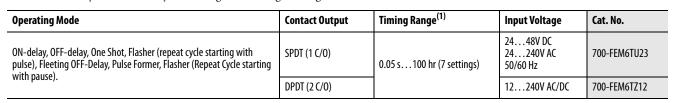
700-FE Economy Timing Relay

- Adjustable function and timing range timing relays
- DIN Rail mounted without cost of socket
- 17.5 mm wide, multi-function or single function
- SPDT contact output, 5 A
- Timing ranges from 0.05 s...100 hr
- Coil surge protection



This device offers you the flexibility of selecting one of 7 single timing functions.



⁽¹⁾ Time ranges: $0.05\dots 1$ s, $0.5\dots 10$ s, $5\dots 100$ s, $0.5\dots 10$ min, $5\dots 100$ min, $0.5\dots 10$ h, $5\dots 100$ h

Single-Function

This device offers you one specific timing function.

Operating Mode	Contact Output	Timing Range ⁽¹⁾	Input Voltage	Cat. No.
ON-delay	SPDT (1 C/0)	0.05 s100 hr (7 settings)	24V48V DC 24240V AC 50/60 Hz	700-FEA6TU23
OFF-delay	SPDT (1 C/O)	0.05 s100 hr (7 settings)	24V48V DC 24240V AC 50/60 Hz	700-FEB6TU23
One Shot	SPDT (1 C/0)	0.05 s100 hr (7 settings)	24V48V DC 24240V AC 50/60 Hz	700-FED6TU23
Flasher (repeat cycle starting with pulse)	SPDT (1 C/O)	0.05 s100 hr (7 settings)	24V48V DC 24240V AC 50/60 Hz	700-FEF6TU23

 $^{(1) \}quad \text{Time ranges: } 0.05\ldots 1 \text{ s, } 0.5\ldots 10 \text{ s, } 5\ldots 100 \text{ s, } 0.5\ldots 10 \text{ min, } 5\ldots 100 \text{ min, } 0.5\ldots 10 \text{ h, } 5\ldots 100 \text{ h}$

Special Functions

Operating Mode	Contact Output	Timing Range ⁽¹⁾	Input Voltage	Cat. No.
Star-Delta	2 N.O. with 1 Common	0.15 s10 min (4 settings)	24V48V DC 24240V AC 50/60 Hz	700-FEY6QU23

⁽¹⁾ Time ranges: 0.05...1 s, 0.5...10 s, 5...100 s, 0.5...10 min



Function Diagrams - 700-FE Relays

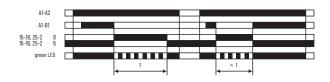
(A) On-Delay



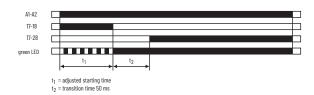
(D) One Shot [Impulse On]



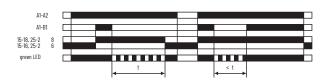
(E) Fleeting Off-Delay [Impulse Off]



(Y) Star-Delta Timing Relay



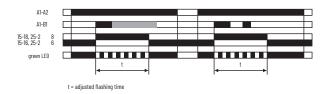
(B) Off-Delay



(F) Flasher [Repeat Cycle Starting with Pulse]



(L) Pulse Converter [Pulse Former]



(G) Flasher [Repeat Cycle Starting with Pause]



