



Bulletin 700-HR — Dial Timing Relay

- Socket- or panel-mounted
- 5 A contact ratings or transistor outputs
- Single- or Multi-Function
- Timing range from 0.05 s...300 hr
- Multi-voltage inputs

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Product Selection

Bulletin 700 Multi-Function Timing Relays with Trigger and Reset Switch Options

- Socket or Panel Mounted
- Timing Range From 0.05 s...300 hr
- 11-pin base for socket cat. nos. 700-HN101, -HN126, -HN129
- Trigger: Power on or optional trigger signal
- Reset: Power off or optional reset signal

Timing Mode	Supply Voltage	Trigger Options	Reset Options	Outputs	Cat. No.
On-Delay (A) OFF-Delay (D) One Shot (E) Repeat cycle OFF-Start (B) Repeat Cycle ON-Start (B2) Signal ON/OFF-delay (C)	24...48V AC 12...48V DC	1. Power On 2. Start Signal - contact closure (zero volts) - NPN transistor 3. Gate Signal (pause)	1. Power Off 2. Reset Signal - contact closure (zero volts) - NPN transistor	DPDT	700-HR52TU24
				Transistor	* 700-HRT6TTU24
	100...240V AC 100...125V DC	1. Power On 2. Start Signal - contact closure (voltage) - NPN transistor - PNP transistor	Power Off	DPDT	700-HRV52TU24
		1. Power On 2. Start Signal - contact closure (zero volts) 3. Gate Signal (pause)	1. Power Off 2. Reset Signal - contact closure (zero volts)	DPDT	700-HR52TA17
		1. Power On 2. Start Signal - contact closure (voltage)	Power Off	DPDT	* 700-HRV52TA17

Bulletin 700 Multi-Function Timing Relays with Power On Trigger

- Socket or Panel Mounted
- Timing Range From 0.05 s...300 hr
- 8-pin base for socket cat. nos. 700-HN100, -HN125, -HN108
- Trigger: Power on
- Reset: Power off

Timing Mode	Supply Voltage	Trigger Options	Reset Options	Outputs	Cat. No.
ON-Delay (A) One Shot (E) Repeat Cycle ON-Start (B2) Delayed One Shot (J)	24...48V AC 12...48V DC	Power On	Power Off	DPDT	700-HRS42TU24
				Transistor	* 700-HRT4TTU24
	24...48V AC/DC	Power On	Power Off	SPDT Timed + Instantaneous Contact	* 700-HRP42TU24
				SPDT Timed + Instantaneous Contact	700-HRP42TA17
100...240V AC 100...125V DC	Power On	Power Off	DPDT	700-HRS42TA17	

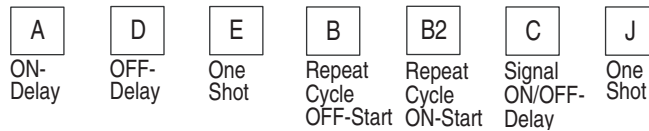
* Voltage input connection to high signal instead of OV signal.

Bulletin 700 ON-Delay Timing Relays

- Socket or Panel Mounted
- Timing Range From 0.05 s...300 h
- 8-pin base for socket cat. nos. 700-HN100, -HN125, -HN108
- Trigger: Power on
- Reset: Power off

Timing Mode	Supply Voltage	Trigger Options	Reset Options	Outputs	Cat. No.
ON-Delay (A)	24...48V AC/DC	Power On	Power Off	SPDT Timed + Instantaneous Contact	700-HRC12TU24
	24...48V AC 12...48V DC			DPDT	700-HRM12TU24
	100...240V AC	Power On	Power Off	DPDT	700-HRM12TA17
				SPDT Timed + Instantaneous Contact	700-HRC12TA17

Timing mode description



Bulletin 700-HRF Repeat Cycle Timing Relays

- Socket or Panel Mounted
- Independently adjustable on- and off-time
- 8-Pin base for socket cat. nos. 700-HN100, -HN125, and -HN108
- DPDT contact outputs
- Trigger: Power on
- Reset: Power off



