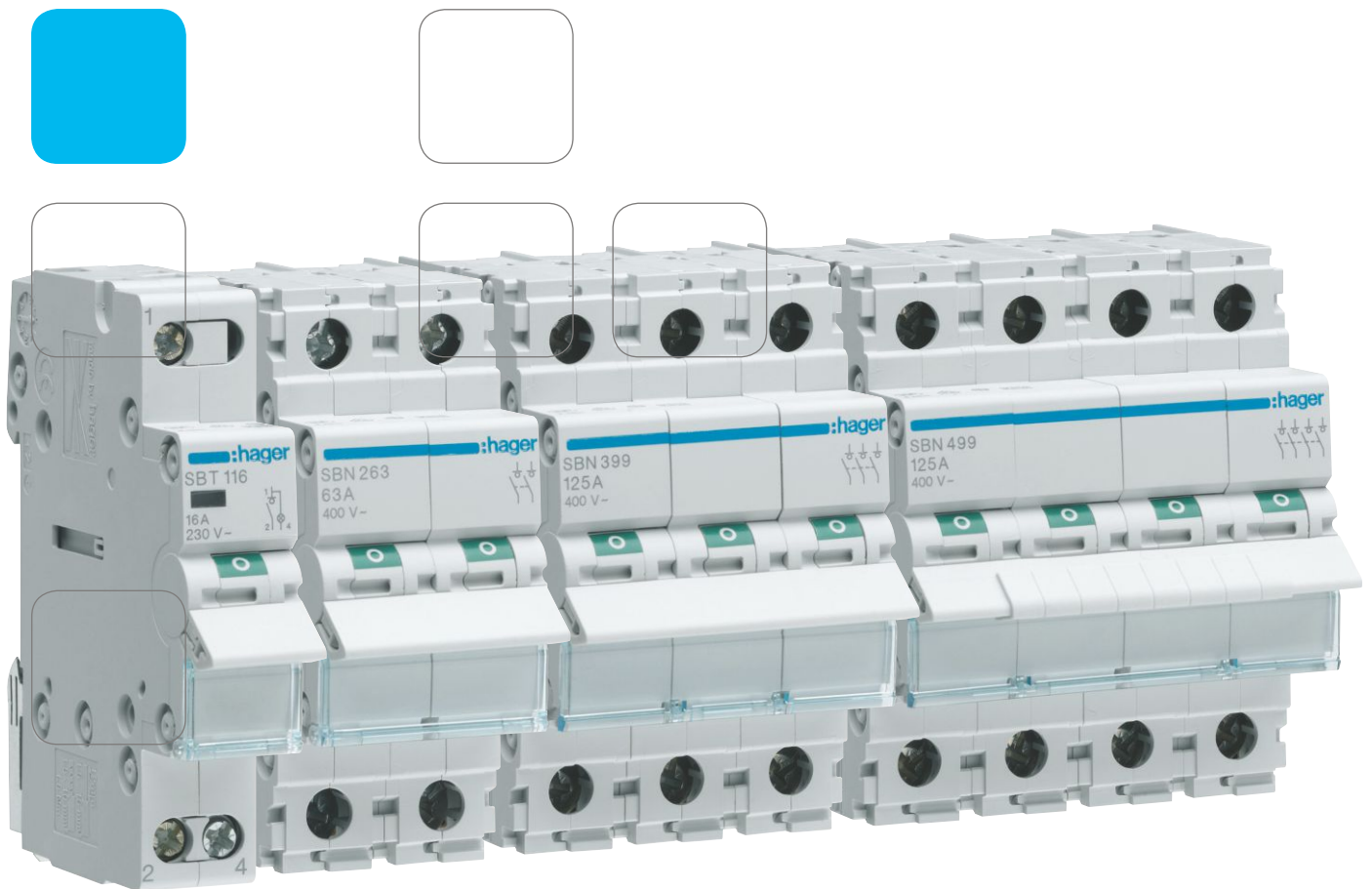


Modular switch disconnectors and modular change-over switches



Modular switch disconnectors and modular change-over switches

The new generation of modular switch disconnectors is guarantee of reliability in function and a high level of safety in use due to switch disconnectors with an indicator light (status signal with LED diode), among other features. Rated current switch disconnectors from 40 to 125 A are equipped with Biconnect terminals, ensuring the ability to use prong insulated bus-bars.

