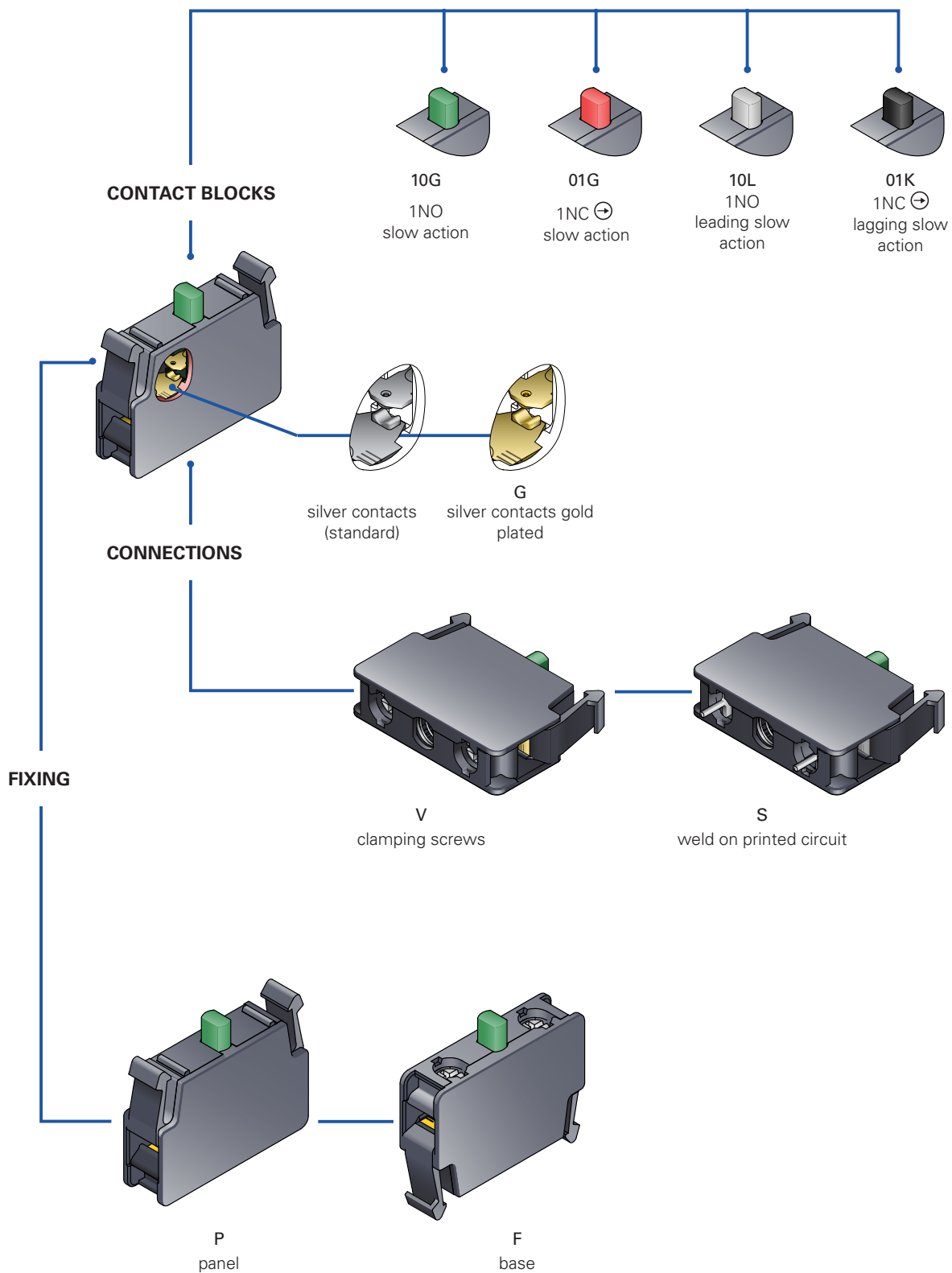
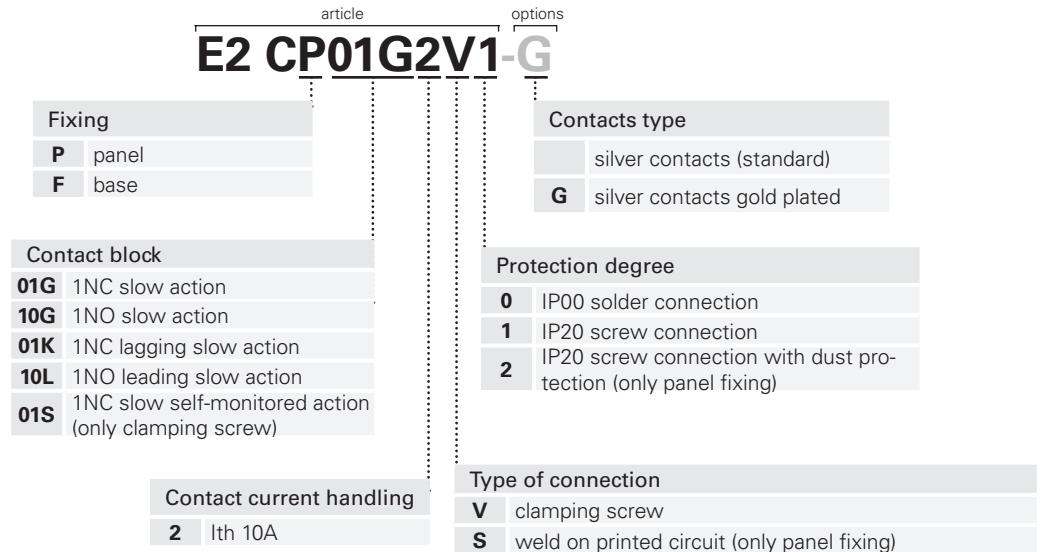


