Switch-disconnectors
TeSys Vario

Door mounting isolation switch - mini Vario - Vario

Type of product	Range		Pages
Switch disconnectors mini-Vario	Up to **12** or **20** A		B3/2
Switch disconnectors, **high performance applications** Vario	From **12** to **175** A		B3/6
Accessories mini-Vario and Vario			B3/8

Technical Data for Designers B3/17

TeSys protection components

Mini-VARIO switch-disconnectors for standard applications

Complete units

- 3-pole rotary switch-disconnectors, 12 to 20 A
- Marking on operator ○ |.
- Padlockable operating handle (padlocks not supplied).
- Degree of protection IP 65.

PF511156.tif



VCDN 20

PF511157.tif



VCCDN 20

PF511158.tif



VBDN 20

Main and Emergency stop switch-disconnectors for door mounting

Operator			Ith	Reference
Handle	Front plate	Fixing		
	mm	mm	A	
Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	Ø22.5	12	**VCDN12**
			20	**VCDN20**

Main and Emergency stop switch-disconnectors for mounting at back of an enclosure (1)

Operator			Ith	Reference
Handle	Front plate	Fixing		
	mm	mm	A	
Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	Ø22.5	12	**VCCDN12**
			20	**VCCDN20**

Main switch-disconnectors for door mounting

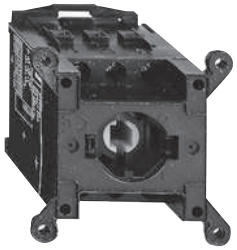
Operator			Ith	Reference
Handle	Front plate	Fixing		
	mm	mm	A	
Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 60 x 60	Ø22.5	12	**VBDN12**
			20	**VBDN20**

(1) Switches supplied with a shaft extension **VZN 17** *and a door interlock plate* **KZ 32** *(see page B3/5).*

Characteristics: pages B3/18 to B3/21
Dimensions: pages B3/22 and B3/23
Schemes: page B3/23

TeSys protection components
Mini-VARIO switch-disconnectors for standard applications
Switch bodies, add-on modules

Mini-Vario



VN 20



VZN 11



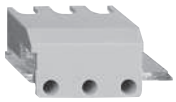
VZN 14



VZN 05



VZN 26



VZN 08

Switch bodies

Description	Rating A	Reference
3-pole switch-disconnectors	12	**VN12**
	20	**VN20**

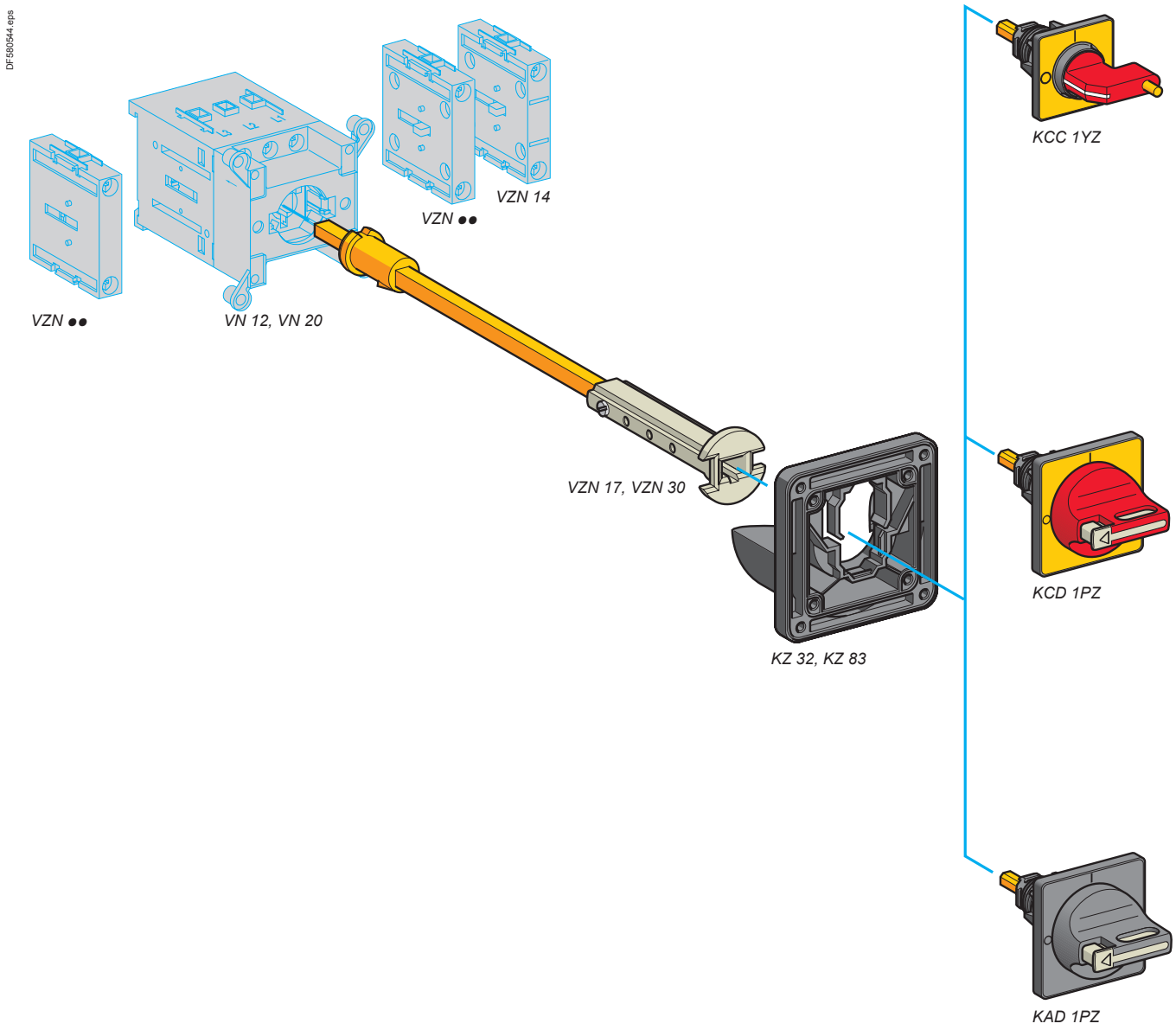
Add-on modules

Description	Rating A	Reference
Main pole modules	12	**VZN12**
	20	**VZN20**
Neutral pole module with early make and late break contacts	12 and 20	**VZN11**
Earthing module	12 and 20	**VZN14**
Auxiliary contact block modules	1 N/O late make contact	**VZN05**
	1 N/C early break contact	**VZN06**
Input terminal protection shrouds	For add-on pole modules or auxiliary contact block modules (single-pole shroud)	**VZN26**
	For switch bodies (3-pole shroud)	**VZN08**

Maximum number of add-on modules that can be fitted on a switch body

VZN 12 or VZN 20 +	**VN 12**	+ VZN 12 or VZN 20
or	**or**	VZN 11 + VZN 14
VZN 05 or VZN 06	**VN 20**	VZN 05 or VZN 06

Switch-disconnectors


DF580544.eps
VZN 14
VZN ●●
VZN ●●
VN 12, VN 20
VZN 17, VZN 30
KZ 32, KZ 83
KCC 1YZ
KCD 1PZ
KAD 1PZ

TeSys protection components
Mini-VARIO switch-disconnectors for standard applications
Operators and accessories

- Degree of protection IP 65.
- Marking on operator .
- Padlockable operating handle (padlocks not supplied).
- Operator fixing by 1 Ø22.5 hole; for other operators see pages B3/11 and B3/13.
- For other accessories and empty enclosures, see pages B3/14, B3/15 and A1/3.

Operators for main and Emergency stop switch-disconnectors

Handle	Front plate mm	Reference
Red, padlockable with 1 padlock (Ø4 to Ø6)	Yellow 45 x 45	**KCC1YZ**
Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	**KCD1PZ**

Operators for main switch-disconnectors

Handle	Front plate mm	Reference
Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 60 x 60	**KAD1PZ**

Accessories for door interlocking

For rear fixing switch-disconnectors mounted at the back of an enclosure, in addition to a direct operator

Description	Front plate	Distance enclosure back/door	Sold in lots of	Unit reference
	mm	mm		
Shaft extensions	–	300…330	1	**VZN17**
		400…430	1	**VZN30**
Door interlock plate	45 x 45 or 60 x 60	–	5	**KZ32**
Plate for door mounting	45 x 45 or 60 x 60	–	5	**KZ83**

Characteristics: pages B3/18 to B3/21
Dimensions: pages B3/22 and B3/23
Schemes: page B3/23

TeSys protection components

VARIO switch-disconnectors for high performance applications

Complete units

- 3-pole rotary switch-disconnectors, 12 to 175 A
- Marking on operator ○ |.
- Padlockable operating handle (padlocks not supplied).
- Degree of protection IP 65.

PF511159.tif



VCF 0

PF511160.tif



VCF 5

PF511161.tif



VCCF 0

Main and Emergency stop switch-disconnectors for door mounting

Handle	Front plate mm	Fixing	Rating A	Reference	Weight kg
Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	Ø22.5	12	**VCD02**	0.215
			20	**VCD01**	0.215
			25	**VCD0**	0.215
			32	**VCD1**	0.215
			40	**VCD2**	0.215
		4 screws	12	**VCF02**	0.250
			20	**VCF01**	0.250
			25	**VCF0**	0.250
			32	**VCF1**	0.250
			40	**VCF2**	0.250
			63	**VCF3**	0.560
			80	**VCF4**	0.560
Red, long, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 90 x 90	4 screws	125	**VCF5**	1.200
			175	**VCF6**	1.200

Main and Emergency stop switch-disconnectors for mounting at back of an enclosure (1)

Handle	Front plate mm	Fixing	Rating A	Reference	Weight kg
Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	Ø22.5	12	**VCCD02**	0.392
			20	**VCCD01**	0.392
			25	**VCCD0**	0.392
			32	**VCCD1**	0.392
			40	**VCCD2**	0.392
		4 screws	12	**VCCF02**	0.527
			20	**VCCF01**	0.527
			25	**VCCF0**	0.527
			32	**VCCF1**	0.527
			40	**VCCF2**	0.527
			63	**VCCF3**	0.440
			80	**VCCF4**	0.680
Red, long, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 90 x 90	4 screws	125	**VCCF5**	1.320
			175	**VCCF6**	1.320

*(1) Unit supplied with a shaft extension **VZN 17** and a door interlock plate **KZ 32** or **KZ 74** (see page B3/14).*

Characteristics: pages B3/18to B3/21
Dimensions: pages B3/24 and B3/25
Schemes: page B3/25

TeSys protection components

VARIO switch-disconnectors for high performance applications

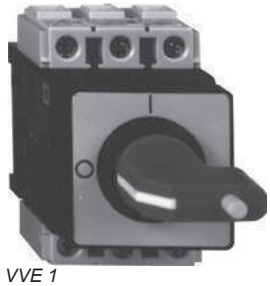
Complete units



VBD 0



VBF 4



VVE 1

- 3-pole rotary switch-disconnectors, 12 to 175 A
- Marking on operator ○ |.
- Padlockable operating handle (padlocks not supplied).
- Degree of protection IP 65.

Main switch-disconnectors for door mounting

Handle	Front plate mm	Fixing	Rating A	Reference	Weight kg
Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 60 x 60	Ø22.5	12	**VBD02**	0.215
			20	**VBD01**	0.215
			25	**VBD0**	0.215
			32	**VBD1**	0.215
			40	**VBD2**	0.215
		4 screws	12	**VBF02**	0.250
			20	**VBF01**	0.250
			25	**VBF0**	0.250
			32	**VBF1**	0.250
			40	**VBF2**	0.250
			63	**VBF3**	0.560
			80	**VBF4**	0.560
Red, long, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 90 x 90	4 screws	125	**VBF5**	1.200
			175	**VBF6**	1.200

Main and Emergency stop switch-disconnectors

For mounting in an enclosure or for modular distribution boards

Handle	Front plate mm	Rating A	Reference	Weight kg
Red, padlockable with 1 padlock (Ø4 to Ø6)	Yellow 45 x 45	25	**VVE0**	0.250
		32	**VVE1**	0.250
		40	**VVE2**	0.250
		63	**VVE3**	0.530
		80	**VVE4**	0.530

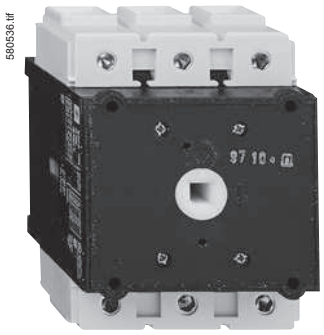
Main switch-disconnectors

For mounting in an enclosure or for modular distribution boards

Handle	Front plate mm	Rating A	Reference	Weight kg
Black, not padlockable	Black 45 x 45	25	**VVD0**	0.250
		32	**VVD1**	0.250
		40	**VVD2**	0.250
		63	**VVD3**	0.560
		80	**VVD4**	0.560

Characteristics: pages B3/18to B3/21
Dimensions: pages B3/24 and B3/25
Schemes: page B3/25

TeSys protection components
VARIO switch-disconnectors for high performance applications
Switch bodies, add-on modules, auxiliary contacts (for customer assembly)



V5



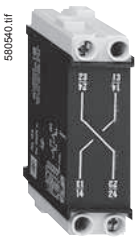
VZ 0



VZ 11



VZ 15



VZ 20

Switch bodies

Description	Rating A	Reference
3-pole switch-disconnectors (1)	12	**V02**
	20	**V01**
	25	**V0**
	32	**V1**
	40	**V2**
	63	**V3**
	80	**V4**
	125	**V5**
	175	**V6**

Add-on modules

Description	Rating A	Reference
Main pole modules	12	**VZ02**
	20	**VZ01**
	25	**VZ0**
	32	**VZ1**
	40	**VZ2**
	63	**VZ3**
	80	**VZ4**
Neutral pole modules with early make and late break contacts (1)	12 to 40	**VZ11**
	63 to 80	**VZ12**
	125 and 175	**VZ13**
Earthing modules	12 to 40	**VZ14**
	63 and 80	**VZ15**
	125 and 175	**VZ16**

Auxiliary contact block modules

Description	Type	Reference
Auxiliary contact block modules with 2 auxiliary contacts	N/O + N/C (2)	**VZ7**
	N/O + N/O	**VZ20**

(1) Protection shrouds are available if required: see page B3/14.
(2) Late make N/O, early break N/C contacts

Characteristics: pages B3/18to B3/21
Dimensions: pages B3/24 and B3/25
Schemes: page B3/25

TeSys protection components
VARIO switch-disconnectors for high performance applications
Switch bodies, add-on modules, auxiliary contacts (for customer assembly)

Maximum number of add-on modules that can be fitted on a switch body

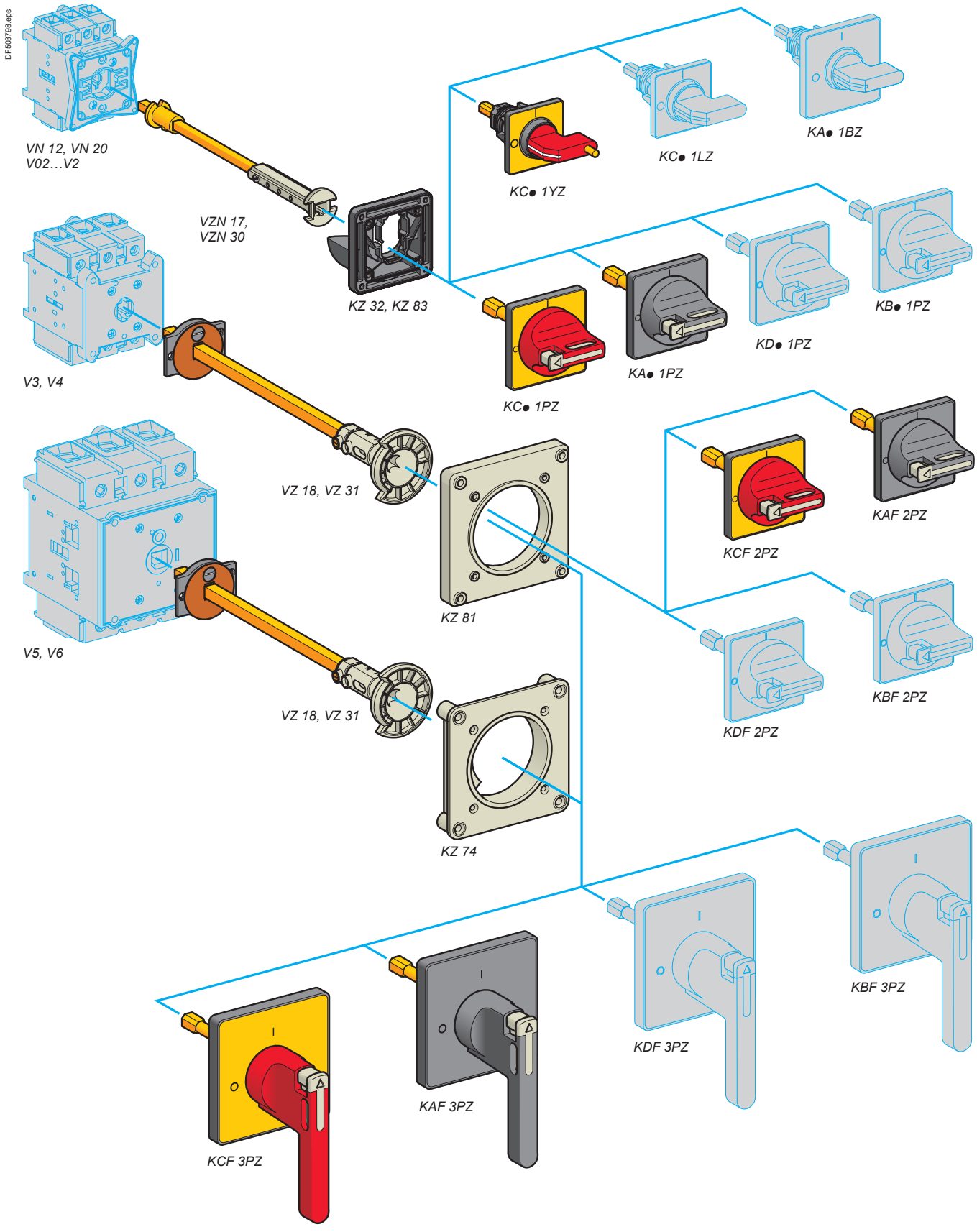
1 add-on module on each side of the switch body

VZ 7 or VZ 20	+	V0●	+	VZ 7 or VZ 20		VZ 7	+	V5	+	VZ 7
or				or		or				or
VZ 11 or VZ 12	+	V0	+	VZ 11 or VZ 12		VZ 20	+	or	+	VZ 20
or		to		or		or				or
VZ 14 or VZ 15	+		+	VZ 14 or VZ 15		VZ 13	+	V6	+	VZ 13
or		V4		or		or				or
VZ 0●/VZ 0 to VZ 4	+		+	VZ 0●/VZ 0 to VZ 4		VZ 16	+		+	VZ 16

2 add-on modules on each side of the switch body

VZ 0●	+	VZ 0●	+	V0●	+	VZ 0●	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 0	+	VZ 0	+	V0	+	VZ 0	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 1	+	VZ 1	+	V1	+	VZ 1	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 2	+	VZ 2	+	V2	+	VZ 2	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 3	+	VZ 3	+	V3	+	VZ 3	+	VZ 7	or	VZ 20	or	VZ 12	or	VZ 15
VZ 4	+	VZ 4	+	V4	+	VZ 4	+	VZ 7	or	VZ 20	or	VZ 12	or	VZ 15

Note: *The add-on modules mounted next to the switch body are main pole modules. Maximum of 3 main pole modules per switch body.*


DF5037798.eps
VN 12, VN 20
V02…V2
VZN 17,
VZN 30
KZ 32, KZ 83
KC● 1YZ
KC● 1LZ
KA● 1BZ
V3, V4
KC● 1PZ
KA● 1PZ
KD● 1PZ
KB● 1PZ
VZ 18, VZ 31
KZ 81
KCF 2PZ
KAF 2PZ
V5, V6
VZ 18, VZ 31
KZ 74
KDF 2PZ
KBF 2PZ
KCF 3PZ
KAF 3PZ
KDF 3PZ
KBF 3PZ

Protection components
Mini-VARIO and VARIO switch-disconnectors
Operators, handles and front plates
(for customer assembly)

- Marking on operator .
- Padlockable operating handle (padlocks not supplied).
- Degree of protection IP 65.

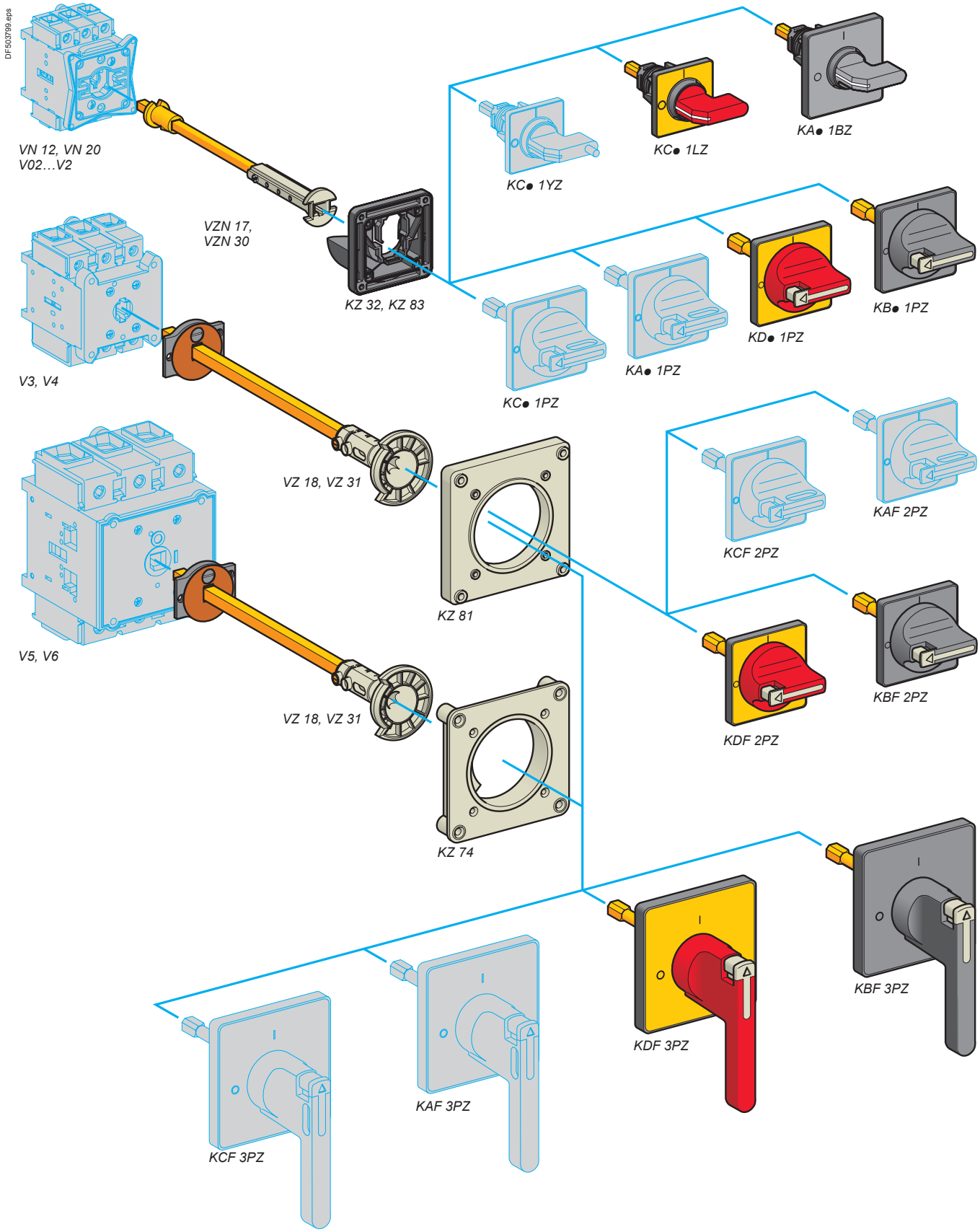
Handles and front plates for main and Emergency stop switch-disconnectors

For switch body	Operator			Reference
	Handle	Front plate		
		Dimensions	Fixing	
		mm		
VN 12, VN 20 V02…V2	Red, padlockable with 1 padlock (Ø4 to Ø6)	Yellow 45 x 45	Ø22.5	**KCC1YZ**
			4 screws	**KCE1YZ**
	Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	Ø22.5	**KCD1PZ**
			4 screws	**KCF1PZ**
V3 and V4	Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	4 screws	**KCF2PZ**
V5 and V6	Red, long, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 90 x 90	4 screws	**KCF3PZ** (1)

Handles and front plates for main switch-disconnectors

For switch body	Operator			Reference
	Handle	Front plate		
		Dimensions	Fixing	
		mm		
VN 12, VN 20 V02…V2	Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 60 x 60	Ø22.5	**KAD1PZ**
			4 screws	**KAF1PZ**
V3 and V4	Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 60 x 60	4 screws	**KAF2PZ**
V5 and V6	Black, long, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 90 x 90	4 screws	**KAF3PZ** (1)

*(1) For door mounting of 63 and 80 A switch-disconnectors, adapter plate **KZ 106** must be ordered separately (see page B3/14).*


DF503799.eps
VN 12, VN 20
V02…V2
VZN 17,
VZN 30
KZ 32, KZ 83
KC● 1YZ
KC● 1LZ
KA● 1BZ
V3, V4
KC● 1PZ
KA● 1PZ
KD● 1PZ
KB● 1PZ
VZ 18, VZ 31
KZ 81
KCF 2PZ
KAF 2PZ
V5, V6
VZ 18, VZ 31
KZ 74
KDF 2PZ
KBF 2PZ
KCF 3PZ
KAF 3PZ
KDF 3PZ
KBF 3PZ

Protection components
Mini-VARIO and VARIO switch-disconnectors
Operators, handles and front plates
(for customer assembly)

- Marking on operator .
- Degree of protection IP 65.