The new modular power switches with various contact configurations and power connection methods ensure the easy and safe connection of power sources in emergencies. Also new is the common universal auxiliary contact block for the family of switch disconnectors and new modular contactors.



Your benefits:

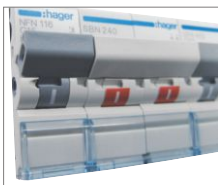
- New design compatible with the modular devices of :hager
- Full range of products in the rated current from 16 A to 125 A
- Descriptive field with safety valve
- Differentiation of the modular switch disconnectors by the colour of the toggle to other modular protection devices
- Allows to use an auxiliary contact block

Technical data:

Usage category:	AC22A from 16 to 125A
Standard compliance:	EN 60669-1, EN 60947-3
Voltage:	230 / 400 V AC
LED signals:	Service life 100 000 h of function
Durability of mechanism:	Up to 320 000 connections

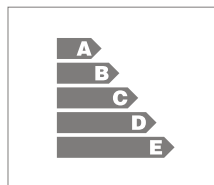
Expert tipps

1



Toggle of the unit
Differentiation of the switch disconnectors by the colour of the toggle to other modular protection devices.

5



Low energy consumption
Modular switch disconnectors with an indicator light are equipped with an LED with very low energy consumption.

2



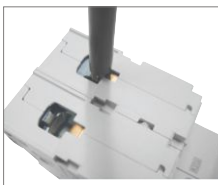
Auxiliary contact block
Universal for all types of modular switch disconnectors, change-over switches and contactors.

6



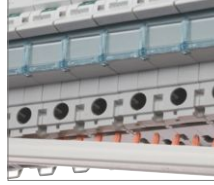
125A in one module size
Compact structure which saves space in the enclosure.

3



Terminal IP2x
Safe installation and function of the devices.

7



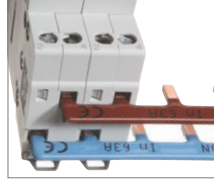
Biconnect terminal blocks
For the easy connection of fork-type bus-bar in 40A to 125A switch disconnectors.

4



Sure and fast function
Fast and fail-proof operation by spring-lock mechanism ensuring safe disconnection of the unit under load.

8



Suitable cage terminals
For cut-off switches from 16 A to 32 A for the easy connection for bus bars phase + N.

Description

For cutting off all current circuits.
Compliance with:
IEC 60943-3 for whole range and
EN60669 for range from 16 A to
63 A

Characteristics

All cut-off switches have green/
red fields on the toggle, ensur-
ing a legible visualisation of the
switch disconnector position.

Technical specifications

Usage category AC22A
230 V/400 V
In: 16 A to 32 A size 1.
Connection terminals:
16 mm² – rigid conductor
10 mm² – flexible conductor
In: 32 A to 63 A size 2.
Connection terminals:
25 mm² - rigid conductor
16 mm² - flexible conductor
In: 63 A to 125 A size 3.
Connection terminals:
50 mm² - rigid conductor
35 mm² - flexible conductor

1 Module = 17.5 mm
2 Modules = 35 mm
3 Modules = 52.5 mm
4 Modules = 70 mm



SBN163

Modular switch disconnector 1-pole



Description	Characteristics	Size	Modular width	Package	Cat. ref.
Modular switch disconnector 1-pole	1 x 16 A 230 V~	1	1	12	SBN116
Modular switch disconnector 1-pole	1 x 25 A 230 V~	1	1	12	SBN125
Modular switch disconnector 1-pole	1 x 32 A 230 V~	1	1	1	SBN132
Modular switch disconnector 1-pole	1 x 40 A 230 V~	2	1	12	SBN140
Modular switch disconnector 1-pole	1 x 63 A 230 V~	2	1	12	SBN163
Modular switch disconnector 1-pole	1 x 80 A 230 V~	3	1	1	SBN180
Modular switch disconnector 1-pole	1 x 100 A 230 V~	3	1	1	SBN190
Modular switch disconnector 1-pole	1 x 125 A 230 V~	3	1	1	SBN199



