



Control & indication

Switches, contactors, relays, push buttons & emergency lighting

This section provides a selection of Isolating, changeover and selector switches, push buttons, indicator lights, delay timers, emergency lighting test packages, DIN socket outlets and contactors that are used for isolation, installation monitoring and circuit control.



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Cat ref.

SBR140

SBR163

SBR180

SBR190

Description

Single pole

Double pole

For use as a switch isolator in all types of circuits. As defined in AS/NZS3000-2007, clause 2.3.3.2, domestic installations require no more than one main switch for each metered supply.

Technical data

Characteristics

1 x 40A 250V~

1 x 63A 250V~

1 x 80A 250V~

1 x 100A 250V~

AC 22B duty specification (mixed resistive and inductive loads. Not motors)

Connection capacity

- In: 40, 63, 80Å 25mm² rigid cables
- 16mm² flexible cables
 In: 63A & 100A

- 50mm² rigid cables
 35mm² flexible cables



SBR163



SBR263



SBR399



Characteristics	Width	Cat ref.
2 x 40A 250V~	2 mod	SBR240
2 x 63A 250V~	2 mod	SBR263
2 x 80A 250V~	2 mod	SBR280
2 x 100A 250V~	2 mod	SBR290

Width

1 mod

1 mod

1 mod

1 mod

Characteristics	Width	Cat ref.
3 x 40A 400V~	3 mod	SBR340
3 x 63A 400V~	3 mod	SBR363
3 x 80A 400V~	3 mod	SBR380
3 x 100A 400V~	3 mod	SBR390
3 x 125A 400V~	3 mod	SBR399



Four pole



Characteristics	Width	Cat ref.
4 x 63A 400V~ neutral right	4 mod	SBR463
4 x 100A 400V~ neutral right	4 mod	SBR490

Width

SBR490



ESC080

Auxiliary contacts



Characteristics 1NO + 1NC 2A AC15 Maximum one auxiliary module per isolator device (left fitting)

Cat ref. 0.5 mod **ESC**080

Electrical characteristics

Family	SBRx40	SBRx63	SBRx80	SBRx90	SBR399
Number of poles	3P				
Frame size	Frame size 2 Frame size 3				
Thermal current lth (40°C)	40A	63A	80A	100A	125A
Operational frequency	50Hz				
Rated insulation voltage (Ui)	500V				
Rated impulse withstand voltage Uimp	6kV				
Protection degree	3				
Working temperature	-20 to 50°C				
Storage temperature	-40 to 80°C				

Operational currents le

Load duty category	Rated voltage					
AC 21A		40A	63A	80A	100A	125A
AC 22B	400V AC					
AC 22A						

A category = Frequent operation

B category = Infrequent operation

Short circuit characteristics

Rated short time withstand current 1s lcw (rms)	IEC 60947-3	945A / 1 sec		945A / 1 sec		945A / 1 sec		1500A / 1 sec
Prospective short circuit current (rms)		6kA						
Associated fuse liks (gG)	EN 00009	40A	63A	N/A				

Mechanical characteristics

Rigid cable section	25mm ²	50mm ²
Flexible cable section	16mm ²	35mm ²
Tightening torque	2.8Nm	3.6Nm
IP protection degree	20	
Mechanical endurance (number of cycles)	30,000	20,000
Electrical endurance @ AC22 (number of cycles)	5,000	2,500

 Overall dimensions
 No. of poles

 Width (mm)
 1P
 17.5

 2P
 36

 Image: Sign of poles
 3P
 53

 Image: Application of the sign of the s



Description Manual changeover switches

for the control between two

power supplies or circuits

Changeover Switches

Connection capacity

- 16mm² rigid
 10mm² flexible

Technical data

AC22B duty secification (mixed resistive and inductive - not motors) comply to IEC 60947-3



SFM125



SF263

SF463



SF263 - Double pole

0 0

. 0 3



SF463 - Four pole

GS



E.4



Cat ref.