Handles and front plates for Emergency stop switch-disconnectors

For switch body	Operator			Reference
	Handle	Front plate		
		Dimensions	Fixing	
		mm		
VN 12, VN 20 V02…V2	Red, not padlockable	Yellow 45 x 45	Ø22.5	**KCC1LZ**
			4 screws	**KCE1LZ**
		Yellow 60 x 60	Ø22.5	**KDD1PZ**
			4 screws	**KDF1PZ**
V3 and V4	Red, long, not padlockable	Yellow 60 x 60	4 screws	**KDF2PZ**
V5 and V6	Red, long, not padlockable	Yellow 90 x 90	4 screws	**KDF3PZ** (1)

Handles and front plates for switch-disconnectors

For switch body	Operator			Reference
	Handle	Front plate		
		Dimensions	Fixing	
		mm		
VN 12, VN 20 V02…V2	Black, not padlockable	Black 45 x 45	Ø22.5	**KAC1BZ**
			4 screws	**KAE1BZ**
		Black 60 x 60	Ø22.5	**KBD1PZ**
			4 screws	**KBF1PZ**
V3 and V4	Black, not padlockable	Black 60 x 60	4 screws	**KBF2PZ**
V5 and V6	Black, not padlockable	Black 90 x 90	4 screws	**KBF3PZ** (1)

*(1) For door mounting of 63 and 80 A switch-disconnectors, adapter plate **KZ 106** must be ordered separately (see next page).*

Protection components

Mini-VARIO and VARIO switch-disconnectors

Accessories

580583.tif



VZ 8

580984.tif



VZ 26

580526.tif



VZ 18

580585.tif



KZ 32

580527.tif



KZ 81

Input terminal protection shrouds

Description	For use on	Reference
For switch bodies (3-pole shroud)	V02…V2	**VZ8**
	V3 and V4	**VZ9**
	V5 and V6	**VZ10**
For add-on pole modules (single-pole shroud)	VZ 02…VZ 2, VZ 11, VZ 14	**VZ26**
	VZ 3, VZ 4, VZ 12, VZ 15	**VZ27**
	VZ 13, VZ 16	**VZ28**
For contact blocks with 2 auxiliary contacts	–	**VZ29**

Components for door interlocking

For rear fixing switch-disconnectors mounted at the back of an enclosure, in addition to a direct operator

Description	For use on	Distance enc. back/door	Sold in lots of	Unit reference
		mm		
Shaft extensions	VN 12, VN 20 V02…V2	300…330	1	**VZN17** (1)
		400…430	1	**VZN30** (1)
	V02…V2	300…330	1	**VZ17**
		400…430	1	**VZ30**
	V3 and V4	300…320	1	**VZ18**
		400…420	1	**VZ31**
	V5 and V6	330…350	1	**VZ18**
		430…450	1	**VZ31**
Door interlock plates	VN 12, VN 20 V02…V2	–	5	**KZ32**
	V3…V6	–	5	**KZ74**

Description	For use on	Front plate dimensions	Sold in lots of	Unit reference
		mm		
Plates for door mounting of handles with 4 screw fixing	VN 12, VN 20 V02…V2	45 x 45 or 60 x 60	5	**KZ83**
	V3…V6	60 x 60 or 90 x 90	5	**KZ81**
Adapter plate for switch-disconnectors	V3 and V4	90 x 90	5	**KZ106**

(1) Can be used with V02 to V2 switches.

Characteristics: pages B3/18to B3/21
Dimensions: pages B3/24 and B3/25
Schemes: page B3/25

Protection components

Mini-VARIO and VARIO switch-disconnectors

Accessories

812783.tif



KZ 15

580528.tif



KZ 67

812785.tif



Z01

Accessories for operators

Description	For use on	Front plate dimensions	Sold in lots of	Unit reference
		mm		
Legend holder with silver coloured blank legend plate	Front plate	45 x 45	5	**KZ13**
		60 x 60	5	**KZ15**
		90 x 90	5	**KZ103**
Legend holders without legend plate	Front plate	45 x 45	20	**KZ14**
		60 x 60	10	**KZ16**
		90 x 90	5	**KZ101**
Silver coloured blank legend plates for engraving by customer	KZ 14	–	20	**KZ76**
	KZ 16	–	10	**KZ77**
	KZ 101	–	5	**KZ100**
Seals	VN 12, VN 20	45 x 45	5	**KZ65**
	V02…V2	60 x 60	5	**KZ66**
	V3 and V4	60 x 60	5	**KZ62**
	V3…V6	90 x 90	5	**KZ67**
Tightening tool	For operators with Ø22.5 fixing	–	5	**Z01**

Characteristics: pages B3/18to B3/21
Dimensions: pages B3/24 and B3/25
Schemes: page B3/25

Vario

Technical Data for Designers

Contents

Characteristics ..... B3/18 to B3/21
Mini Vario:
> Dimensions ..... B3/22 to B3/23
> Schemes B3/23
Vario:
> Dimensions ..... B3/24 to B3/25
> Schemes B3/25

Safety control and protection solutions
Mini-VARIO and VARIO switch-disconnectors

Characteristics

Environment

Switch type (bare type)				VN 12 VZN 12	V02 VZ 02	VN 20 VZN 20	V01 VZ 01	V0 VZ 0	VVD 0 VVE 0	V1 VZ 1	VVD 1 VVE 1
Conforming to standards				IEC 60947-3							
Product certifications				UL, CSA, GL							
Protective treatment				"TC"							
Degree of protection with protection shroud				IP 20 conforming to IEC 60529							
Ambient air temperature			**° C**	-20…+50							
Flame resistance			**° C**	960 conforming to IEC 60695-2-1							
Shock resistance 1/2 sine wave = 11ms conforming to IEC60068-2-27			**gn**	15	30	15	30				
Vibration resistance 10…150 Hz conforming to IEC 60068-2-6			**gn**	5	1						

Electrical characteristics, a.c. operation

Switch type (bare type)				VN 12 VZN 12	V02 VZ 02	VN 20 VZN 20	V01 VZ 01	V0 VZ 0	VVD 0 VVE 0	V1 VZ 1	VVD 1 VVE 1
Rated operational voltage (Ue)			**V**	690							
Rated impulse withstand voltage (Uimp)			**kV**	6	8	6	8				
Conventional thermal currents in free air (Ith) and rated uninterrupted (Iu)			**A**	12		20		25		32	
Conventional thermal current in enclosure (Ithe)			**A**	10		16		20		25	
Rated operational power and current	AC-21A/22A	230…690 V	**A**	12		20		25		32	
	AC-23A	230 V	**A/kW**	10.6/3		14/4		19.7/5.5			
		240 V	**A/kW**	10.6/3		14/4		19.9/5.5		18.9/5.5	
		400 V	**A/kW**	8.1/4		11/5.5		14.5/7.5		21.8/11	
		415 V	**A/kW**	8.1/4		11/5.5		14/7.5		21/11	
		500 V	**A/kW**	8.9/5.5		11.9/7.5		16.7/11			
		690 V	**A/kW**	8.6/7.5		12.3/11		17.5/15			
Rated operational power	AC -3	230/240 V	**kW**	1.5		3		4			
		400/415 V	**kW**	3		4		5.5		7.5	
		500 V	**kW**	4		5.5		7.5			
		690 V	**kW**	4	5.5		7.5	11			
Intermittent duty class				30							
Characteristics in normal operating conditions	Rated making capacity AC-21A/22A/23A (I rms)		**A/** 400 V	120		200		250		320	
	Rated breaking capacity AC-21A/22A/23A (I rms)		**A/** 400 V	120		200				250	
Short-circuit characteristics	Permissible rms short time rating (Icw)		**A/** 400V/1s	140	300	140	300			384	
	Rated making capacity under short-circuit conditions (Icm) I peak		**kA/** 400 V	0.5	1	0.5	1				
	Rated conditional short-circuit current (I rms) with aM/gG fuses		**kA/** 400 V	6	10	6	10				
			A	12		20		25		35	

V2 VZ 2	VVD 2 VVE 2	V3 VZ 3	VVD 3 VVE 3	V4 VZ 4	VVD 4 VVE 4	V5	V6	VZ7 VZ2 0	VZN 05 VZN 06
IEC 60947-3								IEC 60947-5	
UL, CSA, GL									
“TC”									
IP 20 conforming to IEC 60529									
-20…+50									
960 conforming to IEC 60695-2-1									
30								–	
1								–	

V2 VZ 2	VVD 2 VVE 2	V3 VZ 3	VVD 3 VVE 3	V4 VZ 4	VVD 4 VVE 4	V5	V6	VZ7 VZ2 0	VZN 05 VZN 06
690									
8									6
40		63		80		125	175	12	6
32		50		63		100	140	10	4
40		63		80		125	160	Ie/AC-15	
25.8/7.5		50.3/15		61.2/18.5		71.9/22	96.6/30	6 A	
24.8/7.5		48.2/15		58.5/18.5		68/22	92.7/30	6 A	
29/15		41.5/22		57/30		68.5/37	83/45	4 A	
28/15		40/22		55/30		66/37	80/45	4 A	
28.5/18.5		44/30		54/37		64.5/45	79/55	2 A	
17.5/15		25/22		33/30		42/37	49/45	1 A	
5.5		11		15		22	30	–	
11		18.5		22		30	37	–	
15		22		30		37	45	–	
11		18.5				30	37	–	
30								–	
400		630		800		1250	1750	–	
320		500		640		1000	1400	–	
480		756		960		1500	2100	–	
1		2.1				2.8		–	
10								1	
50		63		80		125	200	16	1.6

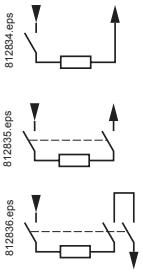
Safety control and protection solutions

Mini-VARIO and VARIO switch-disconnectors

Characteristics

Electrical characteristics, d.c. operation

Switch type (bare type)				VN 12 VZN 12	V02 VZ 02	VN 20 VZN 20	V01 VZ 01	V0 VZ 0	VVD 0 VVE 0	V1 VZ 1	VVD 1 VVE 1
Rated operational current DC-1 (L/R = 1ms)	24 V	1 contact	**A**	12		20		25		32	
		2 contacts	**A**	12		20		25		32	
		3 contacts	**A**	12		20		25		32	
	48 V	1 contact	**A**	12		20		25		32	
		2 contacts	**A**	12		20		25		32	
		3 contacts	**A**	12		20		25		32	
	60 V	1 contact	**A**	12		20		25		32	
		2 contacts	**A**	12		20		25		32	
		3 contacts	**A**	12		20		25		32	
	110 V	1 contact	**A**	1.5		2		9		10	
		2 contacts	**A**	8		10		12		16	
		3 contacts	**A**	12		20		25		32	
	220 V	1 contact	**A**	1.5		2		2.5		3	
		2 contacts	**A**	7		8		10		12	
		3 contacts	**A**	10		14		16		20	
	250 V	1 contact	**A**	0.6		0.7		0.8		1	
		2 contacts	**A**	3		4		6		8	
		3 contacts	**A**	8		10		12		16	
Rated operational current DC-2 to DC-5 (L/R = 1ms)	24 V	1 contact	**A**	12		20		25		32	
		2 contacts	**A**	12		20		25		32	
		3 contacts	**A**	12		20		25		32	
	48 V	1 contact	**A**	12		20		25		32	
		2 contacts	**A**	12		20		25		32	
		3 contacts	**A**	12		20		25		32	
	60 V	1 contact	**A**	10		14		16		20	
		2 contacts	**A**	12		20		25		32	
		3 contacts	**A**	12		20		25		32	
	110 V	1 contact	**A**	1.5		2		2.5		3	
		2 contacts	**A**	3		4		5		6	
		3 contacts	**A**	12		20		25		32	
	220 V	1 contact	**A**	0.4		0.5		0.5		0.8	
		2 contacts	**A**	1.4		1.5		1.5		2	
		3 contacts	**A**	1		2		3		4	
	250 V	1 contact	**A**	0.3		0.4		0.5		0.8	
		2 contacts	**A**	0.4		0.6		0.8		1	
		3 contacts	**A**	1.2		2.4		1.6		2	



Other characteristics

Switch type (bare type)			VN 12 VZN 12	V02 VZ 02	VN 20 VZN 20	V01 VZ 01	V0 VZ 0	VVD 0 VVE 0	V1 VZ 1	VVD 1 VVE 1
Mechanical durability (millions of operating cycles)			0.05	0.1	0.05	0.1				
Electrical durability in cat. AC-21 (millions of operating cycles)			0.05	0.1	0.05	0.1				
Electrical durability in cat. DC-1 to 5 (operating cycles)			30000							
Suitable for isolation			Yes							
Cabling	Flexible cable + cable end	**mm²**	4	6	4	6				
	Solid cable	**mm²**	4	10	4	10				
Tightening torque		**N.m**	0.7	2.1	0.7	2.1				

V2 VZ 2	VVD 2 VVE 2	V3 VZ 3	VVD 3 VVE 3	V4 VZ 4	VVD 4 VVE 4	V5	V6	VZ7 VZ2 0	VZN 05 VZN 06
40		63		80		125	175	8 (Ie/DC-11)	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	8 (Ie/DC-11)	
40		63		80		125	175	–	
40		63		80		125	175	–	
35		40		50		60	70	4 (Ie/DC-11)	
40		63		80		125	175	–	
40		63		80		125	175	–	
12		20		25		30	12	2 (Ie/DC-11)	
20		63		80		125	175	–	
40		63		80		125	175	–	
4		6		8		12	15	1 (Ie/DC-11)	
14		25		30		40	50	–	
25		30		40		80	100	–	
2		4		5		3	10	0.8 (Ie/DC-11)	
12		20		25		30	40	–	
20		30		40		50	61	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
25		40		50		60	70	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
5		6		8		10	12	–	
8		10		20		22	24	–	
40		50		63		70	80	–	
1		1.5		2		2.2	2.4	–	
3		4		6		7	8	–	
7		10		15		16	13	–	
1		1.2		1.5		1.6	1.8	–	
2		3		6		7	8	–	
6		8		10		12	14	–	

V2 VZ 2	VVD 2 VVE 2	V3 VZ 3	VVD 3 VVE 3	V4 VZ 4	VVD 4 VVE 4	V5	V6	VZ7 VZ2 0	VZN 05 VZN 06
0.1		0.03						0.1	0.05
0.1		0.03						0.1 (AC-15)	0.05
30000								30000 (DC-11)	
Yes								–	
6		16				70		2 x 0.75…1.5	
10		25				95		2 x 1…2.5	
2.1		4				22.6		0.7	

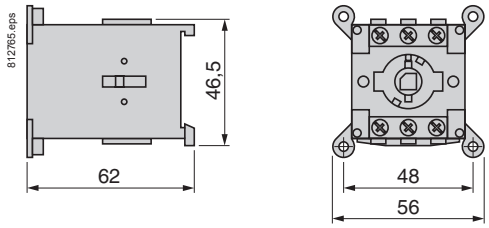
Safety control and protection solutions

Mini-VARIO switch-disconnectors, 12 and 20 A

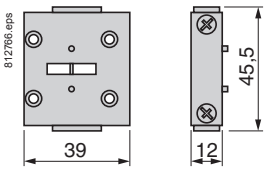
Dimensions

Switch-disconnectors

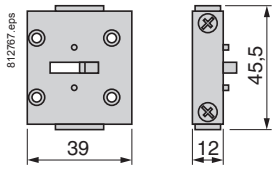
Switch bodies VN 12, VN 20



Add-on modules VZN 12, VZN 20



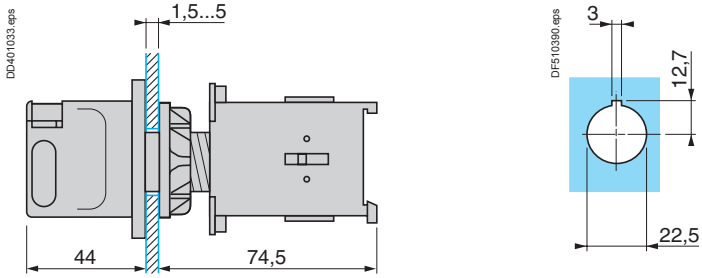
Add-on modules VZN 11, VN 14 VZN 05 and VZN 06



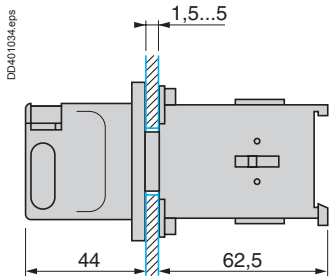
Mounting

Switch-disconnector mounted on enclosure door

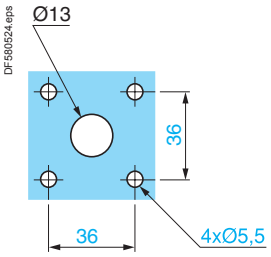
VN 12, VN 20
Single hole fixing



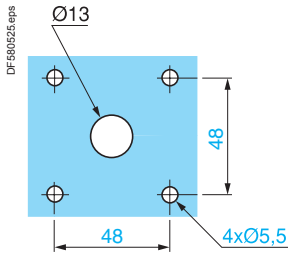
VN 12, VN 20
4 screw fixing



45 x 45 front plate



60 x 60 front plate



Characteristics:
pages B3/18 to B3/21

References:
pages B3/2 to B3/5

Schemes:
page B3/23

Safety control and protection solutions

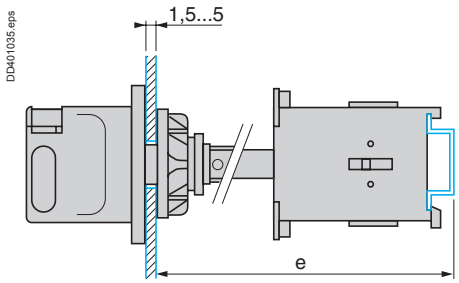
Mini-VARIO switch-disconnectors, 12 and 20 A

Mounting (continued)

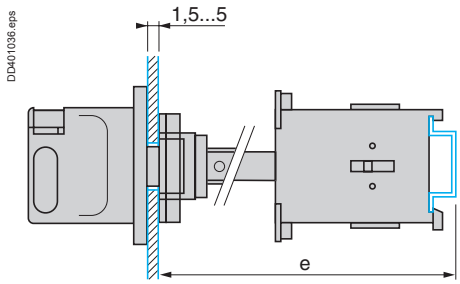
Switch-disconnector mounted at back of enclosure with shaft extension VZN 17 or VZN 30 (clip-on mounting on ⊔ rail)

VN 12, VN 20

Single hole fixing



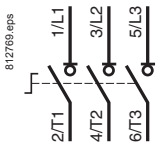
4 screw fixing



	Shaft extension	Distance (e) enclosure back/door
		mm
VN 12, VN 20	VZN 17	300…330
	VZN 30	400…430

Schemes

Switch body VN 12, VN 20



Main pole module VZN 12, VZN 20



Neutral pole module VZN 11



Auxiliary contact blocks

VZN 05



VZN 06



Switch-disconnectors

Characteristics: pages B3/18 to B3/21
References: pages B3/2 to B3/5

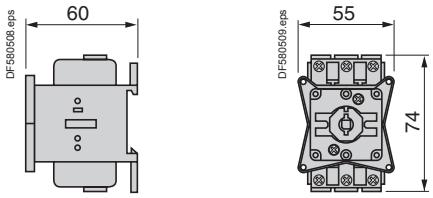
Safety control and protection solutions

VARIO switch-disconnectors, 12 to 175 A

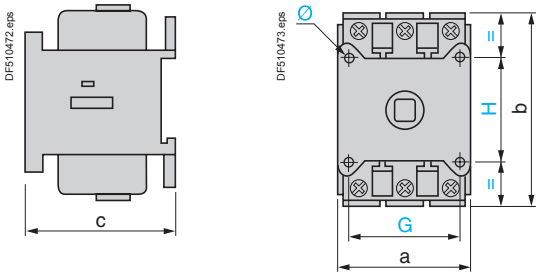
Dimensions

Switch-disconnectors

Switch bodies V0●, V0 to V2

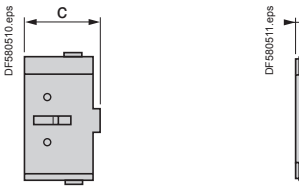


Switch bodies V3 to V6



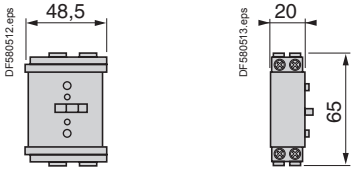
	a	b	c	G	H	Ø
V3, V4	60	83	65	48	48	5.5
V5, V6	90	125	90	68	68	5.5

Add-on modules VZ 02 to VZ 4 and VZ 11 to VZ 16



	a	b	c
VZ 02 and VZ 01, VZ 0 to VZ 2, VZ 11, VZ 14	16	74	35
VZ 3, VZ 4, VZ 12, VZ 15	20	83	46
VZ 13, VZ 16	30	125	63

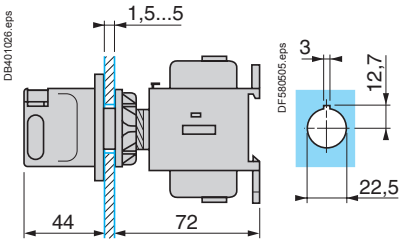
Add-on modules VZ 7, VZ 20



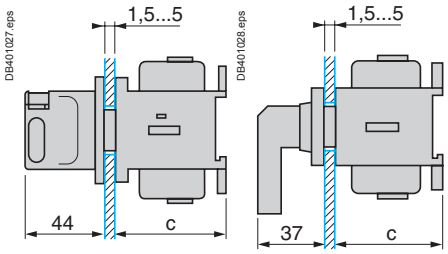
Mounting

Switch-disconnector mounted on enclosure door

Single hole fixing V0●, V0 to V2

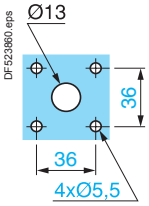


4 screw fixing V0●, V0 to V4

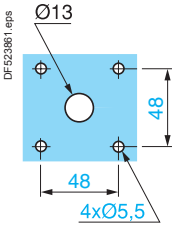


	c
V0●, V0 to V2	60
V3, V4	65

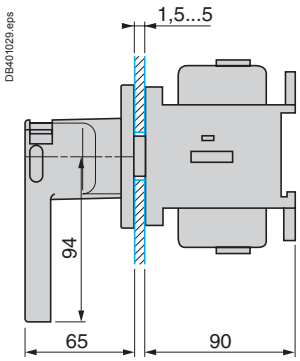
4 screw fixing 45 x 45 front plate V0●, V0 to V2



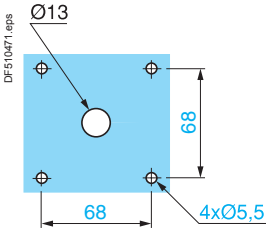
4 screw fixing 60 x 60 front plate V0●, V0 to V4



V5 and V6. 4 screw fixing



90 x 90 front plate



Characteristics:
pages B3/18 to B3/21

References:
pages B3/6 to B3/9

Schemes:
pageB3/25

Safety control and protection solutions

VARIO switch-disconnectors, 12 to 175 A

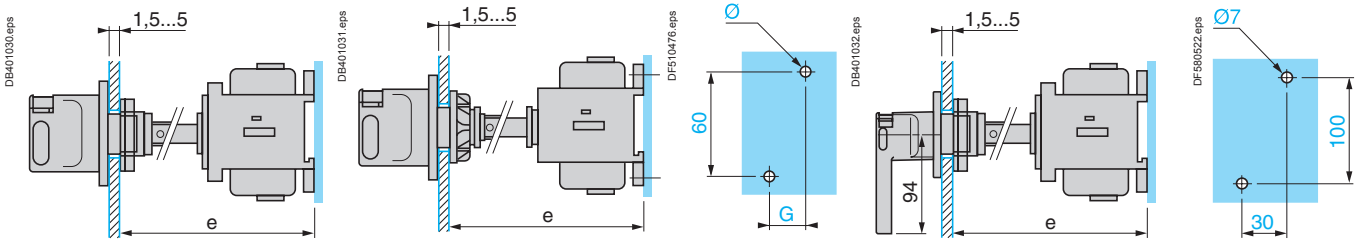
Mounting (continued)

