

Osmoz complete units: non-illuminated control and signalling units

NEW



237 02



237 15



237 26



237 31

Complete units comprising:

- heads
- block sub-assemblies: screw connection (block + clip)
- IP 66 except Cat.Nos 237 11/12/13 - IP 67
- Conform to IEC 60947-5-1

Pack.	Cat.Nos	Spring return
		Flush
1	237 01	● Red - NC (238 01 + 229 61)
1	237 02	● Green - NO (238 02 + 229 62)
1	237 03	● Blue - NO (238 03 + 229 62)
1	237 04	● Yellow - NO (238 04 + 229 62)
1	237 06	● Black - NO (238 06 + 229 62)
1	237 08	● Red engraved "O" - NC (238 08 + 229 61)
1	237 09	● Green engraved "I" - NO (238 09 + 229 62)
		Flush with shroud
1	237 11	● Red - NC (238 11 + 229 61)
1	237 12	● Green - NO (238 12 + 229 62)
1	237 13	● Black - NO (238 13 + 229 62)
		Projecting Ø22
1	237 15	● Red - NC (238 21 + 229 61)
		Mushroom head Ø40
1	237 16	● Red - NC (238 34 + 229 61)

Pack.	Cat.Nos	Twin touch
1	237 17	Red engraved "O", green engraved "I" Flush/Projecting - Green/Red - NO + NC (239 82 + 229 76)

Pack.	Cat.Nos	Stay-put mushroom head
		Push - turn
1	237 20	● Red - Ø40 (238 82 + 229 61) Emergency stop - NC
1	237 26	● Red - Ø40 (238 85 + 229 76) EN 418 emergency stop - NC + NO
		Push - pull
1	237 21	● Red - Ø40 (238 72 + 229 61) Emergency stop - NC
1	237 25	● Red - Ø40 (238 74 + 229 76) EN 418 emergency stop - NC + NO
1	237 28	● Red - Ø54 with flag indicator (238 95 + 229 61) EN 418 emergency stop - NC
		With key
1	237 22	● Red - Ø40 (238 91 + 229 61) Emergency stop - NC
1	237 27	● Red - Ø40 (238 92 + 229 76) EN 418 emergency stop - NO + NC

Pack	Cat.Nos	Selector switches
		Black button
		With standard handle
1	237 30	 2 stay-put positions - 90° + NO (239 15 + 229 62)
1	237 31	 3 stay-put positions - 45° + 2 NO (239 23 + 229 74)
1	237 32	 3 positions with spring return to 0 - 45° + 2 NO (239 28 + 229 74)
		With long handle
1	237 35	 3 stay-put positions - 45° + 2 NO (239 40 + 229 74)
1	237 36	 3 positions with spring return to 0 - 45° + 2 NO (239 43 + 229 74)
		With key⁽¹⁾
1	237 38	 2 stay-put positions - 45° + NO (239 50 + 229 62)

(1) Key free in position symbolized "0"

NEW

Osmoz complete units: illuminated control and signalling units

Osmoz: equipped control stations control and signalling units



237 52



237 67



242 14



242 30

Complete units comprising:
 - heads
 - block sub-assemblies: screw connection (led block + clip)
 IP 66
 Conform to IEC 60947-5-1

IP 66
 Equipped with head and contact block

Pack	Cat.Nos	Spring return
		Flush
1	237 50	○ White - 24 V~/= - NO + NC (240 00 + 229 76 + 229 10)
1	237 51	● Red - 24 V~/= - NO + NC (240 01 + 229 76 + 229 11)
1	237 52	● Green - 24 V~/= - NO + NC (240 02 + 229 76 + 229 12)
1	237 53	● Blue - 24 V~/= - NO + NC (240 03 + 229 76 + 229 13)
1	237 54	● Yellow - 24 V~/= - NO + NC (240 04 + 229 76 + 229 14)
1	237 56	● Red - 130 V~ - NO + NC (240 01 + 229 76 + 229 31)
1	237 57	● Green - 130 V~ - NO + NC (240 02 + 229 76 + 229 32)
1	237 58	● Red - 230 V~ - NO + NC (240 01 + 229 76 + 229 41)
1	237 59	● Green - 230 V~ - NO + NC (240 02 + 229 76 + 229 42)

Pack	Cat.Nos	1 hole
1	242 17	Grey cover 2 position key selector switch (key free in position O) + NO contact
1	242 14	Yellow cover Red mushroom head Ø40 push-turn + NC contact Emergency stop
1	242 18	Yellow cover Red mushroom head Ø54 with flag indicator + NC contact EN 418 emergency stop

Pack	Cat.Nos	2 holes
1	242 30	Grey cover 1 green spring return button engraved "I" + NO contact 1 red spring return button engraved "O" + NC contact

Pack	Cat.Nos	3 holes
1	242 36	Grey cover 1 green spring return button engraved "▶" + NO contact 1 red spring return button engraved "O" + NC contact 1 green spring return button engraved "▶" + NO contact

Pack	Cat.Nos	Twin touch
		Red engraved "O", green engraved "I"
1	237 65	Flush/Projecting - Green/Red - 24 V~/= NO + NC (240 73 + 229 76 + 229 10)
1	237 66	Flush/Projecting - Green/Red - 130 V~ NO + NC (240 73 + 229 76 + 229 30)
1	237 67	Flush/Projecting - Green/Red - 230 V~ NO + NC (240 73 + 229 76 + 229 40)

Pack	Cat.Nos	Selector switches
		With standard handle 2 stay-put positions - 45°
1	237 61	● Red - 24 V~/= - NO + NC (240 31 + 229 76 + 229 11)
1	237 62	● Green - 24 V~/= - NO + NC (240 32 + 229 76 + 229 12)
1	237 63	● Black - 24 V~/= - NO + NC (240 33 + 229 76 + 229 10)



Pack	Cat.Nos	Pilot lights
1	237 70	○ White - 24 V~/= (241 60 + 229 60 + 229 10)
1	237 71	● Red - 24 V~/= (241 61 + 229 60 + 229 11)
1	237 72	● Green - 24 V~/= (241 62 + 229 60 + 229 12)
1	237 73	● Blue - 24 V~/= (241 63 + 229 60 + 229 13)
1	237 74	● Yellow - 24 V~/= (241 64 + 229 60 + 229 14)
1	237 80	○ White - 130 V~ (241 60 + 229 60 + 229 30)
1	237 81	● Red - 130 V~ (241 61 + 229 60 + 229 31)
1	237 82	● Green - 130 V~ (241 62 + 229 60 + 229 32)
1	237 83	● Blue - 130 V~ (241 63 + 229 60 + 229 33)
1	237 84	● Yellow - 130 V~ (241 64 + 229 60 + 229 34)
1	237 90	○ White - 230 V~ (241 60 + 229 60 + 229 40)
1	237 91	● Red - 230 V~ (241 61 + 229 60 + 229 41)
1	237 92	● Green - 230 V~ (241 62 + 229 60 + 229 42)
1	237 93	● Blue - 230 V~ (241 63 + 229 60 + 229 43)
1	237 94	● Yellow - 230 V~ (241 64 + 229 60 + 229 44)

Red catalogue numbers: New products

Osmoz separate units: non-illuminated heads

control and signalling units

NEW



238 01



238 02



238 06



238 21



239 82



238 82



238 85



239 06



239 07

Supplied with a fixing ring
IP 66 except Cat.Nos 238 11/12/13 - IP 67
Conform to IEC 60947-5-1

Pack	Cat.Nos	Spring return
		Flush
10	238 00	○ White
10	238 01	● Red
10	238 02	● Green
10	238 03	● Blue
10	238 04	● Yellow
10	238 06	● Black
1	238 08	● Red engraved "O"
1	238 09	● Green engraved "I"
		Flush with shroud
5	238 11	● Red
5	238 12	● Green
5	238 13	● Black
		Projecting Ø22
5	238 21	● Red
1	238 22	● Green
5	238 26	● Black
		Mushroom head Ø40
10	238 34	● Red
10	238 35	● Green
10	238 36	● Black
1	238 37	● Yellow

Pack	Cat.Nos	Twin touch
		Red engraved "O", green engraved "I"
5	239 80	Flush/Flush - Green/Red - IP 66
5	239 82	Flush/Projecting - Green/Red - IP 66
5	239 84	Flush/Projecting - Green/Red - IP 67

Pack	Cat.Nos	Stay-put mushroom heads
		Push-pull emergency stop
10	238 72	● Red - Ø40
1	238 76	● Black - Ø40
		Push-pull EN 418 emergency stop
10	238 74	● Red - Ø40
1	238 94	● Red - Ø54 With flag indicator "O - I"
5	238 95	● Red - Ø54 With flag indicator "STOP - I"
		Push-turn emergency stop
10	238 80	● Red - Ø32
1	238 81	● Black - Ø32
10	238 82	● Red - Ø40
1	238 83	● Black - Ø40
		Push-turn EN 418 emergency stop
10	238 85	● Red - Ø40
		Emergency stop with key
10	238 91	● Red - Ø40
		EN 418 emergency stop with key
1	238 92	● Red - Ø40

Pack	Cat.Nos	Selector switches	Positions
		With standard handle	
1	239 01	● Red	 2 stay-put positions - 45°
1	239 02	● Green	
10	239 03	● Black	
1	239 04	● Grey	
1	239 05	● Red	 2 stay-put positions - 45°
1	239 06	● Green	
10	239 07	● Black	
1	239 08	● Grey	
1	239 09	● Black	 2 positions with spring-return - 45°
1	239 13	● Black	 2 positions with spring-return - 45°
10	239 15	● Black	 2 stay-put positions - 90°
1	239 18	● Black	 2 stay-put positions - 90°
1	239 21	● Red	 3 stay-put positions - 45°
1	239 22	● Green	
10	239 23	● Black	
1	239 24	● Grey	
1	239 26	● Black	 3 positions with spring-return from left to 0 - 45°
1	239 27	● Black	 3 positions with spring-return from right to 0 - 45°
5	239 28	● Black	 3 positions with spring-return to 0 - 45°
1	239 29	● Black	 3 stay-put positions - 90°

NEW

Osmoz separate units: non-illuminated heads control and signalling units

Osmoz separate units: illuminated heads control and signalling units



239 32



239 51



240 02



240 12



240 73

Supplied with a fixing ring
IP 66 except Cat.No 240 76 - IP 67
Conform to IEC 60947-5-1

Pack	Cat.Nos	Selector switches (continued)	
		With long handle	
		Black long handle	
10	239 30		2 stay-put positions - 45°
1	239 31		2 positions with spring-return - 45°
1	239 32		2 stay-put positions - 45°
1	239 34		2 stay-put positions - 90°
1	239 35		2 stay-put positions - 90°
5	239 40		3 stay-put positions - 45°
1	239 41		3 positions with spring-return from left to 0 - 45°
1	239 42		3 positions with spring-return from right to 0 - 45°
1	239 43		3 positions with spring-return to 0 - 45°
		With key ⁽¹⁾	
		Black button	
1	239 50		2 stay-put positions - 45°
1	239 51		2 stay-put positions - 45°
1	239 52		2 positions with spring-return - 45°
1	239 53		2 stay-put positions - 90°
1	239 54		2 stay-put positions - 90° Key free in both positions
1	239 55		2 stay-put positions - 90° Key free in both positions
1	239 60		3 stay-put positions - 45°
1	239 62		3 positions with spring-return from right to 0 - 45°
1	239 61		3 positions with spring-return to 0 - 45°
1	239 63		3 stay-put positions - 90° Key free in 3 positions
1	239 64		3 stay-put positions - 90°

(1) Key free in position symbolized “.”