SK600

Description

To provide command signals or program selection in electrical control schemes

Application

For domestic and commercial installations

Selector Switches

Description

Spare key For SK606

- Connection capacity: Rigid conductor: 1.5 to 10mm²
- Flexible conductor: 1 to 6mm²

Characteristics

20A 400V~

Conform to IEC947-3 BS EN 60947-3

Width

3 mod

Isolating voltage: 500V~ Nominal current: 10-20A



SK602







SK606

$\begin{bmatrix} 1 \\ 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}_2 \qquad \begin{bmatrix} 1 \\ 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}_2$	Non spring return		
2 pole selector switch $ \stackrel{1}{\vdash} \stackrel{3}{\downarrow} \stackrel{5}{-} \stackrel{7}{\vdash} \stackrel{7}{\downarrow} \stackrel{1}{\downarrow} \stackrel{1}{\downarrow} \stackrel{0}{\downarrow} \stackrel{2}{\downarrow} \stackrel{2}{\downarrow} \stackrel{1}{\downarrow} \stackrel{1}{\downarrow} \stackrel{0}{\downarrow} \stackrel{2}{\downarrow} \stackrel{1}{\downarrow} 1$	20A 400V~ Spring return	3 mod	SK601
Voltmeter selector 3Ph&N - 3 readings between phases - 3 readings between phase & neutral - Null position (no reading) 1 - L1 L2 L3 L3 L1 L2 L3 L3 L1 L2 L3 L3 L3 L3 L3 L3 L3 L3 L3 L3	20A 400V~	3 mod	SK602
Ammeter selector - 4 positions - Use in 3Ph&N - Reading by phase - 0 position (no reading) - Should be used with current transformer (CT) 11 - A - 9 1 - 4 - 10 - 2 1 - 4 - 10 - 2	20A 400V~	3 mod	SK603
Step selector switch $1_{0}^{5}_{0}^{3}_{0}^{7}_{0}^$	20A 400V~	3 mod	SK604
Key selector switch $ \underbrace{\prod_{j=1}^{n} \frac{1}{2} - \frac{3}{4}}_{2} = 1 - \underbrace{\prod_{j=1}^{n} \frac{3}{2}}_{0} = 1 $	10A 400V~	3 mod	SK606

1 pole selector switch

SK001

Contactors



Contactors

Remote switching & control of power circuits suitable for lighting, heating, ventilation, pumps and home automation.

Manual override

to set output contacts permanently On or Off – Great for fault finding. Night & Day override allows the End User to set

output contact permanently Off or temporarily On until next switching cycle.

Specifications: Coil Voltage: 230V AC (50Hz) 24V AC (50Hz) **Output contacts** 1NO, 1NO+1NC, 2NO, 2NC, 2NO+2NC, 3NO, 4NO, 4NC

Output AC1/AC7a (50Hz) 25A, 40A, 63A at 230V AC 4.6kW, 7.3kW, 11.6kW

at 400V AC 13.8kW, 22kW, 35kW

Output AC3/AC7b (50Hz) 8.5A, 25A, 32A

at 230V AC 880W, 2.6kW, 3.3kW at 400V AC 2.6kW, 7.8kW, 10kW



ERC225



ESC425



ESC463





LZ060

Accessories

Description	Cat ref.
Auxiliary contact (1NO+1NC)	ESC080
(Leftside fitting - maximum one AUX per contactor device)	
Heat dissipation insert	LZ060



Hum-free contactors

designed to provide customers with a good nights sleep.

Remote switching

& control of power circuits suitable for lighting, heating, ventilation, pumps and home automation

Manual override

to set output to contacts permanently On or Off – Great for fault finding

Night & Day override allows the End User to set output contact permanently Off or temporarily On until next switching cycle

Specifications: Coil Voltage: 230V AC (50Hz)

Output contacts 1NO+1NC, 2NO, 2NC, 2NO+2NC, 3NO, 3NO+1NC, 4NO, 4NC

Output AC1/AC7a (50Hz)

25A, 40A, 63A at 230V AC 4.6kW, 7.3kW, 11.6kW at 400V AC 13.8kW, 22kW, 35kW

Output AC3/AC7b (50Hz)

