

Control  
signalling  
devices and  
accessories

## General characteristics

Our control and signalling units are designed to ensure accuracy, reliability, high mechanical and electrical life. All pushbuttons are certified IP65 (IP66 with optional dustproof cover), while foot switches are IP54. The contact blocks are equipped with maximum 4 contacts with rating up to 10 A each. The NC contacts are made to guarantee positive opening for safety function. The terminal screws with self-raising plate are supplied in open position for an easier and quicker wiring operation.



## Technical data

Rated insulation voltage	Ui	IEC947-5-1	V	600	
Rated thermal current	Ithe	IEC947-5-1	A	10	
Rated operational current		IEC947-5-1/EN60947-5-1			
	Category AC15	Ie	230 V	A	6
			400 V	A	4
			500 V	A	3
	Category DC13	Ie	24 V	A	6
			250 V	A	0,4
Insulation resistance		500 V DC	MΩ	100	
Contact resistance		IEC255-7 cat. 3	Initial value	mΩ	25
Dielectric insulation		50/60 Hz for 1' *	Vca	2500	
Short circuit protective devices		IEC269 (IEC947-5-1)			
		Gl or gG fuse	A	10	
Conditional short circuit current		IEC947-5-1	A	100	
Pollution degree		IEC947-5-1		3	
Command protection degree (EN 60529)		Non-illuminated/illuminated		IP65	
		Dual pushbuttons		IP40	
		Joystick		IP65	
Vibration resistance		IEC68-2-6	mm	0,35 ± 15% (10÷55 Hz ± 1 Hz)	
Shock resistance		IEC68-2-27	11 ms	g	30
Mechanical life		Mushroom and coupling pushbuttons and controllers	cycles	500000	
		Selector switches	cycles	1000000	
		Illuminated pushbuttons	cycles	3000000	
Electrical life		at 250 V AC 6 A with resistance load cosφ=1	min cycles	500000	
		a 250 V AC 6 A with inductive load cosφ=0,4	min cycles	500000	
Distance between contacts		Slow action models	mm	2x2	
Terminals		Type		Screw with combined notch and removable plate	
		Screw		M3,5	
		Protection degree		IP20	
		Material		Steel class 8.8 / 6-8 micron	
		Max screw tightening Torque	cNm (kg cm)	120 (12,24)	
		Max connection	rigid cable	mm <sup>2</sup>	2x1,5
			flexible cable	mm <sup>2</sup>	2x1,5
		With prod terminal	mm <sup>2</sup>	1x1,5	
		Terminal numbering		In accordance with EN50013	
		Terminal colouring		Red for NC contacts, green for NO contacts	
Air ambient temperature		operationals	°C	-25 ÷ +70	
Relative humidity		operationals		95% max	
Weather resistance		temperate in accordance with DIN 50014:		23/50	
		damp in accordance with DIN 50015:		23/83	
		hot humid in accordance with DIN 50015:		40-92	
		variable humid in accordance with DIN 50016:		FW24	

\* between terminals of the same polarity; between terminals of different polarity; between live metal parts and ground; between live and unpowered metal parts.

## Certifications and Approvals



IEC EN 60947

IPFB	•	+
PFB	•	+
C01B-C10B	•	+
C02-C20-C11	•	+

- UL approval file E72861
- CSA approval file 026716-0-000
- Approved
- + Conforms to requirements



Double insulation enclosures

Code	Description		Pack	Weight (kg)
SD1	Thermoplastic enclosure for base mounting units, 1 hole, grey cover		1	0,122
SD1G	Thermoplastic enclosure for base mounting units, 1 hole, yellow cover		1	0,122
SD2	Thermoplastic enclosure for base mounting units, 2 holes, grey cover		1	0,152
SD3	Thermoplastic enclosure for base mounting units, 3 holes, grey cover		1	0,172
SD4	Thermoplastic enclosure for base mounting units, 4 holes, grey cover		1	0,218

standard article

50 mm version for base mounting electrical units

(includes contact blocks and lamp holders fixing plate)

Code	Cover color
SD1	
SD1G	
SD2	
SD3	
SD4	

Color grey RAL 7031 - color yellow RAL 1012

Dimensions			Drilling template		no. of $\varnothing 22$ holes
A	B	C	D	E	
73	80	50	61	55	1
73	80	50	61	55	1
106	80	50	94	55	2
139	80	50	127	55	3
172	80	50	160	55	4










Aluminium enclosures

Code	Description		Pack	Weight (kg)
<b>SM1V</b>	Aluminium enclosure, 1 hole, length 82 mm		1	0,431
<b>SM2V</b>	Aluminium enclosure, 2 vertical holes, length 141 mm		1	0,555
<b>SM3V</b>	Aluminium enclosure, 3 vertical holes, length 193 mm		1	0,795
<b>SM4O</b>	Aluminium enclosure, 4 horizontal holes, length 141 mm		1	0,561
<b>SM6O</b>	Aluminium enclosure, 6 horizontal holes, length 193 mm		1	0,786
<b>SV1SF</b>	Aluminium enclosure w/o holes length 82 mm		1	0,434
<b>SV2SF</b>	Aluminium enclosure w/o holes length 141 mm		1	0,572
<b>SV3SF</b>	Aluminium enclosure w/o holes length 193 mm		1	0,811

 standard article

Cover with Ø22 mm holes




Code	Color	No. of holes	Dimensions							Drilling template		No. of holes	
			A	B	C	D	E	F	G	H	I	O	V
<b>SM 1 V</b>		1	82	82	75	24	1" GAS	-	-	49	67	-	1
<b>SM 2 V</b>		2	141	82	75	24	1" GAS	52,5	-	108	67	-	2
<b>SM 3 V</b>		3	193	82	75	24	1" GAS	52,5	-	157	64	-	3
<b>SM 4 O</b>		4	141	82	75	24	1" GAS	52,5	32	108	67	2	2
<b>SM 6 O</b>		6	193	82	75	24	1" GAS	52,5	32	157	64	2	3

Color grey RAL 7031

O = Number of holes for horizontal line

V = Number of holes for vertical line

Cover without holes

Code	Color	Dimensions					Drilling template	
		A	B	C	D	E	H	I
<b>SV 1 SF</b>		82	82	75	24	1" GAS	49	67
<b>SV 2 SF</b>		141	82	75	24	1" GAS	108	67
<b>SV 3 SF</b>		193	82	75	24	1" GAS	157	64

Color grey RAL 7031