

# Protection, flexibility and safety

## Cam switches from 10 to 63 A

### ► STANDARD SOLUTIONS P. 198 - 223

The expertise of a specialist like Baco allows us to offer custom solutions, even the most specific.



**Choice of electrical configuration**  
from 1 to 24 contacts

**Metal shaft**  
can withstand more than  
1 million operations

**Customized  
engravings**

### ► ADVANTAGES

- Conform to European and international standards: IEC, UL and CSA, and CCC
- A metal shaft capable of withstanding more than 1 million operations
- More than 50,000 different electrical diagrams available
- Many specific functions and special markings

# CAM SWITCHES

## ► Single Hole Mounting $\phi 22\text{mm}$

 Technical Info (p. 224)

### GENERAL USE RATING 12A

IP40 standard - IP65 available upon request



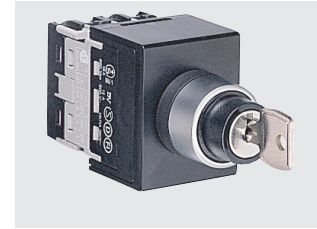
HANDLE WITH LEGEND



HANDLE





LEVER



KEY

Mounting and Dimensions see pg 226 to 229

Switch Series	Operator	Number of poles	Number of contacts	Positions	Designation	Part Number
PR12	HANDLE/LEGEND	1	1		PR12 1101 A4 E N48MD50	<b>NB01AX80</b>
PR12	HANDLE/LEGEND	2	2		PR12 1102 A4 E N48MD50	<b>NB02AX80</b>
PR12	HANDLE/LEGEND	3	3		PR12 1103 A4 E N48MD50	<b>NB03AX80</b>
PR12	HANDLE/LEGEND	4	4		PR12 1104 A4 E N48MD50	<b>NB04AX80</b>
PR12	HANDLE	1	1		PR12 1101 A4 E C21RA03	<b>NB01AC113</b>
PR12	HANDLE	2	2		PR12 1102 A4 E C21RA03	<b>NB02AC113</b>
PR12	HANDLE	3	3		PR12 1103 A4 E C21RA03	<b>NB03AC113</b>
PR12	HANDLE	4	4		PR12 1104 A4 E C21RA03	<b>NB04AC113</b>
PR12	LEVER	1	1		PR12 1101 A4 E C21RB03	<b>NB01AC123</b>
PR12	LEVER	2	2		PR12 1102 A4 E C21RB03	<b>NB02AC123</b>
PR12	LEVER	3	3		PR12 1103 A4 E C21RB03	<b>NB03AC123</b>
PR12	LEVER	4	4		PR12 1104 A4 E C21RB03	<b>NB04AC123</b>
PR12	KEY	1	1	Key Removable in both positions	PR12 1101 A4 E C21RC00	<b>NB01AC1C1</b>
PR12	KEY	2	2		PR12 1102 A4 E C21RC00	<b>NB02AC1C1</b>
PR12	KEY	3	3		PR12 1103 A4 E C21RC00	<b>NB03AC1C1</b>
PR12	KEY	4	4		PR12 1104 A4 E C21RC00	<b>NB04AC1C1</b>
PR12	HANDLE/LEGEND	1	2		PR12 2251 D4 E N48MD50	<b>NC51DX80</b>
PR12	HANDLE/LEGEND	2	4		PR12 2252 D4 E N48MD50	<b>NC52DX80</b>
PR12	HANDLE/LEGEND	3	6		PR12 2253 D4 E N48MD50	<b>NC53DX80</b>
PR12	HANDLE/LEGEND	4	8		PR12 2254 D4 E N48MD50	<b>NC54DX80</b>
PR12	HANDLE	1	2		PR12 2251 D4 E C21RA03	<b>NC51DC113</b>
PR12	HANDLE	2	4		PR12 2252 D4 E C21RA03	<b>NC52DC113</b>
PR12	HANDLE	3	6		PR12 2253 D4 E C21RA03	<b>NC53DC113</b>
PR12	HANDLE	4	8		PR12 2254 D4 E C21RA03	<b>NC54DC113</b>
PR12	LEVER	1	2		PR12 2251 D4 E C21RB03	<b>NC51DC123</b>
PR12	LEVER	2	4		PR12 2252 D4 E C21RB03	<b>NC52DC123</b>
PR12	LEVER	3	6		PR12 2253 D4 E C21RB03	<b>NC53DC123</b>
PR12	LEVER	4	8		PR12 2254 D4 E C21RB03	<b>NC54DC123</b>

