



***industrial
controls***

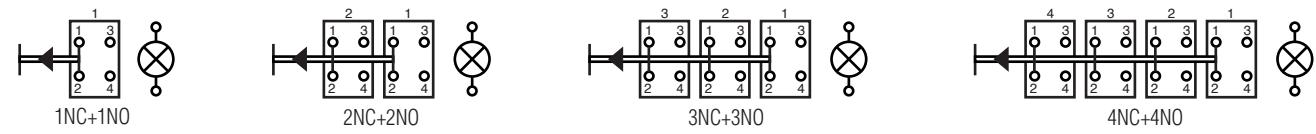
Control switches

RM Series

Control switches and indicating units 16, 22, 30mm
Control stations 22, 30mm

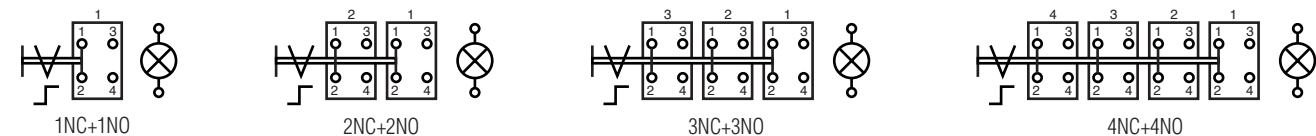


Illuminated momentary pushbuttons (IP40)



	Operator	Lens	
flush guard ^① <i>Diffuser code KS16RO</i>	PM16RO1 (1NC+1NO)	● KC16ROA	 A = 35 (1NC+1NO) A = 43 (2NC+2NO) A = 51 (3NC+3NO) A = 59 (4NC+4NO)
	PM16RO2 (2NC+2NO)	● KC16ROG	
	PM16RO3 (3NC+3NO)	● KC16RON	
	PM16RO4 (4NC+4NO)	● KC16ROR	
flush guard ^① <i>Diffuser code KS16QU</i>	PM16QU1 (1NC+1NO)	● KC16QUA	 A
	PM16QU2 (2NC+2NO)	● KC16QUG	
	PM16QU3 (3NC+3NO)	● KC16QUN	
	PM16QU4 (4NC+4NO)	● KC16QUR	
flush guard ^① <i>Diffuser code KS16RE</i>	PM16RE1 (1NC+1NO)	● KC16REA	 A
	PM16RE2 (2NC+2NO)	● KC16REG	
	PM16RE3 (3NC+3NO)	● KC16REN	
	PM16RE4 (4NC+4NO)	● KC16RER	

Illuminated maintained pushbuttons (IP40)



	Operator ^①	Lens	
flush guard ^① <i>Diffuser code KS16RO</i>	PA16RO1 (1NC+1NO)	● KC16ROA	 A = 35 (1NC+1NO) A = 43 (2NC+2NO) A = 51 (3NC+3NO) A = 59 (4NC+4NO)
	PA16RO2 (2NC+2NO)	● KC16ROG	
	PA16RO3 (3NC+3NO)	● KC16RON	
	PA16RO4 (4NC+4NO)	● KC16ROR	
flush guard ^① <i>Diffuser code KS16QU</i>	PA16QU1 (1NC+1NO)	● KC16QUA	 A
	PA16QU2 (2NC+2NO)	● KC16QUG	
	PA16QU3 (3NC+3NO)	● KC16QUN	
	PA16QU4 (4NC+4NO)	● KC16QUR	
flush guard ^① <i>Diffuser code KS16RE</i>	PA16RE1 (1NC+1NO)	● KC16REA	 A
	PA16RE2 (2NC+2NO)	● KC16REG	
	PA16RE3 (3NC+3NO)	● KC16REN	
	PA16RE4 (4NC+4NO)	● KC16RER	

^① All pushbuttons include contact blocks

Non-illuminated mushroom pushbuttons (IP40)

	Operator	
momentary mushroom pushbutton ^① 	● PF165MROR	
momentary mushroom pushbutton ^① 	■ PF165MQUR	
momentary mushroom pushbutton ^① 	■ PF165MRER	
maintained mushroom pushbutton ^① 	● PF165AROR	
maintained mushroom pushbutton ^① 	■ PF165AQUR	
maintained mushroom pushbutton ^① 	■ PF165ARER	

Signal lamps (IP40)

	Operator	Lens	
monolithic <i>Diffuser code KS16RO</i>	SL16RO	● KC16ROA	
monolithic <i>Diffuser code KS16QU</i>	SL16QU	● KC16ROG	
		● KC16RON	
		● KC16ROR	
		● KC16ROV	
monolithic <i>Diffuser code KS16RE</i>	SL16RE	● KC16QUA	
		● KC16QUG	
		● KC16QUN	
		● KC16QUR	

^① Contact blocks to be ordered separately

Positions		90°		90°				
		0	1	1	0	2		
	upper	1NC (1 - 2)	X		X	X	X= Contact closure Closures to be obtained inserting contacts on upper, centre, lower.	
		1NO (3 - 4)		X		X		
	centre	1NC (1 - 2)	X			X		
		1NO (3 - 4)		X	X			X
	lower	1NC (1 - 2)	X			X		X
		1NO (3 - 4)		X	X			
key square 		KX165AQUA		KY165AQUC KY165AQUE KY165MQUE				
		KX165AQUD						
		KX165AQUB						
		KX165MQUA						
key rectangular 		KX165AREA		KY165AREC KY165AREE KY165MREE				
		KX165ARED						
		KX165AREB						
		KX165MREA						
knob handle square 		SMX165AQU		SMY165AQU SMY165MQU				
		SMX165MQU						
knob handle rectangular 		SMX165ARE		SMY165ARE SMY165MRE				
		SMX165MRE						

Contact blocks to be ordered separately
 Key code standard: A
 Key code on request: B, C, D, E, F
 ▼ Key-removable
 • Position OFF

Contact blocks

		Code	
	1NC+1NO Soldering or inserting terminals type faston 2,8 x 0,5mm	AGX001	
	1NC+1NO wire-wrapping type	AGX001W	
	Dummy unit	AGX002	
	Printed circuit socket (to be fixed max 2 AGX001 contact blocks)	AHX697-P	

“Buzzer”

		Code	
	Continuous sound (without short bar) Intermittent sound (with short bar)	SA24AC-DC	
	Sound level 84 dB AT 0,1 m Operation voltage 12..24V AC/DC		

Incandescent lamps "Midget Groove T1 3/4"

		Code
	6V-1,2W	KM16-6
	14V-1,2W	KM16-14
	24V-1,2W	KM16-24
	28V-1,2W	KM16-28
	48V-1,2W	KM16-48

LED "T1 3/4 Midget Groove MG5 7s/9 "

		Code
	6V-0,25W DC	KL16-6G
		KL16-6R
		KL16-6V
	12V-0,25W DC	KL16-12G
		KL16-12R
		KL16-12V
	28V-0,25W DC	KL16-28G
		KL16-28R
		KL16-28V

Protective shields against incidental operations


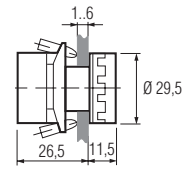

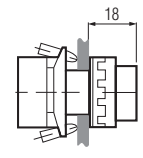

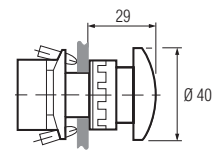

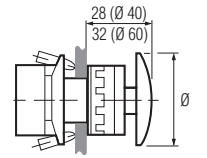

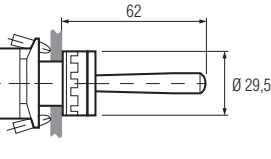

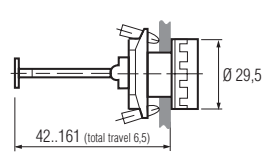
		Code	
	Protective round	KG16RO	
	Protective square	KG16QU	
	Protective rectangular for single mounting	KG16RE	
	Protective rectangular for mounting side	KG16RES	