8.5Å, 25A, 32A at 230V AC 880W, 2.6kW, 3.3kW at 400V AC 2.6kW, 7.8kW, 10kW



ESC425S



ESC463S

Hum Free Contactors

Туре	Coil AC (50Hz)	Override	Rated output current		Override Rated output current	Width	Cat ref.
	or DC		AC1/AC7a	AC3/AC7b	1		
2NO	230V AC	No	25A	8.5A	1 mod	ESC225S	
	230V AC	No	40A	25A	3 mod	ESC240S	
	230V AC	No	63A	32A	3 mod	ESC263S	
3NO	230V AC	Manual	25A	8.5A	2 mod	ESC325S	
	230V AC	No	40A	25A	3 mod	ESC340S	
3NO+1NC	230V AC	No	25A	8.5A	2 mod	ESC428S	
4NC	230V AC	No	25A	8.5A	2 mod	ESC426S	
4NO	230V AC	No	25A	8.5A	2 mod	ESC425S	
	230V AC	No	40A	25A	3 mod	ESC440S	
	230V AC	No	63A	32A	3 mod	ESC463S	



LZ060

Accessories

Description	Cat ref.
Auxiliary contact (1NO+1NC) (Leftside fitting - maximum one AUX per contactor device)	ESC080
Heat dissipation insert	LZ060

Output contact configuration & terminal numbers

	1NO	1NO+1NC	2NC	2NO	3NO	2NO+2NC	3NO+1NC	4NC	4NO
1 Mod	$ \begin{array}{c} A1 1 \\ 4 \\ 4 \\ 4 \\ A2 2 \end{array} $		A1 1 3 	$ \begin{array}{c} A1 1 3 \\ \downarrow \downarrow^{d} \downarrow^{d} \\ \hline $					
2 Mod					$ \begin{array}{c} A1 & 1 & 3 & 5 \\ $	A1 1 3 5 7	A1 1357 1 d d d 4 A2 2468	A1 1 3 5 7 	A1 1 3 5 7
3 Mod				$ \begin{array}{c} A1 1 7 \\ \downarrow \downarrow^{d} \downarrow^{d} \\ A2 2 8 \end{array} $	$ \begin{array}{c} A1 & 1 & 3 & 5 \\ & 4 & 4 & 4 \\ & 7 & 7 & 7 \\ & 7 & 7 & 7 \\ & 4 & 2 & 4 & 6 \end{array} $	A1 1 3 5 7		A1 1 3 5 7 	A1 1 3 5 7 1 d d d d A2 2 4 6 8
Aux Module		11 13 12 14							

Contactors

Electrical Cha	racteristic						
Туре			ERxxxx, ESxxxx, ETCxxx				ESC080
Description			Modular contactor				
Standard confo	ormity		IEC/EN 61095				Aux. contact
Number of mo	dule		1	2	3		1/2
Thermal curren	t Ith (40°C)		25A	25A	40A	63A	6A
Rated frequence	SV		50Hz	50Hz	50Hz	50Hz	50Hz
Rated insulatio	n voltage (Lli)		250V	440V	440V	440V	250V
Rated impulse	withstand voltage (Llimp)		4kV	4kV	AkV	4kV	2001 4kV
Protoction dog	roo (IP rating)		2	2	2	2	2
FIDIECTION deg	ree (ir railing)		2	2	2	2	2
Data dan susti		0					
Rated operation	ng currents & power ratings in A		054	054	40.4	000	
	Rated operating currents le	0001/	25A	25A	40A	63A	
AC1/AC7a	Rated operating power	230V	4.6kW	4.6kW	7.3kW	11.6kW	
		400V	-	13.8kW	22kW	35kW	-
Ļ	Rated operating currents le		8.5A	8.5A	25A	32A	
AC3/AC7b	Bated operating power	230V	880W	880W	2.6kW	3.3kW	
	rated operating perior	400V	-	2.6kW	7.8kW	10kW	
AC12	Rated operating currents le @ 23	VO					6A
AC15	Rated operating currents le @ 23	VO	-				4A
Mechanical &	electrical endurances						
Mechanical en	durance	no. of operations	1,000,000				
Electrical endu	rance @ le AC7a (AC12 for aux)	no. of operations	60,000				
			, ,				
MCB protecte	d short-circuit withstand						
			МСВ		MCB	МСВ	MCB
Associated pro	otection		25A-6kA		40A-10kA	63A-10kA	6A - 6kA
						·	
Power dissipa	tion					-	
Power dissipat	ion per current path		1.5W		3.2W	5W	0.4W
· · ·			1			1	
Magnetic syst	em for standard contactor						
Pick-up			7.4VA	9.2VA	60VA		
Coil consumpti	ion		1.8\/A	1.85\/A	7\/Δ		
Closing delay			20ms	20ms	20ms		-
Opening delay			15ms	15mg	20ms		
Opening delay			101115	15005	201115		L
NA							
Magnetic syst	em for Hum free contactor		0.014	0.014	514		
Ріск-ир			2.2W	2.800	5W		
Coll consumpti	ion		2.200	2.87	5W		-
Closing delay			25ms	25ms	25ms		
Opening delay			15ms	15ms	20ms		
Magnetic syst	em for Lighting contactors (con	trol)		1			
Std and eco	Pick-up		9.5VA	16.3VA			
	Coil Consumption		2.5VA	3.1VA			
Liuma fria a	Pick-up		2.5VA	3.2VA			
rium-tree	Coil Consumption		2.5VA	3.2VA			
Connection							
		rigid	110mm ²		425mm ²		116mm ²
Main contact c	able section	flexible	16mm ²		416mm ²		116mm ²
		Type	M3.4		M5		M3.4
Main contact o	connection screw	Posidrive	P72		P72		P72
an contact c		Max tight torque	1 2Nm		3 5Nm		1 2Nm
		rigid	1 10mm ²		1 10mm ²		
Coil connection	n cable section	flavilata	11011111-		11011111-		
					1omm-		
		Гуре	M3.5		M4		-
Coil connection	n screw	Posidrive	PZ2		PZ2		
		Max. tight. torque	1.2Nm		2.5Nm		
			1				
Working temp	erature		-10°C to +50°C				
Storage temp	erature		-40°C to +80°C				

