

ALLEN BRADLEY TIMING RELAY



Configuration Details

Product: 700-HS12BA1

Description: 700-HS General Purpose Square Base Timing Relay, On Delay Timer, 1.0 to 180 seconds, DPDT, 120V AC 50/60Hz

CONTROL RELAY DATA:

Timing Fixed Mode	Adjustable Timer
Timing Mode	On Delay Timer
Contact Configuration	DPDT Contact Arrangement
Timing Range	1.0 to 180 seconds
Coil Voltage	120V AC 50/60Hz

CERTIFICATIONS AND APPROVALS:

UR

CSA

CE

Bulletin 700-HS

- Timing Relay (On-Delay or Off-Delay)
- Rugged Blade Style Quick Connect Socket Mounting
- 12 A, DPDT Contact Rating
- 0.1 s...180 s Range Available As a Single Range or Fixed Timing (0.1 s...600 s)

PRODUCT SELECTION:

Single Range Timing Relay with Blade Style Quick Connect/Solder Terminations

	Operating Mode	Wiring Diagrams	
		U.S./Canada	International
	On-Delay		
	<i>Socket</i>	700-HN154 or 700-HN153	700-HN153
	Off-Delay		
Bulletin 700-HS DPDT 2-Pole 2 Form C Contacts	<i>Socket</i>	700-HN154 or 700-HN153	700-HN153

700-HS 2 2 A A1
 a b c d e

a	
Timer Type	
Code	Description
HS	Square Base Adjustable Timing Relay

b	
Mode Type	
Code	Mode
1	On-Delay
2	Off-Delay

c	
Number of Poles	
Code	Description
2	2PDT

d	
Timing Range	
Code	Adjustable Time — Type HS
A	0.1...10 s
B	1.0...100 s
C	0.1...10 min
D	1.0...100 min
E	0.1...10 hr

e	
Coil Voltage	
Code	Volts
U12	12V AC/DC, 50/60 Hz
U24	24V AC/DC, 50/60 Hz
U120	120V AC/DC, 50/60 Hz

Fixed Timing Relays

	Description
	Bulletin 700-HSF fixed timing relays feature a plug-in square base with blade style terminations. Construction is the same as the Bulletin 700-HS timing relay except that the adjustment knob has been removed to help prevent unwanted tampering. The timing and output specifications are identical to those of the Bulletin 700-HS timing relay. Setting will be $\pm 5\%$ of the time ordered. Socket: Cat. No. 700-HN153 or 700-HN154
Bulletin 700-HSF DPDT 2 Pole 2 Form C Contacts	

700-HSF 2 2 025 S U24
 a b c d e f

a	
Timer Type	
Code	Description
HSF	Square Base Fixed Timing Relay

b	
Mode Type	
Code	Mode
1	On-Delay
2	Off-Delay

c	
Number of Poles	
Code	Description
2	2PDT

d	
Timing Value *	
Code	Value
001...999	The three digit code represents a numeric value with one decimal place. For example: code 001 is 0.1, code 025 is 2.5, and code 999 is 99.9 The acceptable range for each time unit is listed below: Seconds - 001...999 Minutes - 001...999 Hours - 001...100

e	
Timing Units *	
Code	Units
S	Seconds
M	Minutes
H	Hours

f	
Coil Voltage	
Code	Volts
U12	12V AC/DC, 50/60 Hz
U24	24V AC/DC, 50/60 Hz
U120	120V AC/DC, 50/60 Hz

* Use both the Timing Value and Timing Units tables to properly select the desired fixed time relay.
For example: 700-HSF22**025**SU24 selects a timer value of **2.5 seconds** and 700-HSF22**025**MU24 selects a timer value of **2.5 minutes**.