		Code	
	Square protection cap to avoid faulty operations	KCA16QU	
	Rectangular protection cap to avoid faulty operations	KCA16RE	
	Protective square PVC IP65 (transparent rubber)	KCP16QU	
	Protective rectangular PVC IP66 (transparent rubber)	KCP16RE	
	Black blanking plate (Ø18mm) (18x18mm) (18x24mm)	KT16RO KT16QU KT16RE	
	Contact blocks extractor	ESBC	
	Lamps extractor	KEST16	
	Mounting key	KEY16	
	Key standard (single)	KEYA	


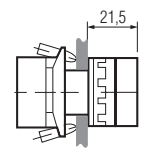

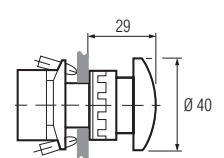

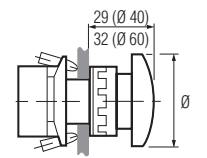
Series RM - Ø 22mm
Non-illuminated pushbuttons
 Metal body, round series



Momentary pushbuttons

	Operator	Actuator	
flush guard 	● ● ○ RM010 ①	● P22804A ● P22804G ● P22804V	
extended button 	● RM020R	● P22805A ○ P22805B ● P22805G ● P22805N ● P22805V	
momentary mushroom head 	● RM050R ● RM050N		
wobble mushroom head 	● RM055R (Ø 40) ● RM055N (Ø 40) ● RM056R (Ø 60)		
wobble joy stick 	● RM054R		
pushbutton "reset" 	Ⓡ G2557	● P22804A ○ P22804B ● P22804G ● P22804N ● P22804R ● P22804V <i>(without symbols)</i>	


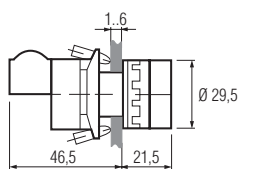

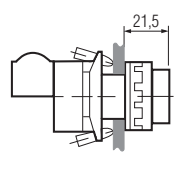

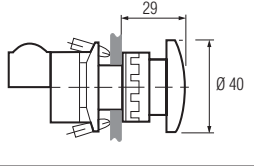
Maintained pushbuttons

	Operator	Actuator	
flush guard push-on / push-off 	RM030 ② Actuator to be ordered separately	● P24728A ○ P24728B ● P24728G ● P24728N ● P24728R ● P24728V	
mushroom head push-on / push-off 	● RM045R ② ● RM045N ②		
mushroom head turn to reset 	● RM065R (Ø 40) ● RM066R (Ø 60)		


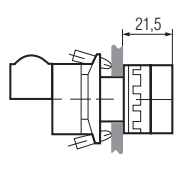

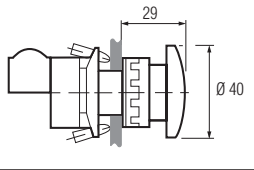

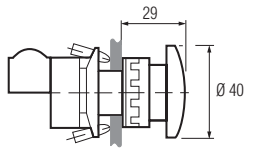
Series RM - Ø 22mm
Illuminated pushbuttons
 Metal body, round series



Momentary pushbuttons



	Operator	Actuator	
flush guard 	RM122 Actuator to be ordered separately	● P22814A ● P22814G ● P22814L ● P22814R ○ P22814T ● P22814V	
extended button 	● RM120R	● P22814A ● P22814G ● P22814L ○ P22814T ● P22814V	
mushroom head 	● RM150R	● P22818G ● P22818V	

Maintained pushbuttons

	Operator	Actuator	
flush guard push-on / push-off ④ 	RM130 ③ Actuator to be ordered separately To use only with direct supply	● G2520A ● G2520G ● G2520R ○ G2520T ● G2520V	
mushroom head push-on / push-off ④ 	● RM145R ③ To use only with direct supply	● G2521G ● G2521V	
mushroom head turn to reset 	● RM165R		

① Either red, black and white, actuators are supplied with RM010 operator

② Contact blocks to be used:  VA0-FA0  V40-F40 max 4 contacts

③ Contact blocks to be used:  V40-F40  VA0-FA0 max 2 contacts

④ To be used with G2380 (not suitable for additional transformer, resistor, flasher)

	Position	60°		120°		60°		60°		60°			
		0	1	0	1	1	0	2	1	0	2		1
	upper	V40	X	X	X	X	X	X	X	X	X	X	
		V50	X	X	X	X	X	X	X	X	X	X	
		VR0	X	X	X	X	X	X	X	X	X	X	
		VA0	X	X	X	X	X	X	X	X	X	X	
		V40	X	X	X	X	X	X	X	X	X	X	
		V50	X	X	X	X	X	X	X	X	X	X	
		VR0	X	X	X	X	X	X	X	X	X	X	
		VA0	X	X	X	X	X	X	X	X	X	X	
lower			X	X	X	X	X	X	X	X	X	X	
X= Contact closure Closures to be obtained inserting contacts on upper or lower.													
		RM200N											
		RM201N											
		RM250N											
			RM204N										
			RM205N										
			RM254N										
				RM210N							RM213N		
				RM230N							RM232N ^①		RM233N
				RM270N									
				RM280N									RM283N
		RM300N											
		RM350N											
			RM304N										
			RM354N										
				RM310N							RM312N ^①		RM313N
				RM370N							RM372N		RM373N
				RM380N									RM383N ^②
		RM400N											
		RM450N											
			RM404N										
			RM454N										
				RM410N							RM412N ^①		RM413N
				RM470N							RM472N		RM473N
			RM480N								RM483N ^②		
		RM650x ^③											
		RM655x ^③											
		90° RM651x ^③											
				RM653x ^③									

① To obtain a single pole 3-step switch without 0 position, use 1NC + 1NO on upper and 1NC on lower

② To obtain a start-stop selector, use 1NC on upper and 1NO on lower

③ To order replace "x" with colour (A = light-bleu, B = white, G = yellow, R = red, V = green)

▼ Key-removable

• Position OFF

Key code standard: E1

Joy stick operators

	Position	90°			90°					
		2	0	1	3	2	0	1		4
	upper	V40		X					X	
		V50	X			X				
		VA0	X	X		X	X	X		X
		V40	X			X				
		V50			X					X
		VR0								
		VA0		X	X		X	X	X	X
	lower					X	X	X	X	X
X= Contact closure Closures to be obtained inserting contacts on upper or lower.										
	joy stick operator ^① without latch	2 - 1	M2530NM							
		2 - - - 1	M2531NM							
		3 2 - 1 4			M2550NM					
		3 2 - - - 1 4			M2551NM					
	joy stick operator ^① with mechanical latch in "0" position	2 - 1	M2570NM							
		2 - - - 1	M2571NM							
		3 2 - 1 4			M2580NM					
		3 2 - - - 1 4			M2581NM					

Pilot lights and potentiometric control

	Operator	Lens	
	RM600 (BA 9s)		P22821A
			P22821G
			P22821L
			P22821R
			P22821T
			P22821V
Lens and diffuser to be ordered separately			
	SR601 (BA 9s)		P22821A
	SR602 (E10)		P22821G
			P22821L
			P22821R
			P22821T
			P22821V
Lens and diffuser to be ordered separately			
	S22BA9S (BA 9s)		G2839A
	S22E10 (E10)		G2839B
			G2839G
			G2839R
			G2839V
Lens and diffuser to be ordered separately			
	RM910		
Suitable for potentiometers with Ø 6mm min. shaft 50 mm (potentiometer not supplied)			

