TR timing relays

Eaton's Universal TR Series timers are a versatile and cost-competitive family of timing relays. The compact IEC-style housing installs easily onto a standard DIN rail, and the direct-wire design eliminates the need for additional sockets and accessories. Each timer has multiple user-selectable timing functions and timing ranges, and a universal input voltage of either 12 or 24 V to 240 Vac or Vdc, depending on the model.

Reducing your inventory costs

With up to seven selectable timing functions and seven selectable time ranges from 50 milliseconds to 100 hours, you can meet the needs of almost any application with just one or two stock items. Do you need 24 Vdc control in some cases and 120 Vac control in others? You are covered with the Universal TR Series timer, as it has a universal, self-selecting control voltage input range from either 12 or 24 V (depending on model) to 240 Vac or Vdc. Are you tired of buying minimum quantities of sockets and accessories for your plug-in timing relays? The direct wire design of the Universal TR Series gives you everything you need in a single item.

Reducing your labor costs

During initial installation, the large terminals on the Universal TR Series make wiring quick and easy. The offset design even allows easy access to the bottom terminals when the top wires are installed. The easy-to-read set point markings improve the accuracy of setup, thereby reducing your startup time. Are you spending too much time troubleshooting and replacing timers? The dual LED indicators on the Universal TR Series use multiple modes to signal input power, relay state and timing status. The Universal TR Series also features a high-quality design with twice the relay life of many competitors.

Powering Business Worldwide

For more information, please visit
Eaton.com/timers

Specifications

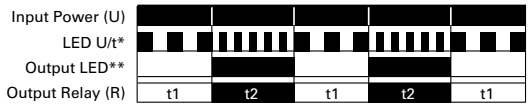
Universal TR timing relays

Specification	TRL04	TRL07	TRP07	TRF25	TRL27	TRW27
Functions	8, 9, 10, 14	8, 9, 10, 11, 12, 13, 14	7, 8, 10, 11, 12, 25, 26	8, 24, 27, 28, 29	8, 9, 10, 11, 12, 13, 14	1, 2, 3, 4, 5, 6, 7
Time range	0.05 sec to 100 hr	0.05 sec to 100 hr	0.05 sec to 100 hr	0.10 sec to 10 min	0.05 sec to 100 hr	0.05 sec to 100 hr
Input						
Supply voltage	24 to 240 Vac/Vdc	24 to 240 Vac/Vdc	24 to 240 Vac/Vdc	24 to 240 Vac/Vdc	12 to 240 Vac/Vdc	12 to 240 Vac/Vdc
Duty cycle	100%	100%	100%	100%	100%	100%
Output						
Contact configuration	SPDT	SPDT	SPDT	DPDT	DPDT	DPDT
Rated voltage	250 Vac	250 Vac	250 Vac	250 Vac	250 Vac	250 Vac
Switching capacity	2000 VA (8 A/250 V)	2000 VA (8 A/250 V)	2000 VA (8 A/250 V)	1250 VA (5 A/250 V) ❶	2000 VA (8 A/250 V)	2000 VA (8 A/250 V)
Mechanical life	20 x 10^6 operations	20 x 10^6 operations	20 x 10^6 operations	20 x 10^6 operations	20 x 10^6 operations	20 x 10^6 operations
Electrical life	2 x 10^5 operations at 1000 VA load	2 x 10^5 operations at 1000 VA load	2 x 10^5 operations at 1000 VA load	2 x 10^5 operations at 1000 VA load	2 x 10^5 operations at 1000 VA load	2 x 10^5 operations at 1000 VA load
Accuracy						
Base	±1% of maximum scale value	±1% of maximum scale value	±1% of maximum scale value	±1% of maximum scale value	±1% of maximum scale value	±1% of maximum scale value
Adjustment	<5% of maximum scale value	<5% of maximum scale value	<5% of maximum scale value	<5% of maximum scale value	<5% of maximum scale value	<5% of maximum scale value
Repetition	<0.5% or ±5 ms	<0.5% or ±5 ms	<0.5% or ±5 ms	1% or ±100 ms	<0.5% or ±5 ms	<0.5% or ±5 ms
Physical						
Ambient temperature	–25 to +55 °C	–25 to +55 °C	–25 to +55 °C	–25 to +55 °C	–25 to +55 °C	–25 to +55 °C

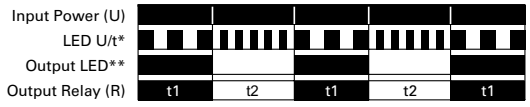
❶ Check data sheet for more detailed information.