# CAM SWITCHES

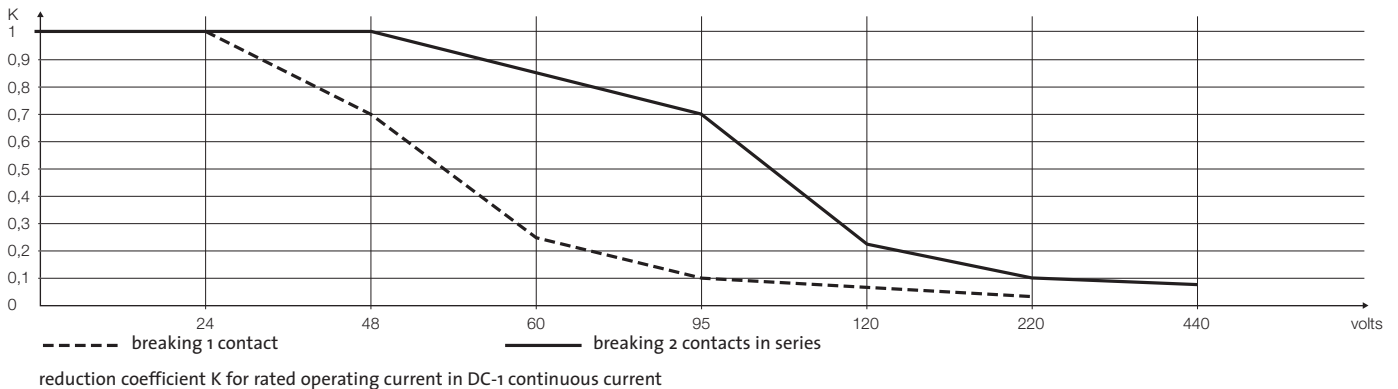
## ► Technical Specifications

UL/CSA Characteristics	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63	PR 125	PR 160
<b>► UL/CSA</b>								
1 PHASE 110/120 VAC	0.5 HP	1 HP	1.5 HP	2 HP	3 HP	5 HP	N/A	N/A
3 PHASE 110/120 VAC 220/240 VAC 440/480 VAC 550/600 VAC	1 HP	2 HP	3 HP	3 HP	7.5 HP	10 HP	N/A	N/A
	3 HP	5 HP	5 HP	7.5 HP	15 HP	20 HP	N/A	N/A
	5 HP	7.5 HP	10 HP	15 HP	30 HP	40 HP	N/A	N/A
	3 HP	10 HP	15 HP	20 HP	30 HP	40 HP	N/A	N/A
GENERAL USE (600 V) (MOTOR CONTROLLER)	12 A	16A	20 A	25 A	50 A	63 A	N/A	N/A
UL 508 RECOGNIZED	YES	YES	YES	YES	YES	YES	No	No
CSA CERTIFIED	YES	YES	YES	YES	YES	YES	No	No
<b>IEC Characteristics</b>								
<b>► For thermal current AC-20 lth I<sub>c</sub>(A)</b> (IEC 60 947-3)	20	25	32	40	63	80	200	250
<b>► Rated operating current for AC-21 A I<sub>e</sub>(A)</b> (IEC 60 947-3) Switching of resistive loads including moderate overloads	16	20	25	32	50	80	160	200
<b>► Rated operating current for AC-15 A I<sub>e</sub>(A) at 230V AC</b> (IEC 60 947-3) Control of electromagnetic loads	6	8	10	12	-	-	-	-
<b>► Performance in AC 23 (kW)</b> (IEC 60 947-3) Switching of motors or other highly inductive loads								
- 3 x 230 V	4	5.5	7.5	11	15	18.5	-	-
- 3 x 400 V	7.5	11	11	11	22	25	-	-
- 3 x 500 V	5.5	11	11	11	25	25	-	-
- 3 x 690 V	4	10	10	11	18.5	22	-	-
<b>► Performance in AC 3</b> (IEC 60 947-3) Control of squirrel-cage motors starting and switching off motors while running - In kW								
- 3 x 230 V	3	4	4	5.5	11	15	-	-
- 3 x 400 V	4	7.5	7.5	11	18.5	22	-	-
- 3 x 500 V	5.5	7.5	7.5	11	18.5	22	-	-
- 3 x 690 V	3	7.5	7.5	11	18.5	22	-	-