① All joy stick operators include legend plate

Non-illuminated momentary pushbuttons

	Operator	Actuator	
flush guard 	■ ■ □ QM010 ^①	■ P22857A	
		■ P22857G	
		■ P22857V	
extended button 	■ QM020R	■ P22858A	
		□ P22858B	
		■ P22858G	
		■ P22858N	
		■ P22858V	
momentary mushroom head 	● QM050R		

Illuminated momentary pushbuttons

	Operator	Actuator	
flush guard 	QM122 ^② Actuator to be ordered separately	■ T1001A	
		■ T1001G	
		■ T1001L	
		■ T1001R	
		■ T1001T	
		■ T1001V	
extended button 	■ QM120R	■ T1002V	
		■ T1002G	
		■ T1002A	
		■ T1002L	
		■ T1002T	
		■ T1002V	

Pilot light

	Operator	Lens	
	QM600 ^② (BA 9s) Actuator to be ordered separately	■ P22853A	
		■ P22853G	
		■ P22853L	
		■ P22853R	
		■ P22853T	
		■ P22853V	
Accepts additional supplies			

① Either red, black and white, actuators are supplied with QM010 operator
② Use lamps 23mm max length

	Positions	60°		120°		60°		60°		60°		
		0	1	0	1	1	0	2	1	0	2	
		⌚	⌚	⌚	⌚	⌚	⌚	⌚	⌚	⌚	⌚	
upper 	V40	X		X	X		X		X	X		
	V50		X		X		X		X	X		
	VR0	X		X	X	X	X	X			X	X
	VA0		X		X	X	X	X	X			
	V40	X		X	X			X	X	X		
	V50		X		X		X		X			X
lower 	VR0	X		X	X	X	X	X	X		X	X
	VA0		X		X	X	X	X	X			X
key selector switches 	QM200N											
	QM201N											
	QM250N											
	QM204N											
	QM205N											
	QM254N											
	QM210N											
	QM230N											
	QM270N											
	QM280N											
black short handle 	QM300N											
	QM350N											
	QM304N											
	QM354N											
	QM310N							QM312N ^①		QM313N		
	QM370N							QM372N		QM373N		
QM380N									QM383N ^②			
black long handle 	QM400N											
	QM450N											
	QM404N											
	QM454N											
	QM410N							QM412N ^①		QM413N		
	QM470N							QM472N		QM473N		
QM480N									QM483N ^②			
illuminated ^③ short handle 	QM650x ^③											
	QM655x ^③											
	90° QM651x ^③											
	QM653x ^③											

① To obtain a single pole 3-step switch without 0 position, use 1NC + 1NO on upper and 1NC on lower
② To obtain a start-stop selector, use 1NC on upper and 1NO on lower
③ To order replace "x" with colour (A = light bleu, B = white, G = yellow, R = red, V = green)

▼ Key-removable
• Position OFF
Key code standard: E1

X= Contact closure
Closures to be obtained inserting contacts on upper or lower.

Momentary pushbuttons, round and square series

	Operator	Actuator	
flush guard 	RT010 Actuator to be ordered separately	● P22804A	
		○ P22804B	
extended button 	● RT054R	● P22804G	
		● P22804N	
wobble joy-stick 	● RT054R	● P22804R	
		● P22804V	
momentary mushroom head 	● RT050R	● P22805A	
		○ P22805B	
wobble mushroom pushbutton 	● RT055R (Ø 40) ● RT056R (Ø 60)	● P22805G	
		● P22805N	
illuminated momentary pushbutton 	RT120 Actuator to be ordered separately	● P22814	
		● P22818R	
pushbutton "reset" 	R G2556	● P22818V	
		● P22818G	
flush guard 	QT010 Actuator to be ordered separately	● P22804A	
		□ P22857B	
extended button 	QT010 Actuator to be ordered separately	● P22857A	
		□ P22857G	
extended button 	QT010 Actuator to be ordered separately	● P22857N	
		● P22857R	
extended button 	QT010 Actuator to be ordered separately	● P22857V	
		● P22858A	
extended button 	QT010 Actuator to be ordered separately	□ P22858B	
		● P22858G	
extended button 	QT010 Actuator to be ordered separately	● P22858N	
		● P22858R	
extended button 	QT010 Actuator to be ordered separately	● P22858V	
		● P22858V	

Maintained pushbuttons, round series

	Operator	Actuator	
flush guard push-on / push-off 	RT030 Actuator to be ordered separately	● P24728A	
		○ P24728B	
mushroom head push-on / push-off 	● RT045R ● RT045N	● P24728G	
		● P24728N	
mushroom head push-on / push-off 	● RT045R ● RT045N	● P24728R	
		● P24728V	

Momentary dual operator pushbutton, square series

	Operator	
	 QT011 QT011A QT011B	
To obtain warning light add direct supply G3820 (see pag. 26)		

Pilot lights and potentiometric control

	Operator	Lens	
pilot light for add-on power supplies 	RT600	● P22821A	
		● P22821G	
monolithic Ø 16mm 	S16BA9S (BA 9s)	● P22821L	
		● P22821R	
monolithic Ø 16mm 	S16E10 (E10)	● P22821T	
		● P22821V	
jumbo 	● P20827A ○ P20827B ● P20827G ● P20827R ● P20827V Lens to be ordered separately	● P21493A	
		○ P21493B	
jumbo 	● P21493G ● P21493R ● P21493V Lens to be ordered separately	● P21493A	
		○ P21493B	
potentiometric control 	● RT910	● P21493G	
		● P21493R	
potentiometric control 	● RT910	● P21493V	
		● P21493V	

⊙ Contact blocks to be used: VAO-FA0 V40-F40 max 4 contacts

Positions		60°		120°		60°		60°		60°			
		0	1	0	1	1	0	2	1	0	2	1	0
upper	V40	X		X		X		X		X		X	X
	V50		X		X		X		X	X		X	
	VR0	X		X		X	X		X	X		X	X
	VA0		X		X		X	X		X	X		
	V40	X		X		X		X		X	X		X
	V50		X		X		X		X		X		X
	VR0	X		X		X	X		X	X		X	X
lower	VA0		X		X		X	X		X		X	

X= Contact closure
 Closures to be obtained inserting contacts on upper or lower.

key selector switches	Diagram	Code	Code	Code	Code	Code
		RT200N				
		RT201N				
		RT250N				
			RT204N			
			RT205N			
			RT254N			
				RT210N		RT213N
				RT230N	RT232N ①	RT233N
				RT270N		
				RT280N		RT283N

black short handle	Diagram	Code	Code	Code	Code	Code
		RT300N				
		RT350N				
			RT304N			
			RT354N			
				RT310N	RT312N ①	RT313N
				RT370N	RT372N	RT373N
				RT380N		RT383N ②

black long handle	Diagram	Code	Code	Code	Code	Code
		RT400N				
		RT450N				
			RT404N			
			RT454N			
				RT410N	RT412N ①	RT413N
				RT470N	RT472N	RT473N
				RT480N		RT483N ②

① To obtain a single pole 3-step switch without 0 position, use 1NC + 1NO on upper and 1NC on lower
 ② To obtain a start-stop selector, use 1NC on upper and 1NO on lower

▼ Key-removable
 • Position OFF
 Key code standard: E1

Emergency stop mushroom pushbuttons Ø 22mm according to EN 60418 safety requirements

