Harmony Timer Relays
Near Field Communication and conventional Timer Relays

Harmony Timer Relays

Innovative, ergonomic and configurable offer with single or multifunction types

Harmony Timer are timing relays designed to time events in industrial automation systems by closing and opening contacts before, during, or after a set time period. They are designed for hard-wired logic automated systems to complement the functions of industrial progammable logic controllers (PLCs).

They are suitable for a wide range of applications, including:
- Machines: single machine, and industrial automation and processes
- Buildings: lighting control, access control door locks, roller shutters
- Water segment: pumping and irrigation systems
- HVAC: fans and centralized water systems

Depending on the product model, these relays support multiple time ranges.

> Modular DIN rail mounted timing relays

RE17, RENF, RE22

> Miniature plug-in timing relays

REXL

> Panel mounted/plug-in timing relays

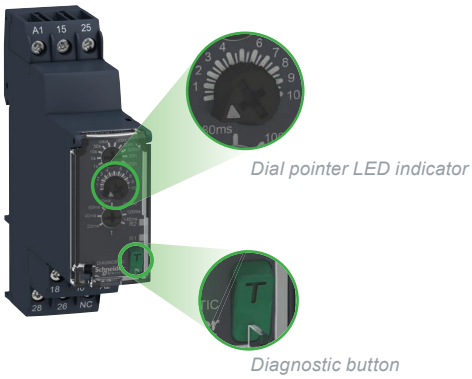
RE48A

The Harmony Timer relays also feature:
- Wide power supply range from 24 to 240 V ≂
- Single or multi timing ranges from 0.02 s to 999 hrs
- Screw or spring connection terminals
- Relay or solid-state output
- Conformity to IEC 61812-1 and EN 61812-1 standards
- UL, CSA, GL, RCM, EAC, CCC, and China ROHS compliance
- Easy to set up with wiring diagrams on the side of the product

Harmony RE22 Timing relays

Modular relays with unique features

> Innovative: dial pointer LED indicator and diagnostic button to assist setup and troubleshooting
> Compact and reliable
> Energy efficient: simple to implement, operate, and maintain
> Compliance with standards and certifications
> QR code embedded in instruction sheet for easy setup



Dial pointer LED indicator

Diagnostic button

Harmony Timer Relays → A complete range of reliable and flexible offers

These timing relays enable simple automation cycles to be set up using wired logic.
They can also be used to complement the functions of PLCs.

Relay
Relay outputs provide complete isolation between the supply circuit and the output.
It is possible to have several output circuits.

Modular and DIN rail mounted		Miniature and plug-in	Analogue and panel-mounted/plug-in
Screw type			
0.1 s to 999 h	Depending on model: □ *7 ranges:* 1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h □ *7 ranges:* 1 s, 3 s, 10 s, 30 s, 100 s, 300 s, 10 min □ *7 ranges* 0.5 s 1 s 3 s 10 s 30 s 100 s 300 s □ *1 range* 30 s □ *10 ranges:* 1 s, 3 s, 10 s, 30 s, 100 s, 300 s, 30 min, 300 min, 30 h, 300 h	□ *7 ranges:* 0.1 s...1 s, 1 s...10 s, 0.1 min...1 min, 1 min...10 min, 0.1 h...1 h, 1 h...10 h, 10 h...100 h	*14 ranges:* 1.2 s, 3 s, 12 s, 30 s, 120 s, 300 s, 12 min, 30 min, 120 min, 300 min, 12 h, 30 h, 120 h, 300 h
RENF	**RE22**	**REXL**	**RE48A**
23	24	26	27

Definitions

The following definitions explain relay operation:

■ **Relay output:**
This is the most common type of output. When the relay is energized, the moving armature is attracted by the coil and so actuates the contacts, which change state. When the relay is de-energized, both the armature and the contacts revert to their initial position. This type of output allows complete isolation between the power supply and the output. There are three types of output contact:

CO: Changeover contact, i.e. when the relay is de-energized, the circuit between the common point C and NC is closed and when the relay is operating (coil energized), it closes the circuit between the common point C and the NO contact.	
NC: A contact that is closed without being actuated is called a **Normally Closed (NC)** contact.	
NO: A contact that closes when actuated is called a **Normally Open (NO)** contact.	

■ **Solid state output:**
This output is entirely electronic and involves no moving parts; service life is therefore increased.

■ **Breaking capacity:**
The current value that a contact is capable of breaking in specified conditions.

■ **Mechanical durability:**
The number of mechanical operating cycles of the contact or contacts.

■ **Minimum switching capacity** (or minimum breaking capacity):
This is the minimum required current that can flow through the contacts of a relay.

■ **X1/X2/Y1/Gate control input:**
Control input allows timing in progress to be interrupted without it being reset.

Functions

Timing functions are identified by letters. For the complementary functions, select the main timing function using the selection dial in the front panel; refer to functional diagrams for connection.

