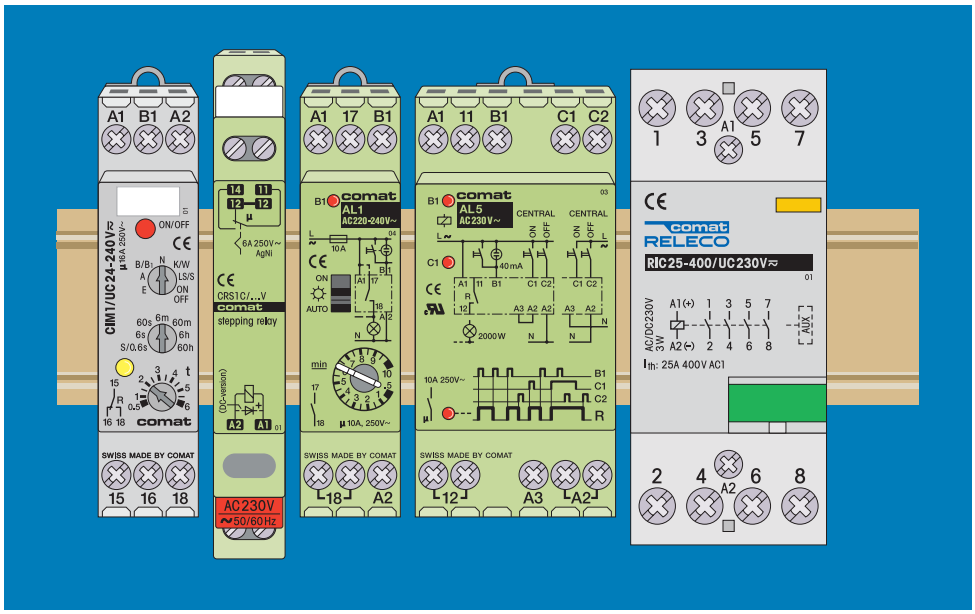
comat
INDUSTRIELLE ELEKTRONIK

Installation Relays



DIN

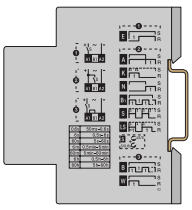
- Power Relays
- Step-on Step-off Relays
- Staircase Lighting Timers
- Power Step-on Step-off Relays
- Installation Contactors

comat

CIM, CRS

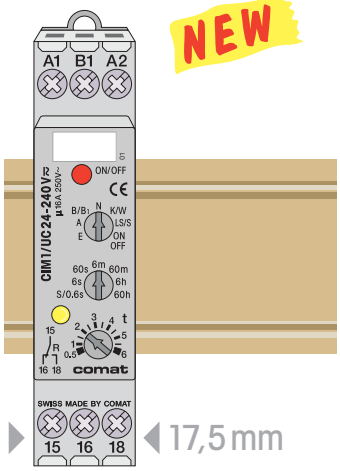
DIN

Type: **AS1**
No longer available
substituted by **CIM1**



Step-On Step-Off Relays

NEW



CIM1

Step-On Step-off Relay
- with integrated LED display
- no external wiring required
- Mounting on DIN rail TS35

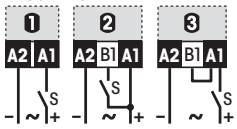
Test voltage: 2000 V

$T_{amb.}$ operation/storage:
-20..+60/-40..+85°C
Railway version up to -46°

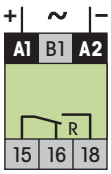
Step-On Step-Off Relay/ Staircase Lighting Timer
and 7 additional time functions including ON/OFF manual switch for maintenance purpose.
LED status display and integrated test switch.