Operator	Diagram	Dimensions
RT065RV40 ① including 1NC + IP20 terminal protection	 STOP 1 2 (by using normally open contact blocks "NO", PLS. Foresee early closed VA0-FA0)	 1.6, 37, Ø40, 50
RT065R ① (without contact block)	(by using normally open contact blocks "NO", PLS. Foresee early closed VA0-FA0)	 30
PN94 ②	 (by using normally open contact blocks "NO", PLS. Foresee base mounting early closed G. 2546)	 63, 38
RT064R	(by using normally open contact blocks "NO", PLS. Foresee early closed VA0-FA0)	 30, 30
RT075R	(by using normally open contact blocks "NO", PLS. Foresee early closed VA0-FA0)	 1.6, 37, Ø40, 30

By request, all control stations type PN are available with ground and neutral terminal (part n. G3817)

① Contact block type used: V40 U_p max 600V, I_p max 10A - AC15

② Metric cable glands M16/20

Round series for mounting on DIN rail

Composition	X = mm			
	45	58	70	
Operator	1	1	1	
N. of contact blocks	1 2	1 2	1 2 3 4	
N. of additional spacers	type G2539 (h=12,5mm) - - 1 1 - - - -			
	type G2540 (h= 5mm) - - - - 1 1 1 1			
	type G2541 (h=20mm) 1 - 1 - 3 2 1 -			
Contact mounting support G2538	1	1	1	
Mounting plate for DIN rail G2535	1	1	1	
Front plates (see below)	1	1	1	

Front plates	Diagram	Code	Code
		blank	P25143
		0 1	P25144
		2 0 1	P25145
			1 OFF ON
			0 1

Non-illuminated momentary pushbuttons

	Actuator colour	Operator	
flush guard 	●	M6010A	
	○	M6010B	
	●	M6010G	
	●	M6010N	
	●	M6010R	
	●	M6010V	
extended button 	●	M6020R	
flush guard 	●	M6080N	
momentary mushroom head IP54	●	M6050N	
	●	M6050R	
wobble mushroom head IP54	●	M6055R	
maintained, mushroom head turn to reset 	●	M6065R	
maintained, mushroom push-on/push-off, thermoplastic body 	●	T6045R	

Contact blocks to be used V40-F40 VA0-FA0 max 4 contacts

Illuminated momentary pushbuttons

	Actuator colour	Operator	
flush guard 	●	M6122A 406	
	○	M6122B 406	
	●	M6122G 406	
	●	M6122R 406	
	●	M6122V 406	
	●	M6122V 406	
extended button 	●	M6120R 406	
mushroom head 	●	M6150R 406	

Selector switches complete of legend plate

	Positions	60°		120°		60°		60°		60°				
		0	1	0	1	1	0	2	1	0	2		1	0
upper 		X		X	X			X				X	X	
			X		X		X		X	X				
		X		X	X	X	X	X	X			X	X	
			X		X	X	X	X	X	X				
		X		X	X			X		X	X			
			X		X		X		X				X	
		X		X	X	X	X	X	X			X	X	
			X		X	X	X	X	X			X		
lower 		X		X	X			X				X	X	
			X		X		X		X				X	
		X		X	X	X	X	X	X			X	X	
			X		X	X	X	X	X			X		
		X		X	X			X		X	X			
			X		X		X		X				X	
		X		X	X	X	X	X	X			X	X	
			X		X	X	X	X	X			X		
Key selector switches 		M6200N												
		M6201N												
		M6250N												
		M6205N												
		M6210N												
		M6230N												
		M6233N												
		M6280N												
	black long handle 		M6400N											
			M6450N											
		M6404N												
		M6410N						M6412N ①			M6413N			
		M6470N												
		M6480N									M6483N ②			
illuminated short handle ③ 		M6650x 406												
		M6653x 406												
illuminated start-stop function ④ 		M6662R TE6												
		M6662V TE6												

X= Contact closure
 Closures to be obtained inserting contacts on upper or lower.

① To obtain a single pole 3-step switch (without 0 position), use 2NC + 1NO
 ② To obtain a start-stop selector switch, use 1NC + 1NO
 ③ To order replace "X" with colour (A = light-blue, B = white, G = yellow, R = red, V = green)
 ④ Supplied with V40 + V50 contact blocks
 Key code standard: E1
 Key code on request: G01..G10

▼ Key removable
 • Position OFF

	Positions	90°			90°					
		2	0	1	3	2	0	1		4
 upper lower	V40			X				X		X= Contact closure Closures to be obtained inserting contact blocks on upper or lower
	V50	X				X				
	VA0	X	X		X	X	X		X	
	V40	X			X					
	V50			X					X	
	VA0		X	X		X	X	X	X	
joy stick operator without latch ① 		M6530NM						 Ø 34 27 89		
		M6531NM								
				M6550NM						
				M6551NM						
joy stick operator with mechanical latch in "0" position ① 		M6570NM						 Ø 34 27 89		
		M6571NM								
				M6580NM						
				M6581NM						

① All joy stick operators include legend plate

Pilot lights

	Operator	Lens		
for additional supplies 	M6631 (BA 9s)		G2842A	
			G2842B	
			G2842G	
			G2842R	
			G2842V	
	Lenses to be ordered separately		 1.6 19	
monolithic light thermoplastic body 	S30BA15D (BA 15d) S30E14 (E14)			P21491A
				P21491B
				P21491G
				P21491R
			P21491V	
	Lenses to be ordered separately		 1.10 66 25	


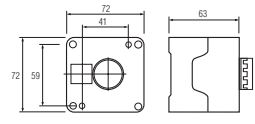

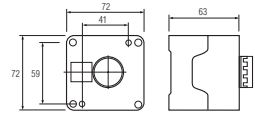

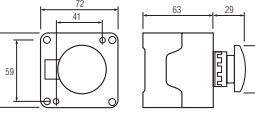

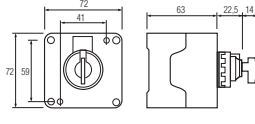

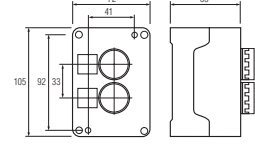

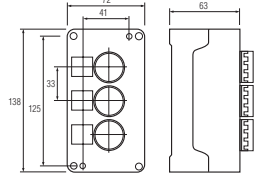

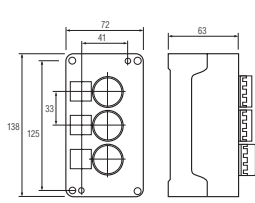
No. holes	Ø 22	Ø 30	
1 hole 	 CT7023 (PG 13,5)	 CT7031 (PG 13,5)	 Ø 4.2 60 102 75 59 67.5
1 hole 	 CT7022 (PG 13,5)	 CT7030 (PG 13,5)	 Ø 4.2 60 102 75 59 67.5
1 hole ② 	 PN22-1G (M 16/20) PN22-1G-PG (Pg 11/16)		 72 59 72 63
1 hole ② 		 PT30-1H ① (PG 13,5)	 Ø 4.2 59 72 39 72 53
1 hole ② 	 PN22-1H (M 16/20) PN22-1H-PG (Pg 11/16)		 72 59 72 63
2 holes ② 	 PN22-2 (M 16/20) PN22-2-PG (Pg 11/16)		 72 41 63 105 92 33
3 holes ② 	 PN22-3 (M 16/20) PN22-3-PG (Pg 11/16)		 72 41 63 138 125 33
5 holes ② 	 PN22-5 (M 20/25) PN22-5-PG (Pg 11/16)		 72 59 63 215 184 33

By request, ground and neutral terminals are available for all "PN" control stations (part n. G3817)

Enclosures type PN are suitable for thermoplastic operators RT and QT series.