Selection diagram

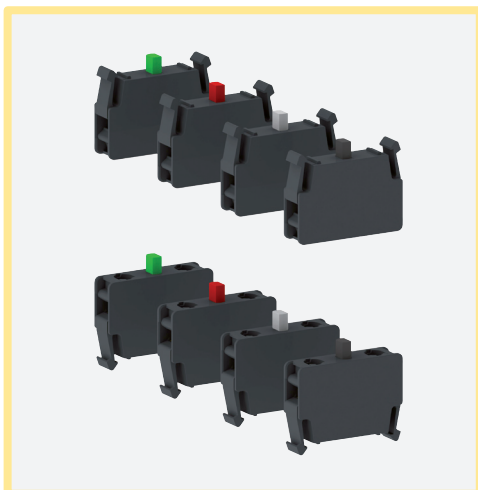


Contact block code structure



Versions with solder connection will be available from 2013.

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.



Main features

- High reliability contact blocks with quadruple contact points self-cleaning contacts
- Gold plated contacts version
- Positive opening NC contacts according to IEC 6097-5-1

Markings and quality marks:



Approval IMQ: CA02.04805

Approval UL: E131787

Approval GOST: POCC IT.AB24.B04512

Technical data

General data

Protection degree:	IP20 on the terminals according to IEC 60529
Ambient temperature:	-40°C +80°C
Mechanical endurance:	20 million operations cycles
Max operating frequency:	3600 operations cycles/hour
Utilization requirements:	see page 78

Contact block

Contacts commutation force:	1,8 N (NO) / 1,4 N (NC) 1,7 N (NO leading) / 1,4 N (NC lagging)
Actuating force at end travel:	3,5 N (NO) / 2,3 N (NC) 3,5 N (NO leading) / 1,9 N (NC lagging)
Positive opening force:	17 N
Activating speed:	min 1 mm/s max 0,5 m/s
Contacts material:	silver contacts (standard) Contacts for weak current in silver, 1µm thick gold-plating (on request)
Contacts form:	"V shape" self-cleaning contacts with quadruple contact points
Conductors cross section:	min 1 x 0,5 mm ² (1 x AWG 20) max 2 x 2,5 mm ² (2 x AWG 14)
Screw terminal driving torque:	0,6 ... 0,8 Nm

In conformity with standards:

IEC 60947-1, IEC 60947-5-1, IEC 60204-1, EN 60947-1, EN 60947-5-1, EN 60204-1, UL 508, CSA 22-2 N°14.

⚠ Installation for safety applications:

Use only switches marked with the symbol ⊕. The safety circuit must always be connected with the **NC contacts** (normally closed contacts: .1-.2) as stated in the standard EN 60947-5-1, encl. K, par. 2.

In conformity with requirements requested by:

Low Voltage Directive 2006/95/EC, Machinery Directive 2006/42/EC and Electromagnetic Compatibility 2004/108/EC.

Positive contact opening in conformity with standards:

IEC 60947-5-1, EN 60947-5-1, VDE 0660-206.