Time Range	0,6 s - 60 h
CE UL	16 A 250 V~
MAX MIN	10 mA 12 V

E 1 Triggering
Function (page *)



Triggering

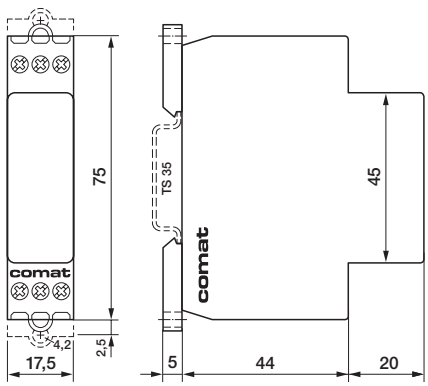


Data at T_{amb} = 20°C

Contact material	AgNi
Switching current/voltage	16 A 250 V
Switching power AC1 // DC1	4000 VA // 384 W
Switching cycles mech.	30 x 10^6
Operating voltage	AC ±20% / DC ±20%
Power consumption AC/DC	1,2 VA, 430 mW
Triggering delay / release time	10 ms / 10 ms
Glow lamp load	≤ 10 mA

UC ~/⎓

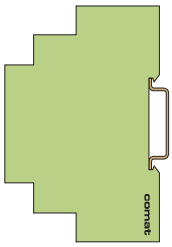
CIM1/UC24-240V

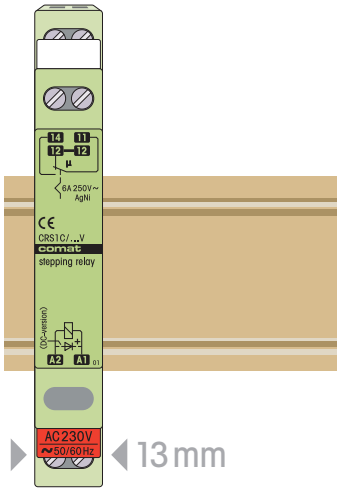


Ordering example

Step-on step-off relay
CIM1/UC24-240V

Step-On Step-Off Relays





CRS1C

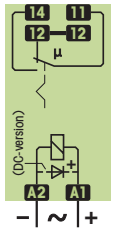
Step-On Step-Off Relay
- with integrated LED display
- no external wiring required
- Mounting on DIN rail TS35

Test voltage: 2000 V

$T_{amb.}$ operation/storage:
-20..+60/-40..+85°C

Step-On Step-Off Relay
- 13 mm series
- 1 x CO for permanente drive
- supply failure protected
- Integrated LED and coil wiring

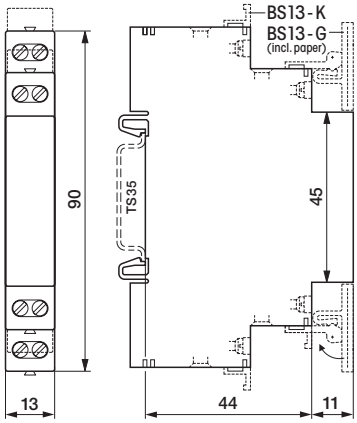
CE UL	6 A 250 V~
MAX MIN	10 mA 12 V



Data at T_{amb} = 20°C

Contact material	AgNi
Switching current/voltage	15 A/20 ms
Switching power AC1 // DC1	1500 VA // ...180 W
Switching cycles mech.	DC: 10 x 10^6; DC ≥ 15%
Operating voltage	AC ±15% / DC ±15%
Power consumption	2 VA 1,5 W
Triggering delay / release time	Recommended triggering time ≥ 50 ms