Specifications - 700-FE Relays⁽¹⁾

Serting Accuracy	Attribute		700-FE				
Repeatability			Ч		SPDT		
Power	Setting Accuracy		±10% of full scale				
Supply Voltage	Repeatability		±0.5% of setting (typical)				
Supply Voltage 2448V DC and 2424V XC, 50/60 Hz Voltage Tolerance AC 1-15%/+10% Power Concumption Tolerance Tourised Tolerance Tourised Reset Time 50 ms 100% Cable Length (Supply voltage Centrol) Max.50 m PulseControl(B1) Impose Duration Im	Tolerance		By voltage: ±0.001%/%∆U By temperature: ±0.025%/°C				
Motage Tolerance Motage Tol				Supply			
Voltage Fidemote Dec	Supply Voltage		2448V DC and 24240V AC, 50/60 Hz				
Power Consumption	Voltage Tolerance	AC	-15%/+10%				
Time fenergized		DC	-15%/+10%				
Rest Time 50 ms Gable Length (Supply Value Control) Max.50 m Impulse Duration 20 ms Imput Voltage 3 upply voltage range Input Current 1 mA Contact Type 1 from C-SPOT contact Dielectric Withstaand Voltage Contact Input Pewer 36000 W, (Make) 3600 W, (Reak) According to IEC 947: 5-1 AC.12 According to IEC 947: 5-1 AC.13 According to IEC 947: 5-1 AC.13 Broth circuit Resistance NC 6A, N/O 10 A, (Rast Blow Fuse) According to IEC 947: 5-1 AC.15 Broth circuit Resistance NC 6A, N/O 10 A, (Rast Blow Fuse) According to IEC 947: 5-1 AC.15 Broth circuit Resistance NC 6A, N/O 10 A, (Rast Blow Fuse) Broth circuit Resistance NC 6A, N/O 10 A, (Rast Blow Fuse) Broth circuit Resistance AC C15 Broth circuit	Power Consumption		max 3.5 VA				
Max. 50 m Pulse Control(B1) Imput Se Duration 20 ms Imput Voltage Supphy voltage range Imput Current T mA Outputs Contact Type 1 From C - SPDT contact Dielectric Withstand Onlact-to-coll Onlact-to-coll AC-12 40000V Onlact Top Contact AC-12 A AC-12 A AC-13 A AC-13 A AC-13 A AC-13 A AC-14 A AC-15 A AC-15 A AC-15 A AC-15 A AC-15 A AC-16 A AC-16 A AC-16 A AC-16 A AC-16 A AC-17 A AC-15 A AC-16	Time Energized		100%				
Fulse Control (B1) Imput Voltage 20 ms Imput Voltage supply woltage range Imput Current 1 mA Outputs Contact Type The Form C - SPDT contact Dielectric Withstand (Politage) One of Contact to-coil According to IEC 947- 5-1 According to IEC 947- 1 According to IEC 947- 1 <tr< td=""><td>Reset Time</td><td></td><td colspan="3">50 ms</td></tr<>	Reset Time		50 ms				
Input Voltage	Cable Length (Supply V	'oltage Control)		Max. 50 m			
Input Voltage Input Current				PulseControl(B1)			
Tama	Impulse Duration		20 ms				
Outputs Contact Type 1 form C – SPDT contact Dielectric Withstand Voltage contact -to-coil 4000V Switching Capacity of Leg Ording to IEC 947- 5-1 AC-12 4 A / 230V A ((inductive load)) Switching Capacity of Exercise Incompanies of Control o	Input Voltage		supply voltage range				
Contact Type 1 Form C − SPDT contact Dielectric Withstand Voltage Contact -to -coil 4000V Application of the Contact -to -coil A Contact -to -coil A Contact -to -coil Switching Capacity Value (application to LEC 947- 5-1) A Co-12 4 A A/230V AC (resistive load) According to UE 5947- 5-1 A Co-15 0.2 A/230V AC (inductive load) NECON TO LEC 947- 5-1 A Co-15 0.2 A/230V AC (inductive load) Short circuit Resistance NECON TO LEC 947- 5-1 A Co-15 NEMA B300 - 5 A/300V AC Short circuit Resistance NECON NO 10 A (fast Blow Fuse) Blectrical Possibility (applications) NECON NO 10 A (fast Blow Fuse) Certifications CUltus Listed (file No. E14840, Guide NIKCR/NIKCR7), CE Marked Standards ENV/EC 60947- 1, EN/IEC 60947- 5-1, IU.508, CSA 22.2 No. 14 Insulation Characteristry A VA AC/50 Hz test voltage according to VDE 0435 Standards ENV AC/50 Hz test voltage according to EC 60947-1 between all inputs and outputs EMC/Interference Immunity <th colspa<="" td=""><td colspan="2">Input Current</td><td colspan="3">1 mA</td></th>	<td colspan="2">Input Current</td> <td colspan="3">1 mA</td>	Input Current		1 mA			