Choice of contactors

- The choice of contactor is based on many factors:
- type of the load supplied,
- nominal current of the load,
- operating voltage,
- number of operations

The contactors are AC7-a (resistive load) and AC7-b (inductive load) approved.

Adjacent fitting

LZ060 inserts are to be fitted between all contactors and adjacent devices to ensure optimum operation and heat dissipation.

Heating applications

The choice of the contactor is based on the electrical heating load, and the targeted life time.

Single phase



Three phase supply



Rated ouput voltage	Rated output current	AC1/AC7A (m	C1/AC7A (maximum load in kilowatts)			
	25A	1	1.35	3	4	4.6
230V AC	40A	1.6	2.2	4.7	6.3	7.3
	63A	2.5	3.5	7.5	10	11.6
	25A	3	4.3	8.6	12	13.8
400V AC	40A	5	6.3	14.385	18 500	22
	63A	7.6	10.2	22.6	30	35
No. of operations (# see note)		600 000	300 000	150 000	100 000	60 000
#NOTE: 1 opening +1 closing contact = 2 operations. *On three phase configuration the maximum load per phase corresponds to the						

Operating temperatures	Derating factor
Up to 40°C	1
40° - 50°C	0.9

values stated divided by 3.

Example application: 4kW (230V AC) heating element ie. AC1/AC7a load

Determine suitability of ESC225 (2 pole, 25A) using load calculation with temperature derating. According to data sheet for AC1/AC7a load on ESC225 – (1 module 25A) the rated operational current (le) = 25A, maximum load = 4.6kW (230 VAC)

Assume operating temperature = 48° C

The maximum load switching capacity at 48° C is calculated as follows: Maximum Load x Derating factor = 4.6kW x 0.9 = 4.14kW

Thus, ESC225 is suitable for a 4kW heating element operating at $48^{\circ}\,\text{C}$ maximum.

Duty cycle or durability

The number of reliable operations of ESC225 (2 pole, 25A) contactor depends on the connected load.

Connected to 1kW (230V AC) load = 600,000 operations Connected to 3kW (230V AC) load = 150,000 operations Connected to 4kW (230V AC) load = 100,000 operations

How long will ESC225 (25A) connected to 4kW load last ? At 100 operations per day it will last a minimum of 1000 days (ie 100,000 ÷ 100 = 1000 days). At 500 operations per day it will last a minimum of 200 days

At 500 operations per day it will last a minimum of 200 days (ie $100,000 \div 500 = 200$ days).

If higher durability is required, the contactor can be up-sized to a higher current rating.

