
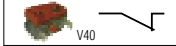
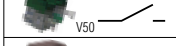

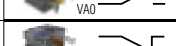



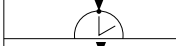




























### Non-illuminated selector switches 2, 3 positions, round series








		Positions	60°		120°		60°			60°					
			0	1	0	1	1	0	2	1	0	2		1	0
	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	X		X	
	lower	 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			X	
<b>key selector switches</b>			RT200N										<b>New!</b>		
			RT201N												
			RT250N												
					RT204N										
					RT205N										
					RT254N										
							RT210N				RT213N				
							RT230N		RT232N <sup>①</sup>		RT233N				
							RT270N								
							RT280N				RT283N <sup>②</sup>				
<b>black short handle</b>			RT300N										<b>New!</b>		
			RT350N												
					RT304N										
					RT354N										
							RT310N		RT312N <sup>①</sup>		RT313N				
							RT370N		RT372N		RT373N				
							RT380N				RT383N <sup>②</sup>				
															
<b>black long handle</b>			RT400N										<b>New!</b>		
			RT450N												
					RT404N										
					RT454N										
							RT410N		RT412N <sup>①</sup>		RT413N				
							RT470N		RT472N		RT473N				
							RT480N				RT483N <sup>②</sup>				
															

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  
 Key code on request: E501..E550

## Illuminated and non-illuminated momentary pushbuttons, round series

	Operator	Actuator
<b>flush guard</b> 	RT010 <i>Actuator to be ordered separately</i>	P22804A P22804B P22804G P22804N P22804R P22804V
<b>extended button</b> <b>pushbutton "reset"</b> 	R G2556	P22804A P22804B P22804G P22804N P22804R P22804V (without symbols)
<b>wobble joy stick</b> 	RT054R	P22804A P22804B P22804G P22804N P22804R P22804V
<b>momentary mushroom head</b> 	RT050R	
<b>wobble mushroom head</b> 	RT055R (Ø 40) RT056R (Ø 60)	
<b>potentiometric control</b> 	RT910	
<b>illuminated pushbutton</b> 	RT120 <i>Actuator to be ordered separately</i>	P22814A P22814G P22814L P22814R P22814T P22814V P22818R P22818V P22818G



**New!**

## Momentary dual operator pushbuttons

	Operator
	QT011 QT011A QT011B

Direct supply to obtain warning light G3820 (power supply)



## Maintained pushbuttons - round series

	Operator	Actuator
<b>flush guard push-on / push-off</b> 	RT030 <i>Actuator to be ordered separately</i>	● P24728A ○ P24728B ● P24728G ● P24728N ● P24728R ● P24728V
<i>Use early closure contact blocks (VA0-FA0)</i>		
<b>Mushroom head push-on / push-off</b> 	● RT045R ● RT045N	
<i>Use early closure contact blocks (VA0-FA0)</i>		


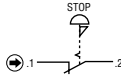





**New!**

**New!**

## Pilot lights

	Operator	Lens
<b>modular pilot light</b> 	RT600 <i>Actuator to be ordered separately</i>	● P22821A ● P22821G ● P22821L ● P22821R ○ P22821T ● P22821V
<b>monolithic pilot light thermoplastic body</b> 	SR601 (BA 9s) SR602 (E10) <i>Actuator to be ordered separately</i>	● P22821A ● P22821G ● P22821L ● P22821R ○ P22821T ● P22821V

## Emergency stop mushroom pushbuttons, turn to reset, round series According to EN60418 safety requirements

	Operator
<b>Ø 40mm + V40</b> 	● RT065RV40 <i>Including 1NC</i> 
<i>(by using normally open contact blocks "NO", PLS. Foresee early closed VA0-FA0)</i>	
<b>Ø 40mm</b> 	● RT065R <i>(without contact blocks)</i>
<i>(by using normally open contact blocks "NO", PLS. Foresee early closed VA0-FA0)</i>	
<b>in enclosure</b> 	●  PN94 (Metric cable glands M16/20) PN94-PG (Cable glands Pg11/16)
<i>(by using normally open contact blocks "NO", PLS. Foresee base mounting early closed G. 2546)</i>	
<b>Ø 30mm</b> 	● RT064R
<i>(by using normally open contact blocks "NO", PLS. Foresee early closed VA0-FA0)</i>	
<b>Ø 40mm key unblocking</b> 	● RT075R
<i>(by using normally open contact blocks "NO", PLS. Foresee early closed VA0-FA0)</i>	