## CAM SWITCHES

### ► Technical Specifications

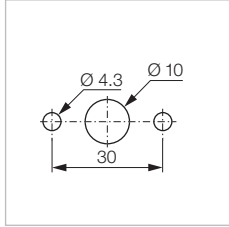
IEC Characteristics	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63	PR 125	PR 160
<b>► Performance in AC 3 - cont.</b>								
- In HP (for reference)								
- 3 x 230 V	4	5.5	5.5	7.5	15	20	-	-
- 3 x 400 V	5.5	10	10	15	25	30	-	-
- 3 x 500 V	7.5	10	10	15	25	30	-	-
- 3 x 690 V	4	10	10	15	25	30	-	-
<b>► Rated insulation voltage <math>U_i</math> (V)</b>								
- Max. rated voltage $U_e(v)$ IEC	690	690	690	690	690	690	690	690
- CSA (Canada)	600	600	600	600	600	600	600	600
- UL (USA)	600	600	600	600	600	600	600	600
<b>► Rated short time withstand current <math>I_{cw}</math> (A) for 1 sec</b>								
	250	400	420	800	1000	1000	2000	2400
<b>► Maximum wire size (mm<sup>2</sup>)</b>								
- rigid	4	6/4 <sup>(1)</sup>	6/4 <sup>(1)</sup>	6	16	16	ø 8 screw for eyelet	
- flexible	2.5	4	4	6	16	16	ø 8 screw for eyelet	
<b>► Maximum wire size (AWG)</b>								
- rigid	10	8/10 <sup>(1)</sup>	8/10 <sup>(1)</sup>	8	6	6		
- flexible	14	12	12	8	6	6		
(1): These values correspond to terminals with jumpers								
<b>► Mechanical durability</b> 1,250,000 operations, maximum rate 150 operations per hour								
<b>► Operating temperature limits</b> - 20°C to + 70°C - 4°F to + 158°F (beyond these limits consult us)								
<b>► Rated operating current in DC-1 low inductive loads (&lt; 1 ms)</b>								
Rated operating current $I_e$ (A) 24 V DC	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63	PR 125	PR 160
	16	20	25	32	50	80	-	-
$I_e$ (A): rated current for breaking 1 contact. For higher voltages you must use a reduction coefficient K in the following graph								



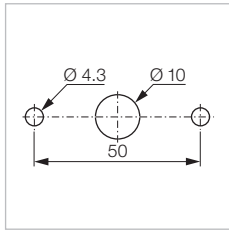
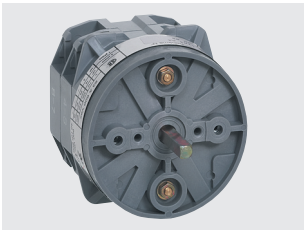
# CAM SWITCHES

## ► Mounting

### 2 SCREWS - 30 OR 50 MM INTERVAL

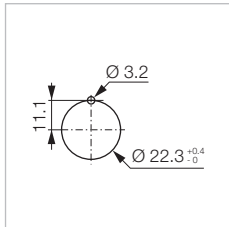


PR 12  
PR 17  
PR 21  
PR 26



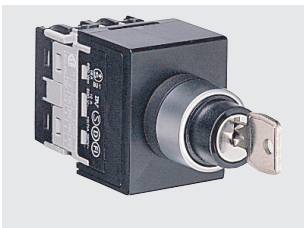
PR 40  
PR 63

### SINGLE HOLE MOUNTING Ø 22



For PR12 only

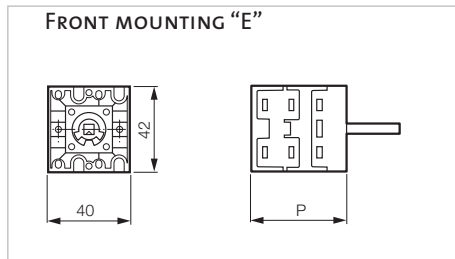
- 48 legend plate with handle
- HANDLE
- LEVER
- KEY



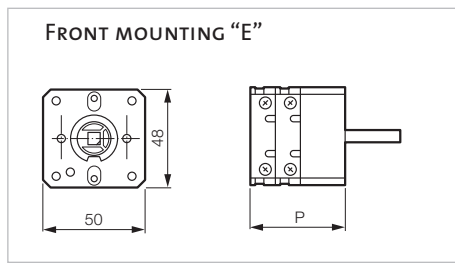
# CAM SWITCHES

## ► Dimensions

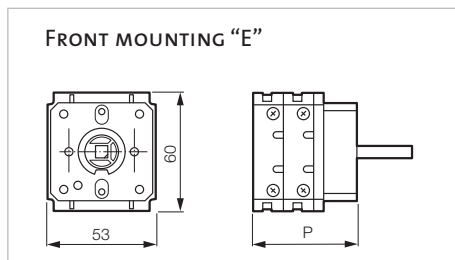
### 2 SCREW FRONT MOUNTING (E)