Cat. No. Explanation

700 – HRF 7 2 D Z12
a b c d e

a

Timer Type	
Code	Description
HRF	Repeat cycle with adjustable ON/OFF times

b

Function	
Code	Description
7	Repeat cycle with OFF start
8	Repeat cycle with ON start

c

Contact Output	
Code	Description
2	DPDT

d








Time Range	
Code	Description
D	0.05 s...30 hr

e




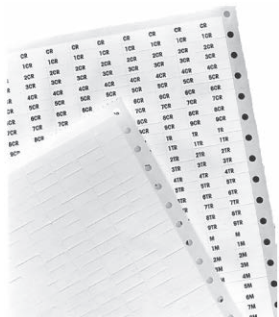
Supply Voltage	
Code	Description
A18	100...240V AC, 50/60 Hz
U25	24V AC, 50/60 Hz; 24V DC
Z12	12V DC
Z45	48...125V DC



Accessories

	Description	Pkg. Qty.	Cat. No.
 Cat. No. 700-HN100	Screw Terminal Tube Base Socket — Panel or DIN Rail Mounting; Guarded Terminal Construction. 8-Pin for use with Bulletin 700-HR and -HX timing relays.	10	700-HN100
 Cat. No. 700-HN125	Screw Terminal Tube Base Socket — Panel or DIN Rail Mounting; Open Style Construction. 8-Pin for use with Bulletin 700-HR and -HX timing relays. No retainer clip required.	10	700-HN125
 Cat. No. 700-HN101	Screw Terminal Tube Base Sockets — Panel or DIN Rail Mounting; Guarded Terminal Construction. 11-pin for use with 3PDT 700-HA relays.	10	700-HN101
 Cat. No. 700-HN126	Screw Terminal Tube Base Sockets — Panel or DIN Rail Mounting; Open Style Terminal Construction. 11-pin for use with 3PDT 700-HA relays. No retainer clip required.	10	700-HN126
 Cat. No. 199-DR1	DIN (#3) symmetrical hat rail 35 x 7.5 x 1 m	10	199-DR1
 Cat. No. 700-HN108	Specialty Socket 8-pin backwired socket with solder terminals for use with 700-HR timing relays. Order 10 or multiples of 10.	10	700-HN108
 Cat. No. 700-HN129	Specialty Socket 11-pin back-wired socket with solder terminals for use with Bulletin 700-HR timing relays.	10	700-HN129

Bulletin 700-HR
Plug-in Timing Relays
 Accessories

	Description	Pkg. Quantity	Cat. No.
 Cat. No. 700-HN130	Frame Adapter For flush or door mounting of all Bulletin 700-HR and -HX timers.	1	700-HN130
 Sample Retainer Clips	Retainer Clip for Cat. Nos. 700-HN100 and -HN101 Sockets with all 700-HR Timing Relays Secures timer in socket. Note: Not required for installation	10	700-HN131
 Cat. No. 700-HN132	Protective Cover Helps prevent tampering of timing and mode settings. Provides a degree of protection against water and dirt from entering the front of the relay. For use with all Bulletin 700-HRs and -HX timing relays.	1	700-HN132
	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-HR Multi-function, Multi-Range Dial Timing Relay, Socket, Retainer Clip Reference Chart

Timer Type	Socket Cat. No.	Retainer Clip Cat. No.
700-HR52, -HRT6, -HRV, -HRQR	⊛ 700-HN101	700-HN131
	⊛ 700-HN126	Not Required*
	⊛ 700-HN129	Not Applicable
700-HRS, -HRT4, -HRP, -HRC, -HRM, -HRF, -HRY, -HRQN	‡ 700-HN100	700-HN131(See note above)
	‡ 700-HN108	Not Applicable
	‡ 700-HN125	Not Required*

* Design of these sockets holds the timing relays securely and does not require retainer clips.

⊛ 11 pins.

‡ 8 + pins.