## Insulating enclosures without control units 1, 2, 3, 5 holes

	Code
1 hole	<ul style="list-style-type: none"> <li>● PN22-1G <i>metric cable glands M16/20</i></li> <li>● PN22-1G-PG <i>cable glands Pg11/16</i></li> </ul>
1 hole	<ul style="list-style-type: none"> <li>● PN22-1H <i>metric cable glands M16/20</i></li> <li>● PN22-1H-PG <i>cable glands Pg11/16</i></li> </ul>
2 holes	<ul style="list-style-type: none"> <li>● PN22-2 <i>metric cable glands M16/20</i></li> <li>● PN22-2-PG <i>cable glands Pg11/16</i></li> </ul>
3 holes	<ul style="list-style-type: none"> <li>● PN22-3 <i>metric cable glands M16/20</i></li> <li>● PN22-3-PG <i>cable glands Pg11/16</i></li> </ul>
5 holes	<ul style="list-style-type: none"> <li>● PN22-5 <i>metric cable glands M20/25</i></li> <li>● PN22-5-PG <i>cable glands Pg16/21</i></li> </ul>

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

## Insulating enclosures pushbuttons, double insulating control stations

	Contact blocks	Operator
flush guard ①		<ul style="list-style-type: none"> <li>● PN81N</li> <li>● PN81R <i>metric cable glands M16/20</i></li> <li>● PN81N-PG</li> <li>● PN81R-PG <i>cable glands Pg11/16</i></li> </ul>
flush guard ①		<ul style="list-style-type: none"> <li>○ PN81B</li> <li>● PN81V <i>metric cable glands M16/20</i></li> <li>○ PN81B-PG</li> <li>● PN81V-PG <i>cable glands Pg11/16</i></li> </ul>
wobble mushroom ①		<ul style="list-style-type: none"> <li>● PN85R <i>metric cable glands M16/20</i></li> <li>● PN85R-PG <i>cable glands Pg11/16</i></li> </ul>
key selector ①		<ul style="list-style-type: none"> <li>● PN200N <i>metric cable glands M16/20</i></li> <li>● PN200N-PG <i>cable glands Pg11/16</i></li> </ul>
flush guards ①		<ul style="list-style-type: none"> <li>● ○ PN82</li> <li>● ● PN82A <i>metric cable glands M16/20</i></li> <li>● ○ PN82-PG</li> <li>● ● PN82A-PG <i>cable glands Pg11/16</i></li> </ul>
flush guards ①		<ul style="list-style-type: none"> <li>○ ● ○ PN83</li> <li>● ● ● PN83A <i>metric cable glands M16/20</i></li> <li>○ ● ○ PN83-PG</li> <li>● ● ● PN83A-PG <i>cable glands Pg11/16</i></li> </ul>
flush guards and pilot lights ①		<ul style="list-style-type: none"> <li>● ○ ● PN87</li> <li>● ● ● PN87A <i>metric cable glands M16/20</i></li> <li>● ○ ● PN87-PG</li> <li>● ● ● PN87A-PG <i>cable glands Pg11/16</i></li> </ul>

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

① Accepts PG13,5 cable glands assembled on M20 knock-out





## Accessories








Installation tool for tightening the central fixture nut (Ø 22mm)

P3906

## Contact blocks

	Function	Diagram	Code
<b>with screw terminals</b>  <b>IP20</b>	● 1NC	1 — 2	V40
	● 1NO	3 — 4	V50
	● 1NC late break	5 — 6	VR0
	● 1NO early closure	7 — 8	VA0
<i>To connect eyelet terminals remove the colored protection</i>			
<b>with screw terminals</b>  <b>IP20</b>	● 1NC	1 — 2	G1769
	● 1NO	3 — 4	G1770
	● 1NC late break	5 — 6	G2545
	● 1NO early closure	7 — 8	G2546
<i>Base mounting type for PN control stations</i>			
<b>with faston terminals</b>  <b>IP20</b>	● 1NC	1 — 2	F40
	● 1NO	3 — 4	F50
	● 1NC late break	5 — 6	FR0
	● 1NO early closure	7 — 8	FA0
<b>with faston terminals</b>  <b>IP20</b>	● 1NC+1NO	3 — 4 1 — 2	210
	<i>Wiring connections should be in same polarity</i>		

## Power supplies


	Voltages	Lamps	Code	
<b>transformer</b>  <b>IP20</b>	110/6V 230/6V	6..7,5V - 0,6..1,2W	T16 T26	
	110/24V 230/24V	24V - 2..3W	T12 T22	
	<b>resistor</b>  <b>IP20</b>	110/48V 230/130V	48V - 1,2W AC/DC 130V - 1,2W AC/DC	R14 R21
		<b>resistor with diode</b>  <b>IP20</b>	110/48V 220/130V	48V - 1,2W AC 130V - 2,6W AC
<b>flasher</b>  <b>IP20</b>	12..130V		2..12W AC/DC	L130
	<b>full voltage module</b>  <b>IP20</b>	Direct supply for modular illuminated control switches Base mounting for control station		G3820 G2134