Switch-disconnector mounted at back of enclosure

4 screw fixing
V0●, V0 to V2 with shaft extension VZ 17 or VZ 30 (clip-on mounting on ⊔ rail possible for V0● to V2)

Single hole fixing
V3 to V4 with shaft extension VZ 18 or VZ 31

V5 and V6 with shaft extension VZ 18 or VZ 31



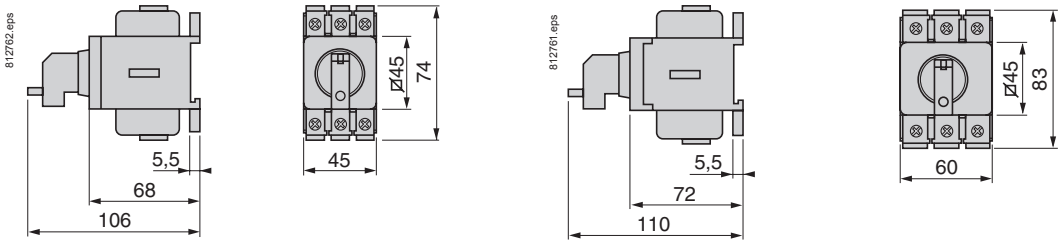
	Shaft extension	Distance (e) enc.back/door	Ø	G
		mm		
V02 and V01 V0 to V2	VZ 17	300…330	2 x 4.2	15
	VZ 30	400…430	2 x 4.2	15
V3 and V4	VZ 18	300…320	2 x 5	20
	VZ 31	400…420	2 x 5	20

	Shaft extension	Distance (e) enc. back/door
		mm
V5 and V6	VZ 18	300…350
	VZ 31	430…450

Switch-disconnectors for modular distribution boards

VV● 0 to VV● 2

VV● 3 to VV● 4



Schemes

Switch body

V02 and V01
V0 to V6

Main pole module

VZ 02 and VZ 01
VZ 0 to VZ 4

Neutral pole module

VZ 11 to VZ 13

Auxiliary contact blocks

VZ 7

VZ 20

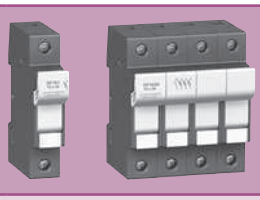
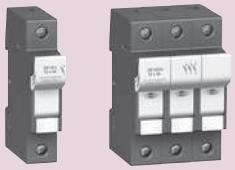
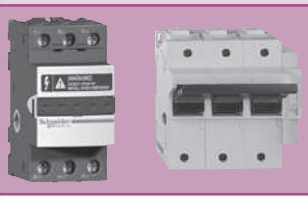


Characteristics:
pages B3/18 to B3/21

References:
pages B3/6 to B3/9

Fuse carriers
TeSys DF, LS, GK

Fuse carriers - TeSys DF, LS, GK

Type of product	Range		Pages
For protection of control circuits or transformer TeSys DF and accessories	Up to **25**, **32**, **50** or **125** A		B4/2
For protection of control circuits or transformer TeSys DF – For North Amercan market	Up to **30** A		B4/4
For protection of motors or transformers TeSys LS, GK and accessories	Up to **25**, **32**, **50** or **125** A		B4/5

Technical Data for Designers B4/9

Fuse carriers

For protection of control circuits or transformers

TeSys DF



DF10 1



DF10 3N



DF14 1



DF14 3NC



DF221NV

DF22 1



DF22 3NC



DF10 1NV



DF10 3V



DF14 1NV



DF14 3VC



DF22 1NV



DF22 3VC

Fuse carriers [1]

Conventional thermal current (Ith)	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
A	mm			
25	8.5 x 31.5	1 P	12	**DF81**
		N	12	**DF10N**
		1 P + N [2]	6	**DF81N**
		2 P	6	**DF82**
		3 P	4	**DF83**
		3 P + N [2]	3	**DF83N**
32	10 x 38	1 P	12	**DF101**
		N	12	**DF10N**
		1 P + N [2]	6	**DF101N**
		2 P	6	**DF102**
		3 P	4	**DF103**
		3 P + N [2]	3	**DF103N**
50	14 x 51	1 P	6	**DF141**
		N	6	**DF14N**
		1 P + N [2]	3	**DF141N**
		2 P	3	**DF142**
		3 P	2	**DF143C** [3]
		3 P + N [2]	1	**DF143NC** [3]
125	22 x 58	1 P	6	**DF221**
		N	6	**DF22N**
		1 P + N [2]	3	**DF221N**
		2 P	3	**DF222**
		3 P	2	**DF223C** [3]
		3 P + N [2]	1	**DF223NC** [3]

Fuse carriers with "blown fuse" indicators (neon) [1] [4]

Conventional thermal current (Ith)	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
A	mm			
25	8.5 x 31.5	1 P	12	**DF81V**
		1 P + N [2]	6	**DF81NV**
		2 P	6	**DF82V**
		3 P	4	**DF83V**
		3 P + N [2]	3	**DF83NV**
32	10 x 38	1 P	12	**DF101V**
		1 P + N [2]	6	**DF101NV**
		2 P	6	**DF102V**
		3 P	4	**DF103V**
		3 P + N [2]	3	**DF103NV**
50	14 x 51	1 P	6	**DF141V**
		1 P + N [2]	3	**DF141NV**
		2 P	3	**DF142V**
		3 P	2	**DF143VC** [3]
		3 P + N [2]	1	**DF143NVC** [3]
125	22 x 58	1 P	6	**DF221V**
		1 P + N [2]	3	**DF221NV**
		2 P	3	**DF222V**
		3 P	2	**DF223VC** [3]
		3 P + N [2]	1	**DF223NVC** [3]

(1) Each pole can be marked. A clip-in marker holder is provided for this purpose. Clip-in markers type AB1 R● or AB1 G● can also be used.
(2) N: neutral pole fitted with a locked tubular link as standard.
(3) A letter "C" in the reference indicates that the fuse carrier can be fitted with auxiliary early break, "blown fuse" signalling and "fuse present" signalling contacts.
(4) Operational voltage of the blown fuse indicator: 110 V...690 V.

Characteristics: page B4/10 | Substitution: page B4/3 | Dimensions: page B4/11 | Schemes: page B4/11

Fuse carriers

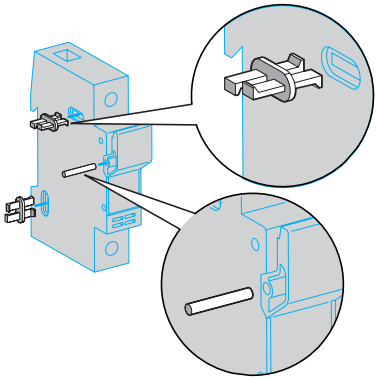
For protection of control circuits or transformers

PF106836-21-M.tif



DF14 AM●

524196.eps



Detail of assembly clip and pin mounting

Accessories

Auxiliary early break and "blown fuse" signalling contacts (1)

Fuse carriers to be equipped	Size of cartridge fuse or link	Number of contacts	Sold in lots of	Unit reference
DF14 (3 P or 3 P + N)	14 x 51	1	1	**DF14AM1**
		2	1	**DF14AM2**
DF22 (3 P or 3 P + N)	22 X 58	1	1	**DF22AM1**
		2	1	**DF22AM2**

Fuse carrier assembly kits (2)

Fuse carriers to be assembled	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
DF8	8.5 x 31.5	1 pin, 2 clips	12	**DF10AP**
DF10	10 x 38			
DF14	14 x 51	1 pin, 3 clips	10	**DF14AP**
DF22	22 x 58	1 pin, 3 clips	10	**DF22AP**

Marking accessories

Description	Composition	Marking	Sold in lots of	Unit reference
Clip-in markers	Strip of 10 identical numbers or letters	0…9	25	**AB1R●** (3)
		A…Z	25	**AB1G●** (3)

Substitution

Fuse carriers

Old range			New range	
Reference	Size of cartridge fuse or link	Composition	Reference w/o indicator	Reference with indicator
DF6 AB08	8.5 x 31.5	1 P	**DF81**	**DF81V**
DF6 AB10	10 x 38	1 P	**DF101**	**DF101V**
DF6 N10	8.5 x 31.5 or 10 x 38	1 N	**DF10N**	**–**
GK1 CC	8.5 x 31.5	1 P + N	**DF81N**	**DF81NV**
GK1 CD	8.5 x 31.5	2 P	**DF82**	**DF82V**
GK1 CF	8.5 x 31.5	3 P	**DF83**	**DF83V**
GK1 CH	8.5 x 31.5	3 P + N	**DF83N**	**DF83NV**
GK1 DC	10 x 38	1 P + N	**DF101N**	**DF101NV**
GK1 DD	10 x 38	2 P	**DF102**	**DF102V**
GK1 DF	10 x 38	3 P	**DF103**	**DF103V**
GK1 DH	10 x 38	3 P + N	**DF103N**	**DF103NV**
GK1 EB	14 x 51	1 P	**DF141**	**DF141V**
GK1 EN	14 x 51	1 N	**DF14N**	**–**
GK1 EC	14 x 51	1 P + N	**DF141N**	**DF141NV**
GK1 ED	14 x 51	2 P	**DF142**	**DF142V**
GK1 EF	14 x 51	3 P	**DF143C**	**DF143VC**
GK1 EH	14 x 51	3 P + N	**DF143NC**	**DF143NVC**
GK1 FB	22 x 58	1 P	**DF221**	**DF221V**
GK1 FN	22 x 58	1 N	**DF22N**	**–**
GK1 FC	22 x 58	1 P + N	**DF221N**	**DF221NV**
GK1 FD	22 x 58	2 P	**DF222**	**DF222V**
GK1 FF	22 x 58	3 P	**DF223C**	**DF223VC**
GK1 FH	22 x 58	3 P + N	**DF223NC**	**DF223NVC**

Fuse carrier assembly kits

Old range		New range
Reference	Size of cartridge fuse or link	Reference
GK1 AP2	8.5 x 31.5 or 10 x 38	**DF10AP**
GK1 AP3	8.5 x 31.5 or 10 x 38	**DF10AP**
	14 x 51	**DF14AP**
GK1 AP4	8.5 x 31.5 or 10 x 38	**DF10AP**
	22 x 58	**DF22AP**
GK1 AP5	14 x 51	**DF14AP**
GK1 AP6	14 x 51	**DF14AP**
	22 x 58	**DF22AP**
GK1 AP9	22 x 58	**DF22AP**

(1) These auxiliary contacts provide the following functions: early break, "blown fuse" signalling (if the fuse carrier is fitted with striker fuses) and "fuse present" signalling.

(2) 1 pin and 2 clips are required to assemble two DF8 or DF10 fuse carriers together.
1 pin and 3 clips are required to assemble two DF14 or DF22 fuse carriers together.

*(3) When ordering, replace the ● in the reference with the number or letter required. Example: **AB1-R1** or **AB1-GA**.*

Characteristics: page B4/10
Dimensions: page B4/11
Schemes: page B4/11

Fuse carriers for the North American market

For protection of control circuits or transformers

References

PF526279-9-M.tif



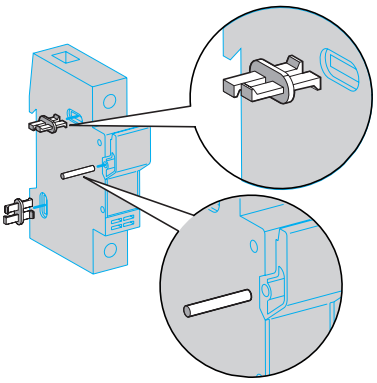
DFCC 1

PF526280-16-M.tif



DFCC 3V

524196.eps



Detail of assembly clip and pin mounting

Fuse carriers (1)

Conventional thermal current (Ith)	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
A				
30	Class CC	1 P	12	**DFCC1**
		2 P	12	**DFCC2**
		3 P	6	**DFCC3**

Fuse carriers with "blown fuse" indicators (neon) (1) (2)

Conventional thermal current (Ith)	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
A				
30	Class CC	1 P	12	**DFCC1V**
		2 P	6	**DFCC2V**
		3 P	6	**DFCC3V**

Fuse carrier assembly kits (3)

Fuse carriers to be assembled	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
DFCC	Class CC	1 pin, 2 clips	12	**DF10AP**

Marking accessories

Description	Composition	Marking	Sold in lots of	Unit reference
Clip-in markers	Strip of 10 identical numbers or letter	0…9	25	**AB1R●** (4)
		A…Z	25	**AB1G●** (4)

(1) Each pole can be marked. A clip-in marker holder is provided for this purpose. Clip-in markers type AB1 R● or AB1 G● can also be used.
(2) Operational voltage of the blown fuse indicator: 110 V...690 V.
(3) 1 pin and 2 clips are required to assemble two DFCC fuse carriers together.
*(4) When ordering, replace the p in the reference with the number or letter required. Example: **AB1 R1** or **AB1 GA**.*

Characteristics: page B4/12
Dimensions: page B4/13
Schemes: page B4/13

Fuse carriers
For protection of motors or transformers

TeSys LS, GK

PF526399.tif



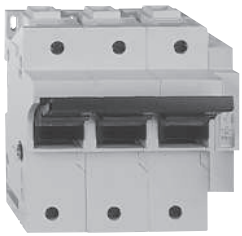
LS1 D323

PF526400.tif



LS1 D32

PF526401.tif



GK1 FK

PF526400.tif



LS1 D32

500505_1.tif



+ LA8 D324

3-pole basic blocks

Connection by spring terminals

Rating	Cartridge fuse size	Number of early break contacts [1]	Single-phase protection device [2]	Reference [3]	Weight kg
25 A	10 x 38	– [4]	Without	**LS1D323**	0.270

Connection by screw clamp terminals or connectors

32 A	10 x 38	– [4]	Without	**LS1D32**	0.300
50 A	14 x 51	1	Without	**GK1EK**	0.430
			With	**GK1EV**	0.470
		2	Without	**GK1ES**	0.470
			With	**GK1EW**	0.510
125 A	22 x 58	1	Without	**GK1FK**	0.860
			With	**GK1FV**	0.900
		2	Without	**GK1FS**	0.900
			With	**GK1FW**	0.940

4-pole basic blocks

Connection by screw clamp terminals or connectors

32 A	10 x 38	– [4]	Without	**LS1D32 + LA8D324** [5]	0.300
50 A	14 x 51	1	Without	**GK1EM**	0.570
			With	**GK1EY**	0.600
		2	Without	**GK1ET**	0.610
			With	**GK1EX**	0.650
125 A	22 x 58	1	Without	**GK1FM**	1.090
			With	**GK1FY**	1.130
		2	Without	**GK1FT**	1.130
			With	**GK1FX**	1.160

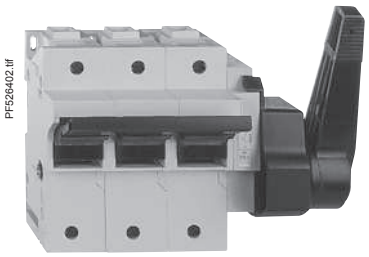
Fuse carriers for the North American market

25 and 30 A basic blocks: please consult your Regional Sales Office.

(1) With 1 or 2 early break contacts to be inserted in the contactor control circuit.
(2) Fuse carriers with single-phase protection device must be fitted with striker fuses.
(3) LS1 D: clips directly onto a 35 mm ⊥ rail or screw fixing.
GK1: clips directly onto a 35 mm ⊥ rail or Telequick mounting plate.
(4) Addition of add-on contact block, see page B4/6.
(5) Can be mounted on left-hand or right-hand side of the basic block.

Fuse carriers
Operators and accessories

TeSys LS, GK


PF526402.tif

GK1 FK + GK1 AP07

Add-on contact blocks

Description	For use on	Mounting	Maximum number	Type of contacts	Sold in lots of	Unit reference
Instantaneous auxiliary contacts (early break contacts)	LS1D32	Front	1	N/O + N/C	10	**GVAE11**
				N/O + N/O	10	**GVAE20**
	LS1D323	Front	1	N/O + N/C	10	**GVAE113**
				N/O + N/O	10	**GVAE203**

Operators

For fuse carrier		For mounting on	Reference
Rating	Number of poles		
Side handles			
125 A	3 or 4	Right-hand side	**GK1AP07**
		Left-hand side	**GK1AP08**
Front handles (1)			
32 - 50 - 125 A			Fitted as standard
External handles			
32 A	3 or 4	Right-hand side	**LS1D32005** (2)
		Left-hand side	**LS1D32006**
50 A	3 or 4	Right-hand side	**GK1AP05**
		Left-hand side	**GK1AP06**
125 A	3 or 4	Right-hand side	**GK1AP07**
		Left-hand side	**GK1AP08**

Padlocking devices (3)

For fuse carrier			Reference
Rating	Number of poles	Single-phase protection device	
32 A	3 or 4	Without	integral
50 A	3	Without	**GK1AV07**
		With	**GK1AV08**
	4	Without	**GK1AV08**
		With	**GK1AV09**

Links

Tubular links

For fuse carrier		Sold in lots of	Unit reference
Rating	Number of poles		
32 A	3 or 4	10	**DK1CB92** (4)
50 A	3 or 4	10	**DK1EB92** (5)
125 A	3 or 4	10	**DK1FA92** (5)

(1) Fitted as standard on 32, 50 and 125 A fuse carriers type GK1.
*(2) Reference **LS1D32005** replaces reference DK1FB005.*
*(3) For the 125 A rating, use side handles **GK1AP07** or **GK1AP08**.*
*(4) For use on a neutral circuit, the tubular link can be interlocked with special device **LA8D25906** (sold in lots of 10).*
(5) 50 and 125 A fuse carriers type GK1 are fitted with an interlocked neutral tubular link as standard.

Selection : page B4/14 | Characteristics : page B4/15 | Dimensions : page B4/16 | Schemes : page B4/17

Fuse carriers
Accessories

TeSys LS, GK

Accessories for LS1 D32 (screw clamp terminals)

Description	Application	Sold in lots of	Unit reference
Plate for mounting	LS1 D32 and contactor LC1 D09...D38 with front faces aligned	1	**LAD311**
Combination blocks	Between LS1 D32 and contactor LC1 K or LP1 K	10	**GV2AF01**
	Between LS1 D32 and contactor LC1 D09...D38	10	**GV2AF3**
	Between LS1 D32 mounted on LAD 311 and contactor LC1 D09...D38	10	**GV2AF4**

Description	Application	Pitch mm	Reference
Sets of 3-pole 63 A busbars	2 tap-offs	45	**GV2G245**
		54	**GV2G254**
		72	**GV2G272**
	3 tap-offs	45	**GV2G345**
		54	**GV2G354**
	4 tap-offs	45	**GV2G445**
		54	**GV2G454**
		72	**GV2G472**
	5 tap-offs	54	**GV2G554**

Description	Application	Sold in lots of	Unit reference
Protective end cover	For unused busbar outlets	5	**GV1G10**
Terminal block Connection from the top	For supply to one or more GV2 G busbar sets	1	**GV1G09**
Cover for terminal block	For mounting in modular panels	10	**LA9E07**
Padlocking device	For use with up to 4 padlocks (not supplied) Ø6 mm shank max	1	**GV2V03**

Accessories for LS1 D323 (spring terminals)

Description	Application	Reference
Plate for mounting	LS1 D323 and contactor LC1 D09...D38 with front faces aligned	**LAD311**

Description	Extension by	Number of starters	Reference
Power splitter box, 63 A	LAD 32●	2	**LAD322**
		3	**LAD323**
		4	**LAD324**

Description	Kit contents	Reference
Assembly and power connection kit for LS1 D323 and LC1 D093...D323	1 LAD 311 plate for mounting LS1 D323 2 LAD 341 power connection modules - between LS1 D323 and power splitter box - between LS1 D323 and contactor	**LAD352**

Description	Maximum capacity	Application	Sold in lots of	Unit reference
Upstream terminal block	16 mm²	Power supply to 1 or 2 power splitter boxes	1	**LAD3B1**
Downstream terminal block	16 mm²	Connection of motor cables	1	**LAD331**
Cable end reducer	–	For connection of conductors from 1 to 1.5 mm²	20	**LAD99**

TeSys DF, LS, GK

Technical Data for Designers

Contents

TeSys DF:
> Characteristics B4/10
> Dimensions and schemes B4/11
TeSys DF for the North American market:
> Characteristics B4/12
> Dimensions and schemes B4/13
TeSys LS and GK:
> Selection B4/14
> Characteristics B4/15
> Dimensions B4/16
> Schemes B4/17

Fuse carriers

TeSys DF

Environment characteristics

Fuse carrier type			DF8	DF10	DF14	DF22
Conforming to standards			IEC 60947-3, UL 512, CSA 22-2 n° 39			
Protective treatment			"TH"			
Degree of protection	Conforming to IEC 60529		IP 20			
Ambient air temperature	Storage	**°C**	-40…+80			
	For operation, with derating (1)	**°C**	-20…+60			
Operating positions	Without derating		± 23° in relation to normal mounting plane			
Flame resistance	Conforming to IEC 60695-2-1	**°C**	960			

Pole characteristics

Fuse size		**mm**	8.5 x 31.5		10 x 38		14 x 51		22 x 58	
Rated insulation voltage (Ui) with tubular links, a.c. or D.C. supply		**V**	500		690		690		690	
Rated impulse withstand voltage (Uimp)		**kV**	6		6		8		8	
Conventional thermal current (Ith) for ambient air temperature ≤ 40 °C (1)										
	With tubular links	**A**	25		32		50		125	
	With aM cartridge fuses	**A**	25		32		50		125	
	With gG cartridge fuses	**A**	25		32		50		100	
Rated conditional short-circuit current Conforming to IEC 60947-3										
	400 V	**kA**	20		120		120		120	
	500 V	**kA**	–		120		120		120	
	690 V	**kA**	–		–		80		80	
Peak withstand current (dynamic stress) Conforming to IEC 60269-1										
	With tubular links	**kA**	11		15		15		19	
Cabling (number of conductors x c.s.a.)			**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**
	Solid cable	**mm²**	1 x 1.5	1 x 16 2 x 6	1 x 1.5	1 x 16 2 x 6	1 x 2.5	1 x 25 2 x 10	1 x 2.5	1 x 35 2 x 25
	Flexible cable without cable end	**mm²**	1 x 1.5	1 x 10 2 x 6	1 x 1.5	1 x 10 2 x 6	1 x 2.5	1 x 25 2 x 10	1 x 2.5	1 x 35 2 x 16
	Flexible cable with cable end	**mm²**	1 x 1.5	1 x 10 2 x 6	1 x 1.5	1 x 10 2 x 6	1 x 2.5	1 x 25 2 x 10	1 x 2.5	1 x 35 2 x 16
Tightening torque		**Nm**	2.2				3.5		4	

Characteristics of early break and signalling contacts DF14 AM and DF22 AM

Rated insulation voltage (Ui) a.c. supply		**V**	250			
Conventional thermal current (Ith) for ambient air temperature ≤ 40 °C (1)		**A**	5			
Rated operational current			**24 V**	**48 V**	**127 V**	**240 V**
	Category AC-15	**A**	4	4	3	2.5
	Category DC-13	**A**	3	1	0.2	0.1
Definition of rated characteristics	Conforming to IEC 60947-5-1		B300			
Low load operating characteristics	Minimum voltage	**V**	10			
	Minimum current	**mA**	30			
Cabling			Faston connectors			

(1) For use in an installation with ambient temperature > 20 °C, apply a derating coefficient:

Maximum temperature	20 °C	30 °C	40 °C	50 °C	60 °C
Max. relative humidity	95 %	90 %	80 %	50 %	50 %
Current derating coefficient	1	0.95	0.9	0.8	0.7

References: pages B4/2 and B4/3 | Substitution: page B4/3 | Dimensions: page B4/11 | Schemes: page B4/11

Fuse carriers

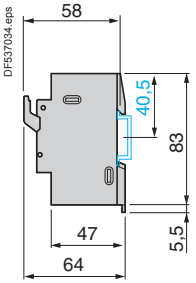
TeSys DF

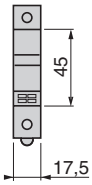
Dimensions

Modular fuse carriers 25 A and 32 A

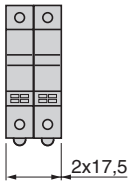
Mounting on 35 mm ⊔ rail

DF8 1 and DF8 1V
DF10 1 and DF10 1V
DF10 N

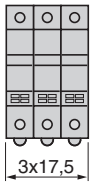




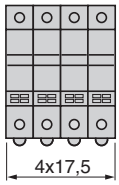
DF8 1N and DF8 1NV
DF8 2 and DF8 2V
DF10 1N and DF10 1NV
DF10 2 and DF10 2V



