CRV4

Multifunction | 24 … 240 V UC | 1 CO | External potentiometer

Time data

Timing functions	fig. 1 1: E 2: E, A, K, N, M, B1, F, G, Q, L, S, LS 3: W, B, B2, H
Timing range	t (t1) 50 ms … 0.6 s / 0.5 s … 6 s / 5 s … 60 s / 0.5 min … 6 min / 5 min … 60 min / 0.5 h … 6 h / 5 h … 60 h t2 (G/H 1) 60 ms / 0.6 s / 6 s / 0.6 min / 6 min / 0.6 h / 6 h t2 (G/H 2) 0.6 s / 6 s / 60 s / 6 min / 60 min / 6 h / 60 h
Timing scale	0.6 s / 6 s / 60 s / 6 min / 60 min / 6 h / 60 h

Main circuit

Number of contacts	1 CO
Contact material	AgNi
Rated voltage	250 V
Rated current	6 A
Minimum load	10 mA, 10 V
Inrush current	15 A, 10 ms
Rated load DC	fig. 2
Rated load AC-1	1500 VA
Mechanical endurance (cycles)	30 000 000
Electrical endurance at rated load AC-1 (cycles)	fig. 3

Control circuit

Nominal voltage	24 … 240 V UC
Operating voltage range	19.2 … 250 V UC
Power consumption AC / DC	0.55 VA / 0.55 W
Current consumption on supply A1-A2 AC / DC	6 mA / 6 mA
Current consumption on input control B1 AC / DC	4 mA / 7 mA
Threshold voltage on input control B1 AC / DC	14.5 V / 17.5 V
Rated frequency	0; 40 ... 60 Hz

Insulation

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

General data

Ambient temperature storage (no ice)	-40 … 85 °C
Ambient temperature operation	-40 … 70 °C
Conductor cross section	2.5 mm², 2 x 1 mm²
Nominal screw torque	0.6 Nm
Dimensions	fig. 4
Weight	50 g
Protection degree	IP 20
Housing material	PC

Product reference

Description	Type	24-240
UC supply	CRV4/UC…V	✓

Other voltages on request. Please contact support@comatreleco.com.
«...» list control circuit voltage to complete product references.

Accessories

External potentiometer	SP-01/100K

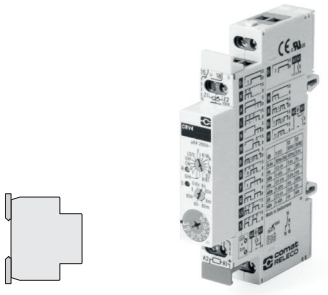


fig. 1. Wiring diagram

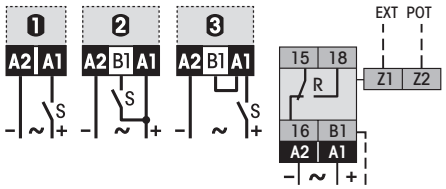


fig. 2. DC load limit curve

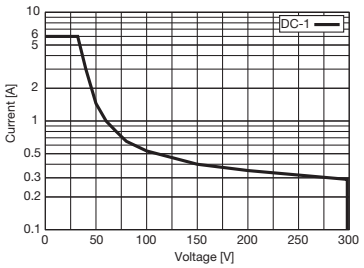


fig. 3. AC voltage endurance

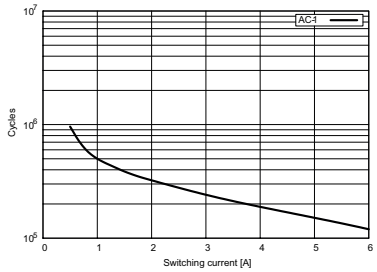
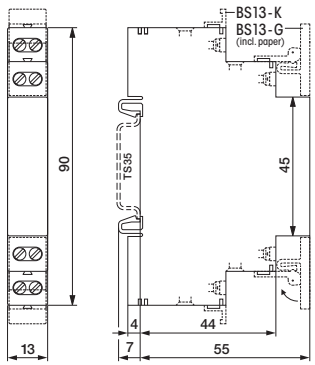


fig. 4. Dimensions (mm)



