

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



PE121282.eps

VCDN20

Switch-disconnectors



FB121283.eps

VCCDN20



PE119284.eps

VBDN20



TeSys Mini-Vario Switch-disconnectors for standard applications

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

Main and Emergency stop switch-disconnectors for door mounting

Operator	Front plate	Fixing	Ith	Reference
Handle	mm	mm	A	
Red, padlockable with up to 3 padlocks ($\varnothing 4$ to $\varnothing 8$)	Yellow 60 x 60	$\varnothing 22.5$	12	VCDN12
			20	VCDN20

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

Operator	Front plate	Fixing	Ith	Reference
Handle	mm	mm	A	
Red, padlockable with up to 3 padlocks ($\varnothing 4$ to $\varnothing 8$)	Yellow 60 x 60	$\varnothing 22.5$	12	VCCDN12
			20	VCCDN20

Main switch-disconnectors for door mounting

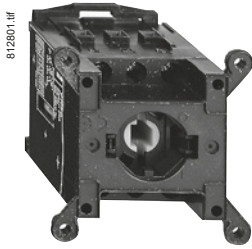
Operator	Front plate	Fixing	Ith	Reference
Handle	mm	mm	A	
Black, padlockable with up to 3 padlocks ($\varnothing 4$ to $\varnothing 8$)	Black 60 x 60	$\varnothing 22.5$	12	VBDN12
			20	VBDN20

⁽¹⁾ Switches supplied with a shaft extension VZN17 and a door interlock plate KZ32 (see page B3/5).