DF8 3 and DF8 3V
DF10 3 and DF10 3V



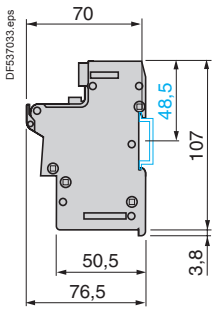
DF8 3N and DF8 3NV
DF10 3N and DF10 3NV

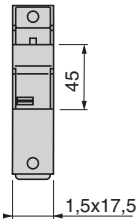


Modular fuse carriers 50 A

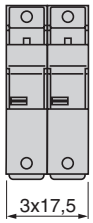
Mounting on 35 mm ⊔ rail

DF14 1 and DF14 1V
DF14 N

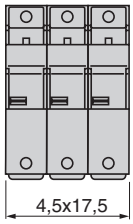




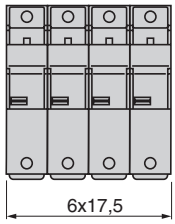
DF14 1N and DF14 1NV
DF14 2 and DF14 2V



DF14 3C and DF14 3VC



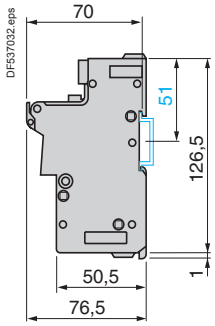
DF14 3NC and DF14 3NVC

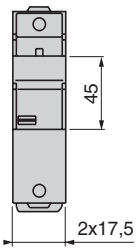


Modular fuse carriers 125 A

Mounting on 35 mm ⊔ rail

DF22 1 and DF22 1V
DF22 N

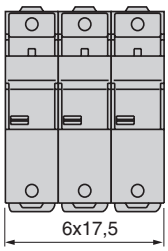




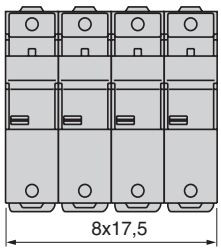
DF22 1N and DF22 1NV
DF22 2 and DF22 2V



DF22 3C and DF22 3VC



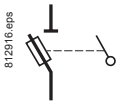
DF22 3NC and DF22 3NVC



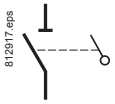
Schemes

Modular fuse carriers

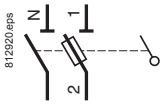
DF• 1P



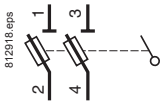
DF• N



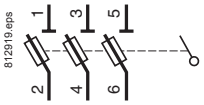
DF• 1P + N



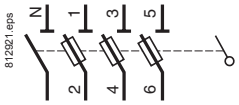
DF• 2P



DF• 3P



DF• 3P + N



References:
pages B4/2 and B4/3

Substitution:
page B4/3

Characteristics:
page B4/10

Fuse carriers for the North American market

TeSys DF

Environment characteristics

Fuse carrier type			DFCC
Conforming to standards			IEC 60947-3, UL 512, CSA 22-2 n° 39
Protective treatment			"TH"
Degree of protection	Conforming to IEC 60529		IP 20
Ambient air temperature	Storage	**°C**	-40…+80
	For operation, with derating (1)	**°C**	-20…+60
Operating positions	Without derating		±23° in relation to normal vertical mounting plane
Flame resistance	Conforming to IEC 60695-2-1	**°C**	960

Pole characteristics

Fuse carrier type			DFCC	
Fuse size			Class CC	
Rated insulation voltage (Ui) with tubular links, a.c. supply		**V**	600	
Rated impulse withstand voltage (Uimp)		**kV**	6	
Conventional thermal current (Ith) for ambient air temperature ≤ 40 °C (1)				
	With tubular links	**A**	30	
	With aM cartridge fuses	**A**	30	
	With gG cartridge fuses	**A**	30	
Short-circuit current withstand With UL 248-4 Class CC fuses				
	Conforming to UL 512 at 600 V	**kA**	200	
Cabling (number of conductors x c.s.a.)			**Min.**	**Max.**
	Solid cable	**mm²**	1 x 1.5	1 x 16 2 x 6
	Flexible cable without cable end	**mm²**	1 x 1.5	1 x 10 2 x 6
	Flexible cable with cable end	**mm²**	1 x 1.5	1 x 10 2 x 6
Tightening torque		**Nm**	2.2	

(1) For use in an installation with ambient temperature > 20 °C, apply a derating coefficient:

Maximum temperature	20 °C	30 °C	40 °C	50 °C	60 °C
Max. relative humidity	95 %	90 %	80 %	50 %	50 %
Current derating coefficient	1	0.95	0.9	0.8	0.7

References: page B4/4 Dimensions: page B4/13 Schemes: page B4/13

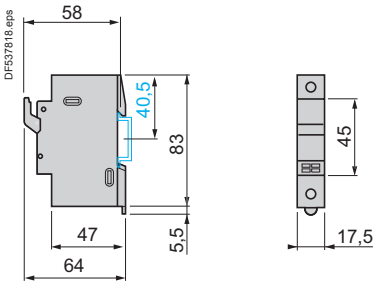
Fuse carriers for the North American market

Dimensions

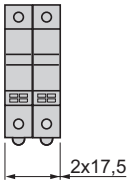
Modular fuse carriers 30 A

Mounting on 35 mm ⊔ rail

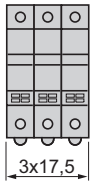
DFCC 1 and DFCC 1V



DFCC 2 and DFCC 2V



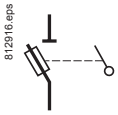
DFCC 3 and DFCC 3V



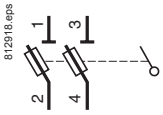
Schemes

Modular fuse carriers

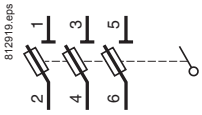
DFCC 1P



DFCC 2P



DFCC 3P



References:
page B4/4

Characteristics:
page B4/12

Fuse carriers

TeSys LS, GK

Operation: safety

The fuse carrier performs two basic functions:
- it isolates the downstream circuit by means of a visible break and wide opening contacts,
- it holds the cartridge fuses designed to protect the installation against short-circuits.

The type of cartridge fuse needed to protect the circuit must be determined before selecting the fuse carrier.

Cartridge fuse selection (type, rating, size)

Type

Application	■ Motor protection. ■ Transformer protection.
Solution	■ **aM type** fuses. These fuses are designed to withstand high current peaks of a very short duration. They must be combined with a thermal overload relay coupled with a contactor.
Application	■ Lighting circuit protection. ■ Supply line protection. ■ Furnace protection.
Solution	■ **gG** type fuses, which are more widely used but whose limiting capacity is weaker than that of **aM** type fuses.

Rating

gG fuses
aM fuses

See standard NF C 15-100.
Table 53 A paragraph 532-2-1 and table 52 C paragraph 523-1.

Motors 3 x 220 V		Motors 3 x 400 V		Cartridge fuses type aM		Fuse carrier
P	in	P	in	Size	Rating	
kW	A	kW	A		A	
9	32	15	28.5	10 x 38	32	**LS1 D32**
11	39	22	44	14 x 51	50	**GK1 EK**
22	75	37	73	22 x 58	80	**GK1 FK**
30	103	55	105	22 x 58	125	**GK1 FK**

Size

Use the “fuse characteristics” table opposite to select the correct fuse size according to:
- the nominal current of the circuit to be protected,
- the operational voltage.

Fuse carrier selection

Application	**Isolation** of a circuit for safety reasons only.
Solution	The fuse carrier may be fitted with links. The maximum permissible current is indicated in the “pole characteristics” table opposite.
Application	**Isolation** of a circuit and its **protection** against short-circuits.
Solution	Select a fuse carrier according to: ■ the type of cartridge fuse required, ■ the maximum permissible current in the fuse carrier poles (see “pole characteristics” table opposite). If the operational current is greater than the maximum permissible current in the poles of the fuse carrier corresponding to the cartridge fuse size selected, select the fuse carrier the next size up. The **safety** provided by using a fuse carrier can be increased by adding a padlocking device with up to three padlocks.

Recommendations for use

The fuse carrier conforms to utilisation category AC-21A/22A of standard IEC 60947-3. It is therefore recommended that the fuse carrier early break auxiliary contacts always be inserted in the coil circuit of the contactor with which it is in series. If the fuse carrier is not associated with a contactor, it is essential to ensure that it will be operated off-load.

References: pages B4/5 and B4/10 | Characteristics: page B4/15 | Dimensions: page B4/16 | Schemes: page B4/17

Fuse carriers

TeSys LS, GK

Environment						
Fuse carrier type			**LS1 D32**	**LS1 D323**	**GK1 E●**	**GK1 F●**
Conforming to standards	NF EN 60947-3		●		●	●
	IEC 60947-3		●		●	●
Product certifications			BV, UR		–	–
Protective treatment			"TH"		"TC"	"TC"
Ambient air temperature for operation with links without derating		**°C**	-50…+70		-50…+70	-50…+70
Maximum tilt in relation to normal vertical mounting plane			±23°		±23°	±23°
Pole characteristics						
Fuse size			10 x 38	10 x 38	14 x 51	22 x 58
Rated operational voltage with links. a.c. supply		**V**	690	690	690	690
Maximum continuous current at ambient temperature ≤ 40 °C [1] (Min. cable Ø/Ie)						
	With tubular links	**mm²/A**	6/32 or 4/25 or 2.5/16	4/25 or 2.5/16	10/50 or 6/40	35/125 or 25/100
	With **aM** fuses	**mm²/A**	6/32 or 4/22 or 2.5/20	4/25 or 2.5/20	10/50 or 6/35	35/125 or 25/100
	With **gG** fuses	**mm²/A**	4/25 or 2.5/20 or 1.5/16	2.5/20 or 1.5/16	10/40 or 6/32	25/100 or 16/80
Early break contact characteristics						
Rated operational voltage		**V**	∿ 250. ⎓ 60	∿ 250. ⎓ 60	∿ 500. ⎓ 440	∿ 500. ⎓ 220
Conventional thermal current		**A**	2.5	2.5	6	6
Cartridge fuse characteristics						
Fuse size			10 x 38	10 x 38	14 x 51	22 x 58
Type **aM**	∿ 400 V	**A**	32 [2]	25	50	125
	∿ 500 V	**A**	20	20	40	80
	∿ 660 V	**A**	–	–	25	50
Type **gG**	∿ 400 V	**A**	25 [2]	25	40	100
	∿ 500 V	**A**	25	25	40	80
	∿ 660 V	**A**	–	–	25	50
Maximum power dissipated by fuse		**W**	3	3	8.5	18

Cabling										
Connection by screw clamp terminals or connectors										
Number and c.s.a. of conductors			**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**
	Solid cable	**mm²**	2 x 1	2 x 6	–	–	1 x 2.5	1 x 25	1 x 16	1 x 70
	Flexible cable without cable end	**mm²**	2 x 1.5	2 x 6	–	–	1 x 2.5	1 x 25	1 x 16	1 x 50
	Flexible cable with cable end	**mm²**	2 x 1	2 x 4	–	–	1 x 2.5	1 x 16	1 x 16	1 x 25
Connection			Screw clamp terminals		–	–	Connector		Connector	
Tightening torque		**Nm**	1.7		–	–	2		2	
Connection by spring terminals										
Number and c.s.a. of conductors			**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**
	Solid cable	**mm²**	–	–	2 x 1 [3]	2 x 4	–	–	–	–
	Flexible cable without cable end	**mm²**	–	–	2 x 1.5 [1]	2 x 4	–	–	–	–

(1) For use in an installation with ambient temperature > 55 °C, apply a derating coefficient equivalent to $\sqrt{\frac{120 - \text{ambient temperature}}{80}}$

*(2) These values are for fuse carriers mounted side by side with a gap of 10 mm between them or mounted with sets of busbars **GV2 ●54**. If mounted side by side without a gap, use the following fuse sizes: **aM** fuse: 25 A and **gG** fuse: 20 A.*

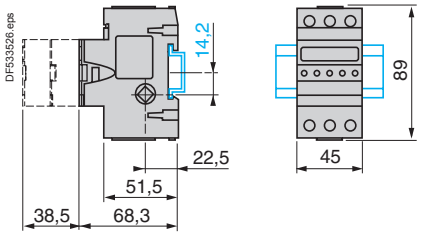
*(3) For cross-sections 1 to 1.5 mm², the use of an **LA9 D99** cable end reducer is recommended.*

References: pages B4/5 and B4/10 | Selection: page B4/14 | Dimensions: page B4/16 | Schemes: page B4/17

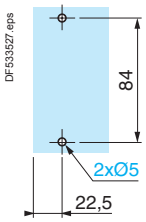
TeSys LS, GK

LS1 D32

Mounting on rail AM1 DP200

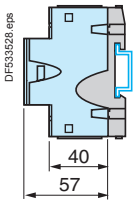


Panel mounting



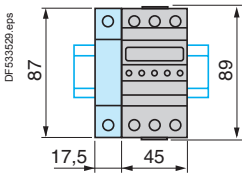
LS1 D32 + LA8 D324

Mounting on rail AM1 DP200

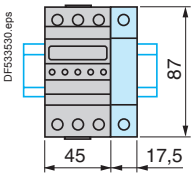


Mounting of 4th pole

On left-hand side

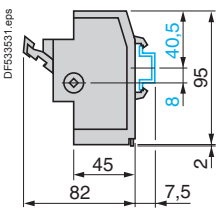


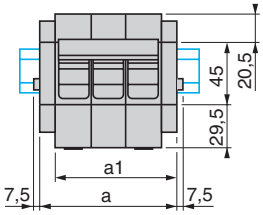
On right-hand side



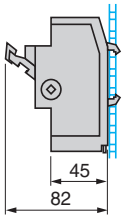
GK1 EK, EM, ES, ET, EV, EW, EX, EY

Mounting on rail AM1 DP200





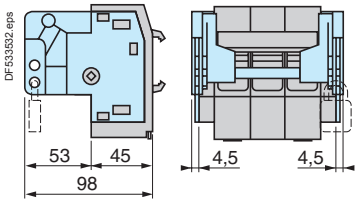
Mounting on pre-slotted plate AM 1P



a: with single-phase protection device.
a1: without single-phase protection device.

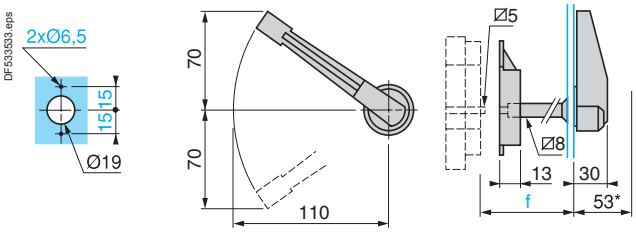
GK1	a		a1	
	3 P	4 P	3 P	4 P
EK	–	–	88	–
EM	–	–	–	114
ES	–	–	97	–
ET	–	–	–	123
EV	106	–	–	–
EW	115	–	–	–
EX	–	141	–	–
EY	–	132	–	–

GK1 E + GK1 AV (padlocking device)



External operator GK1 AP05 right-hand, GK1 AP06 left-hand

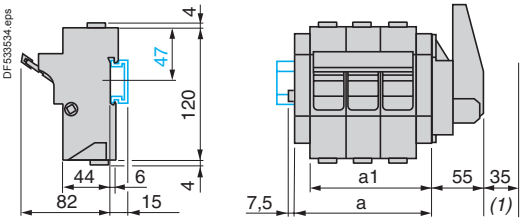
Panel cut-out



External operator, RH or LH side	f
GK1 EK, EM, ES, ET	29…114
GK1 EV, EW, EX, EY	29…114

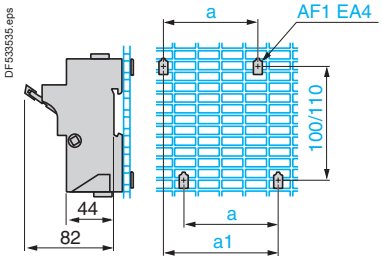
GK1 F● + GK1 AP07 (internal right-hand control)

Mounting on rail AM1 DE or ED



(1) Padlocking device (up to 3 padlocks)

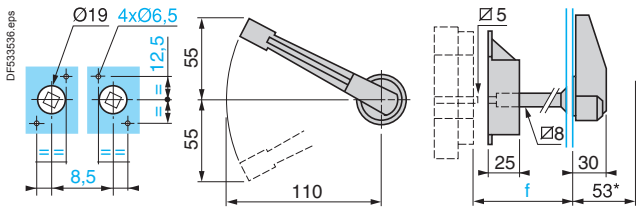
Mounting on pre-slotted plate AM1PA



GK1	a		a1	
	3 P	4 P	3 P	4 P
F●	70	105	96	131

Internal or external control GK1 AP07 RH, AP08LH

Panel cut-out (for external control)



GK1	a		a1	
	3 P	4 P	3 P	4 P
FK	–	–	121	–
FM	–	–	–	156
FS	–	–	136	–
FT	–	–	–	171
FV	136	–	–	–
FW	151	–	–	–
FX	–	186	–	–
FY	–	171	–	–

External operator, RH or LH side	f
GK1 FK, FM, FS, FT	35…114
GK1 FV, FW, FX, FY	35…114

References: pages B4/5 and B4/10 | Selection: page B4/14 | Characteristics: page B4/15 | Schemes: page B4/17

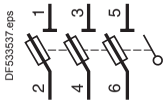
Fuse carriers

TeSys LS, GK

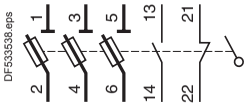
Fuse carriers without single-phase protection device

3-pole

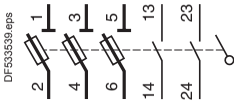
LS1 D32, D323



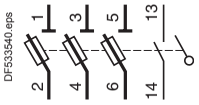
LS1 D32, D323 + GV AE11●



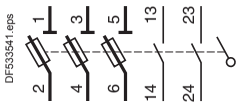
LS1 D32, D323 + GV AE20●



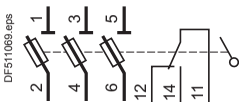
GK1 EK



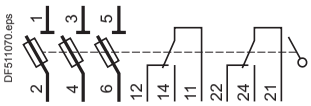
GK1 ES



GK1 FK

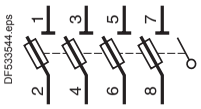


GK1 FS



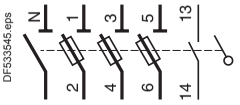
4-pole

LS1 D32 + LA8 D324

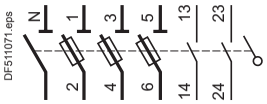


3-pole + Neutral

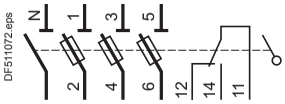
GK1 EM



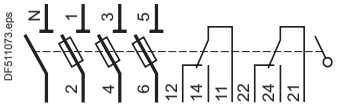
GK1 ET



GK1 FM



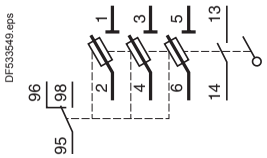
GK1 FT



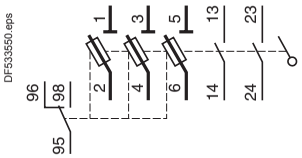
Fuse carriers with single-phase protection device

3-pole

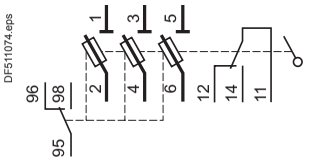
GK1 EV



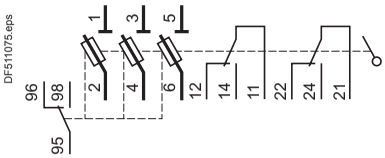
GK1 EW



GK1 FV

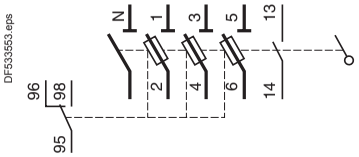


GK1 FW

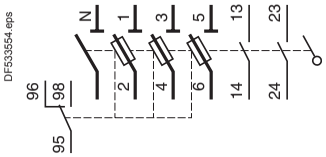


3-pole + Neutral

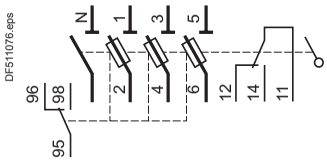
GK1 EY



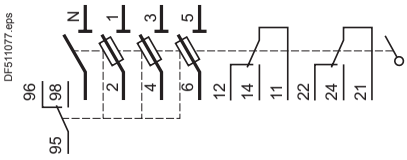
GK1 EX



GK1 FY



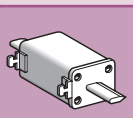
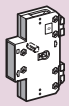
GK1 FX



Switch-disconnector fuses
TeSys GS

Presentation	B5/2

Switch-disconnector fuses - TeSys GS

Type of product	Range		Pages
IEC - Switch-disconnector fuses For NFC / DIN fuses	From **32** to **1250** A		B5/4
IEC - Switch-disconnector fuses For BS fuses	From **32** to **1250** A		B5/6
UL - Switch-disconnector fuses For CC / J fuses	From **30** to **800** A		B5/8
NFC - Cartridge fuses Type aM, gG	From **0.16** to **125** A		B5/10
DIN - Cartridge fuses Type aM, gG	From **10** to **1250** A		B5/11
Auxiliary contacts for IEC and UL switch-disconnector fuses	From **32** to **1250** A		B5/12
Handles	From **32** to **1250** A		B5/13
Other accessories	From **32** to **1250** A		B5/14

Technical Data for Designers	B5/15

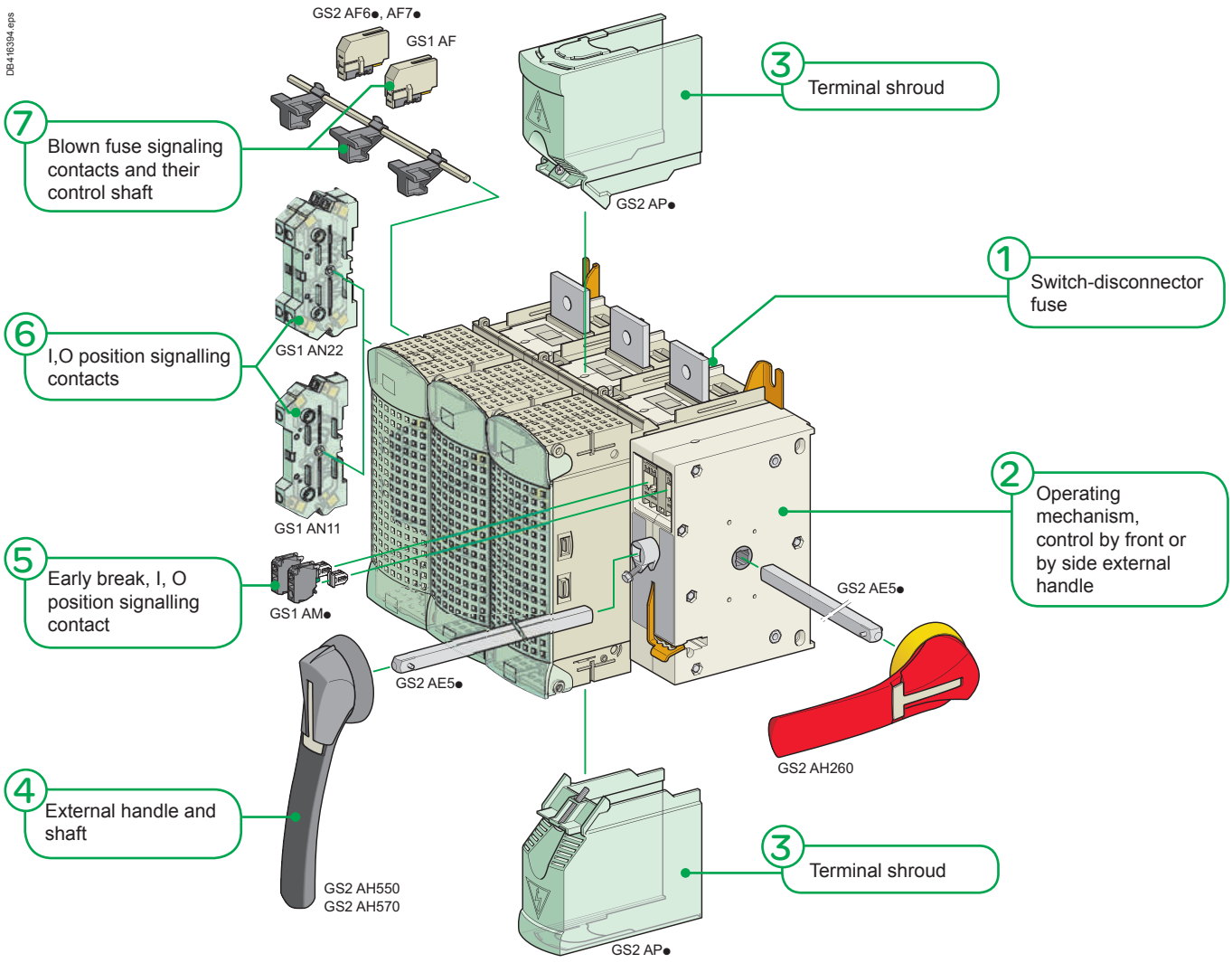
Switch-disconnector fuses and accessories

Discover the components

TeSys GS

A customizable functional block

Whatever its rating, the switch-disconnector fuse fits the need: particular position of the handle, triggering of an automatic control before full opening, enhanced protection of terminals...