Motor applications (AC7-b equivalent to AC3) Single phase 230V



Three phase 400V



	Contactor rating	Control diagram	
		2P 230V single phase	3P 400V three phase
Maximum power for the motor	16A	0.57 kW	1.7 kW
	25A	0.88 kW	2.65 kW
	40A	2.6 kW	7.8 kW
	63A	3.3 kW	10 kW

Modern lighting systems generate high inrush currents. Therefore we recommend to use the table below to calculate the maximum number of lamps (or dual fittings) which can be connected to each pole of a Hager contactor on 230V 50Hz circuits.

- From June 2014, Hager has improved the performance of 1 and 2 module contactors. The products identified on the front face with the For the 1 and 2 module contactors without the pictogram

For the 1 and 2 module contactors without the pictogram

				Rated output (per pole)	
Туре		Lamp wattage (W)	25A '+'	40A	63A
Compact Fluorescent Lamp	os (CFL's)	T			
	1	5 - 7	27	49	76
CFL with external electron	nic ballast	9 - 11	26	40	63
		15 - 26	22	36	5/
CFL with integrated electr	ronic ballast 🕼	5 - 15	54	80	135
Incandescent Jamps		10-20	40	03	100
		40	57	76	120
		60	45	67	105
		75	38	63	100
	(п)	100	28	41	65
Tungsten Halogen Lamps	230V	150	18	29	45
		200	14	22	35
	•	300	10	15	23
		500	6	9	14
		1000	2	4	7
		20	40	139	218
		35	20	82	129
with electronic transformer		75	10	52	82
with electronic transforme		100	6	32	55
		150	4	20	31
Fluorescent tubes (T5)			IT	20	
		15 - 20	30	70	100
		36	28	60	90
		40	26	60	90
	Single - with starter	42	24	55	83
	(Low power factor <0.9)	58-65	17	35	56
		80	15	30	48
		115	10	20	32
		140	10	16	26
		15 - 20	20	36	57
	Single - with starter	36	20	34	53
	(High power factor >0.9)	40 - 42	20	29	40
		115	15	25	39
		2 x 18	40	50	78
		2 x 20	38	50	78
		2 x 36	30	44	69
	Dauble, with starter	2 x 40	26	40	63
	Double - with starter	2 x 42	24	40	63
	(Low power factor <0.9)	2 x 58	18	27	42
		2 x 65	16	27	42
		2 x 80	14	22	35
		2 x 115	10	16	25
		2 x 18	22	34	53
		2 X 20	22	29	45
E C	Double - with starter	2 X 30 - 42	20	21	42
	(High power factor >0.9)	2 X 30 2 X 65	14	23	36
		2 x 80	14	20	31
		2 x 115	10	17	25
		15 - 20	22	36	57
		36	22	34	53
Single with electronic ball	ast Flectronic	40 - 42	22	29	45
		58 - 80	20	27	42
	¢¢	115	20	25	39
		2 x 18	22	34	53
		2 x 20	22	29	45
	Cloctronic	2 x 36 - 42	20	27	42
Double with electronic ba	llast Elevio	2 x 58	20	25	39
		2 x 65	14	23	36
	(t)tr —	2 X 80	14	20	<u>کا</u>
L		C117	1 10	17	20

The information given below should be considered as indicative and is provided on an "as is" basis. Considerable variations may occur depending on the electrical installation and equipment used. Only experienced professionals with the expertise to determine the characteristics of the electrical installation (value and duration of inrush currents, general characterics of the installation, types of loads, etc.) may approve and implement a configuration, in accordance with the currently applicable installation standards. Hager accepts no liability for the use made of this information.