Electrical data

Thermal current (I _{th}):	10 A
Rated insulation voltage (U _i):	500 Vac/dc
Protection against short circuits:	fuse 10 A 500 V type gG/gL
Rated impulse withstand voltage (U _{imp}):	8 kV
Pollution degree:	3

Utilization categories

Alternate current: AC15 (50-60 Hz)					
U _e (V)	24	48	120	250	400
I _e (A)	6	6	6	6	3
Direct current: DC13					
U _e (V)	24	48	125	250	
I _e (A)	2,5	1,3	0,6	0,3	

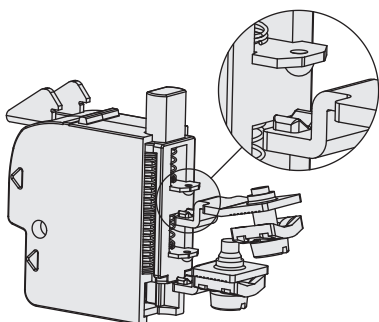
General characteristics

Positive opening

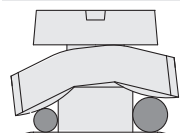
All NC contacts are suitable for safety applications. NC contacts have positive opening according to IEC 60947-5-1.

High reliability self-cleaning contacts

"V shape" self-cleaning contacts with quadruple contact points. This shape, thanks to its quadruple support, allows to reduce the probability of contact wrong switching. Furthermore it highly improves the contacts reliability in case of dust.

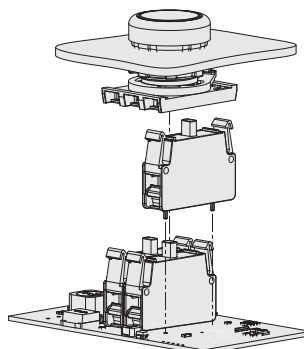


Clamping screw plates



The clamping screw plates of the contact blocks have a particular "roofing tile" structure and are connected loosely to the clamping screw. In this way, during the wires fixing, the clamping screw plate is able to suit to cables of different diameter (see picture) and tends to tighten the wires toward the screw instead of permitting them to escape towards the outside.

Connection to be welded on printed circuit



A number of new EROUND contact blocks provided with pins to be welded are now available. These contact blocks, available in panel-mounted versions, are suitable in cases where a printed circuit is used instead of wiring, and therefore the contact blocks are welded directly onto the printed circuit.

Data type approved by UL

Utilization category: A600 pilot duty (720 VA, 120-600 Vac)
Q300 pilot duty (69 VA, 125-250 Vdc)

Note:
- Use copper wire (Cu) 60 or 75 °C rigid or flexible with cross section 12-20 AWG.
- Terminals tightening torque 7.1 Lb In (0,8 Nm).

Data type approved by IMQ

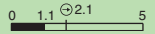
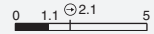
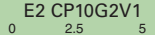
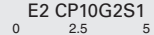
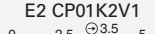



Rated insulation voltage (Ui): 500 V
Thermal current in free air (Ith): 10 A
Thermal current in housing (Ithe): 10 A
Rated impulse withstand voltage (Uimp): 8 kV
Housing protection degree: IP20
Terminals: screw clamps
Category of use: AC15





Operating voltage (Ue): 400 Vac (50/60 Hz)
Operating current (Ie): 3 A
Kinds of contact element: X, Y
Positive contact opening on O1G and O1K contact blocks
Conformity with standards: EN 60947-1, EN 60947-5-1:2004 + A1:2009, fundamental requirements of 2006/95/CE Low Voltage Directive.

Contact block selection table

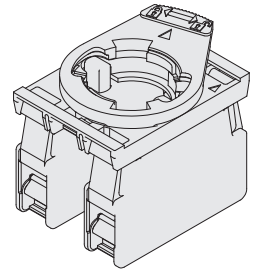
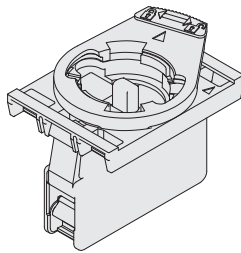
10 pcs packs



Contact block	Panel fixing	
	Screw connection	Solder connection
1NC slow action \rightarrow	E2 CP01G2V1 	E2 CP01G2S1 
1NO slow action	E2 CP10G2V1 	E2 CP10G2S1 
1NC \rightarrow lagging slow action	E2 CP01K2V1 	E2 CP01K2S1 
1NO leading slow action	E2 CP10L2V1 	E2 CP10L2S1 

Contact block	Base fixing
	Screw connection
1NC slow action \rightarrow	E2 CF01G2V1 
1NO slow action	E2 CF10G2V1 
1NC \rightarrow lagging slow action	E2 CF01K2V1 
1NO leading slow action	E2 CF10L2V1 