Dielectric Withstand Voltage Contact-to-coil 40000V Acrosting to IEC 947-5-1 AC-12 4A 2300 NA (Make) 3600 VA (Make) 3600 VA (Gresistive load) Switching Capacity Acrosting to IEC 947-5-1 AC-15 0.2 A/230V AC (Inductive load) Acrosting to UL 508 NEMA B300 - 5 A/300V AC Short circuit Resistance N/C 6 A, N/O 10 A (Fast Blow Fuse) Behavior Life Mechanical 30 million operations Certifications CUllus Listed (File No. E14840, Guide NKCR/NKCR7), CE Marked Standards ENVIEC 60947-1, ENVIEC 60947-5, LUS 08, CSA 22.2 No. 14 Insulation Characteristry 2 VV AC/50 Hz test voltage according to VDE 0435 Insulation Characteristry Surge capacity of the supply voltage according to IEC 60004-7: Level 4 BMC/Interference Immunity Surge capacity of the supply voltage according to IEC 61000-4-5: Level 4 Burst according to IEC 61000-4-2: Level 3 ESD discharge according to IEC 61000-4-2: Level 3 ESD discharge according to IEC 61000-4-2: Level 3 EBUC/Interference Immunity Belec				Outputs			
Voltage Voltage 4000V Switching Capacity Power 3600 VA (Make) 360 VA (Break) Switching Capacity AC-12 4 A / 230 VA (cresitive load) According to IEC 947- 5-1 DC-13 1 A / 24V DC (inductive load) According to UL 508 NEMA B300 - 5 A/300V AC Short circuit Resistance NC 6 A, N/0 10 A (Fast Blow Fuse) Life Mechanical 30 million operations Electrical CUltus 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 Insulation Characteristry Surge capacity of the supply voltage according to IEC 60947-1 between all inputs and outputs EMC/Interference Immurity Surge capacity of the supply voltage according to IEC 61000-4-2: Level 3	Contact Type		1 Form C — SPDT contact				
Switching Capacity According to IEC 947- 5-1 AC-15 AC-15 DC-13 AC-15 NEMA B300 - 5 A/300V AC (inductive load) According to UL 508 NEMA B300 - 5 A/300V AC NEMA B30		Contact-to-coil	4000V				
Switching Capacity According to IEC 947- 5-1 AC-15 DC-13 1 A/24V DC (inductive load) 1 A/24V DC (inductive load) According to UL 508 NEMA B300 - 5 A/300V AC NEMA B		Power	3600 VA (Make) 360 VA (Break)				
Switching Capacity Fig. 1 OC-13 OC-13 ACCORDING to UL 508 NEMA B300 - 5 A/300V AC NEMA B300 - 5 A/300V AC NC 6 A, N/O 10 A (Fast Blow Fuse) ACCORDING to UL 508 Electrical Electrical Certifications Cullus Listed (File No. E14840, Guide NKCR/NKCR7), CE Marked Standards EN/EC 60947-1, EN/IEC 60947-51, UL 508, CSA 22.2 No. 14 Insulation Characteristics EMC/Interference Immunity EMC/Interference Immunity EMC/Emission EMC / Emission EMC / Emission EMC / Emission Electromagnetic fields according to EN 55 022: Class B Climatic Class Vibration Resistance, operating 1 G			AC-12 4 A /230V AC (resistive load)				
According to UL 508 NEMA B300 - 5 A/300V AC NIC 6 A, N/0 10 A (Fast Blow Fuse) Suminion operations EVALUATION	Switching Capacity		AC-15 0.2 A/230V AC (inductive load)				
Short circuit Resistance Life Mechanical Electrical Electrical Certifications Cullus Listed (File No. E14840, Guide NKCR/NKCR7), CE Marked) EN/IEC 60947-1, EN/IEC 60947-5-1, UL 508, CSA 22.2 No. 14 Insulation Characteristics And 4 kV 1.2/50 μs surge voltage according to VDE 0435 and 4 kV 1.2/50 μs surge voltage according to IEC 60947-1 between all inputs and outputs EMC/Interference Immunity Surge capacity of the supply voltage according to IEC 61000-4-5: Level 4 Burst according to IEC 61000-4-5: Level 3 EMC / Emission EMC / Emission EMC / Emission Electromagnetic fields according to IEC 60068-2-30 Vibration Resistance, operating 1 G			DC-13 1 A/24V DC (inductive load)				
Life Mechanical 30 million operations Certifications Certifications Certifications Cullus 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 Insulation Characteristis and 4 kV 1.2/50 μs surge voltage according to VDE 0435 and 4 kV 1.2/50 μs surge voltage according to IEC 60947-1 between all inputs and outputs EMC/Interference Immunity EMC / Emission EMC / Emission EMC / Emission Electromagnetic fields according to EN 55 022: Class B Climatic Class 3K3 according to IEC 60068-2-30 Vibration Resistance, operating 1 G		According to UL 508	NEMA B300 - 5 A/300V AC				