AC ~ 50/60 Hz	CRS1C/AC230V
DC ⎓ ≤ 10%	CRS1C/DC24V



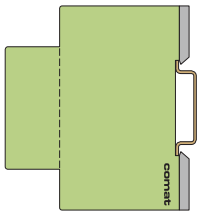
Ordering example

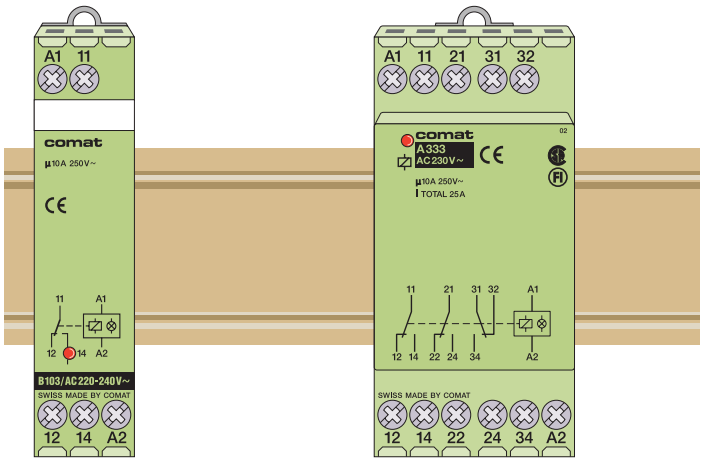
Step-on step-off relay
CRS1C/AC230V

comat
B103, A333 DIN

Power Relays

Power Relays





B103

Power Relay
- 1 pole power relay with free-wheeling diode and reverse polarity protection
- Integrated LED position indicator

A333

Power Relay
- 1 pole power relay with free-wheeling diode and reverse polarity protection
- Integrated LED position indicator

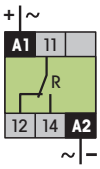
Power Relays
- with mechanical output status
- A333 with DIN 45 mm cap dimension

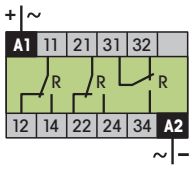
Test voltage: 2000 V / 2000 V

$T_{amb.}$ operation/storage:
-20..+60/-40..+85°C

	B103	A333
CE UL	10 A 250 V~	10 A 250 V~
μ MAX MIN	10 mA 12 V	10 mA 10 V

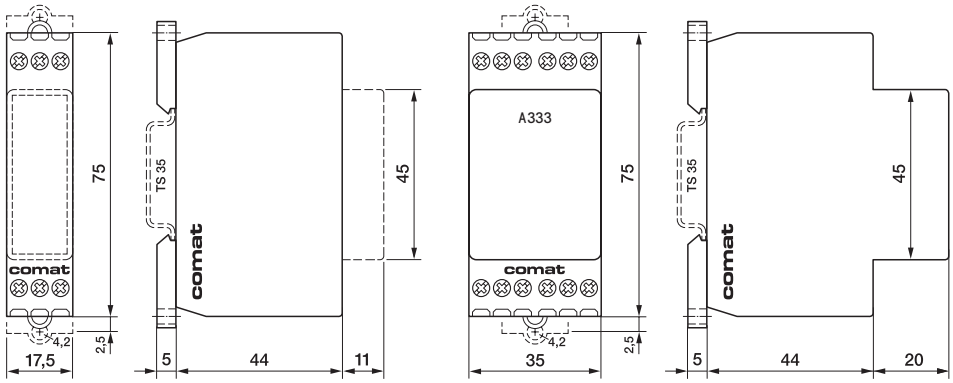
Connection lay out (top/bottom)





Data at T_{amb} = 20°C

	B103	A333
Contact material	AgCdo	AgCdo
Switching power AC1 // DC1	2200 VA // ≤150 W (DC)	1500 VA // ≤300 W (DC)
Peak inrush current	16 A	30 A
Switching cycles mech./elec. (AC1)	2×10^7	2×10^7
Operating voltage AC 50 Hz/DC	AC ±15% / DC ±15%	0,8...1,1 U_N
Power consumption AC/DC	2 VA, 1,5 W	2,2 VA, 1,2 W
Triggering delay / release time	20 ms / 12 ms	18 ms / 10 ms
AC ~ 50/60 Hz	220-240, 110-127 B103/AC ... V	230, 110, 48, 24 A333/AC ... V
DC ⎓ ≤10%		48, 24, 12 A333/DC ... V
UC ≂ 50/60 Hz / ⎓	48, 24, 8-12 B103/UC ... V	



