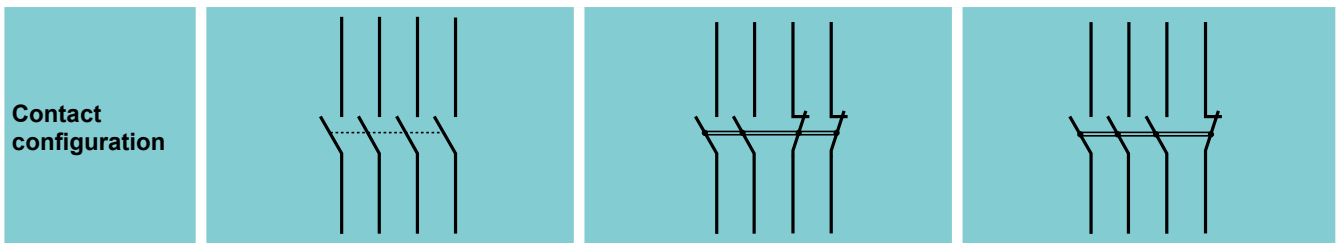


# EasyPact TVS control relays



Coil V AC/Hz	50 Hz	50 Hz	50 Hz
24	CAE40B5	CAE22B5	CAE31B5
48	CAE40E5	CAE22E5	CAE31E5
110	CAE40F5	CAE22F5	CAE31F5
220	CAE40M5	CAE22M5	CAE31M5
240	CAE40U5	CAE22U5	CAE31U5
380	CAE40Q5	CAE22Q5	CAE31Q5
415	CAE40N5	CAE22N5	CAE31N5
440	CAE40R5	CAE22R5	CAE31R5

## Characteristics

- > 4 NO/NC contacts.
- > Weight: 0.280 kg.

Control circuit characteristics			
Type			CAE~
Rated control circuit voltage (Uc)			V 24...440
Control voltage limits	Operation	Coil type: 50 Hz	0.85...1.1 Uc
	Drop-out		0.3...0.6 Uc
Average consumption at 20 °C and at Uc	~ 50 Hz		VA Sealed and closed: 70 Maintain: 8
Operating time (rated control circuit voltage, ambient temperature 20 °C)	Between coil energisation and	opening of the N/C contact	ms 4...19
		closing of the N/O contact	12...22
	Between coil de-energisation and	opening of the N/C contact	4...12
		closing of the N/O contact	6...17
Momentary supply failure	Maximum power-off time without influencing sealed state		2
Maximum operating rate	Operating cycles per second		3
Mechanical durability In millions of operating cycles	Coil type:	50 Hz	10

Control connection (coil)				
Connecting to screw clamp terminals	Flexible cable without cable end	1 conductor	mm <sup>2</sup>	1...2.5
		2 conductors		1...2.5
	Flexible cable with cable end	1 conductor		1...2.5
		2 conductors		1...2.5
	Solid cable without cable end	1 conductor		1...2.5
		2 conductors		1...2.5
Tightening torque			N.m	1.2

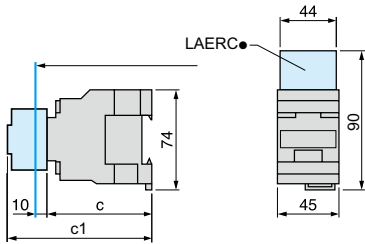
Characteristics of built in instantaneous contacts				
Number of contacts				4
Rated operational voltage (Ue)	Up to		V	690
	Rated insulation voltage (Ui)	Conforming to IEC 60947-5-1		690
Conventional thermal current (Ith)	Operational environment temperature ≤ 40 °C		A	10
Operating current frequency			Hz	50
Minimum switching capacity	U min		V	17
	I min		mA	5
Short-circuit protection	Conforming to IEC 60947-5-1		A	gG fuse: 10 A
Rated making capacity	Conforming to IEC 60947-5-1		A	~: 140
Short-time rating	Permissible for	500 ms	A	120
		100 ms		140
Insulation resistance			MΩ	> 10
Non-overlap time	Guaranteed non-overlap between N/C and N/O contacts		ms	1.5 on energisation and on de-energisation
Tightening torque	Philips n°2		N.m	1.2
Non-overlap distance				Contact LAEN●● connecting with auxiliary contacts

Instantaneous contacts connection				
Connecting to screw clamp terminals	Flexible cable without cable end	1 conductor	mm <sup>2</sup>	1...2.5
		2 conductors		1...2.5
	Flexible cable with cable end	1 conductor		1...2.5
		2 conductors		1...2.5
	Solid cable without cable end	1 conductor		1...2.5
		2 conductors		1...2.5
Tightening torque			N.m	1.2

