# **Product datasheet**

Specification





# time delay relay 10 functions - 1 s.. 100 h - 24..240 VAC - solid state output

RE17LMBM

# Main

Range of product	Harmony Timer Relays	
Discrete output type	Solid state	
Width	17.5 mm	
Product or component type	Modular timing relay	
Component name	RE17L	
time delay type	Power on-delay On-delay and off-delay Interval Off-delay Symmetrical flashing	
time delay range	110 s 660 s 660 min 110 h 10100 h 110 min 0.11 s	
Nominal output current	0.7 A	

# Complementary

Control type	Selector switch front panel	
[Us] rated supply voltage	24240 V AC 50/60 Hz	
Voltage range	0.851.1 Us	
Supply frequency	5060 Hz +/- 5 %	
release of input voltage	8 V	
control signal pulse width	0.05 s typical	
Insulation resistance	100 MOhm at 500 V DC conforming to IEC 60664-1	
[Uimp] rated impulse withstand voltage	5 kV during 1.2/50 μs	
power on delay	100 ms	
Connections - terminals	Screw terminals, 1 x 0.51 x 3.3 mm² (AWG 20AWG 12) solid without cable end Screw terminals, 2 x 0.52 x 2.5 mm² (AWG 20AWG 14) solid without cable end Screw terminals, 1 x 0.21 x 2.5 mm² (AWG 24AWG 14) flexible with cable end Screw terminals, 2 x 0.22 x 1.5 mm² (AWG 24AWG 16) flexible with cable end	
Tightening torque	0.61 N.m conforming to IEC 60947-1	
Dielectric strength	2.5 kV 1 mA/1 minute 50 Hz conforming to IEC 61812-1	
Housing material	Self-extinguishing	
Repeat accuracy	+/- 0.5 % conforming to IEC 61812-1	

Environment		
Compatibility code	RE17	
Number of functions	10	
Functionality	Multifunction	
Time delay type	A, Ac, At, B, Bw, C, D, Di, H, Ht	
Net weight	0.068 kg	
Control type	Without test button	
	At- Power on-delay relay w/ pause/summation (Y1)-1 solid state output B- Single interval relay w/ control signal-1 solid state output Bw- Double interval relay w/ control signal-1 solid state output C- Off-delay relay w/ control signal-1 solid state output D- Symmetrical flashing relay (starting pulse-off)-1 solid state output Di- Symmetrical flashing relay (starting pulse-on)-1 solid state output H- Interval relay-1 solid state output Ht- Interval relay w/ pause/summation (Y1)-1 solid state output	
Function available	A- Power on-delay relay-1 solid state output Ac- On-delay and off-delay relay w/ control signal-1 solid state output	
Mounting support	35 mm DIN rail conforming to IEC 60715	
Mounting position	Any position in relation to normal vertical mounting plane	
Safety reliability data	MTTFd = 353.8 years B10d = 320000	
Creepage distance	4 kV/3 conforming to IEC 60664-1	
marking	CE	
Electrical durability	100000000 cycles	
Maximum voltage drop	<4 V 3-wire <8 V 2-wire	
Maximum switching voltage	250 V AC	
Maximum leakage current	5 mA	
Minimum switching current	10 mA	
Maximum output current	20 A	
operating frequency	10 Hz	
Breaking capacity	0.5 A AC conforming to UL 0.7 A AC at 20 °C	
Maximum power consumption in W	1.5 W at 240 V DC	
Power consumption in VA	03 VA at 240 V AC	
On-load factor	100 %	
Reset time	350 ms on de-energisation typical	
Setting accuracy of time delay	+/- 10 % of full scale at 25 °C conforming to IEC 61812-1	
Voltage drift	+/- 0.2 %/V	
Temperature drift	+/- 0.05 %/°C	