Timer function descriptions

Function #1—
Asymmetrical Flasher, Pause First (Ip)

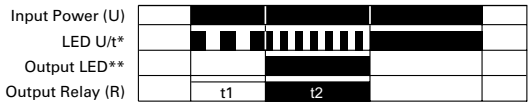


Function #2—
Asymmetrical Flasher, Pulse First (Ii)

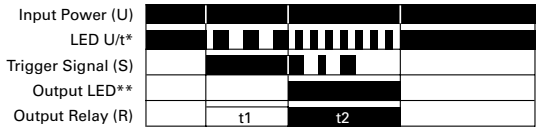


Function #3—
ON Delay and OFF Delay with Control Contact (ER)

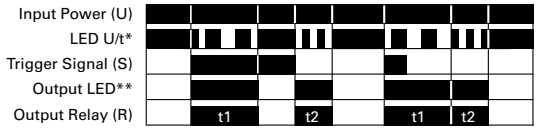
Function #4—
ON Delay and Single Shot Leading Edge Voltage Controlled (EWu)



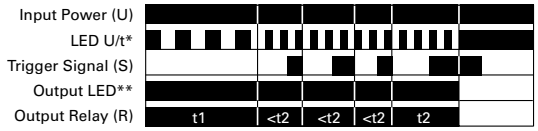
Function #5—
ON Delay and Single Shot Leading Edge Control Contact (EWs)



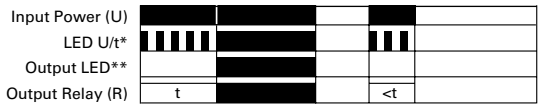
Function #6—
Single Shot Leading and Single Shot Trailing Edge with Control Contact (WsWa)



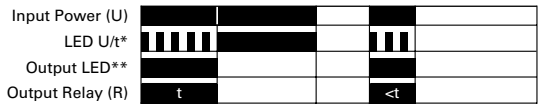
Function #7—
Pulse Sequence Monitoring (Wt)



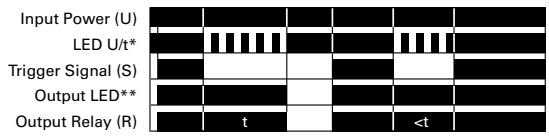
Function #8—
ON Delay, Power Triggered (E)



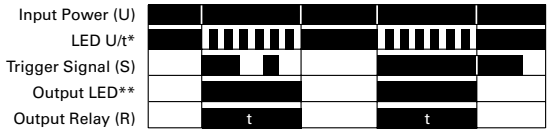
Function #9—
Single Shot Leading Edge Voltage Controlled (Wu)



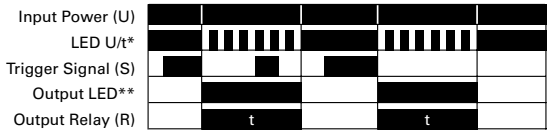
Function #10—
OFF Delay/Signal OFF Delay (R)



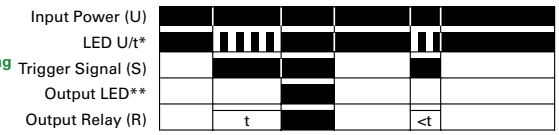
Function #11—
Single Shot Leading Edge with Control Input (Ws)



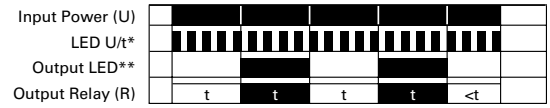
Function #12—
Single Shot Trailing Edge with Control Input (Wa)



Function #13—
ON Delay Control Signal Start, Trailing Edge OFF (Es)



Function #14—
Flasher, Pause First (Bp)



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Powering Business Worldwide

Printed in USA
Publication No. PA04910001E / Z23622
December 2019

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