Ordering example

Power Relay
B103/AC 220-240 V

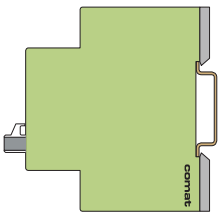
comat
AL1 ... AL3
DIN

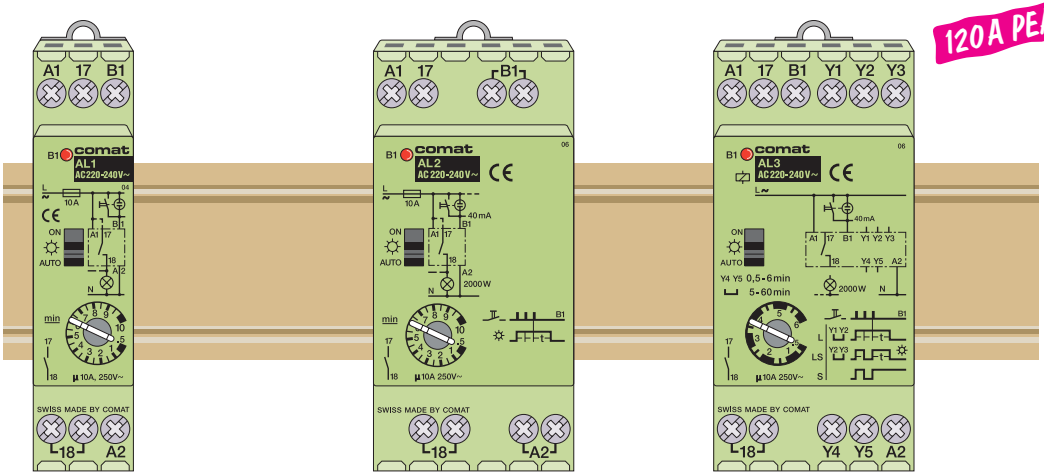
Staircase Lighting Timers

Staircase Lighting Timers

Staircase Lighting Timers

120 A PEAK





AL1

Staircase Lighting Timers
- For small to medium-sized installations
- Single contact 10A, 250V~
- 30s-10min running time, infinitely adjustable
- subsequent time operation from zero
- Manual ON

AL2

Staircase Lighting Timers
- With special contact for high lamp loads
- 120A special early make contact
- Glow lamp load with AC
- 30s-10min running time, infinitely adjustable
- subsequent time operation from zero
- Manual ON

AL3

Staircase Lighting Timers
- With stepping switch functions LS and S
- 120A special early make contact
- Glow lamp load with AC
- 30s-1h running time, infinitely adjustable
- subsequent time operation from zero
- Manual ON

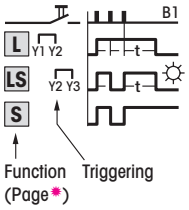
Staircase Lighting Timers
- Trigger status indication
- Manual-Auto switch

Test voltage: 2500V

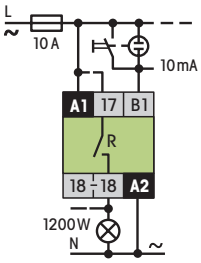
$T_{amb.}$ operation/storage:
-45..+60/-45..+85°C

Time Range	**30s-10min**	**30s-10min**	**30s-60min**
CE UL MAX MIN	**10A 250V~**	**10A 250V~** (120A peak)	**10A 250V~** (120A peak)
	10mA 12V	10mA 12V	10mA 12V