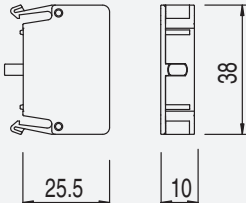
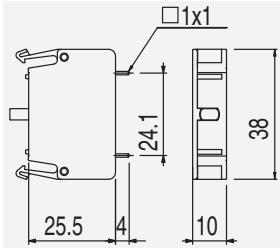
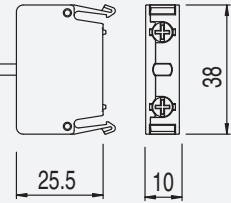
Complete units with contact block and fixing adapter



Contacts			Panel fixing Screw connection
pos 2	pos 3	pos 1	
-	1NO	-	E2 AC-XXBC0010 E2 1BAC11 + E2 CP10G2V1
-	1NC \rightarrow	-	E2 AC-XXBC0009 E2 1BAC11 + E2 CP01G2V1


Contacts			Panel fixing Screw connection
pos 2	pos 3	pos 1	
1NO	-	1NO	E2 AC-XXBC0012 E2 1BAC11 + E2 CP10G2V1 + E2 CP10G2V1
1NC \rightarrow	-	1NC \rightarrow	E2 AC-XXBC0011 E2 1BAC11 + E2 CP01G2V1 + E2 CP01G2V1
1NC \rightarrow	-	1NO	E2 AC-XXBC0028 E2 1BAC11 + E2 CP10G2V1 + E2 CP01G2V1

Dimensions

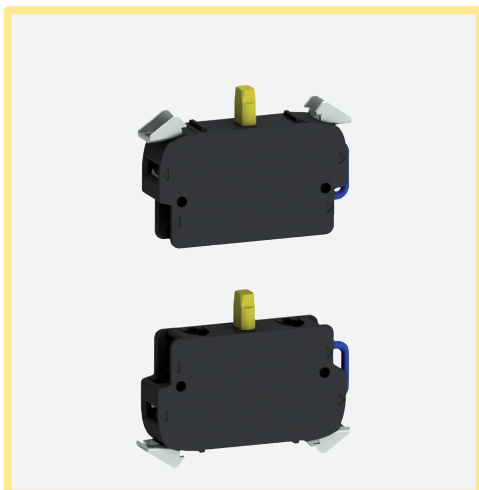
Panel fixing contact block screw connection	Panel fixing contact block solder connection	Base fixing contact block screw connection
		
Holes on PCB \varnothing 1,4 mm		

Dust protection

50 pcs packs

	Article	Description
	VE PR3A70	Transparent dust protection for contact block E2 series. Applicable to all contacts fixed on panels.

Items with code on the green background are available in stock



Main features

- Self-monitored contact block. Electrical circuit opening indicates separation from the device
- Gold plated contacts version
- Positive opening NC contacts according to IEC 6097-5-1

Markings and quality marks:



Approval GOST: POCC IT.AB24.B04512

Technical data

General data

Protection degree:	IP20 on the terminals according to IEC 60529
Ambient temperature:	-40°C +80°C
Mechanical endurance:	20 million operations cycles
Max operating frequency:	3600 operations cycles/hour
Utilization requirements:	see page 78

Contact block

Contacts commutation force:	2,9 N
Actuating force at end travel:	5 N
Positive opening force:	17 N
Velocità di azionamento:	min 1 mm/s max 0,5 m/s
Contacts material:	silver contacts (standard) Contacts for weak current in silver, 1µm thick gold-plating (on request)
Contacts form:	"V shape" self-cleaning contacts with quadruple contact points
Conductors cross section:	min 1 x 0,34 mm ² (1 x AWG 22) max 2 x 1,5 mm ² (2 x AWG 16)
Screw terminal driving torque:	0,6 ... 0,8 Nm

In conformity with standards:

IEC 60947-1, IEC 60947-5-1, IEC 60204-1, EN 60947-1, EN 60947-5-1, EN 60204-1, UL 508, CSA 22-2 N°14.

⚠ Installation for safety applications:

Use only switches marked with the symbol . The safety circuit must always be connected with the **NC contacts** (normally closed contacts: .1-.2) as stated in the standard EN 60947-5-1, encl. K, par. 2.

In conformity with requirements requested by:

Low Voltage Directive 2006/95/EC, Machinery Directive 2006/42/EC and Electromagnetic Compatibility 2004/108/EC.

Positive contact opening in conformity with standards:

IEC 60947-5-1, EN 60947-5-1, VDE 0660-206.

