

2.2 Multifunction Time Relays

CIM12, CIM12R

Multifunction | 24 ... 240 V UC | 1 Triac

Time data

Timing functions	fig. 1 1: E 2: A, K, N, B1, S, LS 3: B, W
Timing range	50 ms ... 60 h
Timing scale	0.6 s / 6 s / 60 s / 6 min / 60 min / 6 h / 60 h

Main circuit

Number of outputs	1 NO
Output type	⚡ Triac, zero crossing
Rated voltage	250 V AC
Rated current	2 A
Minimum load	50 mA, 12 V
Inrush current	100 A, 10 ms
Rated limit load	78 A ² s
Typ. leakage current	1 mA
Rated load AC-1	300 VA
Mechanical endurance (cycles)	∞
Electrical endurance at rated load AC-1 (cycles)	∞

Control circuit

Nominal voltage	24 ... 240 V UC
Operating voltage range	16.8 ... 250 V
Power consumption AC / DC	1.2 VA / 430 mW
Typ. input current on command input AC / DC	22 / 22 mA
Typ. threshold voltage on command input AC / DC	13 V / 15 V
Rated frequency	16 ... 63 Hz

Insulation

Rated test voltage control / main circuit	2.5 kV rms / 1 min
Rated test voltage open contact	0
Pollution degree	2
Overvoltage category	III

General data

Ambient temperature storage	-40 ... 85 °C
Ambient temperature operation	-40 ... 40 °C
Ambient temperature operation derated power	-40 ... 60 °C (I _N 1.2 A)
Ambient temperature operation railway version	-40 ... 70 °C
Conductor cross section	2.5 mm ² , 2 x 1.5 mm ²
Nominal screw torque	0.4 Nm
Module width	fig. 2
Weight	70 g
Protection degree	IP 20
Housing material	PC

Product references

Types	Product reference	24-240
UC supply	CIM12/UC...V	✓
UC supply, Railway version	CIM12R/UC...V	✓

"..." list control circuit voltage to complete product references.

Other voltages on request. Please contact support@comatreleco.com.



fig. 1. Wiring diagram

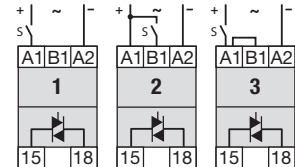
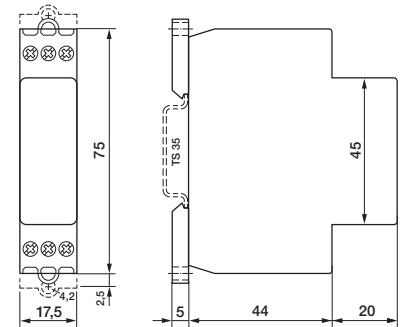


fig. 2. Dimensions (mm)



Standards and approvals

Standards IEC/EN 60947, IEC/EN 50155

Approvals



Delay functions

E On delay

S ⇒ R on with delay
S_{OFF} ⇒ R off

A Off delay

S ⇒ R on
S_{OFF} ⇒ R off with delay

F On and off delay

S ⇒ R on with delay (t1)
S_{OFF} ⇒ R off with delay (t2)

Shot timing modes

W One shot leading edge

S ⇒ R on for t
S_{OFF} ⇒ R off (pulse clipping)

N One shot trailing edge

S_{OFF} ⇒ R on for t
S on for t ⇒ R off

Q One shot leading and trailing edge

S ⇒ R on for t1
S_{OFF} ⇒ R on for t2
S_{OFF} off for t1 ⇒ R off

Puls shaping

K Puls shaping

S (pulse or continuous contact) ⇒ R on for t
S... no influence on R and t

L Pulse shaping, retrigger (subsequ.time operation from 0)

S (pulse or continuous contact) ⇒ R on for t
S on for t = t_{RESET}

M Puls shaping

S_{OFF} ⇒ R on for t
S... no influence on R and t

Blinker functions

B Blinker, pulse start

S ⇒ R on/off periodically according to t
S_{OFF} ⇒ R off

B1 Blinker, pulse start, trailing pulse

S ⇒ R on/off periodically according to t
S_{OFF}: last pulse = t

B2 Blinker, interval start

S ⇒ R after t on/off periodically according to t
S_{OFF} ⇒ R off

Delayed pulse

G On delay single shot

S (pulse or continuous contact) ⇒ R after t1 on for t2
S... no influence on R and t

H On delay single shot

S ⇒ R after t1 on for t2
S_{OFF} ⇒ R off

Repeat cycle timer

I Repeat cycle timer, pulse start

S ⇒ R on/off periodically according to t1 and t2
S_{OFF} ⇒ R off

P Repeat cycle timer, interval start C55, CT1: $\frac{t_2}{t_1}$

S ⇒ R after t1 (t2) on/off periodically according to t2 and t1
S_{OFF} ⇒ R off

Special functions

Y Star-delta timer

S ⇒ Δ on for t
Δ_{OFF} ⇒ Δ on with delay for tΔ-Δ
S_{OFF} ⇒ Δ off

X1 Restart delay

S ⇒ R on
S_{OFF} ⇒ R off and starts t
S ⇒ R restart only after t

Special functions

S Step-on/Step-off switch

S ⇒ R on/off

LS Step-switching (staircase lighting timer), with time lapse

S ⇒ R on and starts t
S on for t ⇒ R off

Stop/Reset

tSTOP SSTOP interrupts t (t-addition)	T t is stopped
tRESET SRESET reset t t restarts immediately	T Test

S = Triggering
R = Output circuit
⇒ = switches...

ON OFF

Pulse sequence monitoring

U

S1/S2
P (tp)
R

V

S1/S2
P (tp)
R

S1/S2 = Monitoring start
P = Pulse sequence
tp = Pulse separation

≤: Pulse separation is **smaller** than the time tp
>: Pulse separation is **larger** than the time tp

Start with S1 = **without** start-up short-out tA
Start with S2 = start-up short-out tA

tv = settable alarm delay
delay (tA = tv)