_			Rated output (per pole)		
Туре		Lamp wattage (W)	25A '+'	40A	63A
Discharge lamps			·		
		50	28	32	50
	High pressure mercury	80	18	24	37
	vapour lamps	125	10	18	28
	vapour lamps	250	6	10	15
	(Low power factor <0.9)	400	2	6	9
		700	0	4	5
		50	22	26	40
		80	16	22	34
	High pressure mercury	125	10	15	23
	vapour lamps	250	6	9	14
	(High power factor >0.9)	400	2	5	8
	(ingli power laster > 0.0)	700	0	3	5
		1000	0	2	3
		18	20	18	21
	Low pressure sodium	35 - 55	9	14	20
	vapour lamps	90	6	9	14
	(Low power factor <0.9)	135 - 180	4	6	8
		18	8	12	24
		35	7	10	24
	Low pressure sodium vapour lamps	55	5	10	10
	(Useb a superfactory 0.0)	00	3	0	19
	(High power factor >0.9)	90	4	0	7
		135	2	5	1
		180	2	5	6
		35	24	30	50
		50	15	22	34
		/0	12	18	28
	High Pressure sodium lamps	110	10	14	22
	(Low power factor <0.9)	150	8	10	16
		250	5	6	10
		400	2	4	6
		1000	1	2	3
		35	18	31	50
		50	18	22	35
		70	12	16	25
	High Pressure sodium lamps	110	8	13	21
\cup	(High power factor >0.9)	150	6	8	13
		250	4	7	11
		400	2	5	8
		1000	1	2	3
		35	30	42	55
		70	17	26	36
	Metal - Halide Lamp	150	12	14	20
	(Low power factor <0.9)	250	8	9	14
		400	4	6	9
R /		1000	0	3	5
		35	18	22	39
		70	13	22	39
	Metal - Halide Lamp	150	8	12	22
	(High power factor >0.9)	250	7	9	16
	(ingli penel laeter / ele)	400	2	5	7
		1000	1	2	3
LED's			•		
		4 - 12	54	86	135
		17 - 22	40	63	101
LED 230V integrated Driv	ver, Non dimmable, E27 / GU10	30 - 40	28	44	70
		50	20	35	55
	ሶኅ	4 - 12	120	159	250
LED	$\vdash \!$	17 - 22	88	118	185
230V integrated driver	()	30 - 40	60	20	120
Dimmable, GU 10	(33)	50 - 40	102	65	100
	<u> </u>	100	40 F	6	102
LED high bay lighting		100	0 0	0	9
230V integrated driver	\succ \prec	000	3	4	0
		200	2	4	6
LED	<u>ج</u> اً	1-5	120	180	220
12V external driver Dimm	nable 🛞 🖯	/ - 10	120	160	200
		1 15	88	160	200

1 83





Applications

For timing and automation in domestic and commercial premises. The input signal can be via various switching devices (push button, latching switch, time clock etc.) and the timed output used to control the application.

Technical data

-

- Voltage range: 12 & 24 to 48V DC
- 12 & 24 to 230V AC
- Adjustable time delay from 0.1s to 10 hours.
- LED indicator complies _ with EN60669-2-1

Connection capacity:

- Rigid capacity: 1.5 to 10mm²
- Rigid capacity: 1.0 to roman
 Flexible capacity: 1 to 6mm²

	Delay ON			
EZNION	Control _{Cd}	Characteristics 1 c/o contact 8A AC1 contact rating Time delay T: 0.1s to 10hr	Width 1 mod	Cat ref. EZN001
EZN002	1 Delay OFF	Characteristics 1 c/o contact 8A AC1 contact rating Time delay T: 0.1s to 10hr	Width 1 mod	Cat ref. EZN002
EZN003	Adjustable time ON	Characteristics 1 c/o contact 8A AC1 contact rating Time delay T: 0.1s to 10hr	Width 1 mod	Cat ref. EZN003
EZN004	Control cd	Characteristics 1 c/o contact 8A AC1 contact rating Time delay T: 0.1s to 10hr	Width 1 mod	Cat ref. EZN004
EZN005	Symmetrical flasher Control cal Output	Characteristics 1 c/o contact 8A AC1 contact rating Time delay T: 0.1s to 10hr	Width 1 mod	Cat ref. EZN005
EZN006	Multifunction Description 6 individual functions including: D - delay on C - delay off E - adjustable time ON B - adjustable time OFF A - timer F - symmetrical flasher - ON - OFF	Characteristics 1 c/o contact 8A AC1 contact rating Time delay T: 0.1s to 10hr	Width 1 mod	Cat ref. EZN006



Time lag switches provide control of lighting circuits with automatic switch-off after a preset time. (e.g. for staircase, corridors lighting). Compact design with a two position switch permanent/timed lighting implementation facility.



Standard staircase time lag switch

Description	Characteristics	Width	Cat ref.
- Adjustable time delay setting:	Supply voltage: 230V 50/60Hz	1 mod	EMN001
- Retrigger	16A - 250V AC1		
	2300W incandescent halogen and fluorescent		

Interface relays

Description

To interface between low voltage and extra low voltage circuits to ensure galvanic insulation between LV and ELV to 4kV.