SBN263

Modular switch disconnector 2-pole

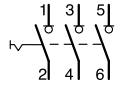


Description	Characteristics	Size	Modular width	Package	Cat. ref.
Modular switch disconnector 2-pole	2 x 16 A 230 V~	1	1	12	SBN216
Modular switch disconnector 2-pole	2 x 25 A 230 V~	1	1	12	SBN225
Modular switch disconnector 2-pole	2 x 32 A 230 V~	1	1	1	SBN232
Modular switch disconnector 2-pole	2 x 40 A 400 V~	2	2	6	SBN240
Modular switch disconnector 2-pole	2 x 63 A 400 V~	2	2	1	SBN263
Modular switch disconnector 2-pole	2 x 80 A 400 V~	3	2	1	SBN280
Modular switch disconnector 2-pole	2 x 100 A 400 V~	3	2	1	SBN290
Modular switch disconnector 2-pole	2 x 125 A 400 V~	3	2	1	SBN299



SBN399

Modular switch disconnector 3-pole

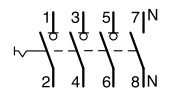


Description	Characteristics	Size	Modular width	Package	Cat. ref.
Modular switch disconnector 3-pole	3 x 16 A 400 V~	1	2	1	SBN316
Modular switch disconnector 3-pole	3 x 25 A 400 V~	1	2	6	SBN325
Modular switch disconnector 3-pole	3 x 32 A 400 V~	1	2	1	SBN332
Modular switch disconnector 3-pole	3 x 40 A 400 V~	2	3	4	SBN340
Modular switch disconnector 3-pole	3 x 63 A 400 V~	2	3	4	SBN363
Modular switch disconnector 3-pole	3 x 80 A 400 V~	3	3	4	SBN380
Modular switch disconnector 3-pole	3 x 100 A 400 V~	3	3	4	SBN390
Modular switch disconnector 3-pole	3 x 125 A 400 V~	3	3	4	SBN399



SBN499

Modular switch disconnector 4-pole



Description	Characteristics	Size	Modular width	Package	Cat. ref.
Modular switch disconnector 4-pole	4 x 16 A 400 V~	1	2	1	SBN416
Modular switch disconnector 4-pole	4 x 25 A 400 V~	1	2	1	SBN425
Modular switch disconnector 4-pole	4 x 32 A 400 V~	1	2	1	SBN432
Modular switch disconnector 4-pole	4 x 40 A 400 V~	2	4	3	SBN440
Modular switch disconnector 4-pole	4 x 63 A 400 V~	2	4	3	SBN463
Modular switch disconnector 4-pole	4 x 80 A 400 V~	3	4	1	SBN480
Modular switch disconnector 4-pole	4 x 100 A 400 V~	3	4	3	SBN490
Modular switch disconnector 4-pole	4 x 125 A 400 V~	3	4	1	SBN499

Description

For cutting off all current circuits.
Compliance with:
IEC 60943-3 and EN60669

Characteristics

Orange LED indicator
LED life cycle: 100,000 h.
All switch disconnectors have
green/red fields on the toggle,
ensuring legible visualisation
of the position of the switch dis-
connector.

Technical specifications

Function category AC22A
230 V/400 V
In: 16 A to 32 A size 1.
Connection terminals:
16 mm² - rigid conductor
10 mm² - flexible conductor



SBT116

Modular switch disconnector 1-pole with indicator light top



Description	Characteristics	Size	Modular width	Package	Cat. ref.
Modular switch disconnector	1 x 16 A 230 V~	1	1	1	SBT116
Modular switch disconnector	1 x 25 A 230 V~	1	1	1	SBT125
Modular switch disconnector	1 x 32 A 230 V~	1	1	1	SBT132



SBB116

Modular switch disconnector 1-pole with indicator light bottom



Description	Characteristics	Size	Modular width	Package	Cat. ref.
Modular switch disconnector	1 x 16 A 230 V~	1	1	1	SBB116
Modular switch disconnector	1 x 25 A 230 V~	1	1	1	SBB125
Modular switch disconnector	1 x 32 A 230 V~	1	1	1	SBB132



SBT216

Modular switch disconnector 2-pole with indicator light top



Description	Characteristics	Size	Modular width	Package	Cat. ref.
Modular switch disconnector	2 x 16 A 230 V~	1	1	1	SBT216
Modular switch disconnector	2 x 25 A 230 V~	1	1	1	SBT225
Modular switch disconnector	2 x 32 A 230 V~	1	1	1	SBT232



SBB216

Modular switch disconnector 2-pole with indicator light bottom



Description	Characteristics	Size	Modular width	Package	Cat. ref.
Modular switch disconnector	2 x 16 A 230 V~	1	1	1	SBB216
Modular switch disconnector	2 x 25 A 230 V~	1	1	1	SBB225
Modular switch disconnector	2 x 32 A 230 V~	1	1	1	SBB232