Life Electrical min 100,000 operations 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 Insulation Characteristics 2 kV AC/50 Hz test voltage according to VDE 0435 and 4 kV 1.2/50 µs surge voltage according to IEC 60947-1 between all inputs and outputs EMC/Interference Immunity Surge capacity of the supply voltage according to IEC 61000-4-5: Level 4 Burst according to IEC 61000-4-4: Level 3 ESD discharge according to IEC 61000-4-2: Level 3 EMC / Emission electromagnetic fields according to EN 55 022: Class B Climatic Class 3K3 according to IEC 60068-2-30 Vibration Resistance, operating 1 G	Short circuit Resistance	!	N/C 6 A, N/O 10 A (Fast Blow Fuse)				
Electrical min 100,000 operations 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 Insulation Characteristics And 4 kV 1.2/50 µs surge voltage according to VDE 0435 and 4 kV 1.2/50 µs surge voltage according to IEC 60947-1 between all inputs and outputs EMC/Interference Immunity Surge capacity of the supply voltage according to IEC 61000-4-5: Level 4 Burst according to IEC 61000-4-4: Level 3 ESD discharge according to IEC 61000-4-2: Level 3 EMC / Emission electromagnetic fields according to IEC 60068-2-30 Vibration Resistance, operating 1 G	Life	Mechanical	30 million operations				
Standards EN/IEC 60947-1, EN/IEC 60947-5-1, UL 508, CSA 22.2 No. 14 Insulation Characteristics 2 kV AC/50 Hz test voltage according to VDE 0435 and 4 kV 1.2/50 μs surge voltage according to IEC 60947-1 between all inputs and outputs The following requirements are fulfilled: Surge capacity of the supply voltage according to IEC 61000-4-5: Level 4 Burst according to IEC 61000-4-2: Level 3 ESD discharge according to IEC 61000-4-2: Level 3 EMC / Emission electromagnetic fields according to EN 55 022: Class B Climatic Class 3K3 according to IEC 60068-2-30 Vibration Resistance, operating	Life	Electrical	min 100,000 operations				
Insulation Characteristics 2 kV AC/50 Hz test voltage according to VDE 0435 and 4 kV 1.2/50 μs surge voltage according to IEC 60947-1 between all inputs and outputs The following requirements are fulfilled: Surge capacity of the supply voltage according to IEC 61000-4-5: Level 4 Burst according to IEC 61000-4-4: Level 3 ESD discharge according to IEC 61000-4-2: Level 3 EMC / Emission electromagnetic fields according to EN 55 022: Class B Climatic Class 3K3 according to IEC 60068-2-30 Vibration Resistance, operating	Certifications		cULus Listed (File No. E14840, Guide NKCR/NKCR7), CE Marked				
Insulation Characteristics and 4 kV 1.2/50 µs surge voltage according to IEC 60947–1 between all inputs and outputs The following requirements are fulfilled: Surge capacity of the supply voltage according to IEC 61000-4-5: Level 4 Burst according to IEC 61000-4-4: Level 3 ESD discharge according to IEC 61000-4-2: Level 3 EMC / Emission electromagnetic fields according to EN 55 022: Class B Climatic Class 3K3 according to IEC 60068-2-30 Vibration Resistance, operating	Standards		EN/IEC 60947-1, EN/IEC 60947-5-1, UL 508, CSA 22.2 No. 14				
EMC/Interference Immunity Surge capacity of the supply voltage according to IEC 61000-4-5: Level 4 Burst according to IEC 61000-4-4: Level 3 ESD discharge according to IEC 61000-4-2: Level 3 EMC / Emission electromagnetic fields according to EN 55 022: Class B Climatic Class 3K3 according to IEC 60068-2-30 Vibration Resistance, operating 1 G	Insulation Characteristics						
Climatic Class 3K3 according to IEC 60068-2-30 Vibration Resistance, operating 1 G	EMC/Interference Immunity		Surge capacity of the supply voltage according to IEC 61000-4-5: Level 4 Burst according to IEC 61000-4-4: Level 3				
Vibration Resistance, operating 1 G	EMC / Emission		electromagnetic fields according to EN 55 022: Class B				
	Climatic Class		3K3 according to IEC 60068-2-30				
	Vibration Resistance, operating		16				
Vibration Resistance, non-operating 4 G	Vibration Resistance, non-operating		46				