Application

Interface between fire alarm, burglar alarm and other ELV systems and main distribution circuits.

Connection capacity

- 6mm² rigid cables
- 4mm² flexible cables

EN145

Interface relay ELV/LV 1 way





2 versions: - Impulse push buttons

- Latching push buttons

These versions with indicator lights are equipped with green or red diffuser. (LED technology)

Connection capacity

10mm² rigid cables
6mm² flexible cables

Standard conformity:

IEC60947-5-1 for push buttons IEC62094-1 for indicator lights



Push buttons impulse with indicator light

Description	Characteristics	Width	Cat ref.
$\mathbf{F} - \int_{\mathbf{r}} \mathbf{e}$	Contacts: 1NO green	1 mod	SVN411M
F 7 🔆	Contacts: 1NC red	1 mod	SVN422M

Push buttons latching without indicator light 16A - 250V~

Description	Characteristics	Width	Cat ref.
F∼Ź	Contacts: 1NO	1 mod	SVN312M
$F \sim \uparrow - \uparrow$	Contacts: 1NO+1NC	1 mod	SVN352M





These products are used for remote controlling signalisation of any event in any electric installation (domestic, tertiary & industrial)LED technology providing longer life, new design and integrated label holder.

Connection capacity

10mm² rigid cable
6mm² flexible cable

Standard conformity:

IEC62094-1 for indicator lights



Indicator lights

Description	Characteristics	Width	Cat ref.
With light 230V~	1 x green	1 mod	SVN121M
1	1 x red	1 mod	SVN122M
\triangleleft	1 x blue	1 mod	SVN124M
Ϋ́	1 x clear	1 mod	SVN125M
I	3 x red	1 mod	SVN127M

SVN122M, SVN125M, SVN124M



SVN121M, SVN122M, SVN127M

DIN Socket Outlets



DIN mounted socket outlets

Description	Width	Cat ref.
DIN mounted 10A double pole auto switched complete with safety shutters and 'on' indicator	2.5 mod	SNO10DA
DIN mounted 15A double with safety shutters and 'on' indicator	2.5 mod	SNO15DA



Cat. ref.

ST305*

Cat. ref.

SU214*

SU215*

Description

Provide safety for extra low voltage 8, 12, 24V~.

Technical data

- Secondary voltage: 8V, 12V, 24V
 Bell transformers are
- Bell transformers are short circuit protected
- Bells/buzzers: Maximum continuous duty \leq 30min

Note

The transformers have a higher no load voltage. The stated voltages correspond to the voltages at nominal load

*Please check availability with the Hager sales office at time of order



ST312

ST303

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Safety transformers

Description	Characteristics	Width	Cat. ref.
Frequency: 50/60Hz Primary voltage: 230V Secondary voltage: 12 / 24V~	25VA	4 mod	ST312*
\bigcirc	63VA	6 mod	ST315*

Connection capacity

Cable clamp type

- Buzzers: 78dBA When a bell transformer is

installed in an enclosure with

mains voltage equipment,

230V cable should be used

on the secondary side of the transformer or extra low voltage cable should be sheathed within the enclosure.

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Output

- Bells: 85dBA

Bell transformers

Description	Characteristics	Width		
I	Frequency: 50/60Hz	2 mod		
	Primary voltage 230V~ 8VA			
	Secondary voltage: 8V~ 1A	Secondary voltage: 8V~ 1A		
	12V~ 0.67A			
v	Frequency: 50/60Hz	3 mod		
	Primary voltage 230V~ 16VA			
	Secondary voltage: 8V~ 2A			
	12V~ 1.33A			

Characteristics

4VA - 0.35A 230V~

6.5VA - 0.03A

8/12V~

Bells

Buzzers

Description



Characteristics	Width	Cat. ref.
8/12V~ 4VA - 0.35A	1 mod	SU212*
230V~ 6.5VA - 0.03A	1 mod	SU213*

Width

1 mod

1 mod

SU212

3

SU214	1
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Safety transformers

These transformers are designed to ensure personal safety, their primary winding are electrically separated from their secondary windings and they are intended to feed safety extra low voltage (SELV) circuits \leq 50V. A thermal overload, in the primary windings, ensures that if a short circuit or an overload occurs in the output it will not damage the device.