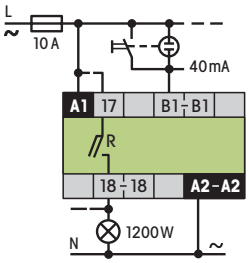
Function/Triggering



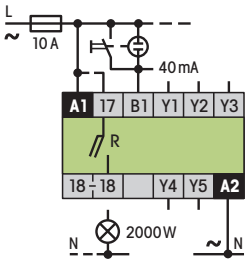
L



L

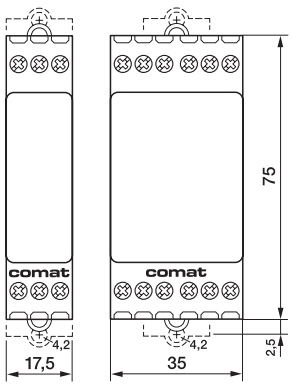


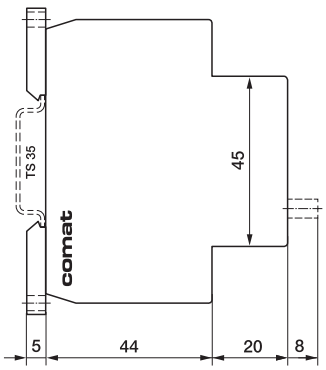
L LS S



Data at T_{amb} = 20°C

Contact material	W+AgSnO2	W+AgSnO2	W+AgSnO2
Switching power AC1 // DC1	2200VA // ≤440W (DC)	2200VA // ≤440W (DC)	2200VA // ≤440W (DC)
Peak inrush current	120A/20ms	120A/20ms	120A/20ms
Switching cycles mech./elec. (AC1)	3x 10^7	3x 10^7	3x 10^7
Operating voltage AC50Hz/DC	0,85...1,1 U_N	0,85...1,1 U_N	0,85...1,1 U_N
Power consumption AC/DC	2,5VA	2,5VA	2,5VA, 1,5W
Triggering delay / release time	50ms/≤300ms	50ms/≤300ms	60ms/≤300ms
Glow lamp load	≤10mA	≤40mA	≤40mA
AC ~ 50/60Hz	220-240, 110-127	220-240, 110-127	220-240, 110-127, 48-60
	AL1/AC ... V	AL2/AC ... V	AL3/AC ... V
UC ≂ 50/60Hz/⎓			24
			AL3/UC ... V



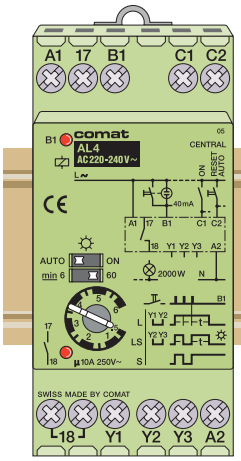


Ordering example

Staircase Lighting Timer
AL1/AC220-240V

comat
AL 4 ... AL 5
DIN

Staircase Lighting Timers for central control



AL 4

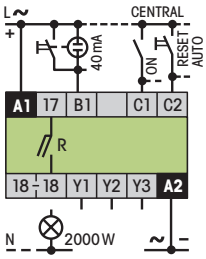
Staircase Lighting Timers
- Two-way lighting control on-off, stepping switch
- 120 A special early make contact
- AC supply for glow lamp
- 30 s - 1 h running time, infinitely adjustable
- subsequent time operation from zero
- Manual ON

30 s - 60 min

10 A 250 V~ (120 A peak)

10 mA 12 V

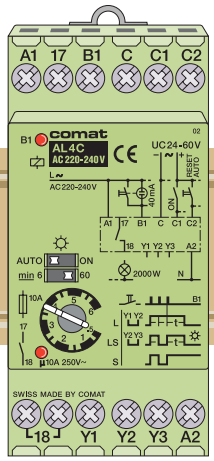
L LS S



Data at Tamb = 20 °C

Contact material	W + AgSnO2
Switching power AC1 // DC1	2200 VA // ≤ 440 W (DC)
Peak inrush current	120 A / 20 ms
Switching cycles mech./elec. (AC1)	3 x 10^7
Operating voltage AC 50 Hz / DC	0,85...1,1 UN
Power consumption AC/DC	≤ 2,5 VA, 1,5 W
Triggering delay / release time	≤ 60 ms / ≤ 300 ms
Glow lamp load	≤ 40 mA
AC ~ 50/60 Hz	220-240, 110-127, 48-60
	AL4/AC ... V
UC ⎓ 50/60 Hz / ⎓	24
	AL4/UC ... V

