
- DIN Rail mounted without cost of socket
- 17.5 mm wide, multi-function or single function
- Available as 1 N.O. or SPDT contact output, 5 A
- Timing ranges from 0.05 s…10.0 hr
- Coil surge protection

See Specifications.

Build a Catalog Number

Multi-Function

This device offers you the flexibility of selecting one of 4 single timing functions.

Operating Mode	Contact Output	Timing Range	Input Voltage	Cat. No.
ON-delay, OFF-delay, One Shot, Flasher (repeat cycle starting with pulse)	1 N.O.	0.05 s…10 hr (6 settings)§	24V AC/DC ⋆ 110…240V AC 50/60 Hz	700-FEM1TU22
ON-delay, OFF-delay, One Shot, Flasher (repeat cycle starting with pulse)	SPDT (1 C/O)	0.05 s…10 hr (6 settings)§	24V…48V AC/DC 24…240V AC 50/60 Hz	700-FEM3TU23

⋆ Voltage is either 24V AC/DC 50/60 Hz.

§ Time ranges: 0.05 s…1 s, 0.5…10 s, 0.05…1 min, 0.5…10 min, 0.05…1 hr, 0.5…10 hr.

Single-Function

This device offers you one specific timing function.

Operating Mode	Contact Output	Timing Range§	Input Voltage	Cat. No.
ON-delay	1 N.O.	0.05 s…10 hr (6 settings)	24V AC/DC ⋆ 110…240V AC 50/60 Hz	700-FEA1TU22
	SPDT (1 C/O)	0.05 s…10 hr (6 settings)	24V…48V AC/DC 24…240V AC 50/60 Hz	700-FEA3TU23
OFF-delay	1 N.O.	0.05 s…10 hr (6 settings)	24V AC/DC ⋆ 110…240V AC 50/60 Hz	700-FEB1TU22
	SPDT (1 C/O)	0.05 s…10 hr (6 settings)	24V…48V AC/DC 24…240V AC 50/60 Hz	700-FEB3TU23

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One Shot	1 N.O.	0.05 s…10 hr (6 settings)	24V AC/DC ⋆ 110…240V AC 50/60 Hz	700-FED1TU22
	SPDT (1 C/O)	0.05 s…10 hr (6 settings)	24V…48V AC/DC 24…240V AC 50/60 Hz	700-FED3TU23
Fleeting OFF-delay	SPDT (1 C/O)	0.05 s…10 hr (6 settings)	24V…48V AC/DC 24…240V AC 50/60 Hz	700-FEE3TU23
Flasher (repeat cycle starting with pulse)	1 N.O.	0.05 s…10 hr (6 settings)	24V AC/DC ⋆ 110…240V AC 50/60 Hz	700-FEF1TU22
	SPDT (1 C/O)	0.05 s…10 hr (6 settings)	24V…48V AC/DC 24…240V AC 50/60 Hz	700-FEF3TU23
Pulse Converter	SPDT (1 C/O)	0.05 s…10 hr (6 settings)	24V…48V AC/DC 24…240V AC 50/60 Hz	700-FEL3TU23

⋆ Voltage is either 24V AC 50/60 Hz or 24V DC.

§ Time ranges: 0.05 s…1 s, 0.5…10 s, 0.05…1 min, 0.5…10 min, 0.05…1 hr, 0.5…10 hr.

Special Functions

Operating Mode	Contact Output	Timing RangeΔ	Input Voltage	Cat. No.
Star-Delta	2 N.O. with 1 Common	0.15 s…10 min (4 settings)	24V…48V AC/DC 24…240V AC 50/60 Hz	700-FEY2QU23

Δ Time ranges: 0.15…3 s, 0.5…10 s, 3 s…1 min, 30 s…10 min.

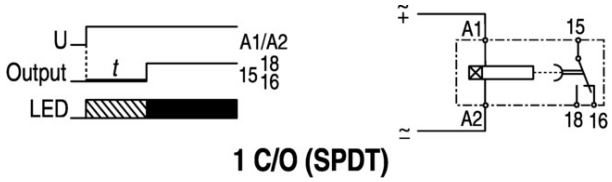
	Description	Pkg. Quantity	Cat. No.
	**Panel Mounting Adapter** For surface mounting according to drilling plan EN 50 002	5	199-FSA
	Label Sheet 105 self-adhesive paper labels each, 6 x 17 mm	10	100-FMS

Function and Connection Diagrams

(A) On-Delay



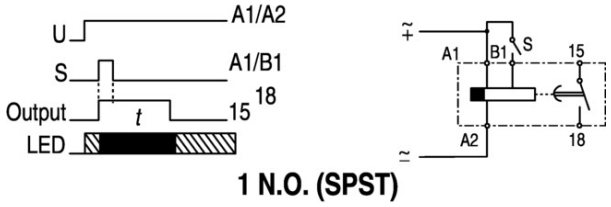
1 N.O. (SPST)