Bell transformers

Bell transformers are similar to safety transformers but the secondary voltages do not exceed 24 volts, they are also similarly protected against short circuits and overloads, by thermal protection in the primary winding.

Compliance with the standards

The bell and safety transformers conform with EN 61558 (BS 3535). Where transformers are to be used in a common enclosure with other devices, heat dissipation inserts should be used.

Recommendation of Use

- To link only a secondary (never link both simultaneously)
- Do not connect (in series or in parallel) secondaries of different transformers.





Technical specification

Reference		ST303	ST305	ST312	ST315
Nominal power		8VA	16VA	25VA	63VA
Designation		Bell	Bell	Safety	Safety
Primary voltage	U ₁	230 volts	230 volts	230 volts	230 volts
Secondary voltage	U ₂	8 volts	8 volts	12 volts	12 volts
		ln = 1A	ln = 2A	ln = 2.08A	ln = 5.25A
	U ₃	12 volts	12 volts	24 volts	24 volts
		ln = 0.67A	ln = 1.33A	ln = 1.04A	In = 2.63A
No load secondary	U ₂	15 volts	12 volts	14 volts	14 volts
Voltage	U ₃	22 volts	13 volts	29 volts	27 volts
Galvanic insulation		4kV	4kV	4kV	4kV
Max functional temperature		35°C	35°C	35°C	35°C
Insulation class		Н	В	В	Н
Overload and S/C protection		Thermal cut out in the primary winding			



The Hager Emergency Lighting Discharge Test Package has been developed to meet the needs of the electrical industry. In accordance with AS2293. 'Emergency Evacuation Lighting for Buildings' a discharge test circuit MUST be installed in both existing and new installations for the purpose of testing the charge. The test facility must also be able to be manually reset.

Application

Hager's emergency lighting discharge test packages offer a convenient and versatile discharge test facility for maintenance of emergency lighting systems. This wired 'off-the-shelf' package may be mounted using the supplied enclosure where space in the switchboard is limited. It can also be installed in the Hager range of performa panelboards by taking advantage of the DIN rail area at the top of the switchboard.

Use and implementation

Upon engaging the Green push button for 1 second, the timer starts it's operation and energises the contactor coil. The four normally closed contacts open, initiating operation of the emergency lights. The timer, to be set at 2hrs (for initial commissioning, 90mins thereafter), completes its operation, de-energising the contactor coil returning the contacts to the normally closed position.

If the red push button is pressed the timer resets and is ready for the green push button to start the timing cycle again.



EMERG1W

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Emergency test packages wired

Description	Characteristics	Cat ref.
Emergency test package 1 - Wired in enclosure - For use as standalone	Includes: - 6 pole surface mount IP40 enclosure with a lockable door - 4 Pole 40A N/C Contactor - Push button 1N/O (green) + 1N/C (red) - Delay timer 0.1sec to 10hrs	EMERG1W
Emergency test package 2 - Wired in enclosure - For use as standalone	 Includes: 4 pole surface mount IP40 enclosure with a lockable door 2 Pole 25A N/C Contactor Push button 1N/O (green) + 1N/C (red) Delay timer 0.1sec to 10hrs 	EMERG2W
Emergency test package 3Wired without enclosureFor use in panelboards and/or other enclosures	Includes: - 4 Pole 40A N/C Contactor - Push button 1N/O (green) + 1N/C (red) - Delay timer 0.1sec to 10hrs	EMERG3W
Emergency test package 4 - Wired without enclosure - For use in panelboards and/or other enclosures	Includes: - 2 Pole 25A N/C Contactor - Push button 1N/O (green) + 1N/C (red) - Delay timer 0.1sec to 10hrs	EMERG4W

EMERG3W

one**konekt** Easier Safer Faster

onekonekt residential range of modular devices

Hager's onekonekt system offers one of the most versatile & flexible solutions to residential electricians on the market today. The use of busbar in our industry is not a new concept. However, providing a full range of residential protection devices that connect to the same busbar, increasing safety, reducing installation time, improving technical characteristics and aesthetics within one system, definitely is.

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residential

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