Customizable

GS2 630 A switch-disconnector fuse

1 Switch-disconnector fuse
- NFC/DIN or BS fuse compatible
- Enhanced isolation between poles
- On-load making/breaking with double break isolation of the power circuit

2 Operating mechanism
- For one front or side external handle, right or left side
- Cavity for early-break contacts

3 Terminal shrouds
- For use when the switch-disconnector fuse is installed outside an enclosure or when the operating voltage is over 500 V AC

4 Operating handle
- Padlockable in open position

5 GS1AN●● Position signalling contacts
- Synchronized with the poles operation

6 GS1AM●●● Early-break signalling contacts
- Activated before the poles are opened

7 GS1AF●● Blown fuse signalling contacts
- A missing fuse is also indicated

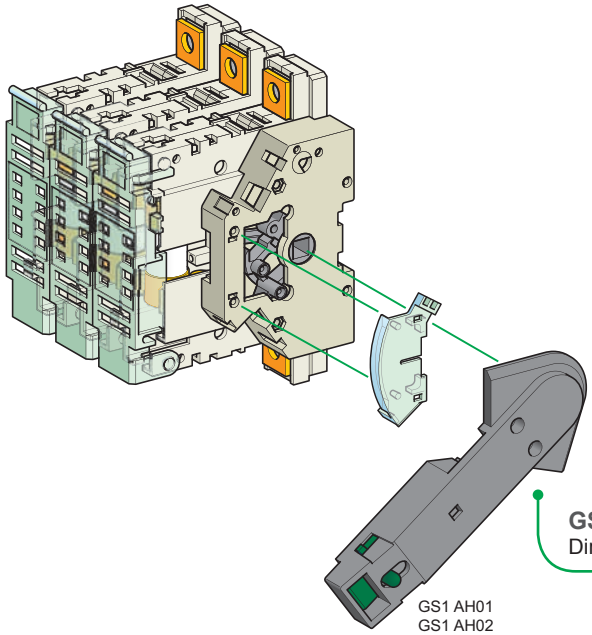
Switch-disconnector fuses and accessories

Discover the operating by direct and remote external handles

Simplicity of the direct operating

The mounting of an operating handle directly on the side of the switch-disconnector fuse is a simple operation.
This handle will be for use by qualified personnel only.
As the mechanical design is simplified, the manoeuvre will be immediately understood by the operator.
Each handle can be padlocked in open position. Locking device for 3 padlocks.

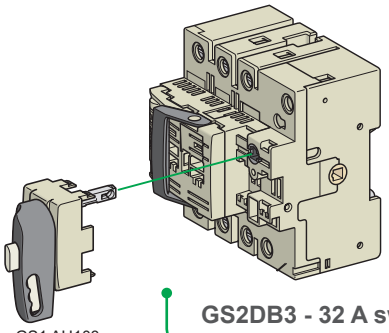
DB416395.eps



GS1 AH01
GS1 AH02

GS1JD3 - 100 A switch-disconnector fuse
Direct lateral operating

DB416396.eps



GS1 AH103

GS2DB3 - 32 A switch-disconnector fuse
Direct front operating

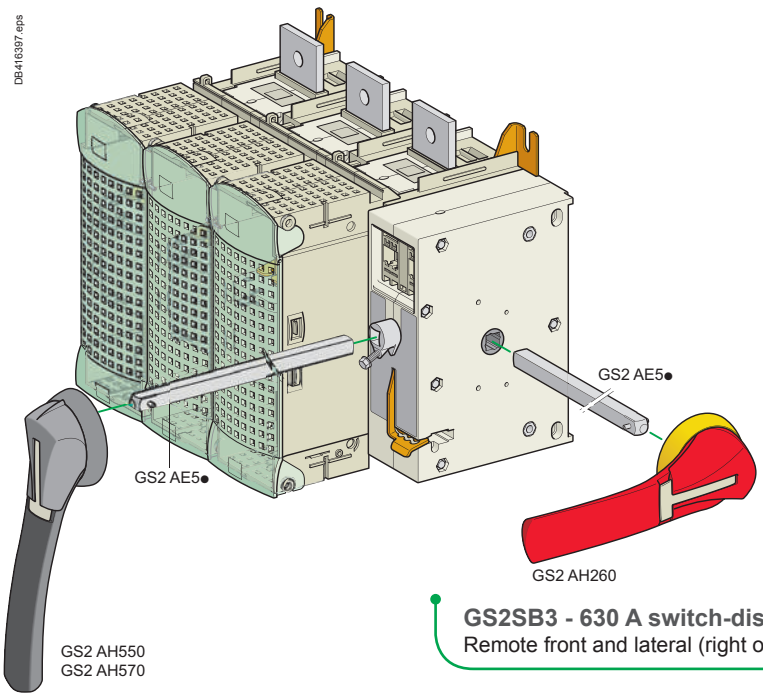
Position of the handle, a free choice

Performance remote operating

Located on the front or side panel of an enclosure, the operating handle provide complementary features:
- simple (IP55) or reinforced (IP65) protection against dust
- intermediate "Test" position
- door interlock when the handle is in "Close" position, opening by mean of a special tool is needed for opening.
- optional key-operated handle lock

The handles are available in different lengths. They are chosen according the operating effort which depends on the rating of the switch-disconnector fuse.
The drive shaft can be cut to the ideal length.
The choice of a red and yellow handle (CNOMO standard) will identify an "Emergency Stop handle" among others handles, generally black and gray.

DB416397.eps



GS2SB3 - 630 A switch-disconnector fuse
Remote front and lateral (right only) operating

IEC Switch-disconnector fuses - TeSys GS

For NFC / DIN fuses





Rating			A	32		50		63		100		125	
Number of poles				3	3+N	3	4	3	4	3	4	3	4
Fuse size				10 x 38		14 x 51		Size 000		22 x 58		22 x 58	
For direct operators													
Switch-disconnector fuses reference				**GS1DD3**	**GS1DD4**	**GS1FD3**	**GS1FD4**	**GS1GD3**	**GS1GD4**	**GS1JD3**	**GS1JD4**	**GS1KD3**	**GS1KD4**
Handle	Black			**GS1AH103**		**GS1AH01**				**GS1AH02**			
Auxiliary contacts	O/I + Test	1NO + 1NC		-		**GS1AN11**							
		2NO + 2NC		-		**GS1AN22**							
	O/I + early break			**GS1AM111** (1 OF)		**GS1AM1** (1 OF)							
				GS1AM211 (2 OF)		**GS1AM2** (2 OF)							
	Blown fuse			-		**GS1AF1**		-		**GS1AF23**	**GS1AF24**	**GS1AF23**	**GS1AF24**
For external left hand side-mounted operators													
Switch-disconnector fuses reference				**GS1DD3**	**GS1DD4**	**GS2FG3**	**GS2FG4**	**GS2GG3**	**GS2GG4**	**GS2JG3**	**GS2JG4**	**GS2KG3**	**GS2KG4**
Handle	Black/Grey	IP65		**GS2AH310**						**GS2AH330**			
	Red/Yellow	IP65		**GS2AH320**						**GS2AH340**			
Auxiliary contacts	O/I + Test	1NO + 1NC		-		**GS1AN11G**							
		2NO + 2NC		-		**GS1AN22G**							
	O/I + early break	1NO		**GS1AM110**									
		2NO		**GS1AM101**									
	Blown fuse			-		**GS1AF1**		-		**GS1AF23**	**GS1AF24**	**GS1AF23**	**GS1AF24**
For external front-mounted and right-hand side-mounted operators													
Switch-disconnector fuses reference				**GS1DD3**	**GS1DD4**	**GS2F3**	**GS2F4**	**GS2G3**	**GS2G4**	**GS2J3**	**GS2J4**	**GS2K3**	**GS2K4**
Front-mounted handle	Black/Grey	IP55		**GS2AH515**						**GS2AH535**			
	Black/Grey	IP65		**GS2AH510**						**GS2AH530**			
	Red/Yellow	IP65		**GS2AH520**						**GS2AH540**			
Front-mounted handle + Test position	Black/Grey	IP65		**GS2AHT510**						**GS2AHT530**			
	Red/Yellow	IP65		**GS2AHT520**						**GS2AHT540**			
RH side-mounted handle	Black/Grey	IP55		**GS2AH215**						**GS2AH235**			
	Black/Grey	IP65		**GS2AH210**						**GS2AH230**			
	Red/Yellow	IP65		**GS2AH220**						**GS2AH240**			
Auxiliary contacts	O/I + Test	1NO + 1NC		-		**GS1AN11**							
		2NO + 2NC		-		**GS1AN22**							
		1NO + 1NC + test		-		**GS1ANT11**							
		2NO + 2NC + test		-		**GS1ANT22**							
	O/I + Test + early break	1NO		-		**GS1AM110**							
		1NC		-		**GS1AM101**							
	Blown fuse			-		**GS1AF1**		-		**GS1AF23**	**GS1AF24**	**GS1AF23**	**GS1AF24**
Accessories													
Shaft for external handle (mm)			200	**GS2AE82**		**GS2AE22**							
			320	**GS2AE8**		**GS2AE2**							
			400	**GS2AE81**		**GS2AE21**							
Terminal shroud				Integrated						**GS1AP33** (3P), **GS1AP34** (4P)			
Dimensions													
	Direct front-mounted version			page B5/23		page B5/24							
	External front-mounted version			page B5/23		page B5/25							

Handles



GS1 AH01



GS1 AH02



GS2 AH●10
GS2 AH●20



GS2 AH●30
GS2 AH●40



GS2 AH●50
GS2 AH●60



GS2 AH●70
GS2 AH●80

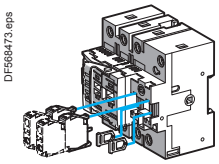
See details on handles page B5/13.



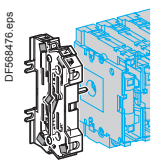


125		160				250		400		630		1250	
3	4	3	4	3	4	3	4	3	4	3	4	3	4
Size 00		Size 00		Size 0		Size 1		Size 2		Size 3		Size 4	
GS1KKD3	**GS1KKD4**	**GS1LLD3**	**GS1LLD4**	**GS1LD3**	**GS1LD4**	**GS1ND3**	**GS1ND4**	**GS1QQD3**	**GS1QQD4**	**GS2S3**	**GS2S4**	**GS2V3**	**GS2V4**
GS1AH02										**GS2AH104**		**GS2AH105**	
GS1AN11													
GS1AN22													
GS1AM1 (1 OF)										**GS1AM110** (1 NO)			
GS1AM2 (2 OF)										**GS1AM101** (1 NC)			
-				**GS1AF33**	**GS1AF34**	**GS1AF43**	**GS1AF44**	**GS1AF43**	**GS1AF44**	**GS2AF63**	**GS2AF64**	**GS2AF73**	**GS2AF74**
GS2KKG3	**GS2KKG4**	**GS2LLG3**	**GS2LLG4**	**GS2LG3**	**GS2LG4**	**GS2NG3**	**GS2NG4**	**GS2QQG3**	**GS2QQG4**	**GS2SG3**	**GS2SG4**	**GS2VG3**	**GS2VG4**
GS2AH330										**GS2AH350**			
GS2AH340										**GS2AH360**			
GS1AN11G													
GS1AN22G													
GS1AM110													
GS1AM101													
-				**GS1AF33**	**GS1AF34**	**GS1AF43**	**GS1AF44**	**GS1AF43**	**GS1AF44**	**GS2AF63**	**GS2AF64**	**GS2AF73**	**GS2AF74**
GS2KK3	**GS2KK4**	**GS2LL3**	**GS2LL4**	**GS2L3**	**GS2L4**	**GS2N3**	**GS2N4**	**GS2QQ3**	**GS2QQ4**	**GS2S3**	**GS2S4**	**GS2V3**	**GS2V4**
GS2AH535										-			
GS2AH530										**GS2AH550**		**GS2AH570**	
GS2AH540										**GS2AH560**		**GS2AH580**	
GS2AHT530										-			
GS2AHT540										-			
GS2AH235										-			
GS2AH230										**GS2AH250**			
GS2AH240										**GS2AH260**			
GS1AN11													
GS1AN22													
GS1ANT11										-			
GS1ANT22										-			
GS1AM110										-			
GS1AM101										-			
-				**GS1AF33**	**GS1AF34**	**GS1AF43**	**GS1AF44**	**GS1AF43**	**GS1AF44**	**GS2AF63**	**GS2AF64**	**GS2AF73**	**GS2AF74**
GS2AE22										**GS2AE52**			
GS2AE2										**GS2AE5**			
GS2AE21										**GS2AE51**			
GS1AP33 (3P), **GS1AP34** (4P)						**GS1AP43** (3P), **GS1AP44** (4P)				**GS2AP73**	**GS2AP64**	**GS2AP83**	**GS2AP84**
page B5/24										page B5/26			
page B5/25										page B5/27			

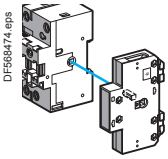
Auxiliary contacts



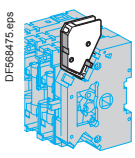
GS1 AM1●●



GS1 AN●●●



GS1 AM●11



GS1 AM●

See details on auxiliary contacts, page B5/12.

Maximal number of auxiliary contacts

Switch rating (A)	Standard configuration	With additional bracket	Reference of additional bracket
32	4	4	**GS1AD10**
50...400	4	4	**GS2AD20**
200...400	8	8	**GS2AD20**
630...1250	8	-	-

IEC Switch-disconnector fuses - TeSys GS

For BS fuses





Number of poles			3	3+N	3	4	3	4	3	4	3	4	3	4		
Fuse size			A1		A1		A2-A3		A4		A4		B1-B2			
For direct operators																
Switch-disconnector fuses reference			**GS1DDB3**	**GS1DDB4**	-											
Handle	Black		**GS1AH103**		-											
Auxiliary contacts	O/I + Test	1NO + 1NC	-		-											
		2NO + 2NC	-		-											
	O/I + early break		**GS1AM111** (1 OF)		-											
			GS1AM211 (2 OF)		-											
For external front-mounted and right-hand side-mounted operators																
Switch-disconnector fuses reference			**GS1DDB3**	**GS1DDB4**	**GS2DB3**	**GS2DB4**	**GS2GB3**	**GS2GB4**	**GS2JB3**	**GS2JB4**	**GS2LLB3**	**GS2LLB4**	**GS2LB3**	**GS2LB4**		
Front-mounted handle	Black/Grey	IP55	**GS2AH515**						**GS2AH535**							
	Black/Grey	IP65	**GS2AH510**						**GS2AH530**							
	Red/Yellow	IP65	**GS2AH520**						**GS2AH540**							
Front-mounted handle + Test position	Black/Grey	IP65	**GS2AHT510**						**GS2AHT530**							
	Red/Yellow	IP65	**GS2AHT520**						**GS2AHT540**							
RH side-mounted handle	Black/Grey	IP55	**GS2AH215**						**GS2AH235**							
	Black/Grey	IP65	**GS2AH210**						**GS2AH230**							
	Red/Yellow	IP65	**GS2AH220**						**GS2AH240**							
Auxiliary contacts	O/I + Test	1NO + 1NC	-		**GS1AN11**											
		2NO + 2NC	-		**GS1AN22**											
		1NO + 1NC + test	-		**GS1ANT11**											
		2NO + 2NC + test	-		**GS1ANT22**											
	O/I + Test + early break	1NO	**GS1AM110** - max 4 contacts													
		1NC	**GS1AM101** - max 4 contacts													
Accessories																
Shaft for external handle (mm)		200	**GS2AE82**		**GS2AE22**											
		320	**GS2AE8**		**GS2AE2**											
		400	**GS2AE81**		**GS2AE21**											
Terminal shroud			Integrated						**GS1AP33** (3P), **GS1AP34** (4P)							
Dimensions																
	Direct front-mounted version		page B5/23				page B5/24									
	External front-mounted version		page B5/23				page B5/25									

	3	4	3	4	3	4	3	4	3	4	3	4	3	4				
	B1-B2		B1...B3		B1...B3		B1...B4		C1-C2		C1...C3		D1					
	-								-				-					
	-								-				-					
	-								-									
	-								-									
	-								-									
	-								-									
	GS2MMB3	**GS2MMB4**	**GS2NB3**	**GS2NB4**	**GS2PPB3**	**GS2PPB4**	**GS2QQB3**	**GS2QQB4**	**GS2SB3**	**GS2SB4**	**GS2TB3**	**GS2TB4**	**GS2VB3**	**GS2VB4**				
	GS2AH535								-									
	GS2AH530								**GS2AH550**				**GS2AH570**					
	GS2AH540								**GS2AH560**				**GS2AH580**					
	GS2AHT530								-									
	GS2AHT540								-									
	GS2AH235								-									
	GS2AH230								**GS2AH250**									
	GS2AH240								**GS2AH260**									
	GS1AN11																	
	GS1AN22																	
	GS1ANT11								-									
	GS1ANT22								-									
	GS1AM110 - max 8 contacts																	
	GS1AM101 - max 8 contacts																	
	GS2AE22								**GS2AE52**									
	GS2AE2								**GS2AE5**									
	GS2AE21								**GS2AE51**									
	GS1AP43 (3P), **GS1AP44** (4P)								**GS2AP73** (3P), **GS2AP64** (4P)				**GS2AP83**	**GS2AP84**				
	page B5/24								page B5/26									
	page B5/25								page B5/27									

UL Switch-disconnector fuses - TeSys GS

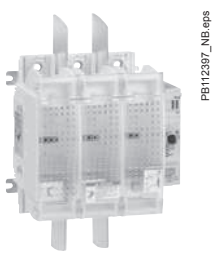
For CC and J fuses





Rating			30 Compact		30		60	100
Number of poles			3		3		3	3
Fuse size			CC	J	CC	J	J	J
For direct operators								
Switch-disconnector fuses reference			**GS1DDU3**	**GS1DU3**	-			
Handle	Black		**GS1AH106**		-			
Auxiliary contacts	O/I + Test	1NO + 1NC	-					
		2NO + 2NC	-					
	O/I + early break	1NO	**GS1AM110 + GS1AD10**		-			
		1NC	**GS1AM101 + GS1AD10**		-			
For external front-mounted operators								
Switch-disconnector fuses reference			**GS1DDU3**	**GS1DU3**	**GS2EEU3**	**GS2EU3N**	**GS2GU3N**	**GS2JU3N**
Front-mounted handle	Black/Grey	1,3R, 12	**GS2AH110**		**GS2AH130**			
		4, 4X	**GS2AH410**		**GS2AH430**			
	Red/Yellow	1,3R, 12	**GS2AH120**		**GS2AH140**			
		4, 4X	**GS2AH420**		**GS2AH440**			
Front-mounted handle + Test position	Black/Grey	1,3R, 12	**GS2AHT110**		**GS2AHT130**			
		4, 4X	**GS2AHT410**		**GS2AHT430**			
	Red/Yellow	1,3R, 12	**GS2AHT120**		**GS2AHT140**			
		4, 4X	**GS2AHT420**		**GS2AHT440**			
Auxiliary contacts	O/I + Test	1NO + 1NC	-		**GS1AN11**			
		2NO + 2NC	-		**GS1AN22**			
		1NO + 1NC + test	-		**GS1ANT11**			
		2NO + 2NC + test	-		**GS1ANT22**			
	O/I + Test + early break	1NO	**GS1AM110** - max 4 contacts (1)		**GS1AM110** - max 4 contacts (1)			
		1NC	**GS1AM101** - max 4 contacts (1)		**GS1AM101** - max 4 contacts (1)			
Accessories								
Shaft for external handle (mm)		320	**GS2AE8**		**GS2AE2**			
		400	**GS2AE81**		**GS2AE21**			
Terminal shroud			Integrated					
Dimensions								
	Direct front-mounted version		page B5/23				page B5/24	
	External front-mounted version		page B5/23				page B5/25	

(1) 4 more contacts allowed with GS1AD10 additional bracket.



	200	400	600	800
	3	3	3	3
	J	J	J	J
	-		-	-
	-		-	
	-		-	
	-		-	
	-		-	
	-		-	
	GS2MU3N	**GS2QU3N**	**GS2SU3**	**GS2TU3**
	GS2AH130		-	
	GS2AH430		**GS2AH150**	
	GS2AH140		-	
	GS2AH440		**GS2AH160**	
	GS2AHT130		-	
	GS2AHT430		-	
	GS2AHT140		-	
	GS2AHT440		-	
	GS1AN11			
	GS1AN22			
	GS1ANT11		-	
	GS1ANT22		-	
	GS1AM110 - max 8 contacts (1)		**GS1AM110** - max 8 contacts only	
	GS1AM101 - max 8 contacts (1)		**GS1AM101** - max 8 contacts only	
	GS2AE2		**GS2AE5**	
	GS2AE21		**GS2AE51**	
	GS1AP43	**GS1AP53**	**GS2AP73**	
	page B5/24		page B5/26	
	page B5/25		page B5/27	

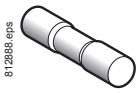
NFC Cartridge fuses
Fuse type aM, type gG

From 32 to 1250 A

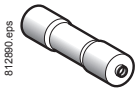
TeSys GS



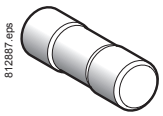
DF2 CA●●●
DF2 CN●●



DF2 EA●●●
DF2 EN●●



DF3 EA●●
DF3 EN●●



DF2 FA●●
DF2 FN●●



DF3 FA●●
DF3 FN●●

NFC fuse

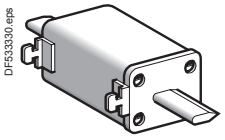
Fuse type	Maximum rated voltage	Rating	Sold in lots of	Fuses without striker – Unit reference		Fuses with striker – Unit reference	
	V ∼	A		aM	gG	aM	gG
Cylindrical 8.5 x 31.5	400	1	10	**DF2BA0100**	**DF2BN0100**	–	–
		2	10	**DF2BA0200**	**DF2BN0200**	–	–
		4	10	**DF2BA0400**	**DF2BN0400**	–	–
		6	10	**DF2BA0600**	**DF2BN0600**	–	–
		8	10	**DF2BA0800**	**DF2BN0800**	–	–
		10	10	**DF2BA1000**	**DF2BN1000**	–	–
		12	10	–	**DF2BN1200**	–	–
		16	10	–	**DF2BN1600**	–	–
		20	10	–	**DF2BN2000**	–	–
Cylindrical 10 x 38	500	0.16	10	**DF2CA001**	–	–	–
		0.25	10	**DF2CA002**	–	–	–
		0.50	10	**DF2CA005**	–	–	–
		1	10	**DF2CA01**	–	–	–
		2	10	**DF2CA02**	**DF2CN02**	–	–
		4	10	**DF2CA04**	**DF2CN04**	–	–
		6	10	**DF2CA06**	**DF2CN06**	–	–
		8	10	**DF2CA08**	**DF2CN08**	–	–
		10	10	**DF2CA10**	**DF2CN10**	–	–
		12	10	**DF2CA12**	**DF2CN12**	–	–
		16	10	**DF2CA16**	**DF2CN16**	–	–
		20	10	–	**DF2CN20**	–	–
	400	20	10	**DF2CA20**	–	–	–
		25	10	**DF2CA25**	**DF2CN25**	–	–
		32	10	**DF2CA32**	**DF2CN32**	–	–
Cylindrical 14 x 51	690	0.25	10	**DF2EA002**	–	–	–
		0.50	10	**DF2EA005**	–	–	–
	500	1	10	**DF2EA01**	–	–	–
		2	10	**DF2EA02**	–	**DF3EA02**	–
		4	10	**DF2EA04**	**DF2EN04**	**DF3EA04**	**DF3EN04**
		6	10	**DF2EA06**	**DF2EN06**	**DF3EA06**	**DF3EN06**
		8	10	**DF2EA08**	–	**DF3EA08**	–
		10	10	**DF2EA10**	**DF2EN10**	**DF3EA10**	**DF3EN10**
		12	10	**DF2EA12**	–	**DF3EA12**	–
		16	10	**DF2EA16**	**DF2EN16**	**DF3EA16**	**DF3EN16**
		20	10	**DF2EA20**	**DF2EN20**	**DF3EA20**	**DF3EN20**
		25	10	**DF2EA25**	**DF2EN25**	**DF3EA25**	**DF3EN25**
		32	10	**DF2EA32**	**DF2EN32**	**DF3EA32**	**DF3EN32**
		40	10	**DF2EA40**	**DF2EN40**	**DF3EA40**	**DF3EN40**
	400	50	10	**DF2EA50**	**DF2EN50**	**DF3EA50**	–
Cylindrical 22 x 58	690	4	10	**DF2FA04**	–	**DF3FA04**	–
		6	10	**DF2FA06**	–	**DF3FA06**	–
		8	10	**DF2FA08**	–	**DF3FA08**	–
		10	10	**DF2FA10**	**DF2FN10**	**DF3FA10**	**DF3FN10**
		16	10	**DF2FA16**	–	**DF3FA16**	–
		20	10	**DF2FA20**	**DF2FN20**	**DF3FA20**	**DF3FN20**
		25	10	**DF2FA25**	**DF2FN25**	**DF3FA25**	**DF3FN25**
		32	10	**DF2FA32**	**DF2FN32**	**DF3FA32**	**DF3FN32**
		40	10	**DF2FA40**	**DF2FN40**	**DF3FA40**	**DF3FN40**
		50	10	**DF2FA50**	**DF2FN50**	**DF3FA50**	**DF3FN50**
	500	63	10	**DF2FA63**	**DF2FN63**	**DF3FA63**	**DF3FN63**
		80	10	**DF2FA80**	**DF2FN80**	**DF3FA80**	**DF3FN80**
		100	10	**DF2FA100**	**DF2FN100**	**DF3FA100**	**DF3FN100**
	400	125	10	**DF2FA125**	–	**DF3FA125**	–