Pack	Cat.Nos	Spring return	
		Flush	
		<ul style="list-style-type: none"> ○ White ● Red ● Green ● Blue ● Yellow 	
		Projecting	
		<ul style="list-style-type: none"> ● Red ● Green 	
		Twin touch	
		Flush/Flush	
		Red engraved “O”, green engraved “I”	
5	240 70	●● Green/Red	
		Flush/Projecting	
		Red engraved “O”, green engraved “I”	
5	240 73	●● Green/Red	
1	240 76	●● Green/Red	
		Flush/Flush	
		Without engraving	
5	240 71	●● Green/Green	

Osmoz separate units: illuminated heads control and signalling units

NEW



Supplied with fixing ring
IP 66
Conform to IEC 60947-5-1

Pack	Cat.Nos	Selector switches	
With standard handle			
			Positions
1	240 31	● Red	2 stay-put positions - 45°
5	240 32	● Green	
1	240 33	● Black	
1	240 35	● Red	2 stay-put positions - 45°
1	240 36	● Green	
1	240 37	● Black	
1	240 41	● Red	2 stay-put positions - 90°
5	240 42	● Green	
5	240 43	● Black	
1	240 51	● Red	3 stay-put positions - 45°
1	240 52	● Green	
1	240 53	● Black	
1	240 54	● Red	3 positions with spring-return from right to 0 - 45°
1	240 55	● Green	
1	240 56	● Black	
1	240 57	● Red	3 positions with spring-return to 0 - 45°
1	240 58	● Green	
1	240 59	● Black	
1	240 60	● Black	2 stay-put positions - 45°
1	240 61	● Black	3 stay-put positions - 45°

Pack	Cat.Nos	Stay-put mushroom head
Push-pull		
1	240 80	● Red - Emergency stop Ø40
5	240 82	● Red - EN 418 emergency stop Ø40
Push-turn		
1	240 91	● Red - Emergency stop Ø40

Pack	Cat.Nos	Pilot lights
10	241 60	○ White
10	241 61	● Red
10	241 62	● Green
5	241 63	● Blue
5	241 64	● Yellow

Pack	Cat.Nos	One-piece pilot lights
To be used without electrical block		
With integrated Led		
10	241 20	○ White - 24 V \sim /=
10	241 21	● Red - 24 V \sim /=
10	241 22	● Green - 24 V \sim /=
1	241 23	● Blue - 24 V \sim /=
10	241 24	● Yellow - 24 V \sim /=
1	241 30	○ White - 130 V \sim
1	241 31	● Red - 130 V \sim
1	241 32	● Green - 130 V \sim
1	241 33	● Blue - 130 V \sim
1	241 34	● Yellow - 130 V \sim
10	241 40	○ White - 230 V \sim
10	241 41	● Red - 230 V \sim
10	241 42	● Green - 230 V \sim
1	241 43	● Blue - 230 V \sim
10	241 44	● Yellow - 230 V \sim
For BA9S lamp (not supplied)		
Direct supply		
10	241 00	○ Colourless
10	241 01	● Red
10	241 02	● Green
1	241 03	● Blue
10	241 04	● Yellow
10	241 05	○ White

NEW

Osmoz separate units: block sub-assemblies control and signalling units

Osmoz separate units: electrical blocks control and signalling units



229 61



229 76



229 78



229 01



229 02



229 42



230 14



229 60



229 64



229 68

Clip and screw electrical blocks assembled
IP 20
Conform to IEC 60947-5-1

IP 20
Conform to IEC 60947-5-1

Pack	Cat.Nos	For non-illuminated heads
		Screw terminals
10	229 61	NC + 1 position clip
10	229 62	NO + 1 position clip
5	229 65	NO/NC + 3 position clip
5	229 66	2 x NO/NC + 3 position clip
1	229 71	NC + 3 position clip
1	229 72	NO + 3 position clip
10	229 73	2 NC + 3 position clip
10	229 74	2 NO + 3 position clip
10	229 76	NO + NC + 3 position clip
1	229 77	2 NO + NC + 3 position clip
1	229 78	NO + 2 NC + 3 position clip

Pack	Cat.Nos	For illuminated heads
		Screw terminals
		With 3 position clip
1	229 80	○ White - 24 V \sim /= - 2 NO/NC
1	229 81	● Red - 24 V \sim /= - 2 NO/NC
1	229 82	● Green - 24 V \sim /= - 2 NO/NC
5	230 00	○ White - 24 V \sim /= - NO
5	230 01	● Red - 24 V \sim /= - NO
5	230 02	● Green - 24 V \sim /= - NO
1	230 03	○ White - 24 V \sim /= - NO + NC
1	230 04	● Red - 24 V \sim /= - NO + NC
1	230 05	● Green - 24 V \sim /= - NO + NC
5	230 06	○ White - 24 V \sim /= - 2 NO
5	230 07	● Red - 24 V \sim /= - 2 NO
5	230 08	● Green - 24 V \sim /= - 2 NO
1	229 90	○ White - 230 V \sim - 2 NO/NC
1	229 91	● Red - 230 V \sim - 2 NO/NC
1	229 92	● Green - 230 V \sim - 2 NO/NC
5	230 10	○ White - 230 V \sim - NO
5	230 11	● Red - 230 V \sim - NO
5	230 12	● Green - 230 V \sim - NO
1	230 13	○ White - 230 V \sim - NO + NC
1	230 14	● Red - 230 V \sim - NO + NC
1	230 15	● Green - 230 V \sim - NO + NC
5	230 16	○ White - 230 V \sim - 2 NO
5	230 17	● Red - 230 V \sim - 2 NO
5	230 18	● Green - 230 V \sim - 2 NO

Pack	Cat.Nos	For non-illuminated heads
		Contact blocks
		Screw terminals
20	229 01	NC
20	229 02	NO
10	229 03	NO/NC

Pack	Cat.Nos	For illuminated heads
		Screw terminals
5	229 10	○ White - 24 V \sim /=
5	229 11	● Red - 24 V \sim /=
5	229 12	● Green - 24 V \sim /=
5	229 13	● Blue - 24 V \sim /=
5	229 14	● Yellow - 24 V \sim /=
1	229 20	○ White - 48 V \sim /=
1	229 21	● Red - 48 V \sim /=
1	229 22	● Green - 48 V \sim /=
1	229 23	● Blue - 48 V \sim /=
1	229 24	● Yellow - 48 V \sim /=
5	229 30	○ White - 130 V \sim
5	229 31	● Red - 130 V \sim
5	229 32	● Green - 130 V \sim
5	229 33	● Blue - 130 V \sim
5	229 34	● Yellow - 130 V \sim
5	229 40	○ White - 230 V \sim
5	229 41	● Red - 230 V \sim
5	229 42	● Green - 230 V \sim
5	229 43	● Blue - 230 V \sim
5	229 44	● Yellow - 230 V \sim

Pack	Cat.Nos	Clips
		Mounting (p. 332)
20	229 60	1 position
20	229 64	3 positions
10	229 68	5 positions

Osmoz: control stations to be equipped

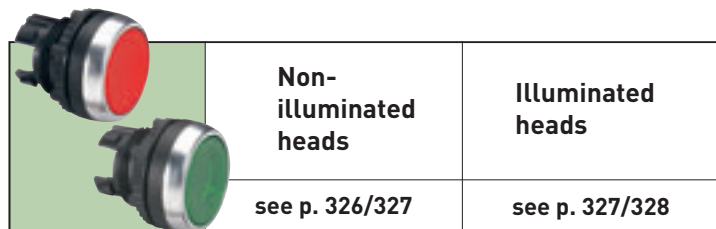
control and signalling units



Empty control stations to be equipped with:
 - illuminated or non-illuminated heads (p. 326/328)
 - specific blocks for control stations
 IP 66, IK 07

Pack	Cat.Nos	Control stations (to be equipped)
		Possibility to mount 3 electrical blocks per hole
1	242 00	1 hole - grey
1	242 01	1 hole - yellow cover
1	242 02	2 holes - grey
1	242 03	3 holes - grey
1	242 04	4 holes - grey
1	242 05	5 holes - grey

Pack	Cat.Nos	Specific blocks
		Contact block mounted on control station base
		Screw terminals
10	242 41	NC
10	242 42	NO
		Illuminated LED blocks
1	242 50	White - 24 V~/=
1	242 51	Red - 24 V~/=
1	242 52	Green - 24 V~/=
1	242 53	Blue - 24 V~/=
1	242 54	Yellow - 24 V~/=
1	242 60	White - 130 V~
1	242 61	Red - 130 V~
1	242 62	Green - 130 V~
1	242 63	Blue - 130 V~
1	242 64	Yellow - 130 V~
1	242 70	White - 230 V~
1	242 71	Red - 230 V~
1	242 72	Green - 230 V~
1	242 73	Blue - 230 V~
1	242 74	Yellow - 230 V~



Osmoz: accessories

control and signalling units



Pack	Cat.Nos	BA9S bulbs
10	241 71	For one-piece pilot lights
10	241 72	● Red - neon - 230 V~ ● Green - fluo - 230 V~

Pack	Cat.Nos	Mounting accessories
		IP 67 shroud
		Reinforced degree of protection: IP 67
		For spring return buttons
5	241 90	○ Transparent
5	241 91	● Red
5	241 92	● Green
5	241 93	● Black
1	241 96	○ ○ Transparent for twin touch flush/projecting
1	241 81	Yellow - standard padlockable guard for mushroom head
1	241 82	Yellow - high padlockable guard for mushroom head
1	241 89	Black - square
		Pre-drilled supports
		Clip-on to DIN rail
10	044 05	Pre-drilled support (1 x Ø22.5) 3 modules 17.5
1	248 45	Double pre-drilled (2 x Ø22.5) 4 modules 17.5
		Miscellaneous
5	241 86	Reducing ring Ø30/22
1	241 88	Padlockable shroud
10	241 87	Blanking plug-back
1	241 99	Anti-rotation ring
1	241 73	Bulb extractor
1	241 85	Fixing tool
		Legend plates
		To mount on frame
		Without engraving
10	243 02	○ Alu - standard model
10	243 03	● Black - standard model
10	243 07	○ Alu - large model
10	243 08	● Black - large model
		With engraving
		○ Alu - standard model
10	243 30	"O I"
10	243 32	"I O I"
10	243 43	"MANU - AUTO"
10	243 44	"MANU - O - AUTO"
10	243 51	"START"
		Round legend plate for mushroom head
		● Yellow
10	241 76	Ø60 "EMERGENCY STOP"
10	241 79	Ø80 "EMERGENCY STOP"