Standards and approvals

Standards IEC/EN 60947

Approvals

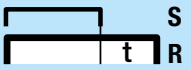
Time functions

Delay functions

E **On delay**

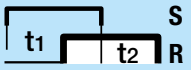
S ⇒ R on with delay
SOFF ⇒ R off

A **Off delay**



S ⇒ R on
SOFF ⇒ R off with delay

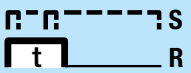
F **On and off delay**



S ⇒ R on with delay (t1)
SOFF ⇒ R off with delay (t2)

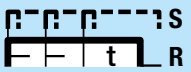
Puls shaping

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)



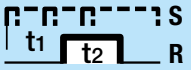
S (pulse or continuous contact)
⇒ R on for t
S on for t = tRESET

M **Puls shaping**

SOFF ⇒ R on for t
S --- no influence on R and t

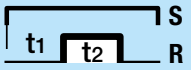
Delayed pulse

G **On delay single shot**



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

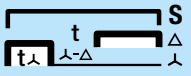
H **On delay single shot**



S ⇒ R after t1 on for t2
SOFF ⇒ R off

Special functions

Y **Star-delta timer**



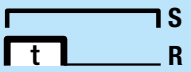
S ⇒ ⅄ on for t⅄
⅄OFF ⇒ △ on with delay for t⅄-△
SOFF ⇒ △ off

X1 **Restart delay**

S ⇒ R on
SOFF ⇒ R off and starts t
S ⇒ R restart only after t

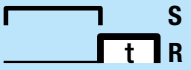
Shot timing modes

W **One shot leading edge**



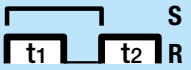
S ⇒ R on for t
SOFF ⇒ R off
(pulse clipping)

N **One shot trailing edge**



SOFF ⇒ R on for t
S on for t ⇒ R off

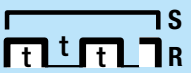
Q **One shot leading and trailing edge**



S ⇒ R on for t1
SOFF ⇒ R on for t2
SOFF off for t1 ⇒ R off

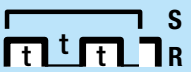
Blinker functions

B **Blinker,** pulse start



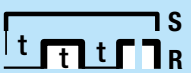
S ⇒ R on/off periodically
according to t
SOFF ⇒ R off

B1 **Blinker,** pulse start, trailing pulse



S ⇒ R on/off periodically
according to t
SOFF: last pulse = t

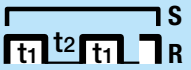
B2 **Blinker,** interval start



S ⇒ R after t on/off periodically
according to t
SOFF ⇒ R off

Repeat cycle timer

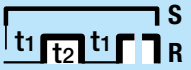
I **Repeat cycle timer,** pulse start



S ⇒ R on/off periodically
according to t1 and t2
SOFF ⇒ R off

P **Repeat cycle timer,** interval start

C55, CT1: t2 t1



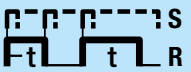
S ⇒ R after t1 (t2) on/off periodically according to t2 and t1
SOFF ⇒ R off

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

t STOP SSTOP interrupts t (t-addition)

t RESET SRESET reset t
t restarts immediately

T t is stopped ⇒ R on/off

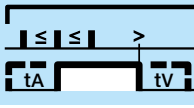
T Test

S = Triggering
R = Output circuit
⇒ = switches…

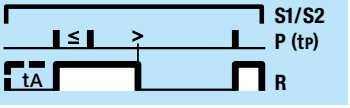
ON OFF

Pulse sequence monitoring

U



V



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)

Time Cubes

Type	Function																				t- Stop	t-Reset	Ext. Poti	t max.				
	E	A	F	W	N	Q	K	L	M	B	B_1	B_2	G	H	I	P	S	LS	X_1	U	V				sec	min	h	d	Page
CT..-E 30	●																									30			229
CT..-A 30		●																								30			229
CT..-K 30				●			●																			30			229
CT..-B 30										●																30			229