For protection of equipment with current peaks
For protection of circuits without significant current peaks

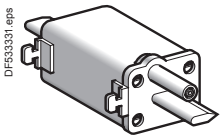
DIN Cartridge fuses
Fuse type aM, type gG

From 32 to 1250 A

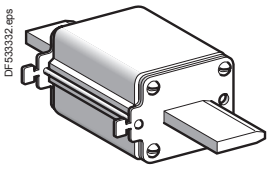
TeSys GS



DF2 GA●●●●
DF2 GN●●●●



DF4 GA●●●●
DF4 GN●●●●



DF2 JA●●●●
DF2 JN●●●●

DIN fuse

Fuse type	Maximum rated voltage	Rating	Sold in lots of		Fuses without striker		Fuses with striker	
					Unit reference		Unit reference	
	V ∼	A	aM	gG	aM	gG	aM	gG
Blade size 000	690	10	-	10	–	DF2FGN10	–	–
		16	3	10	DF2FGA16	DF2FGN16	–	–
		20	3	10	DF2FGA20	DF2FGN20	–	–
		25	3	10	DF2FGA25	DF2FGN25	–	–
		32	3	10	DF2FGA32	DF2FGN32	–	–
		40	3	10	DF2FGA40	DF2FGN40	–	–
		50	3	10	DF2FGA50	DF2FGN50	–	–
		63	3	10	DF2FGA63	DF2FGN63	–	–
		80	-	10	–	DF2FGN80	–	–
Blade size 00	690	80	3	-	DF2FGA80	–	–	–
		100	3	10	DF2FGA100	DF2FGN100	–	–
		125	3	10	DF2FGA125	DF2FGN125	–	–
	500	160	-	10	–	DF2FGN160	–	–
Blade size 0	690	50	3	3	DF2GA1051	DF2GN1051	–	–
		63	3	3	DF2GA1061	DF2GN1061	–	–
		80	3	3	DF2GA1081	DF2GN1081	–	–
		100	3	3	DF2GA1101	DF2GN1101	–	–
		125	3	3	DF2GA1121	DF2GN1121	DF4GA1121	–
		160	3	3	DF2GA1161	DF2GN1161	DF4GA1161	–
	500	125	-	3	–	–	–	DF4GN1121
		160	-	3	–	–	–	DF4GN1161
		200	3	-	DF2GA1201	–	DF4GA1201	–
Blade size 1	690	160	3	3	DF2HA1161	DF2HN1161	–	–
		200	3	3	DF2HA1201	DF2HN1201	DF4HA1201	DF4HN1201
		250	3	-	DF2HA1251	–	DF4HA1251	–
	500	250	-	3	–	DF2HN1251	–	DF4HN1251
		315	3	-	DF2HA1311	–	DF4HA1311	–
Blade size 2	690	250	3	3	DF2JA1251	DF2JN1251	–	–
		315	3	3	DF2JA1311	DF2JN1311	DF4JA1311	DF4JN1311
		400	3	-	DF2JA1401	–	DF4JA1401	–
	500	400	-	3	–	DF2JN1401	–	DF4JN1401
		500	3	-	DF2JA1501	–	DF4JA1501	–
Blade size 3	690	400	3	-	DF2KA1401	–	–	–
		500	3	3	DF2KA1501	–	DF4KA1501	DF4KN1501
	500	500	-	3	–	DF2KN1501	–	–
		630	3	3	DF2KA1631	DF2KN1631	DF4KA1631	DF4KN1631
Blade size 4	690	800	1	3	DF2LA1801	–	DF4LA1801	DF4LN1801
		1000	1	-	DF2LA1101	–	DF4LA1101	–
	500	800	-	1	–	DF2LN1801	–	–
		1000	-	1	–	DF2LN1101	–	DF4LN1101
		1250	1	1	DF2LA1251	DF2LN1251	DF4LA1251	DF4LN1251

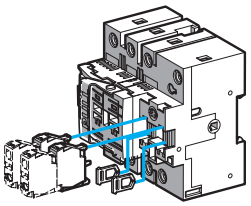
For protection of equipment with current peaks
For protection of circuits without significant current peaks

Auxiliary contacts for IEC and UL switch-disconnector fuses

From 32 to 1250 A

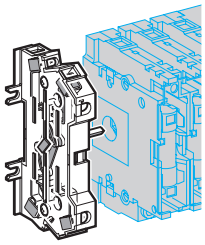
TeSys GS

DF568473.eps



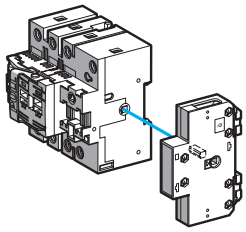
GS1 AM1●●

DF568476.eps



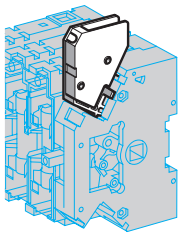
GS1 AN●●●

DF568474.eps



GS1 AM●11

DF568475.eps



GS1 AM●

Auxiliary early break and/or O, I and Test position signalling contacts (1) (2) (3)

Switch rating A (CEI)	Switch rating A (UL)	Contact type	Type of operator	Rated operating current Ie (A) < 24 V DC	Rated operating current Ie (A) < 240 V AC	Reference
32…1250	30 Compact 30...800	1 N/O	External, front or side-mounted (4)	2.8	3	**GS1AM110**
		1 N/C	External, front or side-mounted (4)	2.8	3	**GS1AM101**

Auxiliary O, I and Test position signalling contacts (3) (5)

Switch rating A (CEI)	Switch rating A (UL)	Contact type	Type of operator	Rated operating current Ie (A) < 24 V DC	Rated operating current Ie (A) < 240 V AC	Reference
Auxiliary O and I position signalling contacts						
50…1250	30...800	1 N/C + 1 N/O	External, front or RH side-mounted Direct	–	10	**GS1AN11**
			External, LH side	–	10	**GS1AN11G***
		2 N/C + 2 N/O	External, front or RH side-mounted Direct	–	10	**GS1AN22**
			External, LH side	–	10	**GS1AN22G***
Auxiliary O, I and Test position signalling contacts (3)						
50…400	30...400	1 N/C + 1 N/O	External, front side-mounted	–	10	**GS1ANT11**
		2 N/C + 2 N/O	External, front side-mounted	–	10	**GS1ANT22**

Auxiliary early break and O and I position signalling contacts

Switch rating A (CEI)	Contact type	Type of operator	Rated operating current Ie (A) < 24 V DC	Rated operating current Ie (A) < 240 V AC	Reference
32	1 C/O	–	12	4	**GS1AM111***
	2 C/O	–	12	4	**GS1AM211***
50…400	1 C/O	Direct, RH side	12	4	**GS1AM1***
	2 C/O	Direct, RH side	12	4	**GS1AM2***

Auxiliary "blown fuse" signalling contacts for use with NF C and DIN fuses (6)

Contact type	Switch rating A (CEI)	Fuse size	Number of poles	Rated operating current Ie (A) < 24 V DC	Rated operating current Ie (A) < 240 V AC	Reference
1st C/O	50	14 x 51	3 or 4	12	4	**GS1AF1***
	100 and 125	22 x 58	3	12	4	**GS1AF23***
			4	12	4	**GS1AF24***
	160	Size 0	3	12	4	**GS1AF33***
			4	12	4	**GS1AF34***
	250 and 400	Size 1 and Size 2	3	12	4	**GS1AF43***
			4	12	4	**GS1AF44***
	630	Size 3	3	12	4	**GS2AF63***
			4	12	4	**GS2AF64***
	1250	Size 4	3	12	4	**GS2AF73***
			4	12	4	**GS2AF74***
2nd C/O	50…1250	–	3 or 4	12	4	**GS1AF***

(*) Not for UL switch-disconnector.

(1) For 32 A (CEI), 30 (UL) switch-disconnector-fuses, these auxiliary contacts allow:
- early break and O and I position signalling,
- O, I and Test position signalling,
- O and I position signalling,
- Test position signalling.

For 50 to 400 A (CEI), 30-400 A (UL) switch-disconnector-fuses, they allow:
- early break,
- O, I and Test position signalling,
- O and I position signalling,
- Test position signalling.

For 630 and 1250 A (CEI), 630 and 800 A (UL) switch-disconnector-fuses, they allow:
- early break and O and I position signalling,

(2) Maximum number of auxiliary contacts:

Switch rating A (CEI)	Switch rating A (UL)		Standard	With additional bracket	Reference of additional bracket
32	30 Compact	CC	4	4 + 4	**GS1AD10**
		J	2	2 + 4	**GS1AD10**
50…160	30...100		4	4 + 4	**GS2AD20**
200…400	200 and 400		8	8 + 4	**GS2AD20**
630…1250	600 and 800		8	8	**–**

*(3) The Test position allows testing of the control circuits off-load. Auxiliary contacts **GS1 AM110**, **GS1 AM101** and **GS1 ANT●●** only allow the text function with external handles **GS2 AHT●●●**.*

(4) These auxiliary contacts can also be used with 630, 800 and 1250 A switch-disconnector-fuses fitted with a direct front-mounted operator.

(5) Reversible add-on attachments for converting an N/C contact to an N/O contact and vice versa.

(6) For striker fuses (BS fuses are not available with striker).

Handles

From 32 to 1250 A

TeSys GS



GS1 AH01



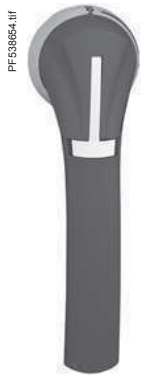
GS1 AH02



GS2 AH●10
GS2 AH●20



GS2 AH●30
GS2 AH●40



GS2 AH●50
GS2 AH●60



GS2 AH●70
GS2 AH●80

Handles for direct operators

Switch rating A (CEI)	Switch rating A (UL)	Type of operator	Handle colour	Reference
Handles for direct operators, padlockable				
-	30 Compact	Front-mounted	Black	**GS2AH106**
32	-	Front	Black	**GS1AH103**
50 and 63	-	RH side	Black	**GS1AH01**
100…400	-	RH side	Black	**GS1AH02**
-	600 and 800	Front-mounted	Black	**GS2AH107**
630 and 800	-	Front	Black	**GS2AH104**
1250	-	Front	Black	**GS2AH105**

Handles for external operator

Switch rating A (CEI)	Switch rating A (UL)	Handle colour	Degree of protection	Protection index Nema	Reference
Handles for front-mounted external operators, padlockable and lockable in position O (1) Door interlock in I position (2)					
32…63	-	Black/Grey	IP 65	–	**GS2AH510**
			IP55	–	**GS2AH515**
		Red/Yellow	IP 65	–	**GS2AH520**
100…400	-	Black/Grey	IP 65	–	**GS2AH530**
			IP55	–	**GS2AH535**
		Red/Yellow	IP 65	–	**GS2AH540**
630 and 800	-	Black/Grey	IP65	–	**GS2AH550**
		Red/Yellow	IP65	–	**GS2AH560**
1250	-	Black/Grey	IP65	–	**GS2AH570**
		Red/Yellow	IP65	–	**GS2AH580**
-	30 Compact	Black/Grey	–	1, 3R, 12	**GS2AH110**
		Red/Yellow	–	1, 3R, 12	**GS2AH120**
		Black/Grey	–	1, 3R, 4, 4X, 12	**GS2AH410**
		Red/Yellow	–	1, 3R, 4, 4X, 12	**GS2AH420**
-	30…400	Black/Grey	–	1, 3R, 12	**GS2AH130**
		Red/Yellow	–	1, 3R, 12	**GS2AH140**
		Black/Grey	–	1, 3R, 4, 4X, 12	**GS2AH430**
		Red/Yellow	–	1, 3R, 4, 4X, 12	**GS2AH440**
-	600 and 800	Black/Grey	–	1, 3R, 12	**GS2AH150**
		Red/Yellow	–	1, 3R, 12	**GS2AH160**
Handles for front-mounted external operators with test facility (3), padlockable and lockable in "O" position (1). Door interlock in "I" position (2)					
32…63	-	Black/Grey	IP 65	–	**GS2AHT510**
		Red/Yellow	IP65	–	**GS2AHT520**
100…400	-	Black/Grey	IP65	–	**GS2AHT530**
		Red/Yellow	IP65	–	**GS2AHT540**
-	30 Compact	Black/Grey	–	1, 3R, 12	**GS2AHT110**
		Red/Yellow	–	1, 3R, 12	**GS2AHT120**
		Black/Grey	–	1, 3R, 4, 4X, 12	**GS2AHT410**
		Red/Yellow	–	1, 3R, 4, 4X, 12	**GS2AHT420**
-	30…400	Black/Grey	–	1, 3R, 12	**GS2AHT130**
		Red/Yellow	–	1, 3R, 12	**GS2AHT140**
		Black/Grey	–	1, 3R, 4, 4X, 12	**GS2AHT430**
		Red/Yellow	–	1, 3R, 4, 4X, 12	**GS2AHT440**
Handles for external right-hand side-mounted operators, padockable and lockable in "O" position (1)					
32…63	-	Black/Grey	IP 65	–	**GS2AH210**
			IP55	–	**GS2AH215**
		Red/Yellow	IP65	–	**GS2AH220**
100…400	-	Black/Grey	IP65	–	**GS2AH230**
			IP55	–	**GS2AH235**
		Red/Yellow	IP65	–	**GS2AH240**
630…1250	-	Black/Grey	IP65	–	**GS2AH250**
		Red/Yellow	IP65	–	**GS2AH260**
Handles for external left-hand side-mounted operators, padockable and lockable in "O" position (1)					
32…63	-	Black/Grey	IP 65	–	**GS2AH310**
		Red/Yellow	IP65	–	**GS2AH320**
100…400	-	Black/Grey	IP65	–	**GS2AH330**
		Red/Yellow	IP65	–	**GS2AH340**
630…1250	-	Black/Grey	IP65	–	**GS2AH350**
		Red/Yellow	IP65	–	**GS2AH360**

*(1) Lockable with device **GS2AX1**, to be ordered separately.*
(2) Door interlock override by means of a tool.
*(3) The Test facility allows testing of the control circuits off-load, by using auxiliary contacts **GS1AM110**, **GS1AM101** or **GS1ANT●●**. In the "Test" position, the enclosure door can be opened.*

Accessories

From 32 to 1250 A

TeSys GS

GS2AE5_AE8.psd



GS2 AE5

GS2AE2.psd



GS2 AE2 - GS2 AE21

GS2AE8_AE81.psd



GS2 AE8 - GS2 AE81

Shafts for external operators

Switch rating A (CEI)	A (UL)	Shaft length mm	Shaft cross section mm	Reference
32	30 Compact	200	5 x 5	**GS2AE82**
		320	5 x 5	**GS2AE8**
		400	5 x 5	**GS2AE81**
50…400	30...400	200	10 x 10	**GS2AE22**
		320	10 x 10	**GS2AE2**
		400	10 x 10	**GS2AE21**
630…1250	600 and 800	200	12 x 12	**GS2AE52**
		320	12 x 12	**GS2AE5**
		40	12 x 12	**GS2AE51**

Terminal protection shrouds for upstream or downstream connector plates

Switch rating A (CEI)	A (UL)	Number of poles	Reference
50 and 63	30 Compact, 30...60 (3P)	3 or 4	(1)
100…160	100	3	**GS1AP33**
	–	4	**GS1AP34**
200…400	200	3	**GS1AP43**
	–	4	**GS1AP44**
–	400	3	**GS1APU53**
630…800	600 and 800	3	**GS2AP73**
	–	4	**GS2AP64**
1250	–	3	**GS2AP83**
		4	**GS2AP84**

Devices for locking fuse covers in "I" position (2)

Switch rating A	Fuse size	Number of poles	Reference
50	14 x 51	3 or 4	(3)
63	Size 00C	3 or 4	**GS1AV1**
100…160	22 x 58, Size 00	3 or 4	**GS1AV2**
160	Size 0	3	**GS1AV33**
		4	**GS1AV34**
250	Size 1	3	**GS1AV53**
		4	**GS1AV54**
400	Size 2	3	**GS1AV73**
		4	**GS1AV74**

Cage terminals for connection of bare cables (without lug)

Switch rating A	Number of poles	Reference
50 and 63	3 or 4	(4)
100…160	3	**GS1AW33**
	4	**GS1AW34**
200…250	3	**GS1AW43**
	4	**GS1AW44**

External handle locking device

Switch rating A	Description	Reference
32…1250	Device for RONIS EL11AP keylock (lock to be ordered separately).	**GS2AX1**

Height compensation plate for external handles

Switch rating A (CEI)	A (UL)	Description	Degree of protection	Reference
32…1250	30 Compact, 30...400	Allows a new GS2●● handle to be fitted on existing cut-outs	IP 65	**GS2AH001**

Flat mounting kit

Switch rating A	Description	Reference
50…400	The kit, for use with a front-mounted external handle, includes: ■ a 200 mm shaft, cross section 10 x 10 mm, ■ an adapter plate	**GS2ADL2**

(1) For these ratings, the switch-disconnector-fuses are fitted with terminal covers as standard.
(2) For NF C and DIN switch-disconnector-fuses fitted with right-hand mounted direct operator.
(3) For this rating, switch-disconnector-fuses are fitted with a cover locking device as standard.
(4) For these ratings, switch-disconnector-fuses are fitted with cage terminals as standard.

TeSys GS

Technical Data for Designers

Contents

Characteristics:
> switch-disconnector fuses ..... B5/16 to B5/21
> auxiliary contacts B5/22
Dimensions ..... B5/23 to B5/31
Schemes B5/31

IEC switch-disconnector-fuses
For use with NFC or DIN fuses

From 32 to 1250 A

TeSys GS

Switch-disconnector-fuse characteristics

Type				GS1 DD	GS● F	GS● G	GS● J
Environment							
Conforming to standards	Switch-disconnector-fuses			IEC 60947-3			
	Circuit breakers			IEC 60269-1 and 2			
Product certifications				ASEFA/LOVAG, LROS (pending)			
Degree of protection conforming to IEC 60529	On front panel with terminal covers			IP 20			
Ambient air temperature around the device	Storage		°C	-40…+80			
	Operation		°C	-20…+70			
Flame resistance conforming to IEC 60695-2-1	Body		°C	960	960		
	Fuse cover		°C	–	850		
Pole characteristics							
Conventional thermal current (Ith) for ambient temperature ≤ 40 °C			A	32	50	63	100
Fuse size				10 x 38	14 x 51	T00C	22 x 58
Rated insulation voltage (Ui)			V	800	750	750	750
Rated impulse withstand voltage (Uimp)			kV	8	8	8	8
Rated operational current (Ie)	Cat. AC-23A/B (1)	∼ 400 V	A	32	50	63	100
		∼ 500 V	A	32	50	63	100
		∼ 690 V	A	32	50	63	100 (3)
	Cat. DC-23A/B (1)	⎓ 440 V (2)	A	20	40	40	100
Rated operational power	Cat. AC-23A/B (1)	∼ 400 V	kW	15	25	30	51
		∼ 500 V	kW	18.5	33	40	63
		∼ 690 V	kW	25	45	55	90
Rated conditional short-circuit current	I rms at ∼ 400 V with protection by gG (gl) fuses		kA	100	100	100	100
	Rating of associated fuses		A	32	50	63	100
Peak value of permissible current (dynamic short-circuit withstand)	Conforming to IEC 60269-1	∼ 400 V	kA	5.5	7.6	10.6	20
Rated making capacity	I rms at 400 V Cat. AC-23B		A	320	500	630	1000
Rated breaking capacity	I rms at 400 V Cat. AC-23B		A	256	400	500	800
Mechanical durability	Number of operating cycles			20000	10000	10000	10000
Electrical durability	Number of operating cycles cat. AC/DC-23A/B (1)			1500/300	1500/300	1500/300	1500/300
Cabling	Cable (c.s.a. min/max)		mm²	2.5/16	6/25	10/25	25/95
	Bars (max width)		mm	–	–	–	20
Tightening torque			N.m	3	3.2	3.2	12

(1) Category "A": frequent operating cycles, category "B": infrequent operating cycles.
(2) 2 poles in series per phase.
(3) With terminal covers.
(4) Poles not juxtaposed.

	GS● K	GS● KK	GS● LL	GS● L	GS● N	GS● QQ	GS2 S	GS2 V
	IEC 60947-3							
	IEC 60269-1 and 2							
	ASEFA/LOVAG, LROS (pending)							
	IP 20							
	-40…+80							
	-20…+70							
	960							
	850							
	125	125	160	160	250	400	630	1250
	22 x 58	T00	T00	T0	T1	T2	T3	T4
	750	750	750	750	750	800	1000	1000
	8	8	8	8	8	8	12	12
	125	125	160	160	250	400	630	1000
	125	125	160	160	250	315	500	800
	100 (3)	100 (3)	125 (3)	125 (3)	250 (3)	250/315	315/400	630
	100	100	125	125	200	200/315 (4)	400/630 (4)	1000
	63	63	80	80	132	220	355	560
	90	90	110	110	160	220	355	560
	80	80	110	110	220	220/295	295/400	400/475
	100	100	100 (50)	100	100	50	100	100
	125	125	125 (160)	160	250	400	630	1250
	20	20	22.7	20	32.5	40	70	90
	1250	1250	1600	1600	2500	4000	6300	10 000
	1000	1000	1280	1280	2000	3200	5040	8000
	10000	10000	10000	10000	10000	10000	8000	5000
	1000/200	1000/200	1000/200	1000/200	1000/200	1000/200	1000/200	500/100
	35/95	35/95	50/95	50/95	95/240	185/240	2 x 150 / 2 x 300	- / 4 x 185
	20	20	20	20	32	45	63	80
	12	12	12	12	25	25	44	44

IEC switch-disconnector-fuses
For use with BS fuses

From 32 to 1250 A

TeSys GS

Switch-disconnector-fuse characteristics

Type				GS1 DDB	GS2 DB	GS2 GB	GS2 JB
Environment							
Conforming to standards	Switch-disconnector-fuses			IEC 60947-3			
	Circuit breakers			IEC 60269-1 and 2			
Product certifications				ASEFA/LOVAG, LROS (pending)			
Degree of protection conforming to IEC 60529	On Front panel, with terminal covers			IP 20			
Ambient air temperature around the device	Storage		°C	-40…+80			
	Operation		°C	-20…+70			
Flame resistance conforming to IEC 60695-2-1	Body		°C	960			
	Fuse cover		°C	–		850	
Pole characteristics							
Conventional thermal current (Ith) for ambient temperature ≤ 40 °C			A	32	32	63	100
Fuse size				A1	A1	A2-A3	A4 Ø ≤ 31 mm
Rated insulation voltage (Ui)			V	800	750	750	750
Rated impulse withstand voltage (Uimp)			kV	8	8	8	8
Rated operational current (Ie)	Cat. AC-23A/B (1)	∼ 400 V	A	32	32	63	100
		∼ 500 V	A	32	32	63	100
		∼ 690 V	A	32	32	63	100 (4)
	Cat. DC-23A/B (1)	⎓ 440 V (2)	A	20	20	40	100
Rated operational power	Cat. AC-23A/B (1)	∼ 400 V	kW	15	15	30	51
		∼ 500 V	kW	18.5	18.5	40	63
		∼ 690 V	kW	25	25	55	90
Rated conditional short-circuit current	I rms at ∼ 400 V with protection by gG (gl) fuses		kA	80	80	80	80
	Rating of associated fuses		A	32	32	63	100
Peak value of permissible current (dynamic short-circuit withstand)	Conforming to IEC 60269-1	∼ 400 V	kA	5.5	9	10.6	20
Rated making capacity	I rms at 400 V Cat. AC-23B		A	320	320	630	1000
Rated breaking capacity	I rms at 400 V Cat. AC-23B		A	256	256	500	800
Mechanical durability	Number of operating cycles			20000	10000	10000	10000
Electrical durability	Number of operating cycles cat. AC/DC-23A/B (1)			1500/300	1500/300	1500/300	1500/300
Cabling	Cable (c.s.a. min/max)		mm²	2.5/16	6/25	10/25	25/95
	Bars (max width)		mm	–	–	–	20
Tightening torque			N.m	3	3.2	3.2	12

(1) Category "A": frequent operating cycles, category "B": infrequent operating cycles.
(2) 2 poles in series per phase.
*(3) Fit switch-disconnector-fuses **GS2 LB** with B1 or B2 fuses and **GS2 LLB** with A4 fuses.*
(4) With terminal covers.
(5) Poles not juxtaposed.