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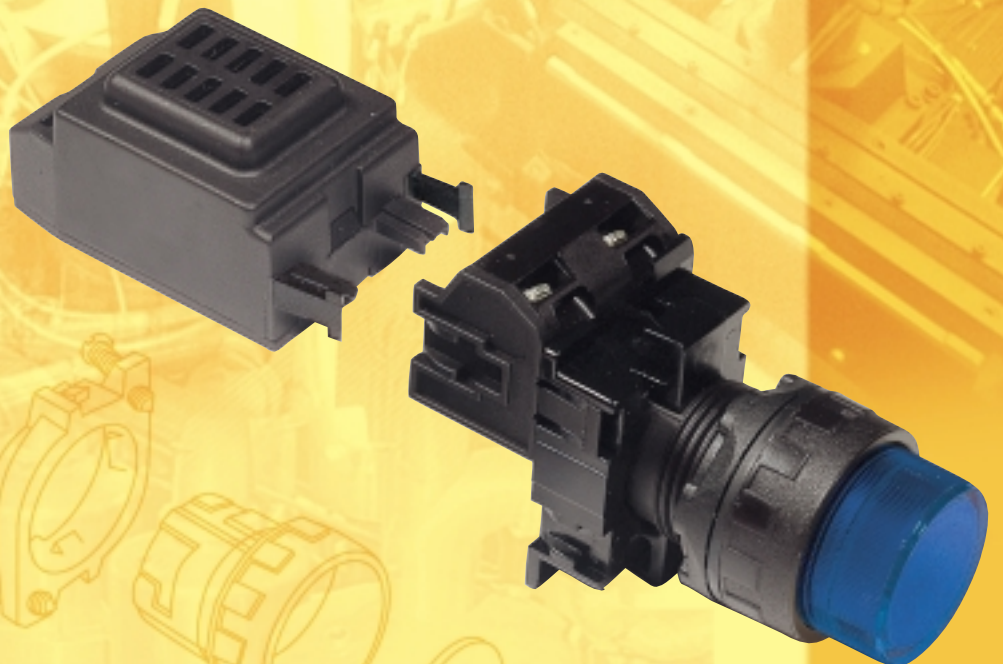
**Flyer RT/PN Series E - 01/2001**

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controls*

# Control switches RT Series and enclosures PN Series

Ø 22mm, thermoplastic body



# RM/RT Series: main features



Breter range of modular control switches and indicating units offers many application solutions on low voltage electrical circuits, both in alternating and direct current.

Actuators are available for **Ø 16, 22 and 30** mm central hole fixing, bodies are **metallic** such as **thermoplastic**, round and square version. **Protection class for all operators is IP65** which means protection against penetration of solids, dust and liquids.

The control switches range includes maintained and momentary push-buttons, illuminated and non-illuminated version, key and knob handle selector switches, pilot lights, joy stick operators, mushroom and emergency stop pushbuttons, insulating enclosures, potentiometric controls, mushroom head control stations: a **complete range** of products built and designed to satisfy every application need.

## Benefits

Fixing of thermoplastic bodies is done through central fixing. The new lock-nut with ergonomic design can be easily and safely fixed by hand or with installation tool, now available for the mechanical hard fixing that improves the pushbutton sealings. Lock-nut is now much faster to be assembled on barrel thread. Consequently time will be saved during assembly.

The new thermoplastic **control stations** product line includes **1, 2, 3, and 5 holes** enclosures with IP65 protection class and they are easy to be installed to get simple wiring to contact blocks previously mounted on back panel.

**Contact blocks** and **power supplies** are **lock coupled** (snap-on system) and can be wired separately from operator to obtain high flexibility and easy installation and maintenance. Ingress protection class is IP20, that avoids accidental finger contact on electrical parts. Breter contact blocks are available

**front and base mounting** and with **screw or fast-on terminals**.

Manufacturing characteristics together with the high modularity level allow a quick mounting and maximum flexibility, reaching a significant **time-saving** as far as installing operations and a strong **cutting of store expenses**.

## Approvals

Carefully selected products materials and Company expertise assures optimum quality, long time availability and running security of RM Series control switches as confirmed by the number of approvals and homologations obtained by the most important International Institutes.

## Safety

The operator for **emergency stop** pushbuttons has been realized according to IEC/EN 60947-5-5 with special regard to DME EN 60418 safety requirements. Infact, the special operator body construction based on a spring weight mechanical system allows the positive opening of NC contact whenever the coupling system is voluntarily driven, so avoiding all eventual damage to persons or things.

## Accessories and further products

Breter range of control switches also covers a wide number of products built to satisfy any application need. For a complete overview of Breter products range and accessories you can have our catalogues upon request or visit the Company Internet site **www.breter.it**.