Pack	Cat.Nos	Frames
		Supplied without legend plate
		Without engraving
10	243 15	Round - standard model
10	243 16	Round - large model
10	243 18	Square - standard model
10	243 19	Round - standard model for twin touch

control and signalling units cross reference list

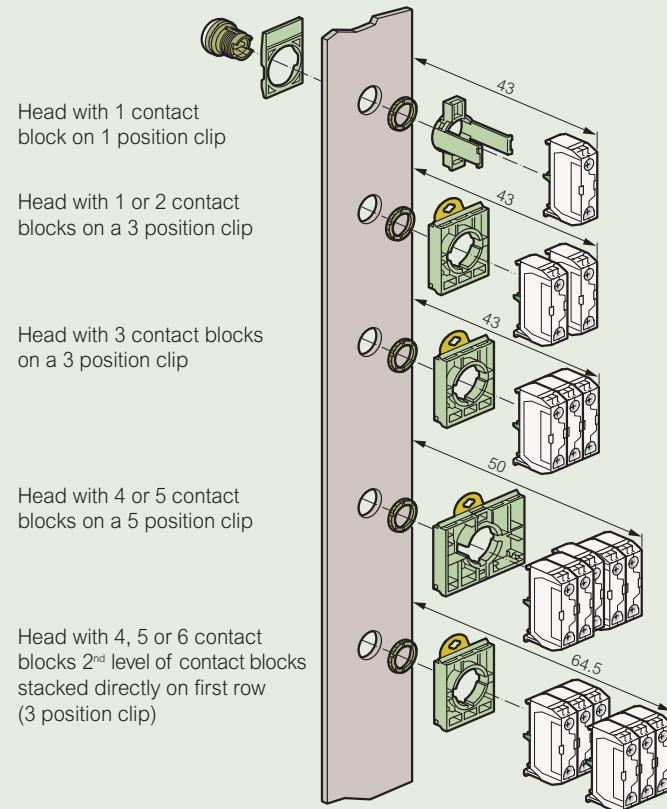
Signis / Osmoz

Signis Cat.Nos	Osmoz Cat.Nos		Signis Cat.Nos	Osmoz Cat.Nos		Signis Cat.Nos	Osmoz Cat.Nos	
	Complete units	To be composed		Complete units	To be composed		Complete units	To be composed
244 01 ○	240 00	-	247 62 ● 130 V	assembly	229 71 + 229 32	248 59	242 15	-
244 03 ●	240 02	-	247 62 ● 130 V	assembly	229 71 + 229 33	248 78	241 02	-
244 04 ●	240 01	-	247 62 ● 130 V	assembly	229 71 + 229 34	248 79	241 01	-
244 05 ●	240 04	-	247 62 ○ 230 V	assembly	229 71 + 229 40	248 80	241 04	-
244 13	240 12	-	247 62 ● 230 V	assembly	229 71 + 229 41	248 81	241 03	-
244 14	240 11	-	247 62 ● 230 V	assembly	229 71 + 229 42	248 82	241 05	-
244 41	240 32	-	247 62 ● 230 V	assembly	229 71 + 229 43	248 89 ○ 24 V	assembly	242 41 + 242 50
244 42	240 31	-	247 62 ● 230 V	assembly	229 71 + 229 44	248 89 ● 24 V	assembly	242 41 + 242 51
244 43	240 52	-	247 65 ○ 24 V	230 03	229 76 + 229 10	248 89 ● 24 V	assembly	242 41 + 242 52
244 44	240 51	-	247 65 ● 24 V	230 04	229 76 + 229 11	248 89 ● 24 V	assembly	242 41 + 242 53
244 58	242 18	-	247 65 ● 24 V	230 05	229 76 + 229 12	248 89 ● 24 V	assembly	242 41 + 242 54
244 81	238 80	-	247 65 ● 24 V	assembly	229 76 + 229 13	248 89 ○ 130 V	assembly	242 41 + 242 60
245 01	238 00	-	247 65 ● 24 V	assembly	229 76 + 229 14	248 89 ● 130 V	assembly	242 41 + 242 61
245 02	238 06	-	247 65 ○ 130 V	assembly	229 76 + 229 30	248 89 ● 130 V	assembly	242 41 + 242 62
245 03	238 02	-	247 65 ● 130 V	assembly	229 76 + 229 31	248 89 ● 130 V	assembly	242 41 + 242 63
245 04	238 01	-	247 65 ● 130 V	assembly	229 76 + 229 32	248 89 ● 130 V	assembly	242 41 + 242 64
245 05	238 04	-	247 65 ● 130 V	assembly	229 76 + 229 33	248 89 ○ 230 V	assembly	242 41 + 242 70
245 06	238 03	-	247 65 ● 130 V	assembly	229 76 + 229 34	248 89 ● 230 V	assembly	242 41 + 242 71
245 22	238 13	-	247 65 ○ 230 V	230 13	229 76 + 229 40	248 89 ● 230 V	assembly	242 41 + 242 72
245 23	238 12	-	247 65 ● 230 V	230 14	229 76 + 229 41	248 89 ● 230 V	assembly	242 41 + 242 73
245 24	238 11	-	247 65 ● 230 V	230 15	229 76 + 229 42	248 89 ● 230 V	assembly	242 41 + 242 74
245 34	238 34	-	247 65 ● 230 V	assembly	229 76 + 229 43	248 90 ○ 24 V	assembly	242 42 + 242 50
245 52	239 03	-	247 65 ● 230 V	assembly	229 76 + 229 44	248 90 ● 24 V	assembly	242 42 + 242 51
245 53	239 23	-	247 72 ○ 130 V	assembly	229 71 + 229 30	248 90 ● 24 V	assembly	242 42 + 242 52
245 62	239 30	-	247 72 ● 130 V	assembly	229 71 + 229 31	248 90 ● 24 V	assembly	242 42 + 242 53
245 63	239 40	-	247 72 ● 130 V	assembly	229 71 + 229 32	248 90 ● 24 V	assembly	242 42 + 242 54
245 65	239 43	-	247 72 ● 130 V	assembly	229 71 + 229 33	248 90 ○ 130 V	assembly	242 42 + 242 60
245 72	239 50	-	247 72 ● 130 V	assembly	229 71 + 229 34	248 90 ● 130 V	assembly	242 42 + 242 61
245 74	239 54	-	247 71 ○ 130 V	assembly	229 72 + 229 30	248 90 ● 130 V	assembly	242 42 + 242 62
245 75	239 63	-	247 71 ● 130 V	assembly	229 72 + 229 31	248 90 ● 130 V	assembly	242 42 + 242 63
245 81	238 82	-	247 71 ● 130 V	assembly	229 72 + 229 32	248 90 ● 130 V	assembly	242 42 + 242 64
245 82	238 91	-	247 71 ● 130 V	assembly	229 72 + 229 33	248 90 ○ 230 V	assembly	242 42 + 242 70
246 98	239 82	-	247 71 ● 130 V	assembly	229 72 + 229 34	248 90 ● 230 V	assembly	242 42 + 242 71
247 51	229 62	-	247 80 ○ 24 V	assembly	229 60 + 229 10	248 90 ● 230 V	assembly	242 42 + 242 72
247 52	229 61	-	247 80 ● 24 V	assembly	229 60 + 229 11	248 90 ● 230 V	assembly	242 42 + 242 73
247 56	229 66	-	247 80 ● 24 V	assembly	229 60 + 229 12	248 90 ● 230 V	assembly	242 42 + 242 74
247 53	229 74	-	247 80 ● 24 V	assembly	229 60 + 229 13	248 91	242 42	-
247 54	229 73	-	247 80 ● 24 V	assembly	229 60 + 229 14	248 92	242 41	-
247 55	229 76	-	247 80 ○ 130 V	assembly	229 60 + 229 30	248 95	238 82	-
247 23 ●	241 62	-	247 80 ● 130 V	assembly	229 60 + 229 31	248 96	238 74	-
247 24 ●	241 61	-	247 80 ● 130 V	assembly	229 60 + 229 32	248 97 ○ 24V	242 50	-
247 25 ●	241 64	-	247 80 ● 130 V	assembly	229 60 + 229 33	248 97 ● 24 V	242 51	-
247 26 ●	241 63	-	247 80 ● 130 V	assembly	229 60 + 229 34	248 97 ● 24 V	242 52	-
247 27 ○	241 60	-	247 80 ○ 230 V	assembly	229 60 + 229 40	248 97 ● 24 V	242 53	-
247 48	240 73	-	247 80 ● 230 V	assembly	229 60 + 229 41	248 97 ● 24 V	242 54	-
247 49	240 76	-	247 80 ● 230 V	assembly	229 60 + 229 42	248 97 ○ 130 V	242 60	-
247 61 ○ 24 V	230 00	229 72 + 229 10	247 80 ● 230 V	assembly	229 60 + 229 43	248 97 ● 130 V	242 61	-
247 61 ● 24 V	230 01	229 72 + 229 11	247 80 ● 230 V	assembly	229 60 + 229 44	248 97 ● 130 V	242 62	-
247 61 ● 24 V	230 02	229 72 + 229 12	247 81 ○ 130 V	assembly	229 60 + 229 40	248 97 ● 130 V	242 63	-
247 61 ● 24 V	assembly	229 72 + 229 13	247 81 ● 130 V	assembly	229 60 + 229 41	248 97 ● 130 V	242 64	-
247 61 ● 24 V	assembly	229 72 + 229 14	247 81 ● 130 V	assembly	229 60 + 229 42	248 97 ○ 230 V	242 70	-
247 61 ○ 130 V	assembly	229 72 + 229 30	247 81 ● 130 V	assembly	229 60 + 229 43	248 97 ● 230 V	242 71	-
247 61 ● 130 V	assembly	229 72 + 229 31	247 81 ● 130 V	assembly	229 60 + 229 44	248 97 ● 230 V	242 72	-
247 61 ● 130 V	assembly	229 72 + 229 32	248 01	243 18	-	248 97 ● 230 V	242 73	-
247 61 ● 130 V	assembly	229 72 + 229 33	248 02	243 15	-	248 97 ● 230 V	242 74	-
247 61 ● 130 V	assembly	229 72 + 229 34	248 03	243 16	-	248 98 ○ 230 V	242 70	-
247 61 ○ 230 V	230 10	229 72 + 229 40	248 31	229 02	-	248 98 ● 230 V	242 71	-
247 61 ● 230 V	230 11	229 72 + 229 41	248 32	229 01	-	248 98 ● 230 V	242 72	-
247 61 ● 230 V	230 12	229 72 + 229 42	248 46	241 90	-	248 98 ● 230 V	242 73	-
247 61 ● 230 V	assembly	229 72 + 229 43	248 47	241 84	-	248 98 ● 230 V	242 74	-
247 61 ● 230 V	assembly	229 72 + 229 44	248 48	241 85	-	249 00	243 03	-
247 62 ● 24 V	assembly	229 71 + 229 12	248 49	241 73	-	249 01	243 08	-
247 62 ● 24 V	assembly	229 71 + 229 13	248 51	242 00	-	249 45	241 76	-
247 62 ● 24 V	assembly	229 71 + 229 14	248 52	242 02	-	249 81	241 71	-
247 62 ○ 130 V	assembly	229 71 + 229 30	248 53	242 03	-	249 86	241 72	-
247 62 ● 130 V	assembly	229 71 + 229 31	248 58	242 12	-			