	GS2 LB or LLB [3]	GS2 MMB	GS2 NB	GS2 PPB	GS2 QQB	GS2 SB	GS2 TB	GS2 VB
	IEC 60947-3							
	IEC 60269-1 and 2							
	ASEFA/LOVAG, LROS (pending)							
	IP 20							
	-40…+80							
	-20…+70							
	960							
	850							
	160	200	250	315	400	630	800	1250
	A4. B1-B2 [3]	B1-B2	B1…B3	B1…B3	B1…B4	C1-C2	C1…C3	D1
	750	750	750	800	800	1000	1000	1000
	8	8	8	8	8	12	12	12
	160	200	250	315	400	630	800	1000
	160	200	250	315	315	500	630	800
	125 [4]	200/160 [4]	250 [4]	250/315 [4]	250/315	315/400	630	630
	125	200	200	200	200/315 [5]	400/630 [5]	800	1000
	80	100	132	150	220	355	450	560
	110	140	160	220	220	355	450	560
	110	150/185	220	220/295	220/295	295/400	400	400/475
	80	80	80	80	80	80	80	80
	160	200	250	315	400	630	800	1250
	22.7	32.5	32.5	40	40	70	80	90
	1600	2000	2500	3150	4000	6300	8000	10 000
	1280	1600	2000	2520	3200	5040	6400	8000
	10000	10000	10000	10000	10000	8000	8000	5000
	1000/200	1000/200	1000/200	1000/200	1000/200	1000/200	500/100	500/100
	50/95	95/240	95/240	185/240	185/240	2 x 150 / 2 x 300	2 x 185 / 2 x 300	- / 4 x 185
	20	32	32	45	45	63	63	80
	12	25	25	25	25	44	44	44

UL, CSA, IEC switch-disconnector-fuses

For use with CC and J fuses

Switch-disconnector-fuse characteristics

Type				GS1 DDU3	GS1 DU3	GS2 EEU3	GS2 EU3N
Environment							
Conforming to standards	Switch-disconnector-fuses			UL 489, CSA 22.2 n°5, IEC 60947-3		UL 98, CSA 22.2 n°4, IEC 60947-3	
	Circuit breakers			IEC 60969-1 and 2			
Degree of protection conforming to IEC 60529	With terminal covers			IP 20			
Ambient air temperature around the device	Storage		°C	-40…+80			
	Operation		°C	-20…+70			
Flame resistance conforming to IEC 60695-2-1	Body		°C	960	960	960	
	Fuse cover		°C	–	–	850	
Pole characteristics							
Conventional thermal current (Ith) for ambient temperature ⩽ 40 °C			A	30	30	30	30
Fuse size				CC	J	CC	J
Rated insulation voltage (Ui)			V	800	800	750	750
Rated impulse withstand voltage (Uimp)			kV	8	8	8	8
Rated operational current (Ie)	Cat. AC-23A/B (1)	∼ 400 V	A	32	32	32	32
		∼ 500 V	A	32	32	32	32
		∼ 690 V	A	32	32	32	32
Rated operational power	Cat. AC-23A/B (1)	∼ 400 V	kW	15	15	15	15
		∼ 500 V	kW	18.5	18.5	18.5	18.5
		∼ 690 V	kW	25	25	25	25
Prospective short-circuit current withstand	Conforming to UL 98 / UL 489	∼ 600 V	kA	100	100	200	200
Peak value of permissible current (dynamic short-circuit withstand)	Conforming to IEC 60269-1	∼ 400 V	kA	5.5	5.5	7.6	17.6
Rated making capacity	I rms at 400 V Cat. AC-23B		A	300	300	300	300
Rated breaking capacity	I rms at 400 V Cat. AC-23B		A	240	240	240	240
Mechanical durability	Number of operating cycles			10000	10000	10000	10000
Electrical durability	Number of operating cycles Cat. AC/DC-23A/B (1)			1500/300	1500/300	1500/300	1500/300
Cabling	Cable (c.s.a. min/max)		mm^2	2.5	2.5	6	6
	Bars (max width)		mm	16	32	25	50
Tightening torque			N.m	3 (for wire)	3 (for wire)	5.5 (for wire)	6.6 (for wire)

(1) Category "A": frequent operating cycles, category "B": infrequent operating cycles.

	GS2 GU3N	GS2 JU3N	GS2 MU3N	GS2 QU3N	GS2 SU3	GS2 TU3
	UL 98, CSA 22.2 n°4, IEC 60947-3					
	IEC 60269-1 and 2					
	IP 20					
	-40…+80					
	-20…+70					
	960					
	850					
	60	100	200	400	600	800
	J	J	J	J	J	L
	750	750	750	800	1000	1000
	8	8	8	8	12	12
	63	100	200	400	630	800
	63	100	200	315	630	630
	63	100	200	250	630	630
	30	51	100	220	355	450
	40	63	140	220	450	560
	55	90	185	220	600	600
	100	200	200	200	200	200
	17.6	22	32	36	80	80
	600	1000	2000	4000	6000	8000
	480	800	1600	3200	4800	6400
	10000	10000	8000	6000	5000	5000
	1500/300	1500/300	1000/200	1000/200	1000/200	500/100
	6	25	95	185	2 x 150	–
	50	20	32	45	100	100
	3.5 (for wire)	4 (for wire)	18 (for lug)	35 (for lug)	35 (for lug)	35 (for lug)

Auxiliary contacts

From 32 to 1250 A

TeSys GS

GS1 AM●11, GS1 AM1 and GS1 AM2 early break and signalling contact characteristics

Conventional thermal current (Ith) for ambient temperature ≤ 40 °C		**A**	16
Rated operational current (Ie)	Cat. AC-15	**A**	127 V: 5 - 230 V: 4 - 400 /415 V: 3 - 440 V: 2
	Cat. DC-13	**A**	24 V: 12 - 48 V: 2 - 110 V: 0.6 - 220 V: 0.4
Durability	Number of operating cycles		Mechanical: 1000000 Electrical: cat. AC-15: 30000
Fuse protection	gG	**A**	6 max
Cabling		**mm**	Faston connectors: 1 x 6.35 or 2 x 2.8

GS1 AN and GS1 ANT signalling contact characteristics

Conventional thermal current (Ith) for ambient temperature ≤ 40 °C		**A**	20
Rated operational current (Ie)	Cat. AC-15	**A**	127 V: 12 - 230 V: 10 - 400/415 V: 8 - 440 V: 6
	Cat. DC-13	**A**	48 V: 4 - 110 V: 1.2 - 220 V: 1
Durability	Number of operating cycles		Mechanical: 30000 Electrical: cat. AC-15: 30000
Fuse protection	gG	**A**	16 max
Cabling	Cable (c.s.a. min/max)	**mm²**	Min: 1.5 - max: 10

GS1 AM110 and GS1 AM101 early break and signalling contact characteristics

Conventional thermal current (Ith) for ambient temperature ≤ 40 °C		**A**	10
Rated operational current (Ie)	Cat. AC-15	**A**	120 V: 6 - 240 V: 3 - 400 V: 1.8 - 480 V: 1.5
	Cat. DC-13	**A**	24 V: 2.8 - 48 V: 1.4 - 125 V: 0.55 - 250 V: 0.27 - 400 V: 0.15
Durability	Number of operating cycles		Mechanical: 5000000 Electrical: cat. AC-15: 1000000
Cabling	Cable (c.s.a. min/max)	**mm²**	Min: 1 x 0.22 - max: 2 x 2.5

GS● AF "blown fuse" signalling contact characteristics

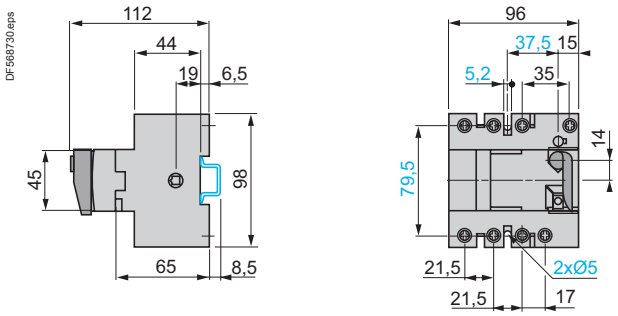
Conventional thermal current (Ith) for ambient temperature ≤ 40 °C		**A**	16
Rated operational current (Ie)	Cat. AC-15	**A**	230 V: 4 - 400 V: 3
	Cat. DC-13	**A**	24 V: 12 - 48 V: 2 - 110 V: 0.6 - 220 V: 0.4
Durability	Number of operating cycles		Mechanical: 30000 Electrical: cat. AC-15: 30000
Cabling		**mm**	Faston connectors: 1 x 6.35

IEC switch-disconnector-fuses
GS1 ●● (32 A)

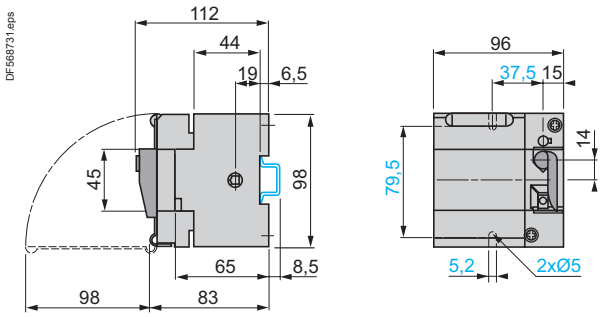
GS1 ●● (32 A)

Direct front-mounted operator

GS1 DD

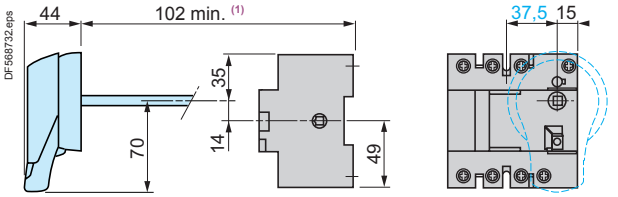


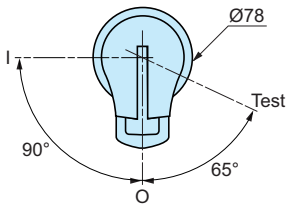
GS1 DDB



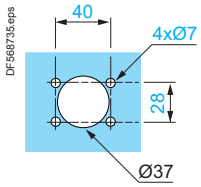
External front-mounted operator

GS1 DD

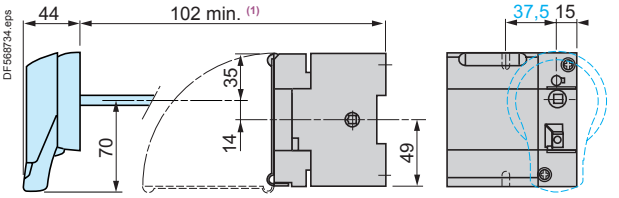


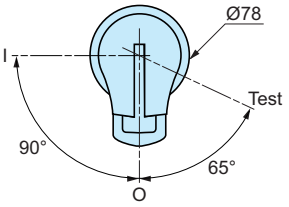


Door cut-out

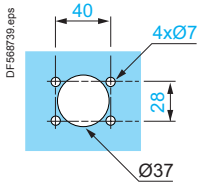


GS1 DDB





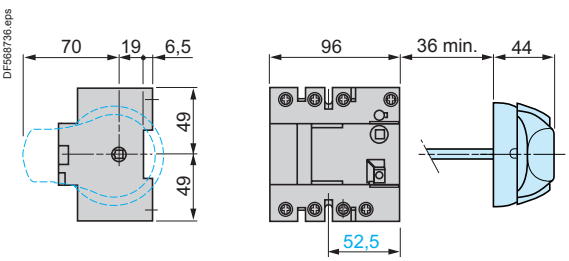
Door cut-out

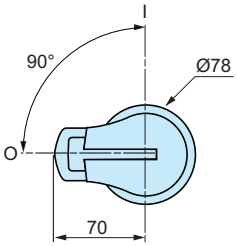


(1) With 1 or 2 auxiliary contacts GS1 AM1●●: 130 mm.
(2) With 3 or 4 auxiliary contacts GS1 AM1●●: 155 mm.

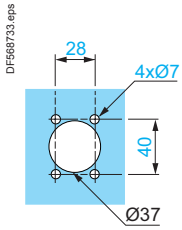
External right-hand side-mounted operator

GS1 DD

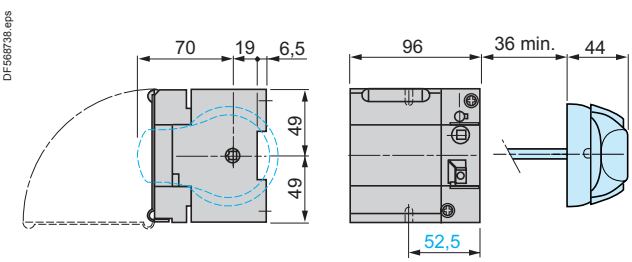


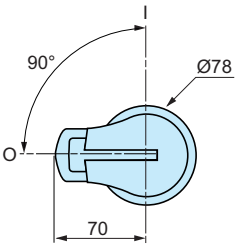


Door cut-out

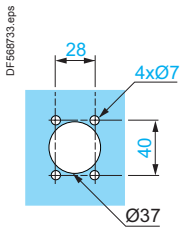


GS1 DDB





Door cut-out



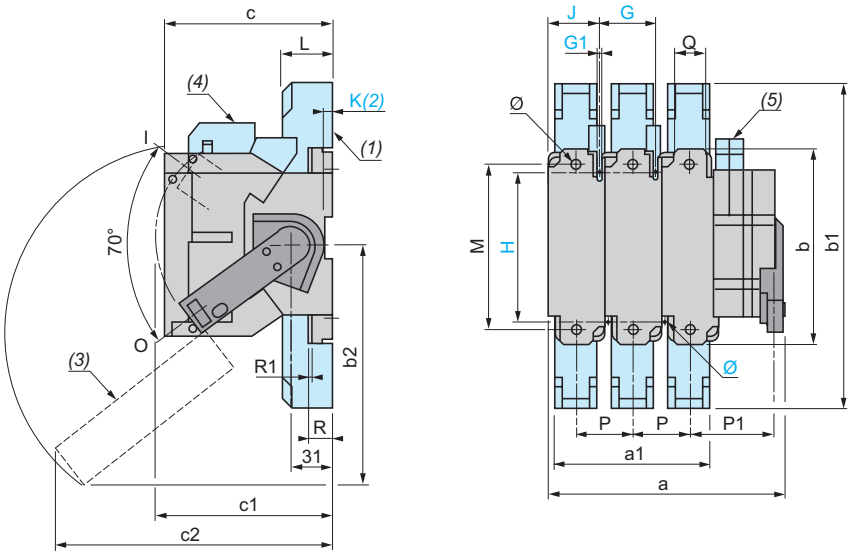
IEC switch-disconnector-fuses
GS1 ●● (50...400 A)

GS1 ●● (50…400 A)

Direct right-hand side-mounted operator

GS1 FD (50 A), GD (63 A), JD (100 A), KD, KKD (125 A), LD, LLD (160 A), ND (250 A) and QQD (400 A)

DF538732.eps



GS1		a	a1	b	b1	b2	c	c1	c2	G	G1	H	J	K	Ø	L	M	P	P1	Q	R	R1	Ø
FD	**3P**	118	–	118	–	–	87	134	–	27	5.4	106	31	6.5	5	–	–	27	33.5	–	–	–	–
	4P	145	–	118	–	–	87	134	–	27	5.4	106	31	6.5	5	–	–	27	33.5	–	–	–	–
GD	**3P**	133	–	118	–	159	116.5	134	145	32	5.4	106	36	6.5	5	–	–	32	36	–	–	–	–
	4P	165	–	118	–	159	116.5	134	145	32	5.4	106	36	6.5	5	–	–	32	36	–	–	–	–
JD, KD	**3P**	150	108	162	268	–	116	173	–	36	5.4	127	40	–	5	44	141	36	38	20	19.5	2.5	8.5
	4P	186	144	162	268	–	116	173	–	36	5.4	127	40	–	5	44	141	36	38	20	19.5	2.5	8.5
KKD, LLD	**3P**	150	108	162	268	141	126.5	173	193	36	5.4	127	40	–	5	44	141	36	38	20	19.5	2.5	8.5
	4P	186	144	162	268	141	126.5	173	193	36	5.4	127	40	–	5	44	141	36	38	20	19.5	2.5	8.5
LD	**3P**	192	136	162	268	174	136.5	173	229	50	5.4	140	54	–	5	44	141	50	45	20	19.5	2.5	8.5
	4P	242	172	162	268	174	136.5	173	229	50	5.4	140	54	–	5	44	141	50	45	20	19.5	2.5	8.5
ND	**3P**	253	180	195	345	185	146	173	251	60	6.4	162	64	–	6	65	166	60	81	32	19.5	2.5	11
	4P	313	240	195	345	185	146	173	251	60	6.4	162	64	–	6	65	166	60	81	32	19.5	2.5	11
QQD	**3P**	271	192	205	355	200	149	173	260	66	6.4	172	70	–	6	65	175	66	86	50	20	3	11
	4P	337	258	205	355	200	149	173	260	66	6.4	172	70	–	6	65	175	66	86	50	20	3	11

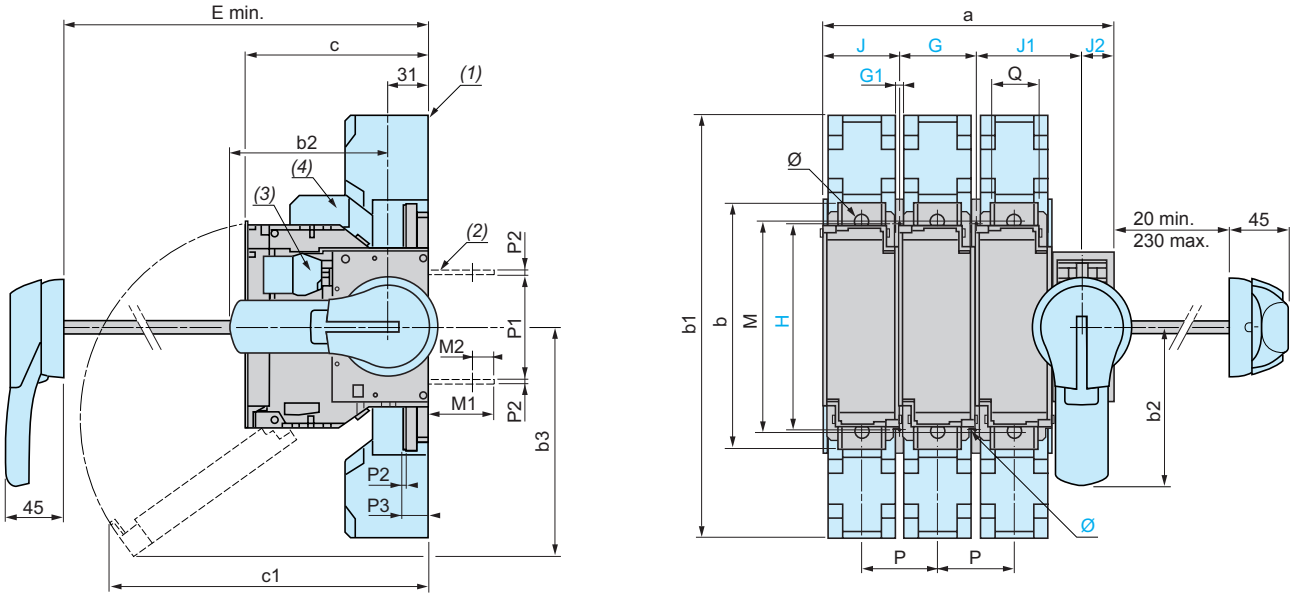
(1) Terminal cover.
(2) Mounting on ⊔ rail only for GS1 FD and GS1 GD (50 and 63 A).
(3) Protective screen, lockable in I position.
(4) 1 or 2 auxiliary contacts GS1 AF●●.
(5) 1 or 2 auxiliary contacts GS1 AM●.

GS2 ●● (32…400 A)

External front and right-hand side-mounted operator

GS2 DB (32 A), F (50 A), G, GB, JB (63 A), J (100 A), K, KK (125 A), L, LL, LB, LLB (160 A), MMB (200 A), N, NB (250 A), PPB (315 A), QQ and QQB (400 A)

DF538733.eps



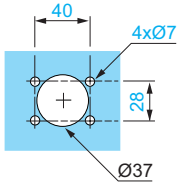
GS2		a	b	b1	b2	b3	c	c1	E min.	G	G1	H	J	J1	J2	Ø	M	M1	M2	P	P1	P2	P3	Q	Ø
F, DB	3P	121	118	–	70	85	87 (5)	153	100 (5)	27	5.4	106	31	45	18	5	–	15	6	27	59	2	–	12	–
	4P	148	118	–	70	85	87 (5)	153	100 (5)	27	5.4	106	31	45	18	5	–	15	6	27	59	2	–	12	–
G, GB	3P	136	118	–	70	159	116.5 (6)	145	125	32	5.4	106	36	50	18	5	–	15	6	32	59	2	–	12	–
	4P	168	118	–	70	159	116.5 (6)	145	125	32	5.4	106	36	50	18	5	–	15	6	32	59	2	–	12	–
J, JB, K	3P	148	162	268	125	141	116 (6)	187	135	36	5.4	127	40	54	18	5	141	41	8	36	62	2.5	19.5	20	8.5
	4P	184	162	268	125	141	116 (6)	187	135	36	5.4	127	40	54	18	5	141	41	8	36	62	2.5	19.5	20	8.5
KK, LL	3P	148	162	268	125	141	126.5 (6)	193	135	36	5.4	127	40	54	18	5	141	41	8	36	62	2.5	19.5	20	8.5
	4P	184	162	268	125	141	126.5 (6)	193	135	36	5.4	127	40	54	18	5	141	41	8	36	62	2.5	19.5	20	8.5
L, LB, LLB	3P	190	162	268	125	174	136.5	229	145	50	5.4	140	54	64	18	5	141	41	8	50	62	2.5	19.5	20	8.5
	4P	240	162	268	125	174	136.5	229	145	50	5.4	140	54	64	18	5	141	41	8	50	62	2.5	19.5	20	8.5
MMB, NB, N	3P	234	195	345	125	185	146	251	154	60	6.4	162	64	86	25	6	166	52	17	60	84	2.5	19.5	32	11
	4P	294	195	345	125	185	146	251	154	60	6.4	162	64	86	25	6	166	52	17	60	84	2.5	19.5	32	11
PPB, QQB, QQ	3P	252	205	355	125	200	149	260	157	66	6.4	172	70	91	25	6	175	54	14.5	66	84	3	20	50	11
	4P	318	205	355	125	200	149	260	157	66	6.4	172	70	91	25	6	175	54	14.5	66	84	3	20	50	11

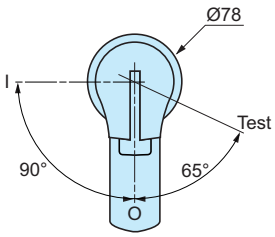
(1) Terminal cover.
(2) Rear access connector plates (option).
(3) 1 to 8 auxiliary contacts GS1 AM1●●.
(4) 1 or 2 auxiliary contacts GS1 AF●●.
(5) 1 auxiliary contact GS1 AM1●●: + 23.5 mm, 2 auxiliary contacts GS1 AM1●●: + 47 mm.
(6) 132 mm with 2 auxiliary contacts GS1 AM1●●.