#### **Environment**

Immunity to microbreaks	20 ms
Derating factor	5 mA/°C

Standards	2004/108/EC IEC 61000-6-2 IEC 61812-1 IEC 61000-6-4 IEC 61000-6-1 2006/95/EC IEC 61000-6-3
Product certifications	GL cULus CSA
Ambient air temperature for storage	-3060 °C
Ambient air temperature for operation	-2060 °C
IP degree of protection	IP20 (terminal block) conforming to IEC 60529 IP40 (housing) conforming to IEC 60529 IP50 (front panel) conforming to IEC 60529
Vibration resistance	20 m/s² (f= 10150 Hz) conforming to IEC 60068-2-6
Shock resistance	15 gn for 11 ms conforming to IEC 60068-2-27
Relative humidity	93 % without condensation conforming to IEC 60068-2-30
Electromagnetic compatibility	Electrostatic discharge immunity test: (in contact), level 3, 6 kV, conforming to IEC 61000-4-2 Electrostatic discharge immunity test: (in air), level 3, 8 kV, conforming to IEC 61000-4-2 Susceptibility to electromagnetic fields: (80 MHz to 1 GHz), level 3, 10 V/m, conforming to IEC 61000-4-3 Electrical fast transient/burst immunity test: (capacitive connecting clip), level 3, 1 kV, conforming to IEC 61000-4-4 Electrical fast transient/burst immunity test: (direct), level 3, 2 kV, conforming to IEC 61000-4-4 1.2/50 µs shock waves immunity test: (differential mode), level 3, 1 kV, conforming to IEC 61000-4-5 1.2/50 µs shock waves immunity test: (common mode), level 3, 2 kV, conforming to IEC 61000-4-5 Conducted RF disturbances: (0.1580 MHz), level 3, 10 V, conforming to IEC 61000-4-6 Voltage dips and interruptions immunity test: (1 cycle), 0 %, conforming to IEC 61000-4-11 Voltage dips and interruptions immunity test: (25/30 cycles), 70 %, conforming to IEC 61000-4-11 Conducted and radiated emissions: , class B, conforming to EN 55022

# **Packing Units**

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.8 cm
Package 1 Width	7.8 cm
Package 1 Length	9.4 cm
Package 1 Weight	72.0 g
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	3.222 kg

# **Contractual warranty**

Warranty 18 months



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Transparency RoHS/REACh

# Well-being performance



Mercury Free



Rohs Exemption Information

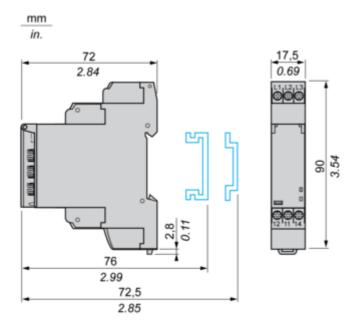
Yes

# **Certifications & Standards**

Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information

# **Dimensions Drawings**

# Width 17.5 mm

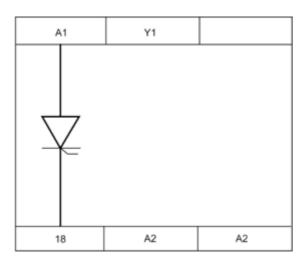


# **Product datasheet**

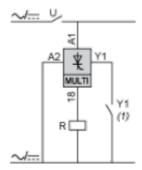
# **RE17LMBM**

Connections and Schema

# **Internal Wiring Diagram**



#### Wiring Diagram



#### (1) Contact Y1:

- Control for functions B, C, Ac, Bw.
- Partial stop for functions At, Ht.
  Function D if Di selected.
- Not used for functions A and H.

#### **Technical Description**

#### Function A : Power on Delay Relay

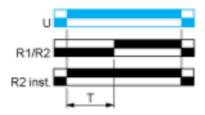
#### Description

The timing period T begins on energisation. After timing, the output(s) R close(s). The second output can be either timed or instantaneous.

#### **Function: 1 Output**



#### **Function: 2 Outputs**



#### Function Ac: On-Delay & Off-Delay with Control Signal

#### **Description**

After energisation of power supply and energization of Y1 causes the timing period T to start.

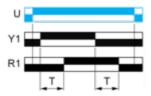
At the end of this timing period, the output(s) R close(s).

When deenergization of Y1, the timing T starts.

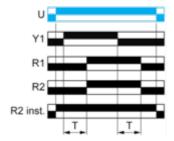
At the end of this timing period T,the output(s) R revert(s) to its/their initial position.

The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

#### **Function: 1 Output**



#### **Function: 2 Outputs**

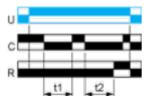


#### Function At: Power on Delay Relay (Summation) with Control Signal

#### Description

After power-up, the first opening of control contact C starts the timing. Timing can be interrupted each time control contact closes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output relay closes.