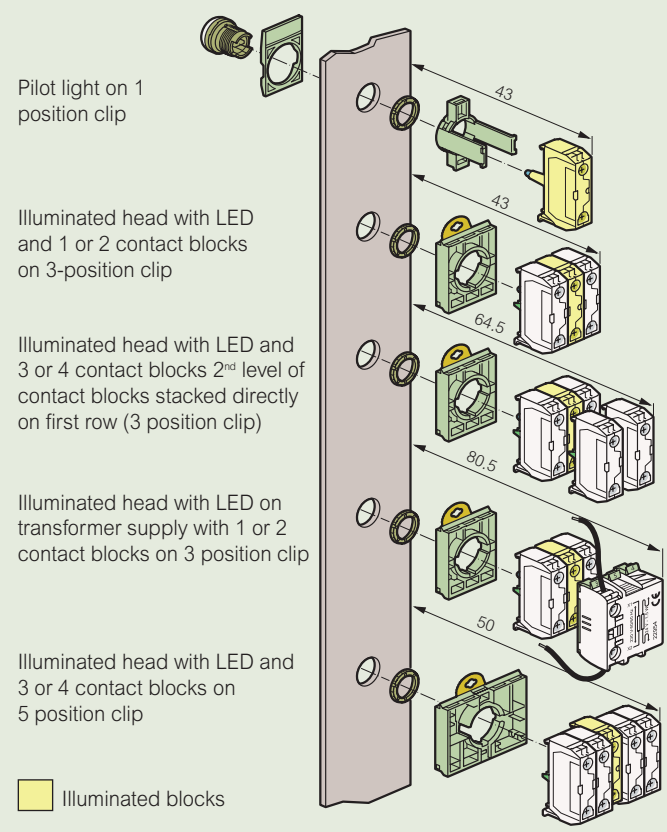
Osmoz: control and signalling units

■ Mounting

Non illuminated



Illuminated



■ Illuminated blocks

■ Technical characteristics

- Storage temperature: - 40°C to + 70°C
- Operating temperature: - 25°C to + 70°C
- Climatic resistance:
 - conform to IEC 60068-2-3 (constant humid heat)
 - conform to IEC 60068-2-30 (cyclical damp heat)
- Degree of protection conform to IEC 60529
 - IP 66 for standard heads
 - IP 67 for shrouded heads
 - IP 66 for equipped control stations
 - IP 20 at the rear of the panel for contact blocks and one piece pilot lights
 - Nema 4x, 12 and 13 for heads and control stations
- Protection against mechanical shocks conform to IEC 50102:
 - IK 05 illuminated and non illuminated heads
 - IK 07 empty control station
- Protection against electrical shocks:
 - Class II according to IEC 60947-5-1
 - Terminal marking conform to IEC 60947-1
 - Tightening torque: head nut: recommended 3 N.m terminals: max. 1.2 N.m

Contact blocks (for non illuminated heads)

- Rated insulation voltage:
 - Degree of pollution 3
 - 690 V according to IEC/EN60947 for flush block with screw terminals or spring terminals
 - 600 V AC according to UL 508
- NC contacts:
 - Positive opening conform to IEC/EN 60947-5-1
- Rated impulse withstand voltage Uimp: 6kV contact blocks
- Convention terminal conform to IEC 60947-5-1 current in free air conditions:
 - AC 15: 10 A
 - DC 13: 2.5 A

- Electrical performance:
 - AC according to IEC 60947-5-1
 - AC15 - A 600
 - Ue = 120 V, Ie = 6 A
 - Ue = 240 V, Ie = 3 A
 - Ue = 380 V, Ie = 1.9 A
 - Ue = 480 V, Ie = 1.5 A
 - Ue = 500 V, Ie = 1.4 A
 - Ue = 500 V, Ie = 1.2 A
 - DC according to IEC 60947-5-1
 - DC13 - Q 600
 - Ue = 125 V, Ie = 0.55 A
 - Ue = 250 V, Ie = 0.27 A
 - Ue = 400 V, Ie = 0.15 A
 - Ue = 500 V, Ie = 0.13 A
 - Ue = 500 V, Ie = 0.1 A
 - Electrical durability
 - 1 million cycles for:
 - AC15 - B 300
 - Ue = 120 V, Ie = 3 A
 - Ue = 240 V, Ie = 1.5 A
 - DC13 - R 300
 - Ue = 125 V, Ie = 0.22 A
 - Ue = 250 V, Ie = 0.1 A

- Connection capacity (rigid or flexible wire) without ferrule: 2 x 0.5 mm² to 2 x 2.5 mm²
- with ferrule: 2 x 0.5 mm² to 2 x 1.5 mm²

- LED blocks and LED pilot lights (for illuminated heads)
 - Rated insulation voltage:
 - Degree of pollution 3
 - 300 V according to IEC/EN60947-5-1
 - Rated insulation withstand voltage Uimp:
 - 4kV conform to IEC/EN 60947-1
 - Operating voltage:
 - 12 to 24 V AC/DC
 - 130 V AC
 - 230 V AC
 - Frequency: 50 or 60 Hz
 - Lifetime at rated supply voltage:
 - Red and yellow: 100,000 hours at 25°C
 - Other colours: 50,000 hours at 25°C
 - Consumption of LED blocks:
 - Voltage:
 - 24 V: 25 mA ± 20%
 - 48 V: 15 mA ± 10%
 - 130 V: 20 mA ± 10%
 - 230 V: 16 mA ± 30%

LED blocks and LED pilot lights (for illuminated heads)

- Rated insulation voltage:
 - Degree of pollution 3
 - 300 V according to IEC/EN60947-5-1
- Rated insulation withstand voltage Uimp:
 - 4kV conform to IEC/EN 60947-1
- Operating voltage:
 - 12 to 24 V AC/DC
 - 130 V AC
 - 230 V AC
- Frequency: 50 or 60 Hz
- Lifetime at rated supply voltage:
 - Red and yellow: 100,000 hours at 25°C
 - Other colours: 50,000 hours at 25°C
- Consumption of LED blocks:
 - Voltage:
 - 24 V: 25 mA ± 20%
 - 48 V: 15 mA ± 10%
 - 130 V: 20 mA ± 10%
 - 230 V: 16 mA ± 30%

One piece pilot light BA9S

- Rated operating voltage: 400 V conform to IEC 60947-5-1
- Rated impulse withstand voltage Uimp
 - 4 kV conform to IEC/EN 60947-1
- Rated impulse withstand voltage Uimp: 6kV contact blocks
- Bulb rating: 2.6 W max.

Heads

- Mechanical endurance (in million cycles)
 - Spring return: 5
 - Push-push: 0.5
 - Selector switches: 0.3
 - Mushroom head maintained function EN 418: 0.10
 - Mushroom head maintained function: 0.15
- Activation force in N
 - Spring return + NO: 6.5
 - Spring return + NC: 4.5
 - Additional NO contact: 4.5
 - Additional NC contact: 3.0
 - Push-pull mushroom head + NO + NC: 27
 - Push-turn mushroom head + NO + NC: 22
 - Push-pull mushroom head EN 418 + NO + NC: 37
 - Push-turn mushroom head EN 418 + NO + NC: 60

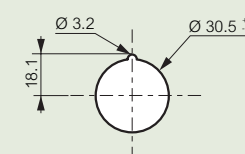
- Activation force in Nm
 - Selector switch + NO: 0.04
 - Additional NO contact: 0.03

■ Drilling

Standard drilling (for screw terminals devices)

	Dim. (mm)	
A	30	With or without legend plate (usual case)
	33	For Ip 67 silicon shroud
	40	With large model legend plate
	45	For mushroom head 640
	50	For selector switch with long handle If 5 position clip
B	45	With or without legend plate (usual case)
	54	With twin touch
	77	With twin touch + legend plate

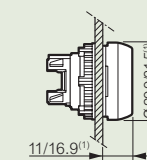
Drilling when using the anti-rotation ring



■ Heads

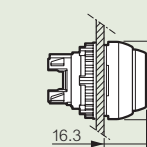
Flush heads

- Spring return
 - Non-illuminated
 - Cat.Nos 238 00/01/02/03/04/06/08/09
 - 238 11/12/13
 - Illuminated Cat.Nos 240 00/01/02/03/04
- (1) For Cat.Nos 238 11/12/13 (with shroud)



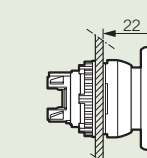
Projecting heads

- Spring return
 - Non-illuminated Cat.Nos 238 21/22/26
 - Illuminated Cat.Nos 240 11/12



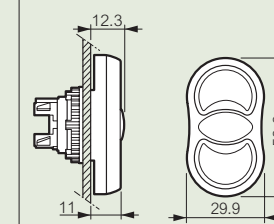
Spring-return mushroom head

- Non-illuminated Cat.Nos 238 34/35/36/37

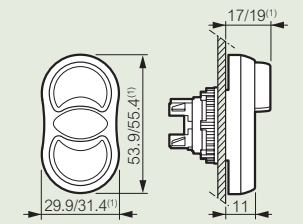


Twin touch

- Flush/flush:
 - Non-illuminated Cat.No 239 80
 - Illuminated Cat.Nos 240 70/71



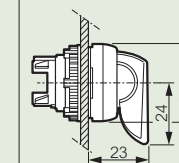
- Flush / Projecting:
 - Non-illuminated
 - Cat.Nos 239 82/84
 - Illuminated Cat.Nos 240 73/76



(1) 239 84

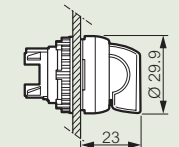
Selector switches with long handle

- Non-illuminated Cat.Nos 239 30/31/32/34/35/40/41/42/43
- Illuminated Cat.Nos 240 60/61



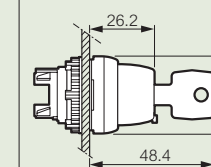
Selector switches with standard handle

- Non-illuminated Cat.Nos 239 01/02/03/04/05/06/07/08/09 239 13/15/18 239 21/22/23/24/26/27/28/29
- Illuminated Cat.Nos 240 31/32/33/35/36/37 240 41/42/43 240 51/52/53/54/55/56/57/58/59



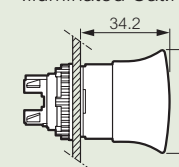
Key selector switches

- Non-illuminated Cat.Nos 239 50/51/52/53/54/55
- Illuminated Cat.Nos 239 60/61/62/63/64



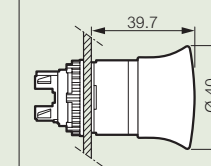
Push-pull stay-put mushroom heads

- Non-illuminated
 - Cat.Nos 238 72/76
- Illuminated Cat.No 240 80



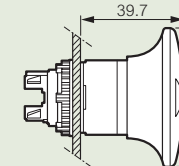
Push-pull stay-put EN 418 mushroom heads

- Non-illuminated
 - Cat.No 238 74
- Illuminated Cat.No 240 82



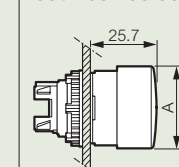
Push-pull stay-put EN 418 mushroom heads Ø54

- Non-illuminated
 - Cat.Nos 238 94/95



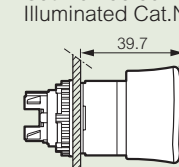
Push-turn stay-put mushroom heads

- Non-illuminated
 - Cat.Nos 238 80/81/82/83



Push-turn stay-put EN 418 mushroom heads

- Non-illuminated
 - Cat.No 238 85
- Illuminated Cat.No 240 91

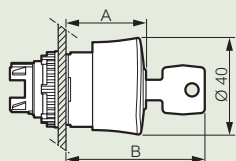


Osmoz: control and signalling units (continued)

Key mushroom heads

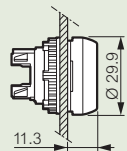
Cat.Nos 238 91/92

Cat.Nos	A (mm)	B (mm)
238 91	30.7	53.7
238 92	40.8	63.8



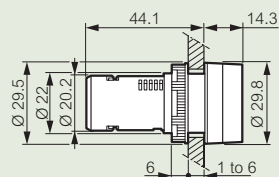
Pilot lights

Cat.Nos 241 60/61/62/63/64



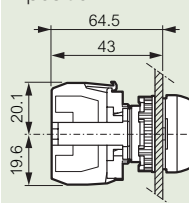
One-piece pilot lights

Cat.Nos 241 20/21/22/23/24
241 30/31/32/33/34
241 40/41/42/43/44
241 00/01/02/03/04/05