SBM216

Modular switch disconnector 2-pole with indicator light top + bottom



Description	Characteristics	Size	Modular width	Package	Cat. ref.
Modular switch disconnector	2 x 16 A 230 V~	1	1	1	SBM216
Modular switch disconnector	2 x 25 A 230 V~	1	1	1	SBM225
Modular switch disconnector	2 x 32 A 230 V~	1	1	1	SBM232

Description

Auxiliary contact block

Universal auxiliary contact block for the family of modular switch disconnectors from 16 A to 125 A with and without LED indicator lights.

Characteristics

The auxiliary contact block has a small signal window to visualise the position of the contact block of the position of the switch disconnector.

Technical specifications

Function category AC12A
230 V / 400 V
Connection terminals:
10 mm² - rigid conductor
6 mm² - flexible conductor

Description

Sealed terminal sheathing

The sealed terminal sheathing is compatible with switch disconnectors in the range of 32 A to 63 A size 2. For the range from 63 A to 125 A, the size 3 of modular switch disconnectors, only a portion of the sheathing is compatible and is used to protect screw heads.

Description

Isolating terminal baffles

The isolating terminal baffle is compatible with the majority of switch disconnectors from 32 A to 125 A sizes 2 and 3.

Description

Blocking mechanism

Allows to block the switch disconnectors in OFF or ON position. Allows to attach 2 padlocks with a bar thickness of 4.75 mm max. (Mechanism supplied without padlocks).



ESC080

Auxiliary contact block

Technical specifications:

- Compatibility with modular switch disconnectors from 16 A to 125 A

Description	Characteristics	Modular width	Package	Cat. ref.
Auxiliary contact block	6 A 230 V~	1/2	1	ESC080



MZN120

Terminal sheathing

Technical specifications:

- Compatibility with modular switch disconnectors from 32 A to 63 A size 2
- Only one part of the sheathing can be used for modular switch disconnectors of 63A to 125A size 3
- to cover the connection terminal and screws, the screw sheathing ensures the ability to seal

Description	Package	Cat. ref.
Terminal sheathing	4	MZN120



MZN121

Isolating partition

Technical specifications:

- for modular switch disconnectors sizes 2 and 3

Description	Package	Cat. ref.
Isolating partition	3	MZN121



MZN175

Blocking mechanism with padlock

Technical specifications:

- prevents accidental activation and deactivation of the modular switch disconnectors

Description	Package	Cat. ref.
Blocking mechanism with padlock	2	MZN175

Description

For switching all types of current circuits.
Compliance with:
IEC 60943-3 for all ranges and
with EN60669 for the ranges
from 16 A to 63 A

Characteristics

All change-over switches have
I - 0 - II fields on the toggle
ensuring the legible visualisation
of positions of the change-over
switch.

Technical specifications

Function category AC22A
230 V/400 V
In: 16 A to 40 A size 1.
Connection terminals:
16 mm² - rigid conductor
10 mm² - flexible conductor

1 Module = 17.5 mm
2 Modules = 35 mm
3 Modules = 52.5 mm
4 Modules = 70 mm



SFT440

Change-over switch I-O-II with central position OFF, common point from top

NO.NC



Description	Characteristics	Size	Modular width	Package	Cat. ref.
Change-over switch I-O-II	1 x 25 A 230 V~	1	1	1	SFT125
Change-over switch I-O-II	1 x 32 A 230 V~	1	1	1	SFT132
Change-over switch I-O-II	1 x 40 A 230 V~	1	1	1	SFT140
Change-over switch I-O-II	2 x 25 A 230 V~	1	2	1	SFT225
Change-over switch I-O-II	2 x 32 A 230 V~	1	2	1	SFT232
Change-over switch I-O-II	2 x 40 A 230 V~	1	2	1	SFT240
Change-over switch I-O-II	3 x 40 A 400 V~	1	3	1	SFT340
Change-over switch I-O-II	4 x 40 A 400 V~	1	4	1	SFT440