	700-HR, -HRS, -HRV	700-HRP	700-HRC	700-HRM	700-HRF	700-HRY	700-HRQ	700-HRT (Transistor Outputs)	
Electrical Ratings									
Pilot Duty Rating	NEMA B300							—	
Thermal Current (I_{th})	5 A							100 mA @ 30V DC max.	
Make	▶] [◀	120V AC	30 A				—		
		240V AC	15 A				—		
Break	◀] [▶	120V AC	3 A				—		
		240V AC	1.5 A				—		
Hp at 120V	1/6 Hp (0.12 kW)	1/4 Hp (0.18 kW)		1/6 Hp (0.12 kW)		1/4 Hp (0.18 kW)	1/6 Hp (0.12 kW)	—	
Hp at 240V	1/3 Hp (0.25 kW)								
Resistive Load	5 A at 250V AC/30V DC								
Inductive Load	AC-15 @ 250V AC, 3 A/DC-13 @ 30V DC, 0.5 A								
Accuracy of Operating Time	±0.2 % FS max. (±0.2 % ±10 ms max. in a range of 1.2 s)								
Setting Error	±5 % FS ±50 ms (The value is ±5 % FS +100 ms to -0 ms max. when the C or D mode signal of the 700-HRVs are OFF.)								
Influence of Voltage	±0.2 % FS max. (±0.2 % ±10 ms max. in a range of 1.2 s)								
Influence of Temperature	±1 % FS max. (±1 % ±10 ms max. in a range of 1.2 s)								
Permissible Leakage Current									
Power Consumption	-HR52, -HRS	-HRV	-HRP, -HRC	-HRM	-HRF	-HRY	-HRQ	-HRT	
240V AC, Output ON	2.1 VA	2.5 VA	2.0 VA	2.1 VA	10 VA	12 VA	0.4 VA	—	
240V AC, Output OFF	1.3 VA	1.8 VA	2.0 VA	1.3 VA	10 VA	12 VA	0.4 VA	—	
24V DC, Output ON	0.8 W	0.9 W	0.9 W	0.8 W	1.0 W	—	0.2 W	0.3 W	
24V DC, Output OFF	0.2 W	0.3 W	0.9 W	0.2 W	1.0 W	—	0.2 W	0.2 W	
Design Specifications									
Dielectric Strength	2000V AC (1000V AC for 700-HRT), 50/60 Hz for 1 min (contact to frame) 2000V AC (1000V AC for 700-HRT), 50/60 Hz for 1 min (between control output terminals and operating circuit) 2000V AC, 50/60 Hz for 1 min (pole-to-pole) 1000V AC, 50/60 Hz for 1 min (between contacts not located next to each other) 2000V AC, 50/60 Hz for 1 min (contact to coil)								
Mechanical									
Vibration Resistance	Malfunction: 10...55 Hz with 0.5 mm double amplitude each in three directions for ten minutes each								
Shock Resistance	Malfunction: 100 m/s ² (10 G)				98 m/s ² (10 G)	294 m/s ² (10 G)	98 m/s ² (10 G)	100 m/s ² (10 G)	
Environmental									
Noise Immunity	±1.5 kV for ±600V DC				±400V for 12V DC		±1kV for 48V DC	±1.5 kV for ±600V DC	
Static Immunity	Malfunction: 8 kV								
Ambient Temperature	Operating: -10...55 °C (with no icing) Storage: -25...65 °C (with no icing)								
Ambient Humidity	Operating: 35...85 %								
Construction									
Life Expectancy (Min. Operations)	Mechanical: 20 000 000. (under no load at 1800 operations/h) Electrical: 100 000 (5 A at 250V AC, resistive load at 1800 operations/h)					Mech: 10 ⁷ Electrical: 10 ⁴			
EMC	(EMI) EN50081-2 Emission Enclosure: EN55011 Group 1 class A Emission AC Mains: EN55011 Group 1 class A (EMS) EN50082-2 Immunity ESD: EN61000-4-2: 4 kV contact discharge (level 2) 8 kV air discharge (level 3) Immunity RF-interference from AM Radio Waves: ENV50140: 10 V/m (80 MHz...1 GHz) (level 3) Immunity RF-interference from Pulse-modulated Radio Waves: ENV50204: 10 V/m (900 ±5 MHz) (level 3) Immunity Conducted Disturbance: ENV50141: 10 V (0.15...80 MHz) (level 3) Immunity Burst: EN61000-4-4: 2 kV power-line (level 3) Immunity Surge: EN61000-4-52 kV I/O signal-line (level 4) 1 kV line to line 2 kV line to ground (level 3)								
Degree of Protection	IP40 (panel surface)								
Weight	Approx. 90 g								
Certifications	CSA Certified (File No. 70751), UL Recognized (File No. E14843 Guide No. NRNT2), CE Marked, C-Tick Marked								
Standards	UL 508, CSA C22.2 No. 14, EN 61812-1, EN 61000-6-2, -6-4								