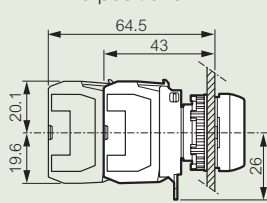


Clips and electrical blocks

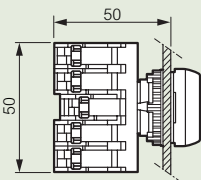
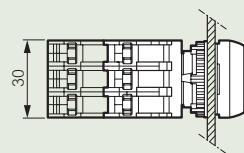
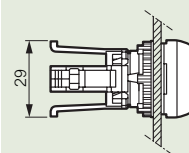
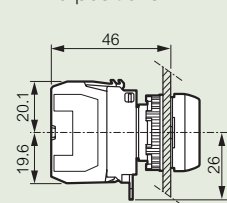
1 position



3 positions



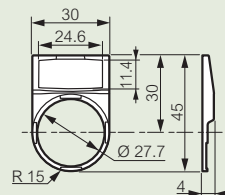
5 positions



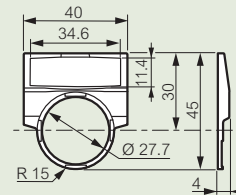
It's possible to have a 3 position clip on 1 or 2 levels

Frames

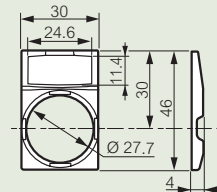
Cat.No 243 15



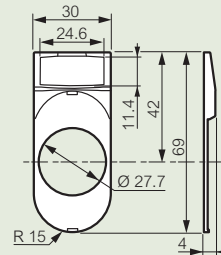
Cat.No 243 16



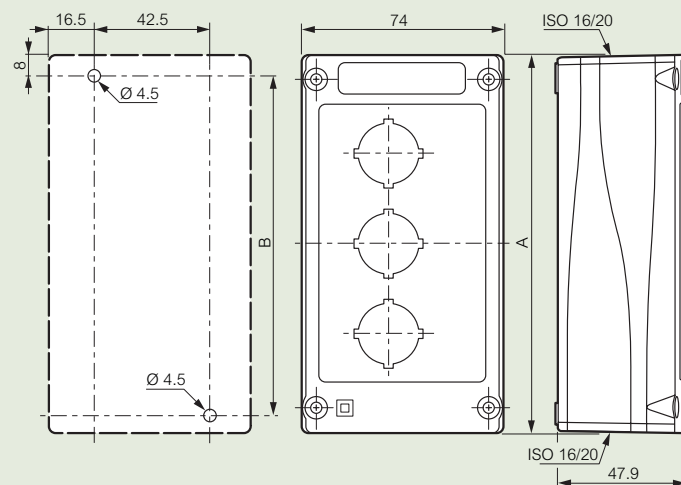
Cat.No 243 18



Cat.No 243 19



Control stations



Dim. (mm)	Number of holes				
	1	2	3	4	5
A	74	107	140	173	206
B	59.5	92.5	125.5	158.5	191.5

cam switches screw fixing on door

NEW



274 21



274 76



274 36



275 03

Technical characteristics (p. 338)

For selecting and changing the status of the circuits into which it is integrated. For viewing the state of equipment according to the position of the selector lever

Mounting on enclosure doors. Contacts with positive opening and double breaking of poles

Presentation: grey/black selector lever - aluminium faceplate with marking

Conform to standards IEC EN 60947-3. Approved to UL-CSA (USA - Canada)

IP 40 at front of enclosure (selector lever)

IP 2X at back of enclosure up to PR 26

Pack	Cat.Nos	Function: on/off switch				
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
1	274 00	1	PR 12	16		1
1	274 01	2	PR 12	16		2
1	274 02	3	PR 12	16		3
1	274 03	4	PR 12	16		4
1	274 05	1	PR 17	20		1
1	274 06	2	PR 17	20		2
1	274 07	3	PR 17	20		3
1	274 08	4	PR 17	20		4
1	274 10	1	PR 21	25		1
1	274 11	2	PR 21	25		2
1	274 12	3	PR 21	25		3
1	274 13	4	PR 21	25		4
1	274 16	2	PR 26	32		2
1	274 17	3	PR 26	32		3
1	274 18	4	PR 26	32		4
1	274 20	1	PR 40	50		1
1	274 21	2	PR 40	50		2
1	274 22	3	PR 40	50		3
1	274 23	4	PR 40	50		4
1	274 25	1	PR 63	63		1
1	274 26	2	PR 63	63		2
1	274 27	3	PR 63	63		3
1	274 28	4	PR 63	63		4

Pack	Cat.Nos	Function: change over switches				
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
Without "off"						
1	274 60	1	PR 12	16		2
1	274 61	2	PR 12	16		4
1	274 62	3	PR 12	16		6
1	274 63	4	PR 12	16		8
1	274 65	1	PR 17	20		2
1	274 66	2	PR 17	20		4
1	274 67	3	PR 17	20		6
1	274 68	4	PR 17	20		8
1	274 71	2	PR 21	25		4
1	274 72	3	PR 21	25		6
1	274 76	2	PR 26	32		4
1	274 77	3	PR 26	32		6
1	274 78	4	PR 26	32		8
1	274 81	2	PR 40	50		4
1	274 82	3	PR 40	50		6
1	274 83	4	PR 40	50		8
1	274 86	2	PR 63	63		4
1	274 87	3	PR 63	63		6
1	274 88	4	PR 63	63		8

Pack	Cat.Nos	Function: change over switches (continued)				
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
With "off" - 45°						
1	274 30	1	PR 12	16		2
1	274 31	2	PR 12	16		4
1	274 32	3	PR 12	16		6
1	274 33	4	PR 12	16		8
1	274 35	1	PR 17	20		2
1	274 36	2	PR 17	20		4
1	274 37	3	PR 17	20		6
1	274 38	4	PR 17	20		8
1	274 41	2	PR 21	25		4
1	274 42	3	PR 21	25		6
1	274 43	4	PR 21	25		8
1	274 46	2	PR 26	32		4
1	274 47	3	PR 26	32		6
1	274 48	4	PR 26	32		8
1	274 51	2	PR 40	50		4
1	274 52	3	PR 40	50		6
1	274 53	4	PR 40	50		8
1	274 56	2	PR 63	63		4
1	274 57	3	PR 63	63		6
1	274 58	4	PR 63	63		8
With "off" - 90°						
1	274 90	1	PR 12	16		2
1	274 91	2	PR 12	16		4
1	274 92	3	PR 12	16		6
1	274 93	4	PR 12	16		8
1	274 95	2	PR 21	25		4
1	274 96	2	PR 40	50		4
1	274 97	2	PR 63	63		4

Pack	Cat.Nos	Function: 3-way switches				
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
Without "off"						
1	274 98	1	PR 12	16		3
1	274 99	1	PR 17	20		3
1	275 00	1	PR 21	25		3
1	275 01	1	PR 26	32		3
With "off"						
1	275 02	1	PR 12	16		3
1	275 03	2	PR 12	16		6
1	275 04	3	PR 12	16		9
1	275 05	3	PR 26	32		9
1	275 06	2	PR 40	50		6
1	275 07	2	PR 63	63		6



275 26



275 23



275 17



275 35

Technical characteristics (p. 338)

For selecting and changing the status of the circuits into which it is integrated. For viewing the state of equipment according to the position of the selector lever

Mounting on enclosure doors. Contacts with positive opening and double breaking of poles

Presentation: grey/black selector lever - aluminium faceplate with marking

Conform to standards IEC EN 60947-3. Approved to UL-CSA (USA - Canada)

IP 40 at front of enclosure (selector lever)

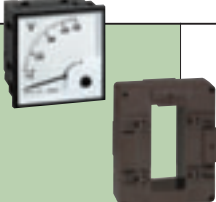
IP 2X at back of enclosure up to PR 26

Function: 3-phase motor switch

Pack	Cat.Nos	Function:	Range	Max. rating AC 3 (kW)	Position	Number of contacts
		Forward/reverse switch, 1 speed				
1	275 10	PR 12	4	4		5
1	275 14	PR 17	7.5	7.5		5
1	275 18	PR 21	7.5	7.5		5
1	275 22	PR 26	11	11		5
1	275 26	PR 40	18.5	18.5		5
1	275 30	PR 63	22	22		5
		Starter 1 way, 1 speed				
1	275 11	PR 12	4	4		8
1	275 15	PR 17	7.5	7.5		8
1	275 19	PR 21	7.5	7.5		8
1	275 23	PR 26	11	11		8
1	275 27	PR 40	18.5	18.5		8
1	275 31	PR 63	22	22		8
		Starter 1 way, 2 Dalhandler				
1	275 12	PR 12	4	4		8
1	275 16	PR 17	7.5	7.5		8
1	275 20	PR 21	7.5	7.5		8
1	275 24	PR 26	11	11		8
1	275 28	PR 40	18.5	18.5	8	
1	275 13	PR 12	4	4		8
1	275 17	PR 17	7.5	7.5		8
1	275 21	PR 21	7.5	7.5		8
1	275 25	PR 26	11	11		8
1	275 29	PR 40	18.5	18.5		8

Function: instrument switches

Pack	Cat.Nos	Function:	Range	Max. rating AC 21 (A)	Position	Number of contacts	Function
		Ammeters					
		1 network, 3-wire, 1 ammeter					
1	146 50	PR 12	16	16		6	3 C.T. with common point
1	275 34	PR 12	16	16		9	without C.T.
1	275 35	PR 12	16	16		9	3 independant C.T.
		Voltmeters					
		3-phase network, 1 voltmeter					
1	146 52	PR 12	16	16		4	without neutral
1	146 53	PR 12	16	16		6	with neutral



Electrical energy measuring on door

see p. 94

cam switches insulating box

NEW



277 11



277 46



277 76

Technical characteristics (p. 338)

For selecting and changing the status of the circuits into which it is integrated
 For viewing the state of equipment according to the position of the selector lever
 Boxed device, class II. Contacts with positive opening and double breaking of poles
 Presentation: black or grey/black selector lever, faceplate with marking
 Conform to standards IEC EN 60947-3
 IP 65 for 76 x 76 and 96 x 120 mm boxes. IP 55 for 135 x 170 mm boxes

Pack	Cat.Nos	Function: on/off switch				
76 x 76 mm box						
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
1	277 10	1	PR 12	16		1
1	277 11	2	PR 12	16		2
1	277 12	3	PR 12	16		3
1	277 13	4	PR 12	16		4
96 x 120 mm box						
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
1	277 16	2	PR 17	20		2
1	277 17	3	PR 17	20		3
1	277 18	4	PR 17	20		4
1	277 21	2	PR 21	25		2
1	277 22	3	PR 21	25	3	
1	277 23	4	PR 21	25	4	