#### **Function: 1 Output**



T = t1 + t2 +...

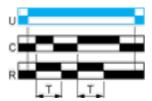
23-Aug-2024

#### Function B : Interval Relay with Control Signal

#### Description

After power-up, pulsing or maintaining control contact C starts the timing T. The output R closes for the duration of the timing period T then reverts to its initial state.

#### **Function: 1 Output**

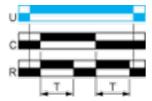


# Function Bw : Double Interval Relay with Control Signal

#### Description

On closing and opening of control contact C, the output R closes for the duration of the timing period T.

#### **Function: 1 Output**

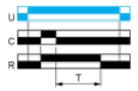


#### Function C : Off-Delay Relay with Control Signal

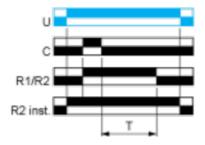
#### **Description**

After power-up and closing of the control contact C, the output R closes. When control contact C re-opens, timing T starts. At the end of the timing period, the output(s) R revert(s) to its/their initial state. The second output can be either timed or instantaneous.

#### **Function: 1 Output**



#### **Function: 2 Outputs**



#### Function D: Symmetrical Flashing Relay (Starting Pulse Off)

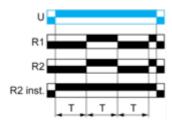
#### **Description**

On energisation of power supply, output(s) R starts at its/their initial state for timing duration T then change(s) to output(s) R close(s) for the same timing duration T.This cycle is repeated indefintely until power supply removal.Specially for RE17\*, RE22R2AMU, RE22R2MMW, RE22R2MMU, RE22R2MJU,this D function can only be initiated by energizing Y1 permanently.The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

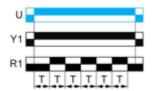
**Function: 1 Output** 



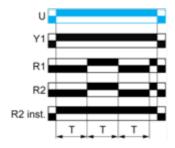
**Function: 2 Outputs** 



Function: 1 Output with Retrigger / Restart Control



Function: 2 Output with Retrigger / Restart Control



#### Function Di: Symmetrical Flasher Relay (Starting Pulse On)

#### **Description**

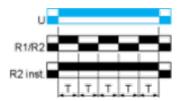
Repetitive cycle with two timing periods T of equal duration, with output(s) R changing state at the end of each timing period T.

The second output can be either timed or instantaneous.

#### **Function: 1 Output**



#### **Function: 2 Outputs**



#### Function H : Interval Relay

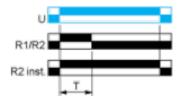
#### Description

On energisation of the relay, timing period T starts and the output(s) R close(s). At the end of the timing period T, the output(s) R revert(s) to its/their initial state. The second output can be either timed or instantaneous.

#### **Function: 1 Output**



#### **Function: 2 Outputs**



# Function Ht: Interval Relay & With Pause / Summation Control

#### **Description**

On energisation of power supply, output(s) R close(s) and timing period T starts.

The timing can be interrupted / paused each time X1 energizes.

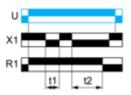
When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R revert(s) to its/their initial state Reenergization of X1 will also cause output(s) R close(s) if the time has elapsed and restart the same operation as described at the beginning.

**RE17LMBM** 

Except for RE17\*, RE22R2MMW, RENF22R2MMW, RE22R2MMU and RE22R2MJU, timing can be interrupted / paused each time Y1 energizes.

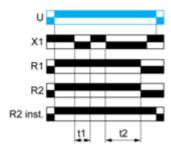
The second output (R2) can be either timed (when set to "TIMED" or instantaneous (when set to "INST").

#### **Function: 1 Output**



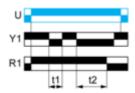
T = t1 + t2 +...

#### **Function: 2 Outputs**



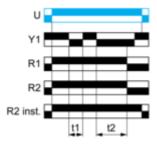
T = t1 + t2 +...

#### Function: 1 Output with Retrigger / Restart Control



T = t1 + t2 +...

#### Function: 2 Outputs with Retrigger / Restart Control



T = t1 + t2 +...

#### Legend