Main timing functions	Complementary functions *(1)*	Definitions
A *(2)*		Power on-delay relay
	Ac	On-delay and off-delay relay with control signal
	Act	On-delay and off-delay relay with control signal and pause/summation control signal
	Ad	Pulse delayed relay with control signal
	Ah	Pulse delayed relay (single cycle) with control signal
	Ak	Asymmetrical on-delay and off-delay relay with control signal
	Akt	Asymmetrical on-delay and off-delay relay with control signal and pause/summation control signal
	At	Power on-delay relay with pause/summation control signal
	Aw	Power on-delay relay with retrigger/restart control signal
B *(2)*		Single interval relay with control signal
	Bw	Double interval relay with control signal
C *(2)*		Off-delay relay with control signal
	Ct	Off-delay relay with control signal and pause/summation control signal
D *(2)*		Symmetrical flashing relay (starting pulse-off)
	Di *(2)*	Symmetrical flashing relay (starting pulse-on)
	Dit	Symmetrical flashing relay (starting pulse-on) with pause/summation control signal
	Diw	Symmetrical flashing relay (starting pulse-on) with retrigger/restart control signal
	Dt	Symmetrical flashing relay (starting pulse-off) with pause/summation control signal
	Dw	Symmetrical flashing relay (starting pulse-off) with retrigger/restart control signal
H *(2)*		Interval relay
	He	Pulse-on de-energization
	Ht	Interval relay with pause/summation control signal
	Hw	Ineterval relay with retrigger/restart control signal
K		Delay on de-energization (without auxiliary supply)
L *(2)*		Asymmetrical flashing relay (starting pulse-off)
	Li *(2)*	Asymmetrical flashing relay (starting pulse-on)
	Lit	Asymmetrical flashing relay (starting pulse-on) with pause/summation control signal
	Lt	Asymmetrical flashing relay (starting pulse-off) with pause/summation control signal

(1) Complementary functions enhance the main timing functions.
*Example: **Ac**: timing after closing and opening of control contact.*
(2) The most commonly used timing functions.

Harmony Timer Relays

Near Field Communication and conventional Timer Relays

Modular timing relays, solid state or relay output, width 17.5 mm/*0.689 in.*

Solid state output
- *Multifunction, dual function, or single function*
- *Multi-range (7 selectable ranges)*
- *Multivoltage*
- *Solid state output: 0.7 A*
- *Screw and spring terminals*

RE17LAMW

RE17LCBMS

Relay output, 1 CO contact
- *Dual function or single function*
- *Multi-range (7 selectable ranges)*
- *Multivoltage*
- *1 relay output: 8 A*
- *Screw and spring terminals*
- *State indication by 1 LED*
- *Option of supplying a load in parallel*
- *3-wire sensor control option*

RE17RAMU

RE17RMMWS

2 CO contacts
- *Multifunction*
- *Multiple timing ranges*
- *Multivoltage*
- *2 relay outputs: 8 A - 250 V*
- *Screw terminals*
- *State indication by LED*
- *Option of supplying a load in parallel*
- *3-wire sensor control option*

RENF22R2MMW

Modular timing relays with solid state output

Single function

Timing ranges	Functions	Voltages V	Reference	Weight kg/*lb*
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	A	⎓ 24…240	RE17LAMW	0.060/*0.132*
			RE17LAMWS	0.050/*0.110*
	H	∿ 24…240	RE17LHBM	0.060/*0.132*
	C	∿ 24…240	RE17LCBM	0.060/*0.132*
			RE17LCBMS	0.050/*0.110*

Dual function

Timing ranges	Functions	Voltages V	Reference	Weight kg/*lb*
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	L, Li	∿ 24…240	RE17LLBM	0.060/*0.132*
			RE17LLBMS	0.050/*0.110*

Multifunction

Timing ranges	Functions	Voltages V	Reference	Weight kg/*lb*
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	A, At,B, C, H, Ht, D, Di, Ac, Bw	∿ 24…240	RE17LMBM	0.060/*0.132*

Modular timing relays with relay output

Single function

Timing ranges	Functions	Voltages V	Reference	Weight kg/*lb*
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	B	⎓ 24/∿ 24…240	RE17RBMU	0.070/*0.154*
	C	⎓ 24/∿ 24…240	RE17RCMU	0.070/*0.154*
			RE17RCMUS	0.060/*0.132*

Dual function

Timing ranges	Functions	Voltages V	Reference	Weight kg/*lb*
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	A, At	⎓ 24/∿ 24…240	RE17RAMU	0.070/*0.154*
			RE17RAMUS	0.060/*0.132*
	H, Ht	⎓ 24/∿ 24…240	RE17RHMU	0.070/*0.154*
			RE17RHMUS	0.060/*0.132*
	L, Li	⎓ 24/∿ 24…240	RE17RLMU	0.070/*0.154*
			RE17RLMUS	0.060/*0.132*
		⎓ 12	RE17RLJU	0.070/*0.154*

Multifunction

Timing ranges	Functions	Voltages V	Reference	Weight kg/*lb*
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	A, At, B, C, H, Ht, D, Di, Ac, Bw	⎓ 12	RE17RMJU	0.070/*0.154*
		⎓ 24/∿ 24…240	RE17RMMU	0.070/*0.154*
			RE17RMMUS	0.060/*0.132*
		⎓ 12…240	RE17RMMW	0.070/*0.154*
			RE17RMMWS	0.060/*0.132*
	Ad, Ah, N, O, P, Pt, Ti, Tt, W	⎓ 24/∿ 24…240	RE17RMXMU	0.070/*0.154*
			RE17RMXMUS	0.060/*0.132*
1 s, 10 s, 1 min, 10 min, 1 h, 10 h	A, At, B, C, H, Ht, D, Di	⎓ 24/∿ 24…240	RE17RMEMU	0.070/*0.154*
			RE17RMEMUS	0.060/*0.132*

NFC Timing relays with relay output

Multifunction

Timing ranges	Functions	No. of relay outputs	Voltages V	Reference	Weight kg/*lb*
0.1 s to 999 h	A, Ac, Ad, Ah, Ak, At, B, Bw, C, D, Di, Dt, Di, H,Ht, L, Li, Lt, Lit, N, O, P, Pt, Qt, Qtt, Tl, Tt,W	2	⎓ 24…240	RENF22R2MMW	0.0904/*0.1993*

Note*: References ending with "S" are spring terminals; references without "S" are screw terminals.*

Example: RE17LAMWS is timing relay with spring terminal and RE17LAMW is timing relay with screw terminal