Modular plug-in Time Relays (CT-System)

Type	Function																				t- Stop	t-Reset	Ext. Poti	t max.				
	E	A	F	W	N	Q	K	L	M	B	B_1	B_2	G	H	I	P	S	LS	X_1	U	V				sec	min	h	d	Page
CT32…	●	●		●	●		●			●	●															60*			233
CT33…	●	●	△	●	●	△	●	●		●	●		▲	▲													60*		234
CT36…															●	●											60*		235

Plug-in Time Relays

Type	Function																				t- Stop	t-Reset	Ext. Poti	t max.				
	E	A	F	W	N	Q	K	L	M	B	B_1	B_2	G	H	I	P	S	LS	X_1	U	V				sec	min	h	d	Page
C55	●	●	●	●	●	●	●		●	●			●	●	●	●				●	●	●	●					60	210
C55.3	●	●	●	●	●	●	●		●	●			●	●	●	●				●	●	●	●					60	211
C55.4	●	●	●	●	●	●	●		●	●			●	●	●	●				●	●	●	●					60	212
C56	●	●	●	●	●	●	●		●	●			●	●	●	●				●	●	●	●					60	213
C64		■			■																					20			214
CS2	●	●		●	●		●			●		●											●			60*			217
CS3	●	●		●	●		●			●		●														60*			218
RS 41-M	●	●		●			●			●																15			219

Plug-in Time Relays

Type	Function																				t- Stop	t-Reset	Ext. Poti	t max.				
	E	A	F	W	N	Q	K	L	M	B	B_1	B_2	G	H	I	P	S	LS	X_1	U	V				sec	min	h	d	Page
C83	●	●	△	●	●	△	●	●		●	●		▲	▲													60*		215
C85			●			●							●	●	●	●											60*		216

DIN Time Relays

Type	Function																				t- Stop	t-Reset	Ext. Poti	t max.				
	E	A	F	W	N	Q	K	L	M	B	B_1	B_2	G	H	I	P	S	LS	Y	U	V				sec	min	h	d	Page
AA2 - AA2M		●																								1,5/12			170
AE2 - AE2M	●																									1,5/12			171
AL1								●																					195
AL3								●									●	●								60			196
AL4								●									●	●								60			197
AL5																	●												198
AM1	●			●						●		●														60			199
AM2	●	●		●			●																			60			200
AM3 [1]	●	●		●			●																			60			201
CM2	●	●		●			●															●	●	●			12		202
CM3	●	●		●	●		●			●	●																60*		203
CMD11 A		●																											168
CMD11 E	●																												169
CIM1	●	●		●	●		●			●	●						●	●									60*		176
CIM12	●	●		●	●		●			●	●						●	●									60*		178
CIM13	●	●		●	●		●			●	●						●	●									60*		180
CIM14	●	●		●	●		●			●	●						●	●									60*		182
CIM2	●	●						●	●			●	●	●													60*		183
CIM22	●	●						●	●			●	●	●													60*		185
CIM23	●	●						●	●			●	●	●													60*		187
CIM3			●			●							●	●	●	●											60*		189
CIM32			●			●							●	●	●	●											60*		191
CIM33			●			●							●	●	●	●											60*		193
CRV4	●	●	△	●	●	△	●	●	●	●	●	●	●	●			●	●						●			60*		205
CSV4	●	●	△	●	●	△	●	●	●	●	●	●	●	●			●	●						●			10*		206
CPF11		●					●	●																	0.6				204
CY1																			●										208

*** TF-60 Setting of long times**

The TF60 time setting methode permits short examination of long delay time settings. Elapsing times of hours can be monitored in the sec. range.

Example for a delay time of 38h:

1. Set range switch to 60sec
2. Set 38sec on the potentiometer (e.g. check 38sec by chronometer)
3. Set range switch to 60h

The delay time now amounts to 38h.

[1] alternatively with instantaneous contact
■ without auxiliary voltage (relay bistable)
□ without auxiliary voltage (relay monostable)
△ $t_2 = t_1$
▲ $t_2 = 0.5s$