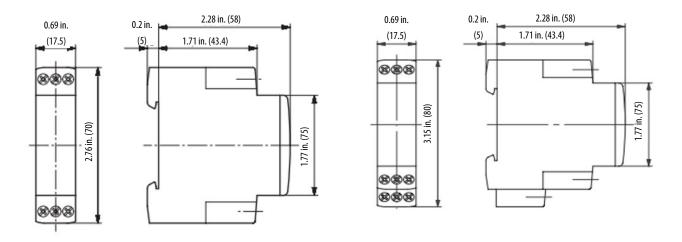
⁽¹⁾ Time Characteristics (according to VDE 0435, part 2021)

Attribute	700-FE		
Shock Resistance, operating	76		
Shock Resistance, non-operating	50G		
Protection Class IEC 60947-1	Terminal: IP 20		
Relative Humidity	2585%		
Certifications	cULus, Germanischer Lloyd, CE Certified		
Ambient Temperature	Operation −20+60 °C Storage: −40+85 °C		
Connections	Screw terminal M3 for Pozidriv No.1, Philips, and slotted screws No.2. suitable for power screwdriver. Rated tightening torque 8.8 lbin. (max 1.0 Nm) For terminal cross-sections of 1 x 0.5 mm ² 2 x 1.5 mm ² (solid) or 2 x 1.5 mm ² (stranded with sleeve), #20 14 AWG. Finger protection accordin to EN 50274		
Mounting	For surface mounting in any position; snap-on mounting on 35 mm DIN Rail		
Disposal	Synthetic materials without dioxin according to EC/EFTA-Notification No. 93/0141/D		

IMPORTANT For best long-term performance, allow at least 10 mm (.04 in.) of space on each side of the relay for proper ventilation when operating in temperatures above 40 °C (104 °F).

Dimensions - 700-FE Relays

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



Cat. No. 700-FE with 1 c/o Contact or 2 n/o Contacts

Cat. No. 700-FE with 2 c/o Contacts