Accessories

	Description	Pkg. Qty.	Cat. No.
	Screw Terminal Socket — Panel or DIN Rail Mounting. Guarded Terminal Construction 11-blade socket for use with Bulletin 700-HB and -HJ relays and -HS timing relays. Order must be for 10 sockets or multiples of 10. Safe separation between coil and contacts.	10	700-HN153
Cat. No. 700-HN153			
	Screw Terminal Base Socket — Panel or DIN Rail Mounting. Open Style Construction 11-blade for use with Bulletin 700-HB and -HJ relays and -HS timing relays. Order must be for 10 sockets or multiples of 10.	10	700-HN154
Cat. No. 700-HN154			
	DIN (#3) Symmetrical Rail 35 mm x 7.5 mm x 1 m long Zinc-plated, yellow chromated	10	199-DR1
Cat. No. 199-DR1			
	Retainer Clip for Cat. Nos. 700-HN153 and -HN154 Sockets with Bulletin 700-HS Timing Relays * Secures relay in socket. Order must be for 10 clips or multiples of 10.	10	700-HN160
Sample Retainer Clips			
	Pre-printed identification tags — contains 10 sheets of pre-printed and blank tags. Each sheet contains 13 sets of the markings CR...9CR, TR...9TR, M...9M, F, R, 1S, and 117 blank tags. Tags are peel-off with sticky backing for easy placement on relays.	10	700-N40
	Blank identification tags — contains 10 sheets of blank identification tags for customer specialized printing. Each sheet contains 546 blank tags. Tags are peel-off with sticky backing for easy placement on relays.	10	700-N41

* Bulletin 700-HS Timing Relay, Socket, and Retainer Clip Reference Chart

Relay Type	Socket	Retainer Clip
700-HS	700-HN153	700-HN160
	700-HN154	

Specifications

		Cat. No. 700- HS...	Cat. No. 700-HSF...				
Electrical Ratings							
Pilot Duty Rating †		NEMA B300					
Rated Thermal Current (I_{th})		12 A					
Rated Insulation Voltage (U)		250V IEC, 300V UL/CSA					
Contacts	Inductive	Make	Break	Hp	Make	Break	Hp
	120V AC	30 A	3 A	1/3	30 A	3 A	1/3
	240V AC	15 A	1.5 A	1/2	15 A	1.5 A	1/2
	Resistive 30V DC	12 A	12 A	—	12 A	12 A	—
Permissible Coil Voltage Variation		85...110% of Nominal Voltage at 50 Hz 85...110% of Nominal Voltage at 60 Hz 80...110% of Nominal Voltage at DC					
Power Consumption ±10%	AC	24V AC	2 VA				
		120V AC	3 VA				
		240V AC	—				
	DC	1.3 W					
Design Specification/Test Requirements							
Dielectric Withstand Voltage	Pole-to-Pole, same circuit (VRMS)		1000V AC				
	Pole-to-Pole, different circuits (VRMS)		2000V AC				
	Contact-to-Coil (VRMS)		2000V AC				
Electrical Life Operations		100,000 minimum					
Switching Frequency Operations		360/hr					
Coil Voltages		See product selection					
Mechanical							
Degree of Protection		Open Type (Guarded Terminal Sockets)					
Mechanical Life Operations		10 x 10 ⁶					
Switching Frequency Operations		18,000/hr					
Timing	Duty Cycle		Continuous				
Repeat Accuracy (constant voltage and temperature)		±2% (Time Delay: 0.1...2 s) ±1% (Time Delay: >2 s)					
Repeat Accuracy (variable voltage and temperature)		±15%					
Fixed Time Setting Accuracy		—		±2% (Time Delay: 0.1...2 s) ±1% (Time Delay: >2 s)			
Scale Tolerance	High End of Range		+5%		—		
	Low End of Range		-50%		—		
Reset Time	ON Delay		100 ms				
	OFF Delay		40 ms				
Environmental							
Temperature	Operating		-28...+65 °C (-18...+149 °F)				
	Storage		-55...+85 °C (-67...+185 °F)				
Altitude		2000 m (6560 ft)					

SPECIFICATIONS CONTINUED:

Construction	
Insulating Material	Molded High Dielectric Material
Enclosure	Impact Resistant Dust Cover
Contact Material	Silver Nickel
Terminal Markings on Socket	In accordance with EN 50 005
Sockets	8- or 11-Blade (On = 8, Off = 11) 700-HN153 -HN154
Certifications	CSA Certified, File LR1234, UL Recognized, File E3125 Guide NLDX 2, Listed Ind. Cont. Eq. 700-HN153 and 700-HN154 sockets, CE Marked (per EU Low Voltage Directive 93/68 EEC)
Standards	EN 61812, EN 60947-5-1, CSA 22.2, UL 508

* Performance Data — See Important 2, publication A115.

† NEMA Rating Chart is on page 19 of publication 700-SG003B-EN-P.