① For base mounting contact blocks assemblies, please order also (code P25461)

② For metal control switches assemblies in "PN" control station used P3823 (see pag.28, RM accessories)


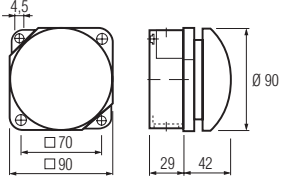

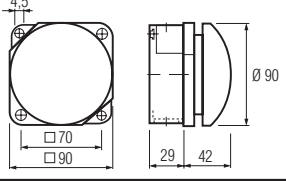

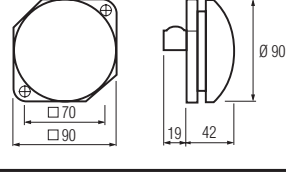
	contacts	Part number	Cable glands			
flush guard 	Stop 	PN81N ①	M16/20			
		PN81R ①	M16/20			
	Stop 	PN81N-PG	Pg11/16			
		PN81R-PG	Pg11/16			
flush guard 	Start 	PN81B ①	M16/20			
		PN81V ①	M16/20			
	Start 	PN81B-PG	Pg11/16			
		PN81V-PG	Pg11/16			
wobble mushroom 	Stop 	PN85R ①	M16/20			
	Stop 	PN85R-PG	Pg11/16			
key selector 	0 - 1 	PN200N ①	M16/20			
	0 - 1 	PN200N-PG	Pg11/16			
flush guards 	Stop 	Start 	PN82 ①	M16/20		
			PN82A ①	M16/20		
	Stop 	Start 	PN82-PG	Pg11/16		
			PN82A-PG	Pg11/16		
flush guards 	Indietro 	Stop 	Avanti 	PN83 ①	M16/20	
				PN83A ①	M16/20	
				PN83B ②		
	Indietro 	Stop 	Avanti 	PN83-PG	Pg11/16	
				PN83A-PG	Pg11/16	
flush guards and pilot light 	Stop 	Start 	Pilot light 	PN87 ①	M16/20	
				PN87A ①	M16/20	
				PN87B ①	M16/20	
	Stop 	Start 	Pilot light 	PN87-PG	Pg11/16	
				PN87A-PG	Pg11/16	

By request, ground or neutral terminals are available for all "PN" control stations (part n. G3817)


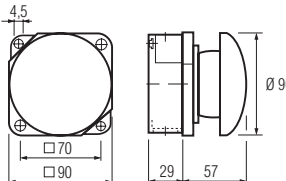

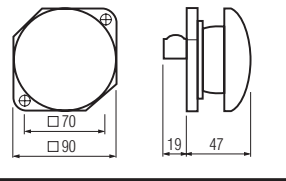
① Accept PG 13,5 cable glands assembled on M20 knock-out

② Same as PN83A but with legend plate "forward-stop-reverse"


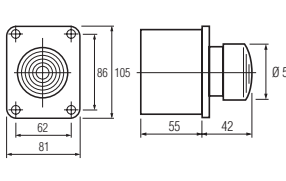

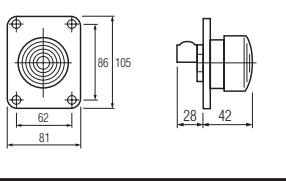
Thermoplastic control stations

	Operator	
mushroom head 	4090R ①	
mushroom head 	4090N ①	
mushroom head flush mounting 	4091R	

Thermoplastic control stations

	Operator	
wobble mushroom 	4190R ①	
wobble mushroom flush mounting 	4191R	


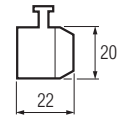

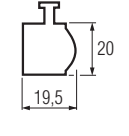

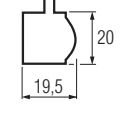

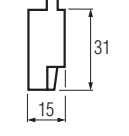
Metal control stations

	Operator	
mushroom head 	5090R ②	
mushroom head flush mounting 	5091R	

① Boxes with knockouts for Pg 13,5 cable gland (part n. G2519) or Ø 21 grommets (part n. P9695)


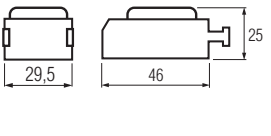

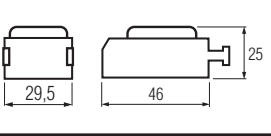

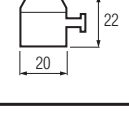

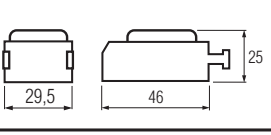

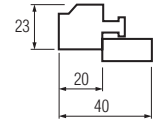
② Supplied with grommets and suitable for Pg 13,5 cable gland (part n. G2519)

Contact blocks

	Function	Diagram	Code	
with screw terminals  IP20	● 1NC	1 — 2	V40	
	● 1NO	3 — 4	V50	
	● 1NC late break	5 — 6	VR0	
	● 1NO early closure	7 — 8	VA0	
	(to connect eyelet terminals remove the coloured protection)			
with screw terminals  (base mounting type for PN control stations) IP20	● 1NC	1 — 2	G1769	
	● 1NO	3 — 4	G1770	
	● 1NC late break	5 — 6	G2545	
	● 1NO early closure	7 — 8	G2546	
with faston terminals 	● 1NC	1 — 2	F40	
	● 1NO	3 — 4	F50	
	● 1NC late break	5 — 6	FR0	
	● 1NO early closure	7 — 8	FA0	
with faston terminals 	● 1NC+1NO	3 — 4 1 — 2	210	

Wiring connections should be in same polarity

Power supplies





	Voltages	Lamps	Code	
transformer 	110/6V	6..7.5V - 0.6..1.2W	T16	
	230/6V		T26	
	110/24V	24V - 1,2W	T12	
	230/24V		T22	
resistor 	110/48V	48V - 1,2W AC/DC	R14	
	230/130V	130V - 2W AC/DC	R21	
resistor with diode 	110/48V	48V - 1,2W AC	RD1	
	220/130V	130V - 2.6W AC	RD2	
flasher 	12..130V	2..12W AC/DC	L130	
full voltage module with lamp holder  IP20	Base mounting for control station		G2134	
	Direct supply for modular illuminated control switches		G3820	

Test pushbuttons


Red marked connections are to be made in relation to the various types of power supplies



Lamps

	Voltages/Watt	Code	
BA 9s filament 	6V-1,2W	A14591/15	
	24V-2W	AP14591/6	
	36V-2W	A14591/18	
	48V-1,2W	AP14591/7	
	130V-2W	A14591/14	
BA 9s neon 	220V	A14591/13	
E10 filament 	24V-3W	AP11066/1	
E10 neon 	220V	AP11066/9	

Led

	Voltages/Watt	Code	
BA 9s Socket 	240 Vac-0,6W	Led 240 V	
		Led 240 R	
		Led 240 M	
		Led 240 A	
		Led 240 B	
	120 Vac-0,6W	Led 120 V	
		Led 120 R	
		Led 120 M	
		Led 120 A	
		Led 120 B	
	24 Vac/DC-0,5W	Led 24 V	
		Led 24 R	
	Led 24 M		
	Led 24 A		
	Led 24 B		