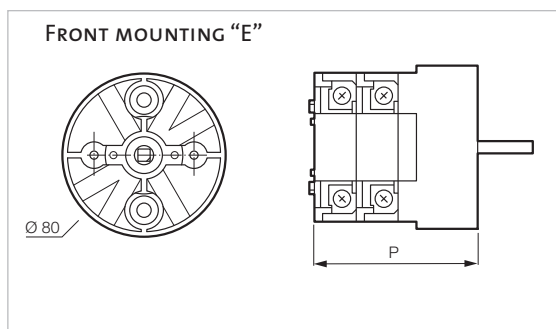
PR 12	No. of contacts	P*
	1-2	36
	3-4	46
	5-6	56
	7-8	66
	9-10	76
	11-12	86



PR 17/21	No. of contacts	P*
	1-2	33
	3-4	45
	5-6	57
	7-8	69
	9-10	81
	11-12	93



PR 26	No. of contacts	P*
	1-2	36
	3-4	51
	5-6	66
	7-8	81
	9-10	96
	11-12	111



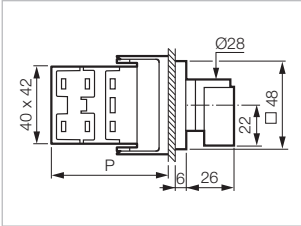
PR 40/63	No. of contacts	P*
	1-2	60
	3-4	80
	5-6	100
	7-8	120
	9-10	140
	11-12	160

# CAM SWITCHES

## ► Dimensions

### SINGLE HOLE MOUNTING Ø 22

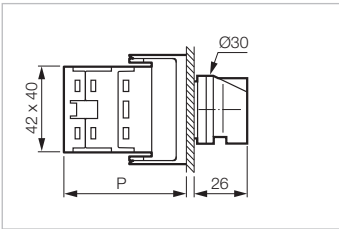
FRONT MOUNTING "E N48MD50"



**WITH HANDLE AND  
LEGEND PLATE**

No. of contacts	P*
1-2	51
3-4	61
5-6	71
7-8	81
9-10	91
11-12	101

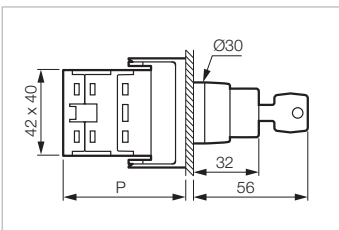
FRONT MOUNTING "E C21RA03"



**WITH HANDLE  
OR LEVER**

No. of contacts	P*
1-2	51
3-4	61
5-6	71
7-8	81
9-10	91
11-12	101

FRONT MOUNTING "E C21RC00"



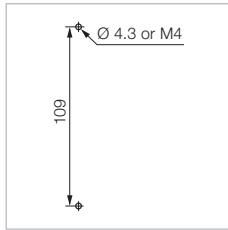
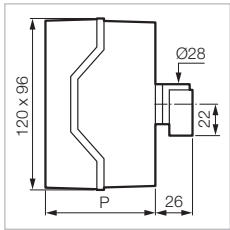
**WITH KEY**

No. of contacts	P*
1-2	51
3-4	61
5-6	71
7-8	81
9-10	91
11-12	101

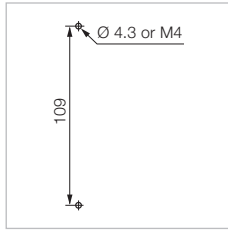
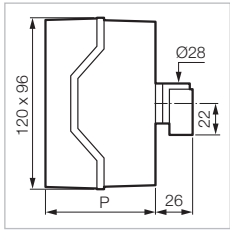
## CAM SWITCHES

### ► Dimensions

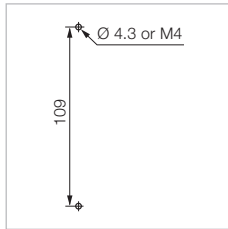
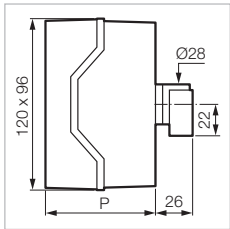
#### ENCLOSURES



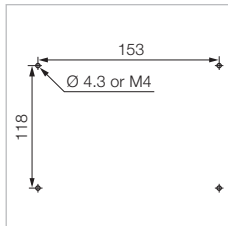
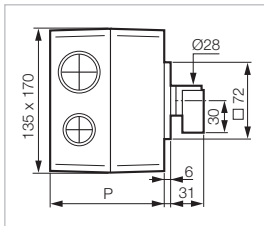
PR 12	No. of contacts	P*
	1-6	77
	7-10	101



PR 17/21	No. of contacts	P*
	1-6	77
	7-10	101



PR 26	No. of contacts	P*
	1-4	77
	5-8	101



PR 40/63	No. of contacts	P*
	1-4	107
	5-8	145