Electrical data

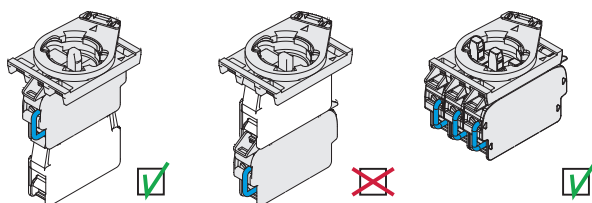
Thermal current (I _{th}):	10 A
Rated insulation voltage (U _i):	250 Vac/dc
Protection against short circuits:	fuse 10 A 500 V type gG/gL
Rated impulse withstand voltage (U _{imp}):	4 kV
Pollution degree:	3

Utilization categories

Alternate current: AC15 (50-60 Hz)				
U _e (V)	24	48	120	250
I _e (A)	6	6	6	6
Direct current: DC13				
U _e (V)	24	48	125	250
I _e (A)	2,5	1,3	0,6	0,3

General characteristics

Fitting of several single, double and self-monitored contact blocks

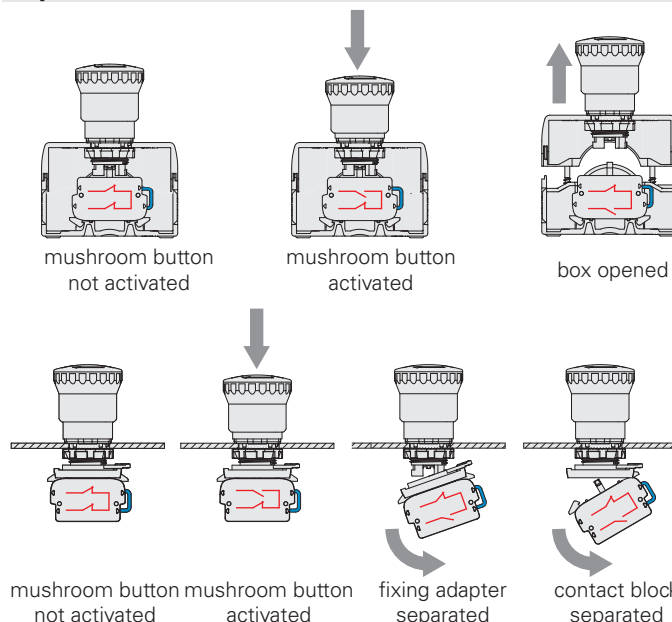


Always install self-monitored contact blocks directly on the fixing adapter.

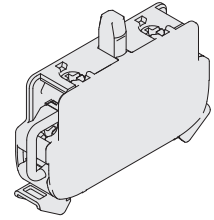
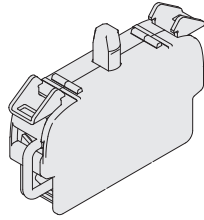
Do not fix self-monitored contact blocks to standard contact blocks. Forbidden application!




Fix no more than three self-monitored contact blocks per device.




Operation of self-monitored contact blocks



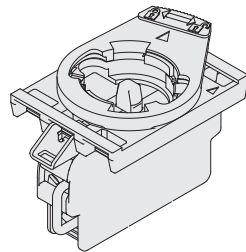
Contact block selection table 5 pcs packs




Contact block	Panel fixing Screw connection
1NC  slow self-monitored action 	E2 CP01S2V1 2.3 0.8 0 1.1  2.1 5

Contact block	Base fixing Screw connection
1NC  slow self-monitored action 	E2 CF01S2V1 2.3 0.8 0 1.1  2.1 5

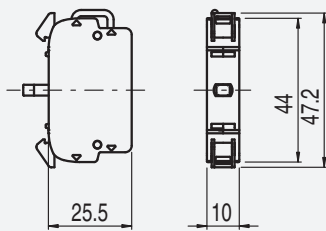
Complete units with contact block and fixing adapter



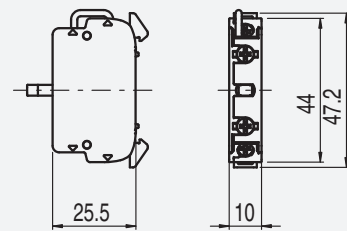
Contacts			Panel fixing Screw connection
pos 2	pos 3	pos 1	
-	1NC  SELF-MONITORED	-	E2 AC-XXBC0139 E2 1BAC11 + E2 CP01S2V1

Dimensions


Panel fixing contact block E2 CP01S...



Base fixing contact block E2 CF01S...



Dust protection 50 pcs packs

Article	Description
 VE PR3A70	Transparent dust protection for contact block E2 series. Applicable to all contacts fixed on panels.

Items with code on the **green** background are available in stock