	Description	Code
<p>IP66</p>	Seal caps RM / RT010	<ul style="list-style-type: none"> ● P17482N ● P17482R ● P174820 ● P17482V
	M6010	<ul style="list-style-type: none"> ● P17483N ● P17483R ● P174830
	QM / QT010	■ P24280
	QT011	■ P24293
	Flush metal guard for illuminated pushbutton M6122	P19255
	Caps to cover unused holes Ø 22	G1299
	Ø 30	G1300
	Lamps remover BA 9s / E10	P21734
	Panel hole adapter from Ø 30 to Ø 22 RM / RT (round series)	G2326
	QM / QT (square series)	G2327
	Washer to reinforce thin panels Ø 22	P18822
	Ø 30	P18823
	Earthing cover plate Ø 22 series	G2621
	Backing plate for mounting metal body control switches on PN control station	P3823

	Description	Code
	Base mount plate metal non-illuminated operators only Ø 22	1415
	Direct power supply for enclosure	G2134
	Screw terminal mounting on back panel	1NC G1769
		1NO G1770
	Late break	1NC G2545
Early make	1NO G2546	
	Dust-tight cover plates 1 contact block	P15973
	2 contact blocks	P18096
	Base mounting plate for 1 contact block	P22021
	2 contact blocks	G2538
	Installation tool for tightening the central fixture nut (Ø22mm)	P3906
	Terminal protection IP20	<ul style="list-style-type: none"> ● V40 P24417R ● V50 P24418V ● VR0 P24419H ● VA0 P24420G ● for direct supply P24854N
	6,35mm slip on terminal for screw terminal connection	1417
	6,35mm double slip on terminal for F40-F50-FA0-FR0 contact blocks	1418
	Standard key for selector switches	A00CH00E1

Enclosures

	covers				boxes	A B C D (dimensions in mm)	
	knockout holes Ø 22		without holes				
No. of halls	h 13 mm	h 13 mm	h 33 mm				
1	Ø 22 P1B-0122	P1B	P1A	C1	91 91 71 46		
	Ø 30 P1B-0130						
2	Ø 22 P2B-0222	P2B	P2A	C2	151 91 71 106		
	Ø 30 P2B-0230						
3	Ø 22 P2B-0322						
	Ø 30 P2B-0330						
4	P2B-0422						
6	P2B-0622						
		P3B		C3	204 91 71 159		
		P4B		C4	256 91 71 211		
		P5B		C5	360 91 71 315		
			P6A	C6	204 169 149 159		
			P8A	C8	290 257 237 245		

Sealed fiberglass and polyester resin
Self-extinguishing, withstands shocks and chemical agents

- ① Boxes with knockouts for Pg 16 cable gland
- ② Boxes with knockouts for Pg 21 cable gland
- ③ Boxes with knockouts for Pg 29 cable gland

Buttons and internal lenses with ISO symbols ①

	SYMBOLS / INSCRIPTIONS	BUTTONS RM010 / RT010		INTERNAL LENSES RM120 RM122 SR601 - 2 RM600		
Ø 22 round series 	○	P24200R	P24200N	P24230	P24245	
	I	P24201N	P24201B	P24201V	P24246	
	II	P24202N		P24202V	P24247	
	ÿ	P24203N		P24203V	P24248	
	STOP	P24204R		P24234	P24249	
	START	P24205N	P24205V	P24235	P24250	
	ARRESTO	P24206R		P24236	P24251	
	MARCIA	P24207N	P24207V	P24237	P24252	
Ø 22 square series 	○	P24215R		P24784	P24769	P24260
	I	P24216N	P24216V	P24785	P24770	P24261
	II	P24217N	P24217V	P24786	P24771	P24262
	ÿ	P24218N	P24218V	P24787	P24772	P24263
	STOP	P24219R		P24788	P24773	P24264
	START	P24220N	P24220V	P24789	P24774	P24265
	ARRESTO	P24221R		P24790	P24775	P24266
	MARCIA	P24222N	P24222V	P24791	P24776	P24267

① R = red, V = green, N = black

Legend plates for PT control stations

	Description	
	Self adhesive legend plate (for insulating enclosures)	
	AVANTI	P25467
	INDIETRO	P25468
	FORWARD	P25469
	REVERSE	P25470
	START	P25465
	STOP	P25466
	0 - 1	P25481
	BLANK	P25464

Legend plates for PN control stations

	Description	
	Self adhesive legend plate (for insulating enclosures)	
	START	P3980
	STOP	P3981
	AVANTI	P3982
	INDIETRO	P3983
	FORWARD	P3984
	REVERSE	P3985
	ON	P3986
	OFF	P3987
	IMPULSO	P3988
	MARCHE	P3989
	ARRET	P3990
	ARRIERE	P3991
	AVANT	P3992
	MONTEE	P3993
	DESCENTE	P3994
	SINISTRA	P3995
	DESTRA	P3996
	NED	P3997
	OP	P3998
	UP	P3999
	DOWN	P4000
	APRE	P4001
	CHIUDE	P4002
		0 1
	2 0 1	P4004
	1 0 2	P4005

Ø 22	Ø 30	Description	Ø 22	Ø 30
for pushbuttons				
		ACCESO	P24445	
		APRE	P22914	P13071
		ARRESTO	P22906	P13062
		AUMENTA	P24286	P13076
		AUTOMATICO	P22920	P15413
		AVANTI	P22907	P13063
		CHIUDE	P22913	P13070
		CLOSE	P24526	
		CLOSED	P22930	
		DESTRA	P22912	P13069
		DIMINUISCE	P24287	P13077
		DISCESA	P22910	P13066
		DISINSERITO	P22916	
		DOWN	P22936	
		FAST	P22937	
		FORWARD	P22941	
		IN	P22933	
		INCH	P22939	
		INDIETRO	P22908	P13064
		INSERITO	P22915	P13078
		LENTO	P22917	P13084
		MANUALE	P22919	
		MARCIA	P22905	P13061
		OFF	P22932	P17997
		ON	P22931	P17996
		OPEN	P22929	
		OUT	P22934	
		RAPIDO	P22918	P13085
		REVERSE	P22942	
		RUN	P22940	
		SALITA	P22909	P13065
		SINISTRA	P22911	P13068
		SLOW	P22938	
		SPENTO	P24446	
		START	P24520	P13087
		STOP	P24521	P13088
		UP	P22935	
for selector switches				
		0 1	P22923	P17380
		0 1	P24804	
		1 2	P22988	
		1 0	P24720	
		2 0	P22922	P13055
		APRE CHIUDE	P22926	
		ARR. MARCIA	P22925	
		AUTO MAN	P22924	
		AUTO 0 MAN	P22928	
		AVAN. 0 INDIET.	P22976	
		INS DIS	P24711	
		ON OFF AUTO	P25763	
		OPEN OFF CLOSED	P22927	
		0 1	P22921	P13148
		OFF ON	P24447	
		0 MAN	P24721	
		1 2	P24805	
red background				
		ARRESTO	P22949	
		EMERGENZA	P22950	
		STOP	P22948	
		BLANK	P22851	P18007R

Ø 22	Ø 30	Description	Ø 22	Ø 30
		In alluminium to be engraved <i>BLANK</i>	P24143	P13086
		In thermoplastic to be marked-up <i>BLANK</i>	P22850	P18007
		In alluminium 8,5x27,5 to be engraved <i>BLANK</i>	G2382	
		In alluminium to be engraved <i>BLANK</i>	P24802	
		In thermoplastic to be marked-up <i>BLANK</i>	P24907	P20892
		In thermoplastic - yellow background <i>BLANK</i>	P25961G	P21186
		Self adhesive legende plate - yellow background ARRESTO EMERGENZA EMERGENCY STOP <i>BLANK</i>	P26723 P26721 P26720	
		Self adhesive legende plate - yellow background ARRESTO EMERGENZA EMERGENCY STOP <i>BLANK</i>	P24006 P24007 P24005	
		In thermoplastic EMERGENCY STOP	P25692	