Function: changeover switches						
Without off - 96 x 120 mm box						
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
1	277 55	3	PR 12	16		6
1	277 56	4	PR 12	16		8
1	277 58	4	PR 17	20		8
1	277 60	4	PR 21	25		8
1	277 62	4	PR 26	32	8	
Without off - 135 x 170 mm box						
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
1	277 64	4	PR 40	50		8
1	277 66	4	PR 63	63		8
With off - 96 x 120 mm box						
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
1	277 25	1	PR 12	16		2
1	277 26	2	PR 12	16		4
1	277 27	3	PR 12	16		6
1	277 28	4	PR 12	16		8
1	277 31	2	PR 17	20		4
1	277 32	3	PR 17	20		6
1	277 33	4	PR 17	20		8
1	277 36	2	PR 21	25		4
1	277 37	3	PR 21	25		6
1	277 38	4	PR 21	25		8
1	277 41	2	PR 26	32		4
1	277 42	3	PR 26	32		6
1	277 43	4	PR 26	32		8

Pack	Cat.Nos	Function: changeover switch (continued)				
With off - 135 x 170 mm box						
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
1	277 46	2	PR 40	50		4
1	277 47	3	PR 40	50		6
1	277 48	4	PR 40	50		8
1	277 51	2	PR 63	63		4
1	277 52	3	PR 63	63		6
1	277 53	4	PR 63	63		8
Function: 3-way switches						
With off - 76 x 76 mm box						
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
1	277 67	1	PR 12	16		3
With off - 96 x 120 mm box						
		Number of poles	Range	Max. rating AC 21 (A)	Position	Number of contacts
1	277 68	1	PR 12	16		3
1	277 69	2	PR 12	16		6

Function: 3-phase motor switch				
Forward/reverse switch, 1 speed				
	Range	Max. rating AC 3 (kW)	Position	Number of contacts
1	277 70	PR 12	4	5
1	277 75	PR 17	7.5	5
1	277 78	PR 21	7.5	5
1	277 81	PR 26	11	5
1	277 84	PR 40	18.5	5
Starter 1 way, 1 speed				
	Range	Max. rating AC 3 (kW)	Position	Number of contacts
1	277 71	PR 12	4	8
1	277 76	PR 17	7.5	8
1	277 79	PR 21	7.5	8
1	277 82	PR 26	11	8
1	277 85	PR 40	18.5	8
Starter 1 way, 2 speed Dalhander				
	Range	Max. rating AC 3 (kW)	Position	Number of contacts
1	277 72	PR 12	4	8
1	277 77	PR 17	7.5	8
1	277 80	PR 21	7.5	8
1	277 83	PR 26	11	8
1	277 73	PR 12	4	8

Red catalogue numbers: New products

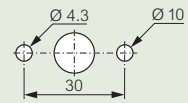
cam switches

Electrical characteristics

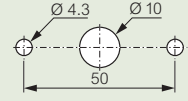
	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63
Thermal rating	20 A	25 A	32 A	40 A	63 A	63 A
Rated operating current (Ie) AC 21	16 A	20 A	25 A	32 A	50 A	63 A
Rated operating current (Ie) AC 15	6 A	8 A	10 A	12 A	-	-
Motor performance AC 23	3 x 230 V	4 kW	5.5 kW	7.5 kW	11 kW	18.5 kW
	3 x 400 V	7.5 kW	11 kW	11 kW	11 kW	25 kW
	3 x 500 V	5.5 kW	11 kW	11 kW	11 kW	25 kW
	3 x 690 V	4 kW	10 kW	10 kW	11 kW	18.5 kW
Motor performance AC 3	3 x 230 V	3 kW	4 kW	4 kW	5.5 kW	11 kW
	3 x 400 V	4 kW	7.5 kW	7.5 kW	11 kW	18.5 kW
	3 x 500 V	5.5 kW	7.5 kW	7.5 kW	11 kW	18.5 kW
Degree of protection	front	IP 40	IP 40	IP 40	IP 40	IP 40
	back	IP 2X	IP 2X	IP 2X	IP 2X	-
Insulation voltage (Ui)	690 V	690 V	690 V	690 V	690 V	690 V
Max. cable cross-section	flexible	2.5 mm ²	4 mm ²	4 mm ²	6 mm ²	16 mm ²
	rigid	4 mm ²	6 mm ²	6 mm ²	6 mm ²	16 mm ²

Drilling

Screw fixing on door
For PR 12, PR 17, PR 21 and PR 26

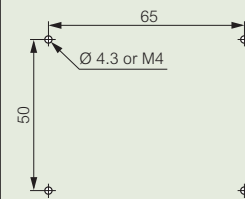


For PR 40 and PR 63

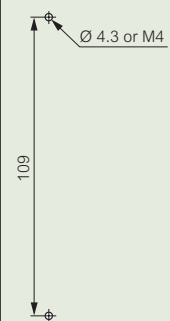


Boxes

For PR 12 - 76 x 76 mm box
2 x 2 knock-out entries Pg 16



For PR 12, PR 17, PR 21 and PR 26 - 96 x 120 mm box
2 x 2 knock-out entries Pg 16



For PR 40 and PR 63 - 135 x 170 mm box
6 knock-out entries Pg 21
+ 4 knock-out entries Pg 29

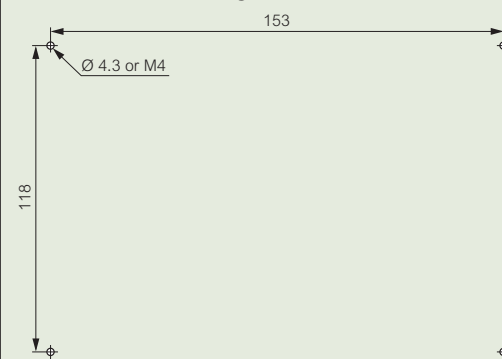
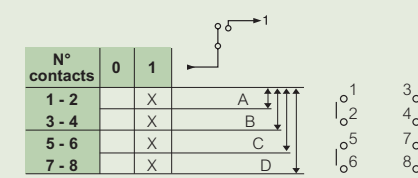


Diagram - Terminals

On/off switch



Screw fixing on door

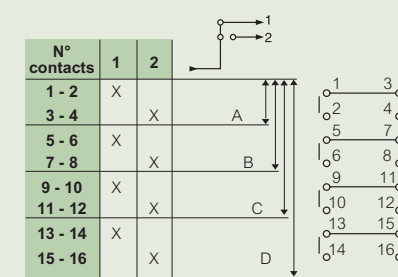
	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63
A	274 00	274 05	274 10	-	274 20	274 25
B	274 01	274 06	274 11	274 16	274 21	274 26
C	274 02	274 07	274 12	274 17	274 22	274 27
D	274 03	274 08	274 13	274 18	274 23	274 28

Boxes

	PR 12	PR 17	PR 21
A	277 10	-	-
B	277 11	277 16	277 21
C	277 12	277 17	277 22
D	277 13	277 18	277 23

Change over switch

•Without "off"



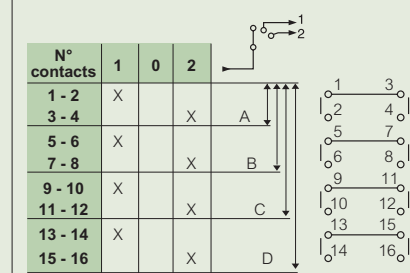
Screw fixing on door

	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63
A	274 60	274 65	-	-	-	-
B	274 61	274 66	274 71	274 76	274 81	274 86
C	274 62	274 67	274 72	274 77	274 82	274 87
D	274 63	274 68	-	274 78	274 83	274 88

Boxes

	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63
C	277 55	-	-	-	-	-
D	277 56	277 58	277 60	277 62	277 64	277 66

•With "off"



Screw fixing on door

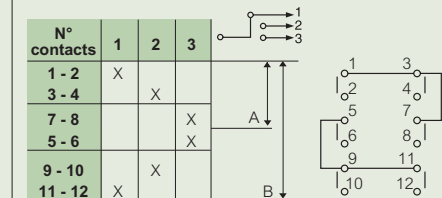
	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63
A	274 30/90	274 35	-	-	-	-
B	274 31/91	274 36	274 41/95	274 46	274 51/96	274 56/97
C	274 32/92	274 37	274 42	274 47	274 52	274 57
D	274 33/93	274 38	274 43	274 48	274 53	274 58

Boxes

	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63
A	277 25	-	-	-	-	-
B	277 26	277 31	277 36	277 41	277 46	277 51
C	277 27	277 32	277 37	277 42	277 47	277 52
D	277 28	277 33	277 38	277 43	277 48	277 53

3-way switch

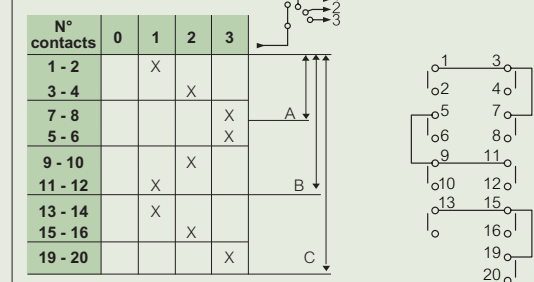
•Without "off"



Screw fixing on door

	PR 12	PR 17	PR 21	PR 26
A	274 98	-	275 00	275 01
B	-	274 99	-	-

•With "off"



Screw fixing on door

	PR 12	PR 26	PR 40	PR 63
A	275 02	-	-	-
B	275 03	-	275 06	275 07
C	275 04	275 05	-	-

Boxes

	PR 12
A	277 67/68
B	277 69

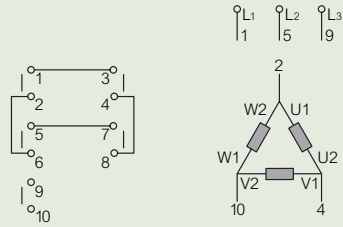
cam switches

Diagram - terminals (continued)

3-phase motor switch

•Forward/reverse switch 1 speed

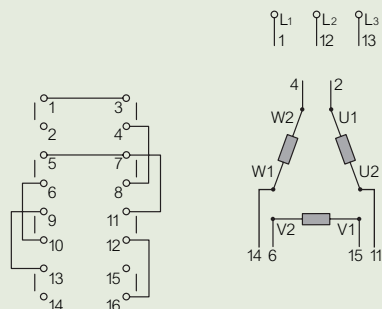
N° contacts	AR	0	AV
1 - 2	X		
3 - 4			X
5 - 6			X
7 - 8	X		
9 - 10	X		X



	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63
Screw fixing on door	275 10	275 14	275 18	275 22	275 26	275 30
Boxes	277 70	277 75	277 78	277 81	277 84	-

•Starter 1 way - 1 speed

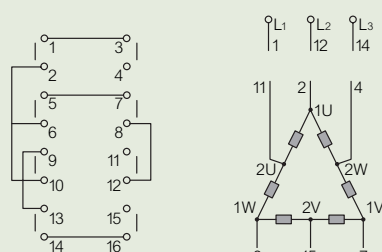
N° contacts	0	Y	Δ
1 - 2		X	X
3 - 4			X
5 - 6	X	X	
7 - 8	X	X	
9 - 10			X
11 - 12			X
13 - 14	X	X	
15 - 16	X	X	



	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63
Screw fixing on door	275 11	275 15	275 19	275 23	275 27	275 31
Boxes	277 71	277 76	277 79	277 82	277 85	-

•Starter 1 way - 2 speed Dahlander
2 possible configurations: 0 - PV - GV
PV - 0 - GV

N° contacts	PV	0	GV
1 - 2	X		
3 - 4			X
5 - 6			X
7 - 8	X		
9 - 10			X
11 - 12			X
13 - 14	X		
15 - 16			X

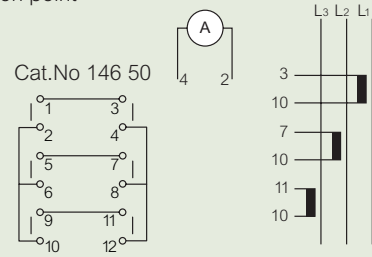


	PR 12	PR 17	PR 21	PR 26	PR 40
Screw fixing on door					
0 - PV - GV	275 12	275 16	275 20	275 24	275 28
PV - 0 - GV	275 13	275 17	275 21	275 25	275 29
Boxes					
0 - PV - GV	277 72	277 77	277 80	277 83	-
PV - 0 - GV	277 73	-	-	-	-

Instrument switches

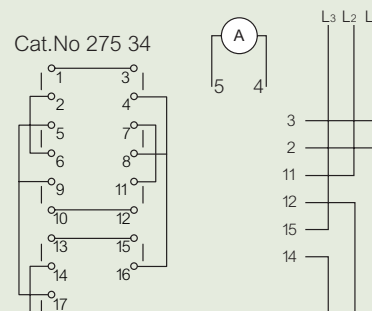
•Ammeter 3 C.T. with common point

N° contacts	0	L ₁	L ₂	L ₃
1 - 2	X	X		
3 - 4	X	X		
5 - 6		X	X	
7 - 8		X	X	
9 - 10	X			X
11 - 12	X			X



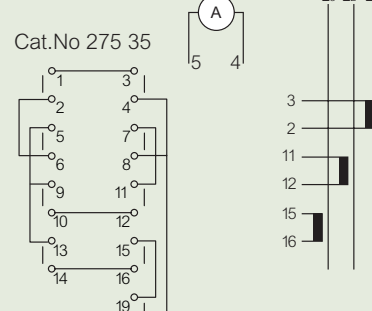
•Ammeter without C.T.