Environment			
Type		CAE~	
Rated insulation voltage (Ui)	Conforming to IEC 60947-5-1	<b>V</b>	690
Rated impulse withstand voltage (Uimp)	Conforming to IEC 60947	<b>kV</b>	6
Electrical insulation	IEC 60536		Up to 400 V reinforced insulation
Conforming to standards			IEC 60947-5-1
Certifications			GOST
Protective treatment	Conforming to IEC 60068		"TH"
Degree of protection	Conforming to IEC 60529		IP20
Ambient air temperature around the device	Storage	<b>°C</b>	-60...+80
	0.85...1.1 UC		-5...+55
	For operation at Uc		-20...+70
Maximum operating altitude	Without derating	<b>m</b>	3000
Operating position	Without derating in the following positions		
Shock resistance <sup>(1)</sup> 1/2 sine wave, 11 ms	Control relay open		7 gn
	Control relay closed		10 gn
Vibration resistance <sup>(1)</sup> 5...300 Hz	Control relay open		1.5 gn
	Control relay closed		3 gn

<sup>(1)</sup> No change of contact state at coil voltage  $U_e$  in worst conditions.

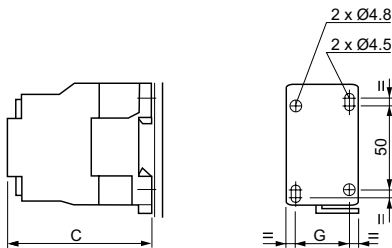
## CAE●●



<b>CAE</b>	<b>32</b>	<b>50</b>
c	80	80
c1 with LAEN	113	113

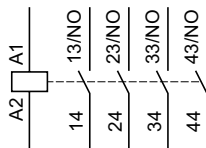
## CAE

On mounting plate AM1-P

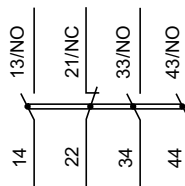


<b>CAE~</b>	
c	80
G	35

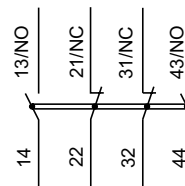
## CAE40



## CAE31



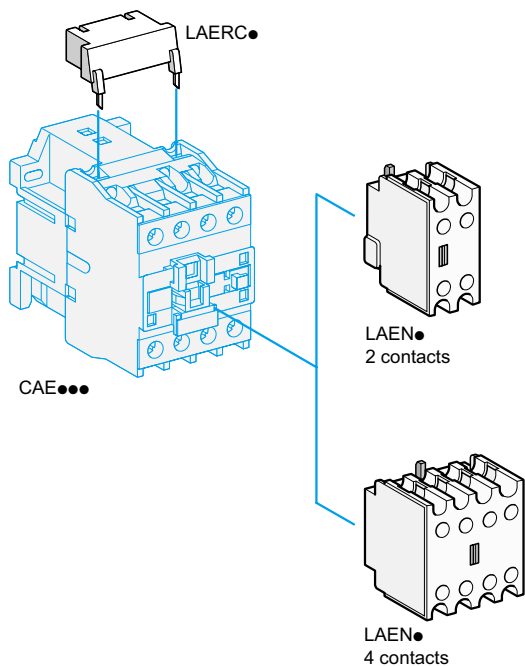
## CAE22



# EasyPact TVS control relays

## Auxiliary contact blocks

## RC suppressor



### Instantaneous auxiliary contact blocks

For use in normal operating environments

Number of contacts	Maximum number of relays that can be mounted		Composition		Cat. no.	Weight kg
	Front mounted	Side mounted	NO	NC		
2	1	-	1	1	LAEN11	0.030
	1	-	2	-	LAEN20	0.030
	1	-	-	2	LAEN02	0.030
4	1	-	2	2	LAEN22	0.050

### Coil suppressor modules

#### RC suppressor

- Effective protection for circuits highly sensitive to "high frequency" interference and transient generated when the contactor coil is switched off. For use only in cases where the voltage is virtually sinusoidal, i.e. less than 5 % total harmonic distortion.
- Voltage limited to 3 Uc max. and oscillating frequency limited to 400 Hz max.
- Slight increase in drop-out time (1.2 to 2 times the normal time).

Mounted on	Operational voltage	Cat. no.	Weight kg
CAE40●●	~24...48 V	LAERCE	0.012
	~110...240 V	LAERCU	0.012
	~50...120 V	LAERCG	0.012
	~380...415 V	LAERCN	0.012