ALTERNATING CURRENT (IEC / EN 60947-5-1)

		Contact blocks									
		AGX001 (Ø 16 series)		V40-V50-VA0-VRO-F40-F50-FA0-FRO (Ø 22, 30 series)						210 (Ø 22, 30 series)	
Rated isolation voltage U_i	V	250 (60V Buzzer)		690						250	
Rated impulse voltage U_{imp}	kV	-		6						-	
Rated voltage U_e	V	100..125 200..220		24	48	110/120	240	400	500	600	250
Rated current I_e											
AC-15 Electromagnetic loads >72VA	A	0,3	0,2	10	8,5	6,5	4,5	2,6	2,1	1,6	-
AC-12 Resistive loads and solid state loads with insulation by opto couplers	A	1,5	1	-	-	-	-	-	-	-	-
AC-13 Solid state loads with transformer insulation	A	1	0,7	-	-	-	-	-	-	-	-
Minimum operating levels		5V AC/DC - 2 mA		28V DC - 7 mA							
Rated thermal current											
open (IEC) I_{th}	A	5		12						10	
enclosed (IEC-UL/CSA) I_{the}	A	-		10						10	
Category / Protection class		-		C Group (VDE01106) / Class II (CEI 23-11)						-	
Wasted power at thermal rated current I_{the}	W	-		≤ 0,3						-	
Short-circuit protection		1 kA (fuse 1A)		1 kA (fuse NDZ 10A-500V gL/gG)						-	

		AGX001		V40, V50, F40, F50						
				VA0, VRO, FA0, FRO						
RATED VOLTAGE U_e	V	24	100..110	24	48	125	250	440	500	600
DC-12 Resistive loads and solid state loads with insulation by opto couplers	A	1	0,2	-	-	-	-	-	-	-
DC-13 Control of electromagnets	A	0,7	0,15	4	2	1,1	0,55	0,31	0,27	0,2
Electrical life in AC with U_e, I_e (operations)		100.000		400.000 (AC-15)						
Electrical life in DC with U_e, I_e (operations)		100.000		- (DC-13)						

UL / CSA		V40, V50, F40, F50		VA0, VRO, FA0, FRO		210		
General use		5A-250V AC 1A-24V DC 0,2A-125V DC		6A-600V AC / 6A-125V DC		6A-600V AC / 4A-125V DC		10A-300V AC
Heavy Pilot Duty (HD)	code designation			A600(HD)		A600(HD)		-
Standard Duty (SD)	code designation			P600 (SD)		P150 (SD)		B300(SD) P150(SD)

POWER SUPPLIES (Ø 22, 30 series)

		Direct supply		Transformer		Resistor		Flasher	
Rated isolation voltage U_i	V	250		-		250		250	
Maximum rated voltage $U_{e,max}$	V	250		-		250		24	130
Rated voltage primary circuit	V	-		110/220	110/220/380	110/220	220	-	-
Rated voltage secondary circuit	V	-		6	24	48	130	-	-
Frequency	Hz	-		50/60	50/60	-	-	50/60	50/60
Flash frequency at rated voltage (per min.)		-		-	-	-	-	70 ± 10	70 ± 5
Flash begins at minute - at rated voltage		-		-	-	-	-	< 20 sec	immediate
Power supply		AC-DC		AC		AC-DC		AC-DC	AC
Rated power	W	2		0,6..1	2..3	1,2	2..2,6	2..12	1..12
Short-circuit resistant of the secondary circuit for building									
Max. wire gauges		A3		A2		A1		A3	
Terminal sizes according to IEC / EN 60947-5-1		A3		A2		A1		A3	
Rigid and stranded	N. x mm²	1 x 0,5..3,3 o 2 x 2,5		1 x 1..2,5 o 2 x 2,5		1 x 0,75..1,5 o 2 x 1,5		1 x 0,5..3,3 o 2 x 2,5	
	N. x AWG	1 x 20..12 o 2 x 14		1 x 14..12 o 2 x 14		1 x 18..16 o 2 x 16		1 x 20..12 o 2 x 14	
Terminals	Type	screw		screw		screw		screw	
	Thread	M3,5		M3,5		M3,5		M3,5	
	Screwdriver size	3/2		3/2		2		3/2	

PILOT LIGHTS

		Ø 16 series		Ø 22, 30 series		Monolithic		Jumbo light	
						Ø 16		Ø 30	
Connection lamp holder		Midget Groove T1 3/4		BA 9s		BA 9s/E10		E14/BA 15d	
Rated voltage	W	1,2		2		3		6	
Rated isolation voltage U_i	V	250		250		250		250	
Maximum rated voltage $U_{e,max}$	V	250		250		250		250	
Rated impulse voltage U_{imp}	kV	4		4		4		4	
Max. wire gauges									
Terminal sizes according to IEC/EN 60947-1		A3		B1		A1		A2	
Stranded/Solid wire	N° x mm²	2 x 0,8		2 x 0,5..1,5		2 x 0,75..1,5		2 x 1..2,5	
	N° x AWG	2 x 20		2 x 20..16		2 x 18..16		2 x 18..14	
Terminals	Recommended torque Nm	0,8		0,5		0,8		0,8	
	Type	soldering		screw		screw		screw	
	Thread	M3		M3		M3		M3	
	Screwdriver size	2/-		2/-		2/-		2/-	

ENVIRONMENTAL DATA

		(Ø 16 series)		(Ø 22, 30 series - Monolithic signal - Jumbo light)	
Ambient temperature:	Operation:	-5°C ... +70°C		-25°C ... +60°C	
	Storage:	-25°C ... +80°C		-40°C ... +80°C	

		AGX001 (Ø 16 series)		V40-V50-VA0-VRO-F40-F50-FA0-FRO (Ø 22, 30 series - Monolithic signal - Jumbo light)	
MECHANICAL DATA					
Protection class according to IEC / EN 60529		IP 40 (IP 65 selector switches)		IP65	
Front		IP00		IP20	
Mechanical life (Mio. operations)					
Illuminated / non-illuminated momentary pushbuttons		1		6	
Illuminated / non-illuminated maintained pushbuttons		1		1	
Non-illuminated selector switches		0,25		1	
Illuminated selector switches				0,2	
Emergency mushroom pushbutton				0,2	
Maintained mushroom pushbuttons				0,2	
Maintained push-on / push off pushbuttons				1	
Joy stick operators				1	
Control stations with momentary operators				6	
Vibration withstand (base mounting)					
Frequency	Hz			2..13,2 - 10..100Hz	
Amplitude/displacement width	mm			±1	
Acceleration amplitude	g			0,7	
Max. wire gauges					
Terminal sizes according to IEC / EN 60947-5-1		A3		A3	
Rigid and stranded wire	N. x mm²	2 x 0,8		1 x 0,5..3,3 o 2 x 2,5	
	N. x AWG	2 x 20		1 x 20..12 o 2 x 14	
Terminals	Type	soldering		screw	
	Thread	M3,5		M3,5	
	Screwdriver size	3/2		3/2	
	Type	Clutch 1x2,8mm		Clutch 1x6,3mm or 2x2,8mm	
Max. No. of contacts on operators					
non-illuminated / illuminated with direct supply		4NO+4NC		4 (on 2 levels)	
non-illuminated selector switches		3NO+3NC		4 (on 2 levels)	
illuminated with transformer or resistor				2 (on 2 levels)	
illuminated / non-illuminated push-on / push-off				2 (on 1 level)	

APPROVALS

CE-Confirma
CSA (Canada)
R.I.Na. Italian Naval Register - Italy (Ø16 series not included)
UR (USA)

Specifications



Colours according to IEC / EN 60204-1

Colours used for starting pushbuttons are white, grey or black, preferably white. Also green is permitted. Red is not to be used. Red must be used for emergency stop push-buttons. Colours for stop pushbuttons are black, grey or white preferably black. Also red is permitted. Green is not to be used. White, grey and black are recommended colours for start/stop pushbuttons. Not to be

used colours are red, yellow or green. White, grey and black are recommended colours for maintained pushbuttons. Red, yellow or green are not to be used. Green is the colour reserved to those functions indicating standard or safety conditions. Yellow is the colour reserved to those functions indicating dangerous or non-standard conditions. Blue is the colour reserved to all compulsory functions. Reset pushbuttons must be blue, white, grey

or black. When used as stop/switch off push-buttons, colours recommended are white, grey or black with a strong preference for black. Green is not to be used.