Door cut-out

For external front-mounted operator

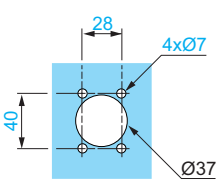
DF568742.eps

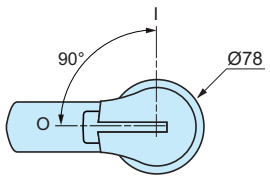




For external right-hand side-mounted operator

DF568743.eps





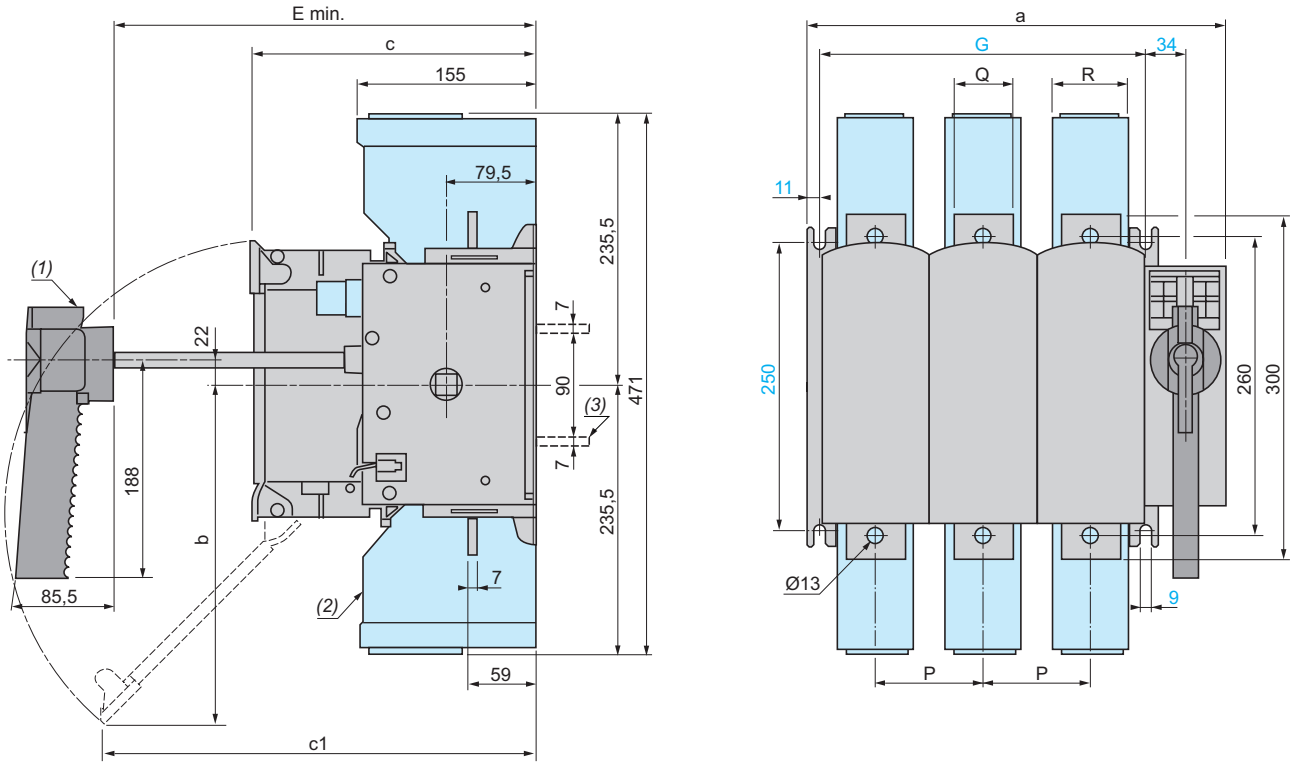
IEC switch-disconnector-fuses
GS2 ●● (630...1250 A)

GS2 ●● (630…1250 A)

Direct front-mounted operator

GS2 S, SB (630 A), TB (800 A), V and VB (1250 A)

DF568745.eps

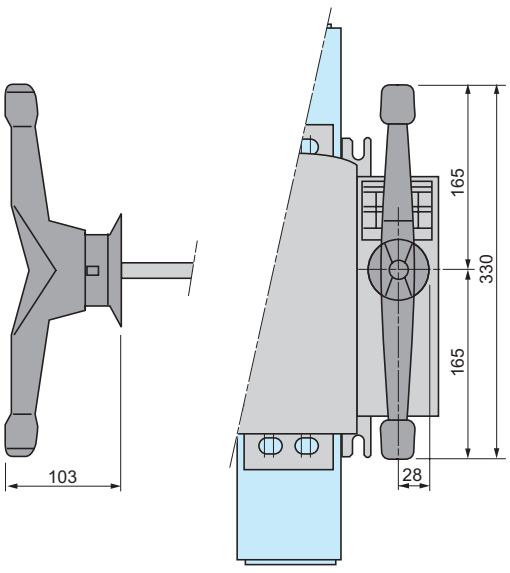


GS2		a	b	c	c1	E min.	G	P	Q	R
S, SB, TB	3P	364	300	250	380	265	284	94	51	65
	4P	458	300	250	380	265	378	94	51	65
V, VB	3P	442	355	289	295	304	362	120	77	88
	4P	562	355	289	295	304	482	120	77	88

(1) Handle GS2 AH104 for GS2S, GS2 SB and GS2 TB.
(2) Terminal cover.
(3) Rear access connector plates (GS2 V and GS2 VB).

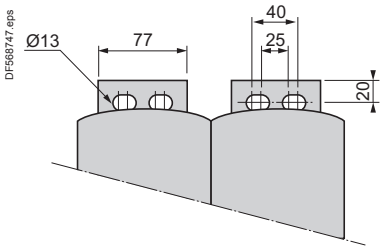
Handle GS2 AH105 for GS2 V and GS2 VB (direct front-mounted operator)

DF568746.eps



Connector plates for GS2 V and GS2 VB

DF568747.eps

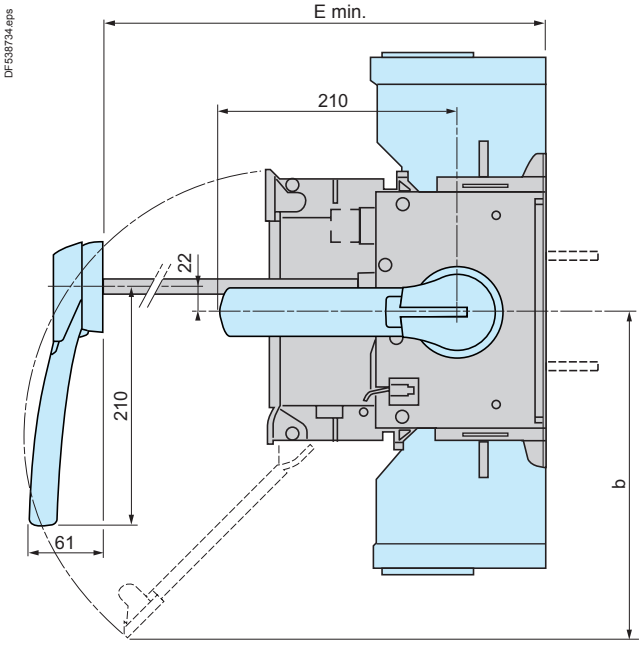


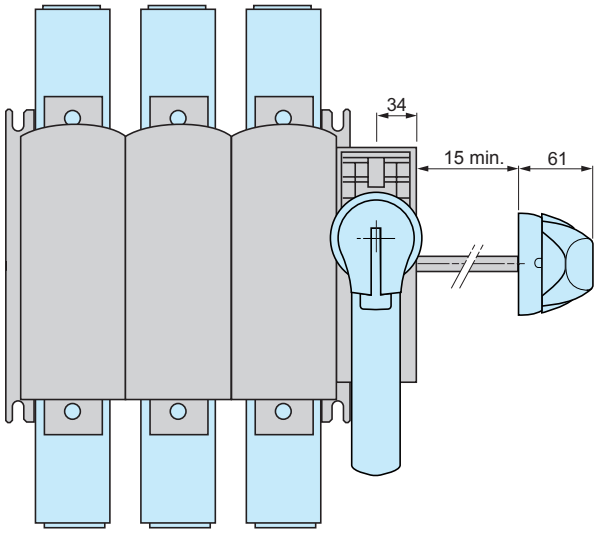
TeSys GS

GS2 ●● (630…1250 A)

External front and right-hand side-mounted operator

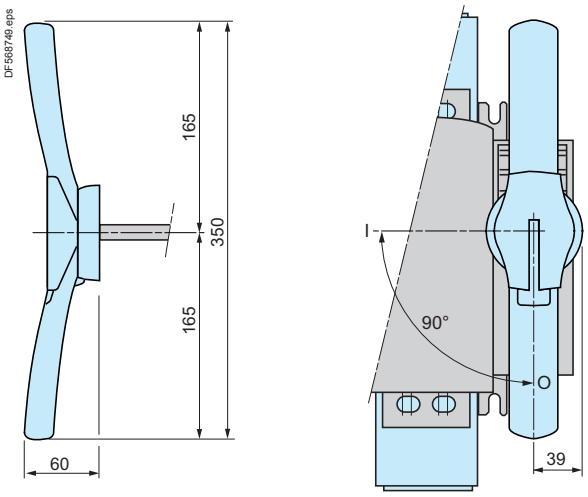
GS2 S, SB (630 A), TB (800 A), V and VB (1250 A)





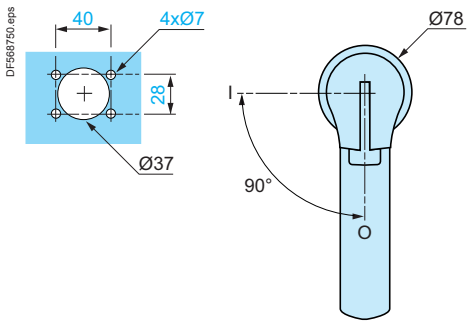
GS2		b	E min.
S, SB, TB	3P	297	265
	4P	297	265
V, VB	3P	350	304
	4P	350	304

Handle GS2 AH570 or GS2 AH580 for GS2 V and GS2 VB (external front-mounted operator)

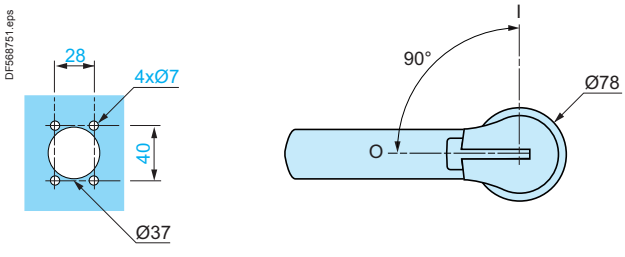


Door cut-out

For external front-mounted operator



For external right-hand side-mounted operator



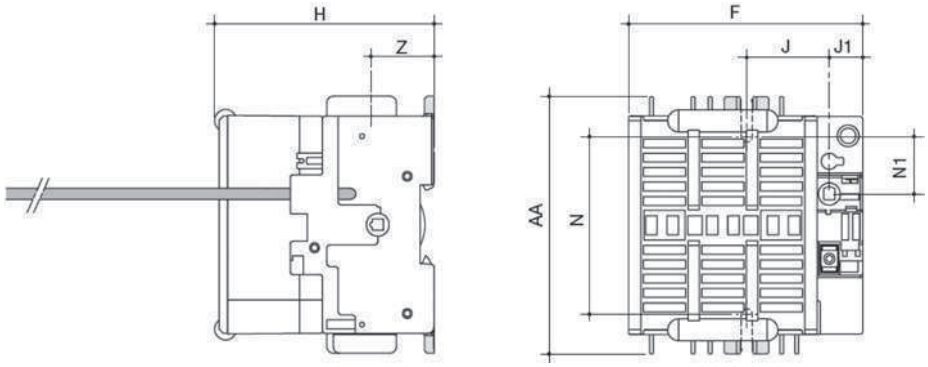
UL, CSA, IEC switch-disconnector-fuses

GS1 ●● and GS2 ●● (30 and 60 A)

Switch-disconnectors-fuses, 30 and 60 A

GS1DU3 (30 A) class CC fuses, GS1DDU3 (30 A) class J fuses

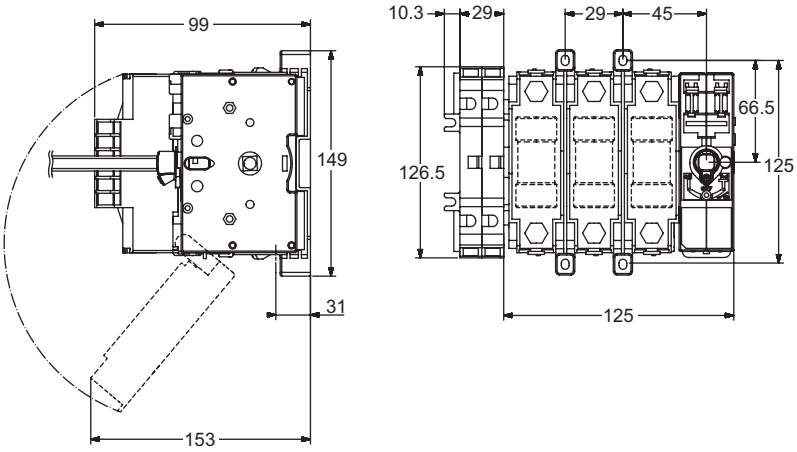
DB417416.eps



Rating	F	H	J	J1	N	N1	AA	Z
30 / CC	96	83.5	37.5	15	79.5	25.5	116	28.5
30 / J	105	99	37.5	15	79.5	25.5	116	28.5

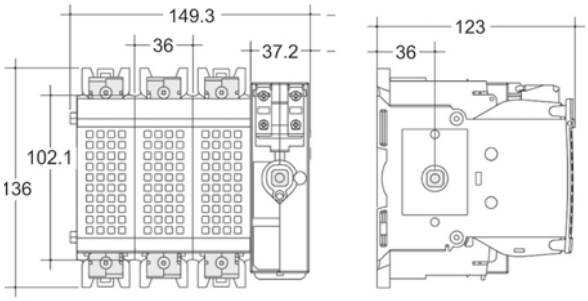
GS2EEU3 (30 A) class CC fuses

DB417417.eps



GS2EU3N, GS2GU3N (60 A) class J fuses

DB417418.eps

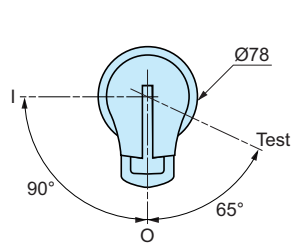


Accessories

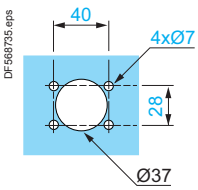
Handle for 30 and 60 A switch-disconnector-fuses

External front handle | **Door cut-out** | **External side handle** | **Door cut-out**

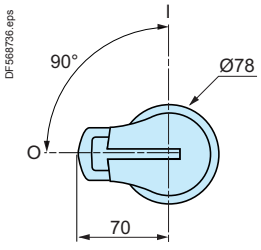
DF568732.eps



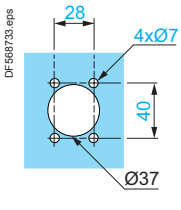
DF568735.eps



DF568736.eps



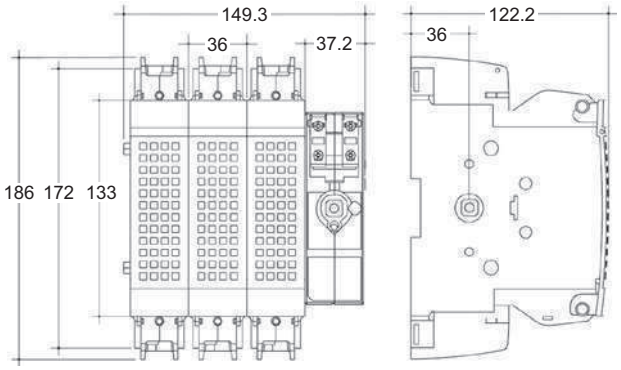
DF568733.eps



Switch-disconnectors, 100 to 400 A

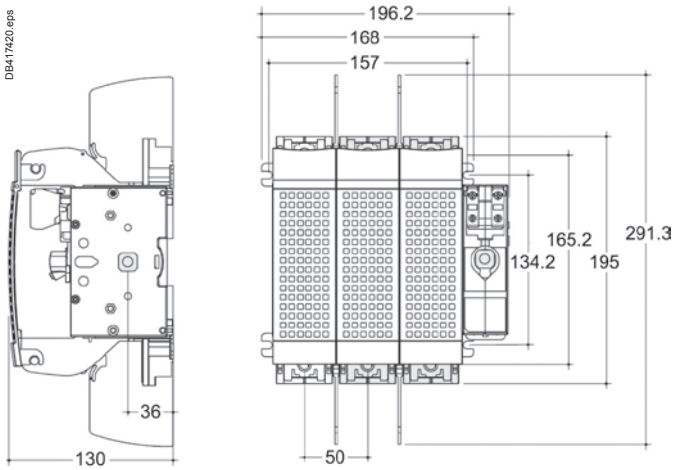
GS2JU3N (100 A) class J fuses

DB417419.eps



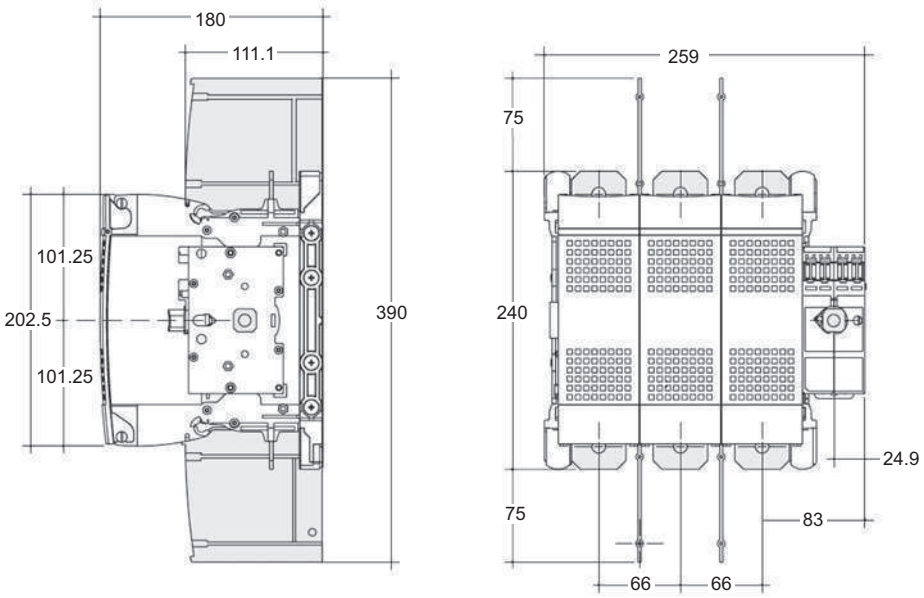
GS2MU3N (200 A) class J fuses

DB417420.eps



GS2QU3N (400 A) class CC fuses

DB417421.eps

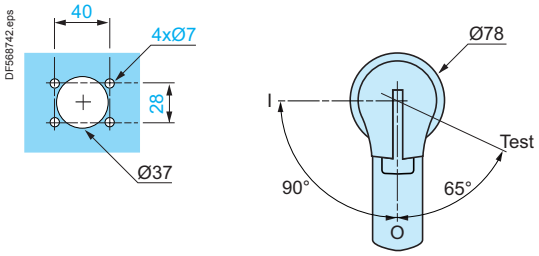


Accessories

Handle for 100, 200 and 400 A switch-disconnector-fuses

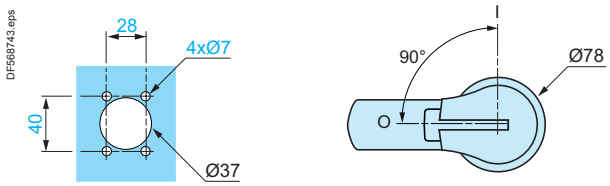
For external front-mounted operator

DF568742.eps



For external right-hand side-mounted operator

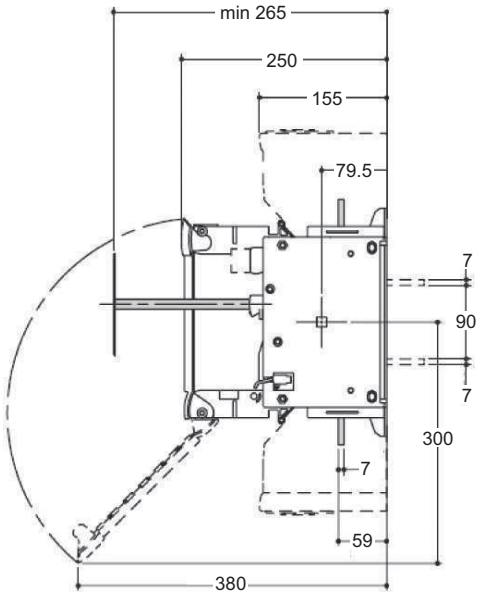
DF568743.eps

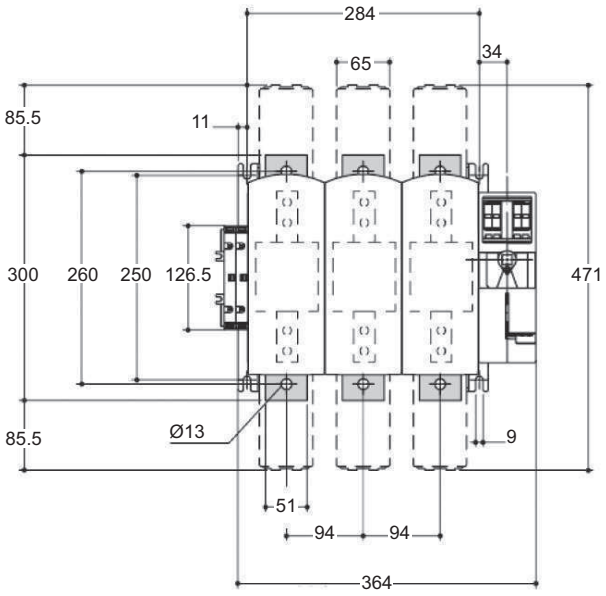


UL, CSA, IEC switch-disconnector-fuses
GS2 ●● (600 and 800 A)

Switch-disconnectors, 600 and 800 A
GS2SU3 (600 A), GS2TU3 (800 A) class J fuses

DB417422.eps

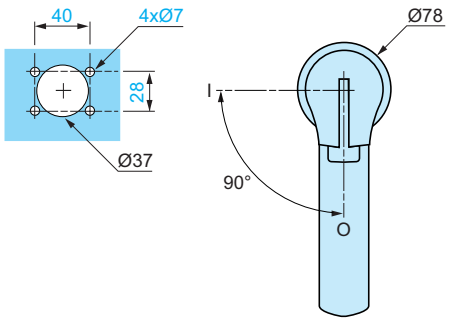




Accessories
Handle for 600 and 800 A switch-disconnector-fuses

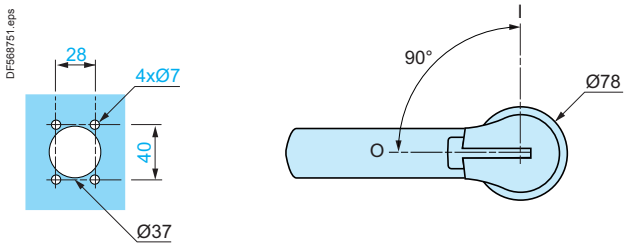
For external front-mounted operator

DF568750.eps



For external right-hand side-mounted operator

DF568751.eps



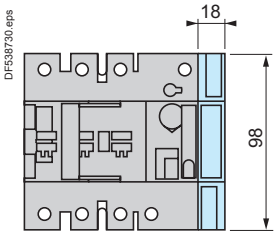
Auxiliary contacts

From 32 to 1250 A

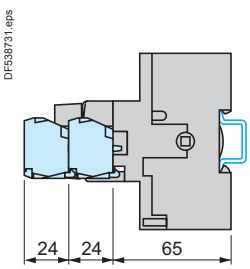
TeSys GS

Auxiliary contacts

GS1 AM111, GS1 AM211



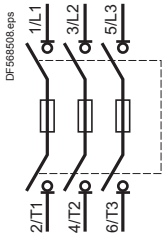
GS1 AM110, GS1 AM101



Schemes

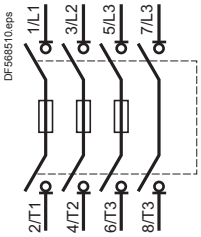
3-pole GS

32 to 1250 A

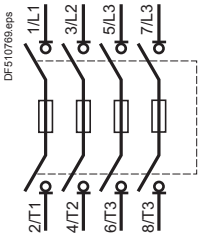


4-pole GS

32 A



50 to 1250 A



Auxiliary contacts

GS1 AM110

1 N/O



GS1 AM101

1 N/C



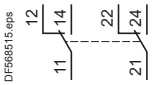
GS1 AM111 and GS1 AM1

1 C/O



GS1 AM211 and GS1 AM2

2 C/O

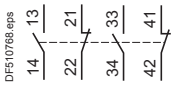


GS1 AN●●

1 N/C + 1 N/O



2 N/C + 2 N/O



GS1 AF●

1 C/O



2 C/O