SFB125

Change-over switch I-O-II with central position OFF, common point from bottom

NO.NC



Description	Characteristics	Size	Modular width	Package	Cat. ref.
Change-over switch I-O-II	1 x 16 A 230 V~	1	1	12	SFB116
Change-over switch I-O-II	1 x 25 A 230 V~	1	1	12	SFB125
Change-over switch I-O-II	1 x 32 A 230 V~	1	1	1	SFB132
Change-over switch I-O-II	2 x 16 A 230 V~	1	2	1	SFB216
Change-over switch I-O-II	2 x 25 A 230 V~	1	2	1	SFB225
Change-over switch I-O-II	2 x 32 A 230 V~	1	2	1	SFB232



SFL125

**Change-over switch I-II,
common point from bottom**

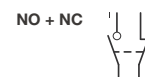


Description	Characteristics	Size	Modular width	Package	Cat. ref.
Change-over switch I-II	1 x 16 A 230 V~	1	1	1	SFL116
Change-over switch I-II	1 x 25 A 230 V~	1	1	1	SFL125
Change-over switch I-II	1 x 32 A 230 V~	1	1	1	SFL132
Change-over switch I-II	2 x 16 A 230 V~	1	2	1	SFL216
Change-over switch I-II	2 x 25 A 230 V~	1	2	1	SFL225
Change-over switch I-II	2 x 32 A 230 V~	1	1	1	SFL232



SFM125

2-circuit change-over switch



Description	Characteristics	Size	Modular width	Package	Cat. ref.
2-circuit change-over switch	1 x 25 A 230 V~	1	1	1	SFM125
2-circuit change-over switch	1 x 32 A 230 V~	1	1	1	SFM132

Electrical characteristics		SB									
Number of poles	1, 2, 3, 4										
Size	1			2			3				
Rated heat current I_{th} (40°C)	16 A	25 A	32 A	32 A	40 A	63 A	63 A	80 A	100 A	125 A	
Rated frequency	50 / 60 Hz			50 / 60 Hz			50 / 60 Hz				
Rated isolation voltage (U_i)	440 V			440 V			440 V				
Maintained rated impulse voltage U_{imp}	3 kV			3 kV			3 kV				
Working temperature	-20 to 50°C										
Storage temperature	-40 to 80°C										

Working rated current I_e												
400 V AC	AC21A	16 A	25 A	32 A	32 A	40 A	63 A	63 A	80 A	100 A	125 A	
400 V AC	AC21B	16 A	25 A	32 A	32 A	40 A	63 A	63 A	80 A	100 A	125 A	
400 V AC	AC22A	16 A	25 A	32 A	32 A	40 A	63 A	63 A	80 A	100 A	125 A	
400 V AC	AC23A											

A - Partial connection B- Sporadic connections Short-circuit characteristics

Short-circuit characteristics

One-second short-circuit current I_{cw} (rms)	IEC 60947-3	480A / 1s			945A / 1 s			1500A / 1s				
Expected short-circuit current (rms)	EN 60669	3 kA			6 kA			n/a				
Rated current of safety liner (gG)		16 A	25 A	32 A	32 A	40 A	63 A	n/a	n/a	n/a	n/a	

Mechanical properties

Connection type	Cage terminals											
Maximum segment of copper conductor (wire)	16 mm ²	16 mm ²	16 mm ²	25 mm ²	25 mm ²	25 mm ²	50 mm ²	50 mm ²	50 mm ²	50 mm ²	50 mm ²	
Maximum segment of copper conductor (cable)	10 mm ²	10 mm ²	10 mm ²	16 mm ²	16 mm ²	16 mm ²	35 mm ²	35 mm ²	35 mm ²	35 mm ²	35 mm ²	
Torque	1,8 Nm	1,8 Nm	1,8 Nm	2,9 Nm	2,9 Nm	2,9 Nm	3,6 Nm	3,6 Nm	3,6 Nm	3,6 Nm	3,6 Nm	
Connection type	Pin busbar			Fork-type comb bus-bar								
Thickness				1 to 1,5 mm			1 to 1,5 mm					
Protection level	IP20											
Service life of mechanism (quantity of connection cycles)	320.000	320.000	320.000	120.000	120.000	120.000	80.000	80.000	80.000	80.000	80.000	
Electrical service life (quantity of connection cycles for AC-22)	50.000	50.000	50.000	10.000	10.000	10.000	5.000	5.000	5.000	5.000	5.000	

Dimensions

Width (mm)	Number of poles										
	1	17,5									
	2	17,5			36						
	3	36			53						
Height (mm)	1, 2, 3, 4	83									
		72									
Depth (mm)	1, 2, 3, 4	72									

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