Staircase Lighting Timers for central control



AL 4 C

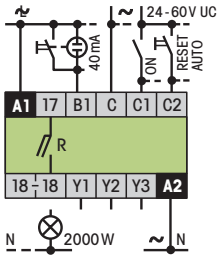
Staircase Lighting Timers
- Two-way lighting control on-off, stepping switch
- 120 A special early make contact
- AC supply for glow lamp
- 30 s - 1 h running time, infinitely adjustable
- subsequent time operation from zero
- Manual ON

0,5 s - 60 min

10 A 250 V~ (120 A peak)

10 mA 12 V

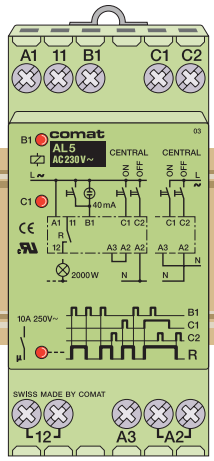
L LS S



Contact material	W + AgSnO2
Switching power AC1 // DC1	2200 VA // ≤ 440 W (DC)
Peak inrush current	120 A / 20 ms
Switching cycles mech./elec. (AC1)	3 x 10^7
Operating voltage AC 50 Hz / DC	0,85...1,1 UN
Power consumption AC/DC	≤ 2,5 VA
Triggering delay / release time	≤ 60 ms / ≤ 300 ms
Glow lamp load	≤ 40 mA
AC ~ 50/60 Hz	220-240, 110-127
	AL4C/AC ... V
UC ⎓ 50/60 Hz / ⎓	

Power Step-on Step-off Relay for central control

120 A PEAK



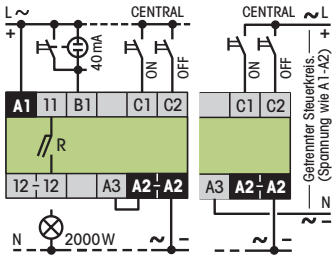
AL 5

Power Step-on Step-off Relay
- Stepping switch funct. S
- Central ON-OFF
- 120 A special early make contact
- Output status
- Neon lamps by AC control (Push button illumination up to 40 mA for glow lamps resp. LED's)

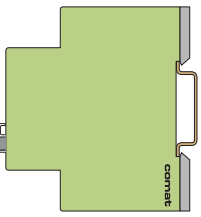
10 A 250 V~ (120 A peak)

10 mA 12 V

S



Contact material	W + AgSnO2
Switching power AC1 // DC1	2200 VA // ≤ 440 W (DC)
Peak inrush current	120 A / 20 ms
Switching cycles mech./elec. (AC1)	3 x 10^7
Operating voltage AC 50 Hz / DC	0,85...1,1 UN
Power consumption AC/DC	≤ 2,5 VA, 1,5 W
Triggering delay / release time	≤ 60 ms / ≤ 300 ms
Glow lamp load	≤ 40 mA
AC ~ 50/60 Hz	230, 48-60
	AL5/AC ... V
UC ⎓ 50/60 Hz / ⎓	24
	AL3/UC ... V



Staircase Lighting Timers
- Trigger status indication
- Electronic switch position indication