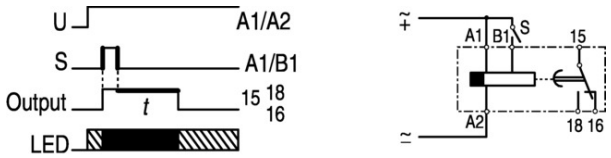
1 C/O (SPDT)

(B) Off-Delay

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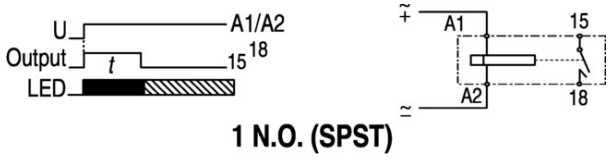


1 N.O. (SPST)

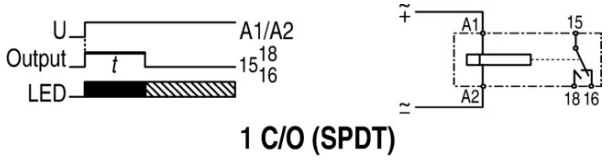


1 C/O (SPDT)

(D) One Shot

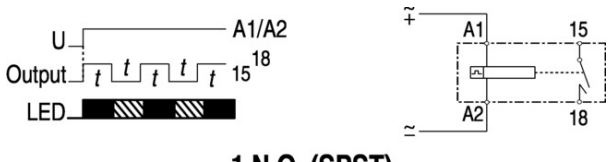


1 N.O. (SPST)

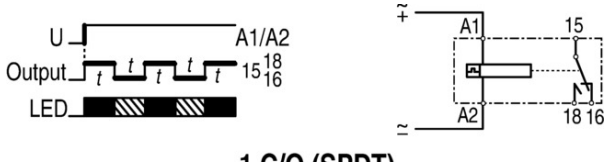


1 C/O (SPDT)

(F) Flasher (Repeat Cycle Starting with Pulse)



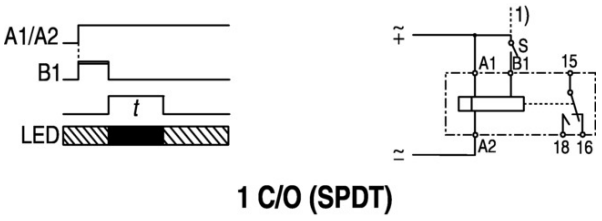
1 N.O. (SPST)



1 C/O (SPDT)

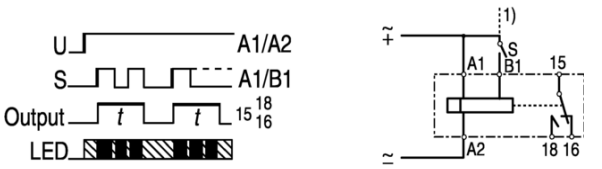
(E) Fleeting Off-Delay

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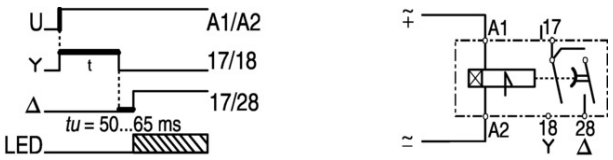


1 C/O (SPDT)

(L) Pulse Converter



(Y) Star-Delta Timing Relay



Bi-Color LED: 1 C/O (SPDT) or 1 N.O. Contact Timers

LED U = green: Supply voltage available.
LED Relay = red: Output is energized.

Single Color LED: 2 N.O. with Common

ON = green
OFF = red

Time Characteristics (according to VDE 0435, part 2021)

			1 N.O.		SPDT
Setting Accuracy		±5% of full scale			
Repeatability		±1% of setting (typical)			
Tolerance		By voltage: ±0.01%/%DU By temperature: ±0.25%/°C		By voltage: ±0.001%/%DU By temperature: ±0.025%/°C	
Supply					
Supply Voltage		24V AC/DC‡ and 110...240V AC, 50/60 Hz		24...48V DC and 24...240V AC, 50/60 Hz	
Voltage Tolerance	AC	-15%/+10%			
	DC	-15%/+20%			