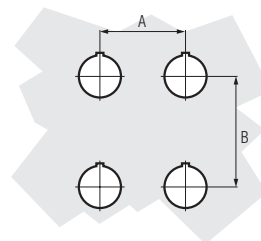
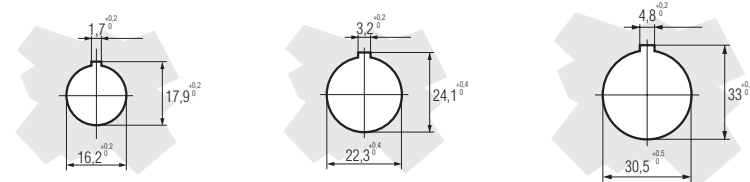
PUSHBUTTONS (NON-ILLUMINATED)	PILOT LIGHTS
<p>RED <i>Emergency</i> (push in case of danger or emergency).</p>	<p>RED <i>Emergency</i> (dangerous conditions). Immediate action to solve one dangerous situation (es. moving the emergency stop).</p>
<p>YELLOW <i>Non-standard</i> (push in case of non-standard condition). To stop one non-standard condition or re-start one interrupted automatic cycle.</p>	<p>YELLOW <i>Non-standard</i> (non-standard or difficult situation). Control or intervention (es. re-establishing the desired function).</p>
<p>GREEN <i>Safety</i> (push in case of safety condition or to prepare one standard condition).</p>	<p>GREEN <i>Standard</i> (standard condition). Authorization to proceed.</p>
<p>BLUE <i>Compulsory</i> (push when a condition requires one compulsory action). Reset function.</p>	<p>BLUE <i>Compulsory</i> (indicates that an operator intervention is needed). Obligation.</p>
<p>WHITE <i>No particular meaning</i> For general start of functions excepted emergency stop ①. Start (optional) or stop.</p>	<p>WHITE <i>Neutral</i> (control and general information). It can be used in any case of doubt as an alternative to red, yellow, green and blue.</p>
<p>GREY <i>No particular meaning</i> For general start of functions excepted emergency stop ①. Start or stop.</p>	
<p>BLACK <i>No particular meaning</i> or general start of functions excepted emergency stop ①. Stop (optional) or start.</p>	

① In case of use of an additional coding (for example body, shape, position) to identify pushbuttons actuators, the same colour white, grey or black can be employed for different functions (for example white for starting or stop actuators).

Illuminated pushbuttons

Illuminated pushbuttons actuators must be coloured according to "Pushbuttons and pilot lights" colour code. When a suitable colour is difficult to be determined, it is necessary to use white.

Mounting holes



	Ø16	Ø22	Ø30
A	25	30	50
B	25	50	65



BRETER has been established in the fifties as a manufacturer of switches for industrial applications and achieved a key specialist role in the market of electromechanical low-voltage industrial controls, especially due to its expertise on custom-designed products.

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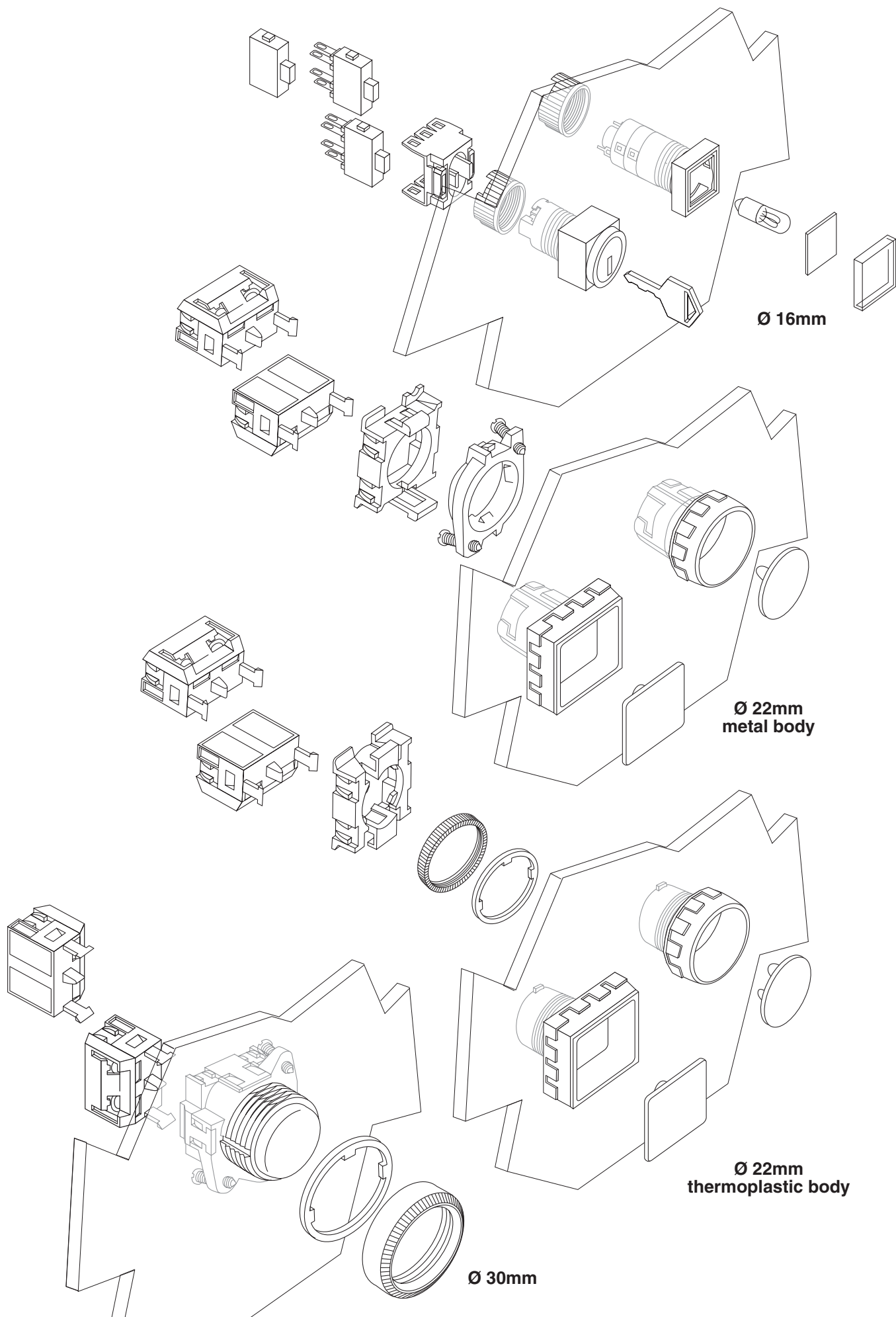
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