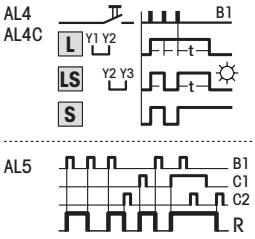
Test voltage: 2500 V / 1500 V

Tamb. operation/storage:
-20..+60 / -40..+85 °C

Time Range

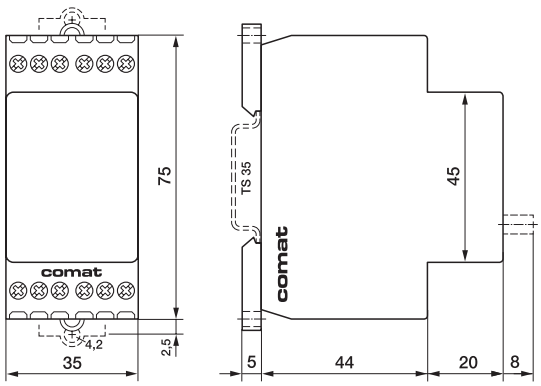
CE UL MAX MIN

Function (Page*) /Triggering



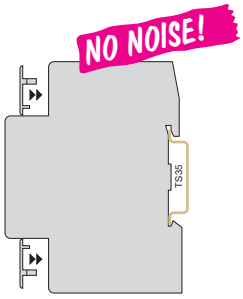
Ordering example

Staircase Lighting Timer
AL4/AC220-240V

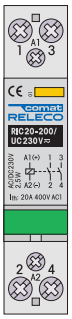


comat RIC DIN

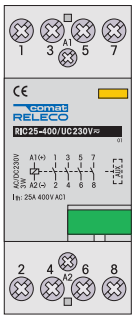
Miniature Contactor



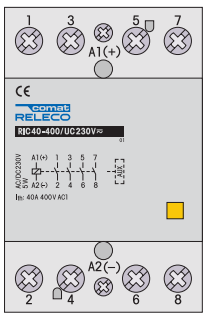
Contactor 20 A
2 NO or 2 NC or 1 NO/1 NC



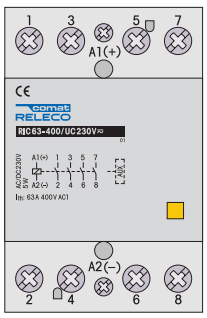
Contactor 25 A
4 NO or 4 NC or 2 NO/2 NC



Contactor 40 A
4 NO or 4 NC or 2 NO/2 NC



Contactor 63 A
4 NO or 2 NO/2 NC



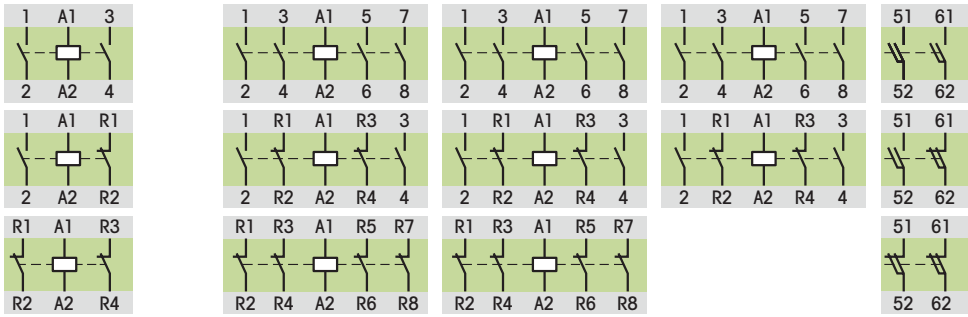
AUX Block
2 NO or 2 NC or 1 NO/1 NC

AC/DC Istallation Contactors
No noise!
- All contacts doublemake/ doublebrake
- Mechanical status display

Test voltage: 4 kV/3
$T_{amb.}$ operation/storage:
-20..+55/-30..+80 °C

	RIC 20	RIC 25	RIC 40	RIC 63	RIC-AUX
	Contactor 20 A Contactor with 2 NO or 2 NC or 1 NO+1 NC contacts. UC (AC/DC) versions are noise free and do not need external freewheeling circuits. No coil inrush overcurrent. Sealing cover optional.	**Contactor 25 A** Contactor with 4 NO or 4 NC or 2 NO+2 NC contacts. UC (AC/DC) versions are noise free and do not need external freewheeling circuits. No coil inrush overcurrent. Sealing cover optional.	**Contactor 40 A** Contactor with 4 NO or 4 NC or 2 NO+2 NC contacts. UC (AC/DC) versions are noise free and do not need external freewheeling circuits. No coil inrush overcurrent. Sealing cover optional.	**Contactor 63 A** Contactor with 4 NO or 2 NO+2 NC contacts. UC (AC/DC) versions are noise free and do not need external freewheeling circuits. No coil inrush overcurrent. Sealing cover optional.	**Auxilary** Contactblock with 2 NO or 2 NC or 1 NO+1 NC contacts. For signalling and control applications up to 6 A with crown twin contacts. For all RIC contactors.
	20 A 400 V ~	**25 A** 400 V ~	**40 A** 400 V ~	**63 A** 400 V ~	**6 A** 400 V ~
	10 mA 24 V	10 mA 24 V	10 mA 24 V	10 mA 24 V	5 mA 24 V