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Power Consumption		0.5 W at 24V DC, 5 VA at 240V AC		
Time Energized		100%		
Reset Time		100 ms		
Cable Length (Supply Voltage Control)		Max. 250 m (750 feet)		
Pulse Control (B1)				
Impulse Duration		³ 250 ms	³ 50 ms (AC), ³ 30 ms (DC)	
Input Voltage		supply voltage range		
Input Current		1 mA		
Cable Length		Max. 250 m without parallel load between B1 and A2 Max. 50 m with load (< 3 kW) between B1 and A2		
Outputs				
Contact Type		1 N.O. contact	1 Form C - SPDT contact	
Dielectric Withstand Voltage	Contact-to-coil	4000 V		
Switching Capacity	Power	1250 VA		
	According to IEC 947-5-1	AC-1	5 A /250V AC (resistive load)	
		AC-14	1 A/250V AC (inductive load)	
		DC-13	1 A/24V DC (inductive load)	
	According to UL 508	NEMA D300 - 1 A/300V AC		
Short-Circuit Resistance		6 A gL (Fast Blow Fuse)		
Life	Mechanical	20 million operations		
	Electrical	0.4 million at 1 A/250V AC, resistive 0.4 million at 0.5 A/250V AC, cos f = 0.4 0.4 million at 1 A/24V DC, resistive		
State Indicator		1 Bi-Color LED (Supply; Relay)		
Certifications		cULus Listed (File No. E14840, Guide NKCR/NKCR7), CE Marked		
Standards		EN/IEC 60947-1, EN/IEC 60947-5-1, UL 508, CSA 22.2 No. 14		

⋆ See Performance Data

‡ Voltage is either 24V DC or AC 50/60 Hz.

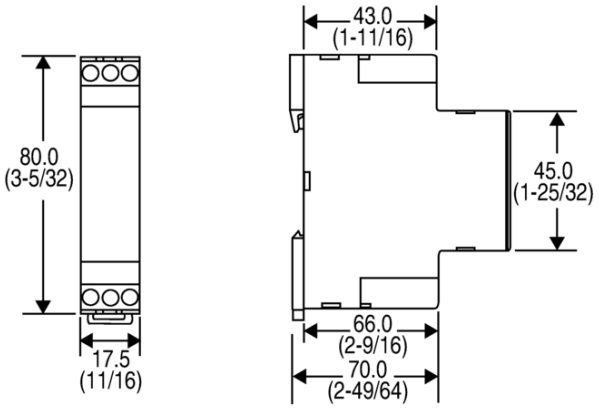
General Specifications

		1 N.O.		SPDT
Insulation Characteristics	2 kV AC/50 Hz test voltage according to VDE 0435 and 4 kV 1.2/50 ms surge voltage according to IEC 60947-1 between all inputs and outputs			
EMC/Interference Immunity	The following requirements are fulfilled: Surge capacity of the supply voltage according to IEC 61000-4-5: Level 3 Burst according to IEC 61000-4-4: Level 3 ESD discharge according to IEC 61000-4-2: Level 3			
EMC/Emmission	electromagnetical fields according to EN 55 022: Class B			
Safe Isolation	according to VDE 0106 T 101			
Climatic Withstand	56 cycles (24 hr) at 25...40 °C and 95% relative humidity according to IEC 60068-2-30			
Vibration Resistance	4 g in three axes at 10...500 Hz, test FC according to IEC 60068-2-6			
Shock Resistance	50 g according to IEC 68-2-27			
Protection Class IEC 60947-1	Enclosure:IP 40 Terminal:IP 20			
Weight	60 g		60 g	
Certifications	cULus, CE Certified		cULus, Germanischer Lloyd, CE Certified	

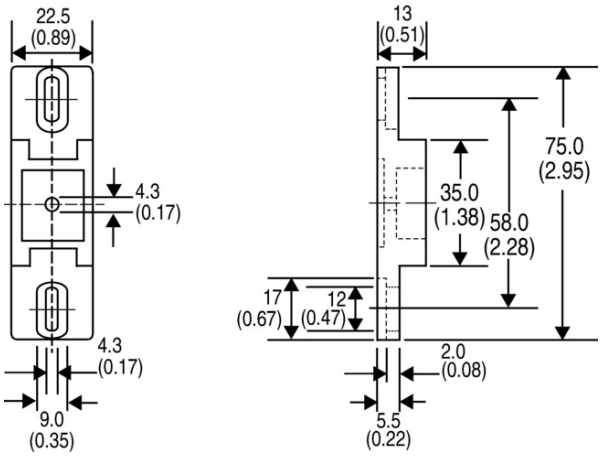
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Ambient Temperature	Open:-25…+60 °C Enclosed:-25…+45 °C Storage:-40…+85 °C
Connections	Screw terminal M3 for Pozidriv No.1, Philips and slotted screws No.2. suitable for power screw-driver. Rated tightening torque 8.8 lb.-in. (max. 1.0 Nm) For terminal cross-sections of 1 x 0.5 mm2…2 x 1.5 mm2 (solid) or 2 x 1.5 mm2 (stranded with sleeve), #20…14 AWG. Finger protection according to EN 50274
Mounting	For surface mounting in any position; snap-on mounting on 35 mm DIN Rail or by adapter and two screws (M4 type)
Disposal	Synthetic materials without dioxin according to EC/EFTA-Notification No. 93/0141/D electrical contacts are AgCdO

Approximate dimensions are shown in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.



Cat. No. 700-FE…



Cat. No. 199-FSA…

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