N° contacts	0	L ₁	L ₂	L ₃
1 - 2	X	X		
3 - 4	X	X		
5 - 6	X	X		
7 - 8	X	X		
9 - 10	X	X		
11 - 12	X	X		
13 - 14	X	X	X	
15 - 16	X	X	X	
17 - 18	X	X	X	



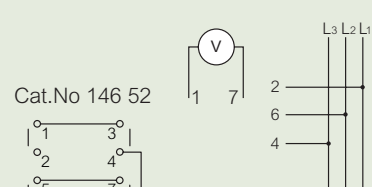
•Ammeter with 3 independent C.T.

N° contacts	0	L ₁	L ₂	L ₃
1 - 2	X	X		
3 - 4	X	X		
5 - 6	X	X		
7 - 8	X	X		
9 - 10	X	X		
11 - 12	X	X		
13 - 14	X	X	X	
15 - 16	X	X	X	
19 - 20	X	X	X	



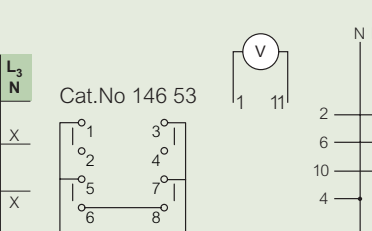
•Voltmeter without neutral

N° contacts	0	L ₁	L ₂	L ₃
1 - 2		X		X
3 - 4		X	X	
5 - 6		X	X	X
7 - 8		X	X	X



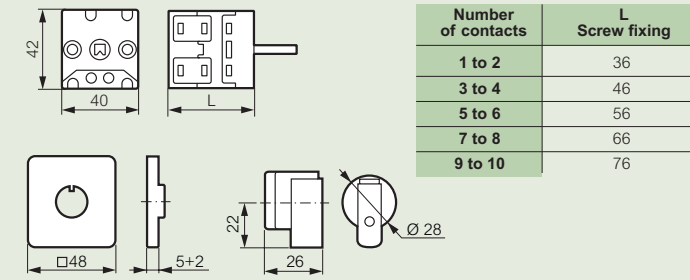
•Voltmeter with neutral

N° contacts	L ₃	L ₂	L ₁	0	L ₁	L ₂	L ₃	N
1 - 2	X		X	X	X			X
3 - 4		X		X		X		X
5 - 6		X	X					X
7 - 8		X	X					X
9 - 10	X							X
11 - 12	X	X						X

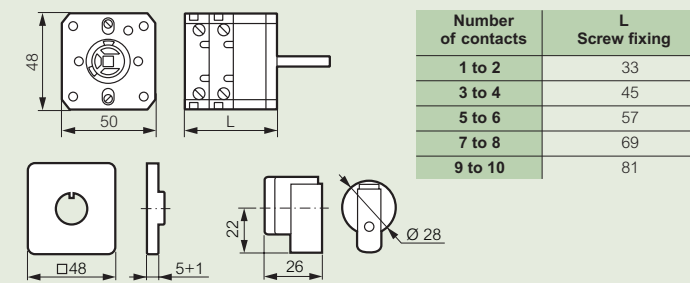


Dimensions

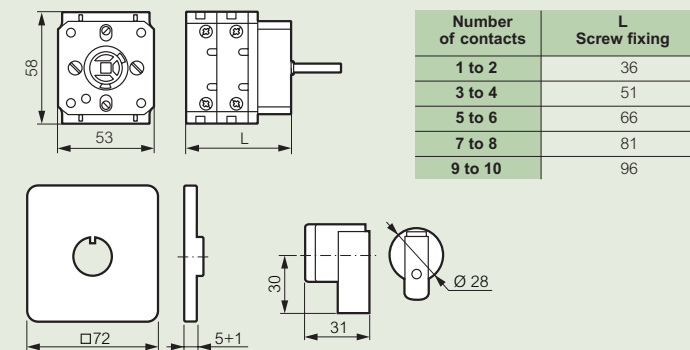
PR 12



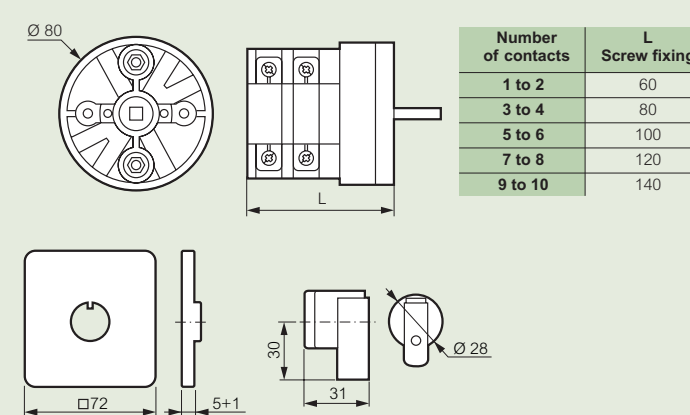
PR 17 and PR 21



PR 26

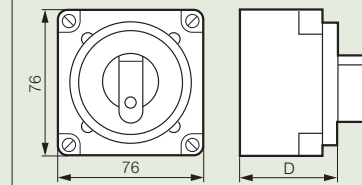


PR 40 and PR 63



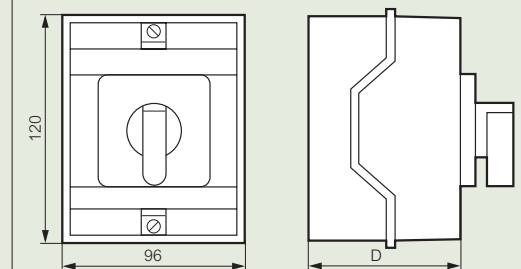
Boxes

For PR 12 (1 to 4 contacts)



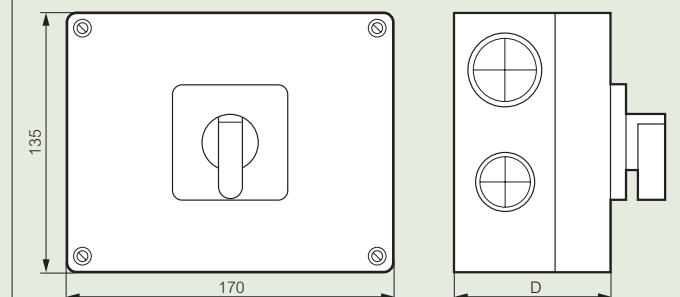
Number of contacts PR 12	D
1 to 2	46
3 to 4	58

For PR 12 (1 to 9 contacts)
PR 17 and 21 (1 to 9 contacts)
PR 26 (1 to 8 contacts)



Number of contacts PR 12/17/21	D
1 to 6	77
7 to 10	101
PR 26	D
1 to 4	77
5 to 8	101

For PR 40/63 (1 to 8 contacts)



Number of contacts PR 40/63	D
1 to 4	107
5 to 8	145



221 07



226 62



227 00



222 82



222 86

Technical characteristics (p. 343)

Safety switch for disconnection and isolation of phases
 IP 2X
 Double breaking on each phase
 Red rotary handle on yellow plate
 Immediate display of position
 - horizontal: open (O)
 - vertical: closed (I)
 Equipped with non reversible terminals
 Conform to IEC EN 60947-3
 UL-cUL (USA and Canada) agreements (except boxes)
 IP 65 - IK 07 for boxes

Pack	Cat.Nos	Flush-mounting, padlockable
		Mounting on panel, screw fixing
		3P
1	221 01	20 A
1	221 02	25 A
1	221 03	32 A
1	221 04	50 A
1	221 05	63 A
1	221 06	80 A
1	221 07	100 A
		3P + N/O + N/C
1	221 09	20 A
		4P neutral on left-hand side
1	221 11	20 A
1	221 12	25 A
1	221 13	32 A
1	221 14	50 A
1	221 15	63 A
1	221 16	80 A
1	221 17	100 A

Pack	Cat.Nos	Proximity switching
		Padlockable boxes for on-load breaking, isolation and locking in O position Equipment located remotely from a control cabinet. Applications: breaking of CMV (controlled mechanical ventilation), motors, fixed or moving machines, air-conditioners.
		3P
1	226 60	12 A ⁽¹⁾
1	221 72	20 A
1	221 73	25 A
1	221 74	40 A
1	221 75	50 A
1	221 76	63 A
1	221 77	80 A
		3P + N/O + N/C
1	221 78	12 A
1	221 79	20 A
		3P + N/C
1	226 00	25 A ⁽¹⁾

Pack	Cat.Nos	Proximity switching (continued)
		4P - neutral on left-hand side
1	226 62	12 A ⁽¹⁾
1	221 82	20 A
1	226 02	25 A ⁽¹⁾
1	221 84	40 A
1	221 85	50 A
1	221 86	63 A
1	221 87	80 A
		6P
1	226 04	25 A ⁽¹⁾

Pack	Cat.Nos	Accessories
		Auxiliary contact N/O + N/C
1	227 00	
		IP 65 weatherproof kit For 25 to 100 A devices padlockable □ 66, □ 86
5	222 70	Flush mounting
		Labels Marked "Main switch"
5	222 82	Duty label for padlockable faceplate
5	222 86	Self-adhesive for 150 x 100 x 96 mm box

(1) For more technical informations (see opposite)

isolating switches

■ Technical characteristics

Conform to IEC EN 60947-3

UL - cUL (USA - Canada) agreements. Class II box installed (if correct use of isolating caps supplied with box)

IP 40 and IP 65 - IK 07

Operating temperature: - 30 °C to + 70 °C

Box self-extinguishing: 650 °C/ 960 °C (acc. to IEC 695-2-1)

Degree of protection: IP 2 (at back of panel)

IP 65 for boxes

IP 65 for complete devices

Tropical atmosphere acc. to:

IEC 682-3 constant humid heat

IEC 682-30 cyclical humid heat

Padlockable devices

General case: up to 3 padlocks Ø4 to 8 mm

Device with 1 auxiliary contact OF: up to 3 padlocks Ø6 to 8 mm

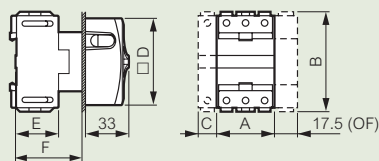
		20 A	25 A	32 A	50 A	63 A	80 A	100 A
Rated insulation voltage Ui	V	690	690	690	690	690	690	690
Conventional free air thermal current (Ith) Continuous rated current Iu	A	20	25	32	50	63	80	100
Conventional enclosed thermal current Ithe	A	16	20	25	40	50	63	80
Rated impulse withstand voltage Uimp⁽¹⁾ (kV)		4	6	6	6	6	6	6
Rated operating current (A) AC - 21 A / 22 A Conforming to IEC 60947-3	A	16	25	32	50	63	80	100
Rated operating power (kW) AC - 23 A								
3 x 230 V	kW	4	5.5	5.5	15	15	18.5	22
	A	14.5	20	20	50	50	63	72
3 x 400 V	kW	7.5	7.5	11	18.5	22	30	37
	A	15	15	21	35	42	57	69
3 x 500 V	kW	-	7.5	11	22	30	37	45
	A	-	12	17	33	45	55	65
3 x 690 V	kW	-	7.5	11	18.5	22	22	30
	A	-	9	12	20	24	24	33
AC - 3								
3 x 230 V	kW	3	4	4	7.5	11	15	18.5
	A	11.5	14.5	14.5	26	38	51	63
3 x 400 V	KW	4	5.5	7.5	15	18.5	22	30
	A	8	11	15	28	35	42	57
3 x 500 V	KW	-	5.5	7.5	15	22	30	37
	A	-	9	12	23	33	45	55
3 x 690 V	KW	-	5.5	7.5	15	18.5	18.5	22
	A	-	6.5	9	16.5	20	20	24
Closing/breaking characteristics:								
Rated closing capacity	Aeff/400 V	-	710	710	1270	1270	1970	1970
Rated breaking capacity	Aeff/400 V	-	330	330	800	800	800	800
Short circuit characteristics:								
Rated short term withstand current Icw	Aeff/400V/1s	300	350	430	500	760	1100	1500
Rated short circuit make capacity Icm	kA peak/400 V	-	1	1	1.8	1.8	2.8	2.8
Short circuit current	kA eff/400 V	6	10	10	10	10	10	10
With fuse gI/gG	A	16	25	32	50	63	80	100
Mechanical life AC - 20	million	1	0.1	0.1	0.04	0.04	0.04	0.04
Connection:								
Flexible + connector (max./min)	mm ²	2.5/0.75	6/0.75	6/0.75	16/1.5	16/1.5	35/2.5	35/2.5
Rigid	mm ²	4	10	10	25	25	50	50
Auxiliary contact electrical characteristics:								
Rated insulation voltage (Ui)	V	400	400	400	400	400	400	400
Conventional free air thermal current (Ith)								
Continuous rated current (Iu)	A	20	10	10	10	10	10	10
Rated operating current (Ie) AC - 15	230 V A	6	6	6	6	6	6	6
	400 V A	-	4	4	4	4	4	4
Protection against short circuit by fuse gG	A	16	10	10	10	10	10	10
Connection	flexible wire mm ² max	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5

(1) Overload category III - pollution degree 3.

isolating switches

■ Dimensions

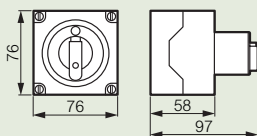
Flush-mounting padlockable isolating switches



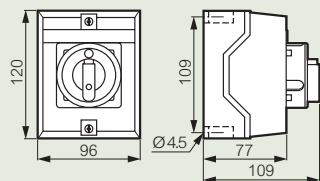
	A	B	C	D	E	F
25/32 A	44	75.4	14.5	□ 66	36	50
50/63 A	53.6	85	17.9	□ 66	50.3	60
80/100 A	71.8	93	26.8	□ 86	63.8	70

Proximity switching

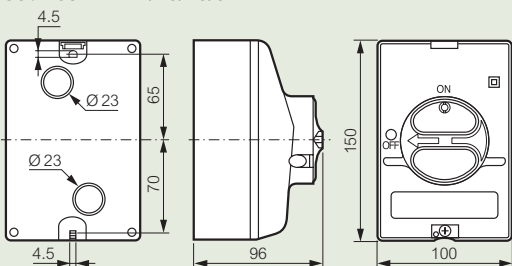
12 A
2 x 2 knock-out entries: PG 11
Cat.Nos 226 60/62



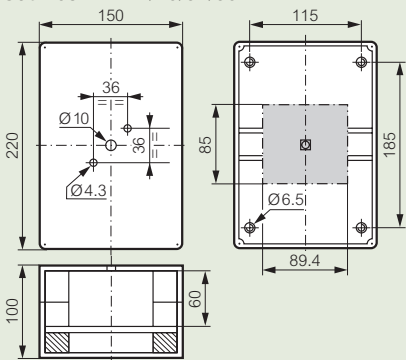
25 A
2 x 2 knock-out entries: PG 16
Cat.Nos 226 00/62/04



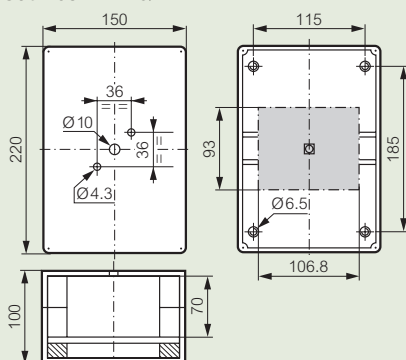
Boxes 2 x 2 knock-out entries: PG 16 or ISO 25
Cat.Nos 221 72/73/78/82



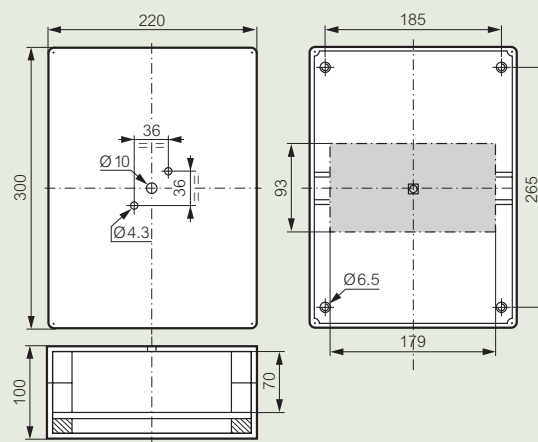
Boxes 2 x 2 knock-out entries: PG 21
Cat.Nos 221 74/75/84/85



Boxes 2 x 2 knock-out entries: PG 29
Cat.Nos 221 76/77

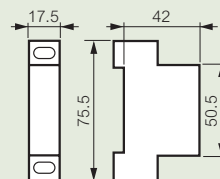


Boxes 2 x 4 knock-out entries: 2 x PG 21 and 2 x PG 29
Cat.Nos 221 86/87



Auxiliary contact

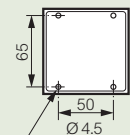
Cat.No 227 00



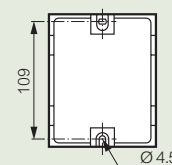
■ Fixing and drilling

Fixing centres

12 A
Cat.Nos 226 60/62

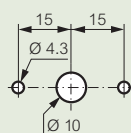


25 A
Cat.Nos 226 00/02/04

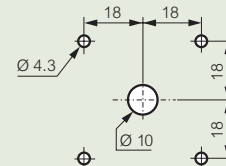


Panel drilling for flush-mounting

For 20 to 32 A devices



For 50 to 100 A devices



analogue time switches



6499 14

499 26

Power supply 230 V~
 Override switching "ON" or "OF" in front face
 Working reserve: 500 h with quartz controlled motor
 (except Cat.No 499 26)
 1 output via changeover contact
 (2 changeover contacts for Cat.No 499 26)

Pack	Cat.Nos	Daily programme
1	6499 14	20 A - 250 V~ - $\mu \cos \varphi = 1$ Shortest switching time: 30 minutes (1 segment = 10 minutes) Switching accuracy: ± 5 minutes
		30 A - 230 V~ - $\mu \cos \varphi = 1$ Shortest switching time: 20 minutes (1 segment: 10 minutes) Switching accuracy: ± 30 minutes IP 20
1	6499 64	230 V - 50/60Hz
1	6499 65	120 V - 50/60Hz

Pack	Cat.Nos	Weekly programme
1	497 56	16 A - 250 V~ - $\mu \cos \varphi = 1$ Shortest switching time: 3 hours (1 segment = 1 hour) Switching accuracy: ± 20 minutes
1	044 09	Adaptor for fixing time switch on rail EN 50022
		30 A - 230 V~ - $\mu \cos \varphi = 1$ Shortest switching time: 2 hours (1 segment: 1 hour) Switching accuracy: ± 30 minutes IP 20
1	6499 66	230 V - 50/60Hz
1	6499 67	120 V - 50/60Hz

Pack	Cat.Nos	Defrosting time switch
1	499 26	Time switch for short periods for control of defrosting, regularly repeated switching of pumps, feed conveyors, sprinkler systems, periodic lubrication of machines 16 A - 250 V~ $\mu \cos \varphi = 1$ IP 30 Daily programme The timer can repeat one or two settable short programmes within 24 hours Shortest switching sequence 2.5 hours - up to 9 times 1 switching step = 1 segment = 30 min. 50 Hz Defrosting time from 1 to 60 minutes per contact



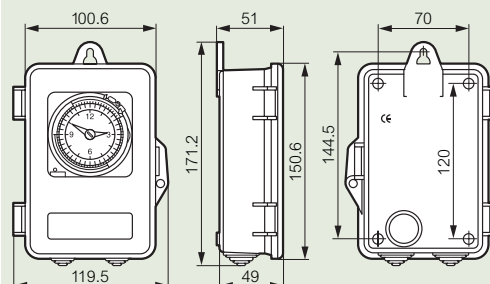
Totalising hour counter

see p. 94

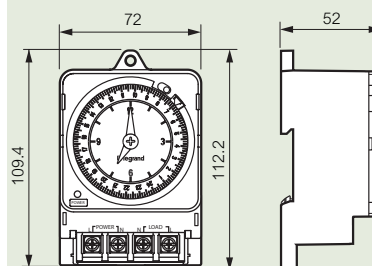
analogue time switches

■ Dimensions

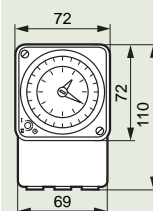
Cat.No 6499 14



Cat.Nos 6499 64/65/66/67



Cat.No 497 56



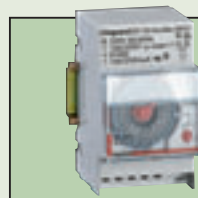
■ Technical Characteristics

Analogue time switches 30A

Conform to EN 50022, EN 55014-1, EN 55014-2, IEC 60730-1, IEC 60730-2-7, VDE 0631-1 and VDE 0631-2-7

For special applications with heavy loads like controlling:

- the lighting of commercial boards / sign boards
- water heaters
- air conditioners
- hydrochlorinators
- heating / ventilation systems
- street lighting
- blowers
- pool heaters
- electric fences
- filters, pumps and conveyers



Programmable time switches with analogue dial

see p. 152