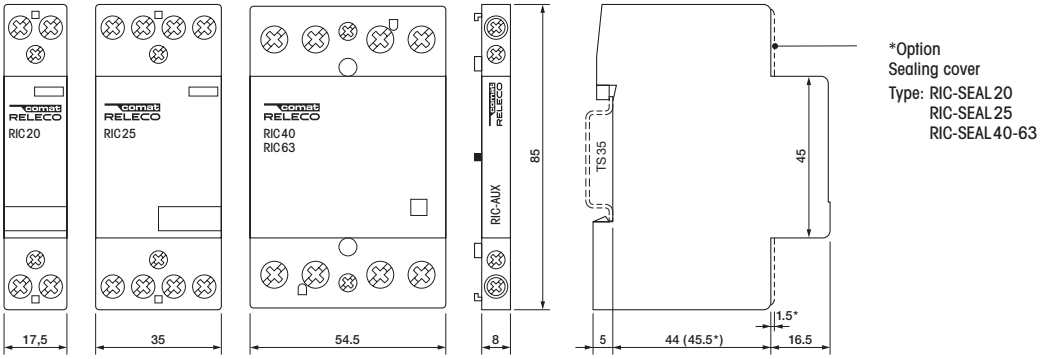
Connection lay out (top/bottom)



Data at T_{amb} = 20 °C

	RIC 20	RIC 25	RIC 40	RIC 63	RIC-AUX
Contact material	AgNi	AgNi	$AgSnO_2$	$AgSnO_2$	AgNi
Switching current I_{TH}	20 A	25 A	40 A	63 A	6 A
Switching voltage	400 V	400 V	400 V	400 V	400 V
Switching power AC3	1,3 kW/230 V	2,2 kW/400 V	5,5 kW/400 V	8,5 kW/230 V	–
Switching power AC1/AC7a	4 kW/230 V	16 kW/400 V	26 kW/400 V	40 kW/400 V	–
Op Frequenz max. cycle/hr	600	600	120	120	600
Electrical life cycles AC1	$2x10^5$	$2x10^5$	$1x10^5$	$1x10^5$	$2x10^5$
Coil voltage range	0,85 - 1,1 U_N	0,85 - 1,1 U_N	0,85 - 1,1 U_N	0,85 - 1,1 U_N	–
Power consumption	2,5 W	3 W	5 W	5 W	–
Operate / release time typ.	20 ms // 20 ms	10 ms // 50 ms	20 ms // 35 ms	20 ms // 35 ms	– // –
UC ≂ ~ 50/60 Hz / ⎓	24, 230 RIC20-200/UC V	24, 230 RIC25-400/UC V	24, 230 RIC40-400/UC V	24, 230 RIC63-400/UC V	RIC-AUX20
UC ≂ ~ 50/60 Hz / ⎓	24, 230 RIC20-110/UC V	24, 230 RIC25-220/UC V	24, 230 RIC40-220/UC V	24, 230 RIC63-220/UC V	RIC-AUX11
UC ≂ ~ 50/60 Hz / ⎓	24, 230 RIC20-020/UC V	24, 230 RIC25-040/UC V	24, 230 RIC40-040/UC V		RIC-AUX02

RIC20 | RIC25-63



*Option
Sealing cover
Type: RIC-SEAL 20
RIC-SEAL 25
RIC-SEAL 40-63

Ordering example

Installation contactor
RIC25-400/UC230V

Aux block
RIC-AUX20

Sealing cover
RIC-SEAL20