TeSys

TeSys Mini-Vario Switch-disconnectors

Product references



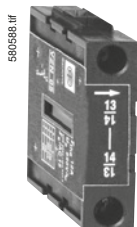
VN20



VZN11



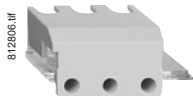
VZN14



VZN05



VZN26



VZN08

TeSys Mini-Vario Switch-disconnectors for standard applications

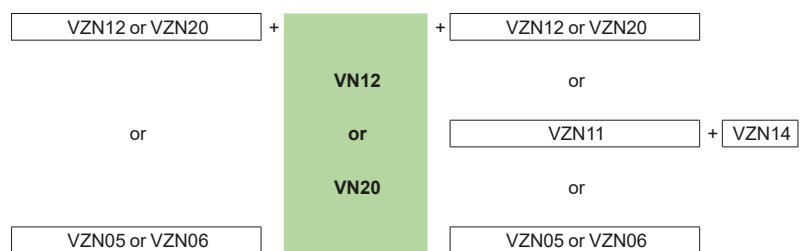
Switch bodies

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

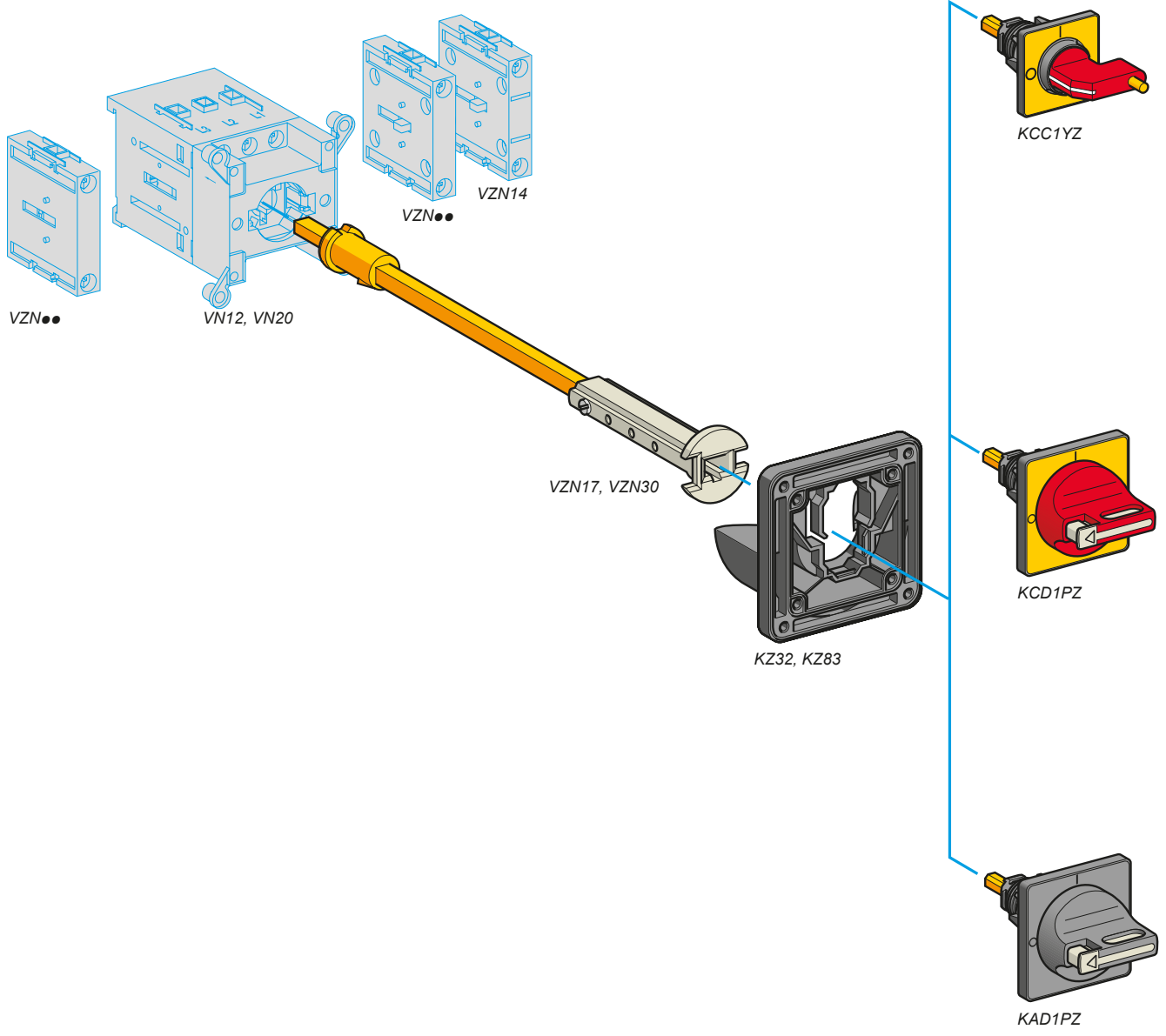
Maximum number of add-on modules that can be fitted on a switch body




Switch-disconnectors



Switch-disconnectors



TeSys Mini-Vario Switch-disconnectors for standard applications

- 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 chapter A1.

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 mm	Distance enclosure back/door mm	Sold in lots of	Unit reference
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



TeSys Vario Switch-disconnectors for high performance applications

- 3-pole rotary switch-disconnectors, 12 to 175 A
- Marking on operator $\text{O} \downarrow$
- Padlockable operating handle (padlocks not supplied).
- Degree of protection IP 65.

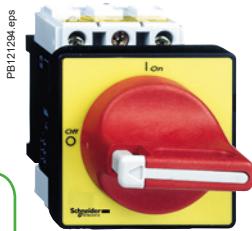
Main and Emergency stop switch-disconnectors for door mounting

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 VZN17 or VZ18 and a door interlock plate KZ32 or KZ74 (see page B3/14).



VCF0

Switch-disconnectors




VCF5



VCCF0

TeSys Vario Switch-disconnectors for high performance applications

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



VBD01



VBF4



VVE1

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
Black, long, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 90 x 90	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
Black, 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	Fixing	Rating A	Reference	Weight kg
Red, padlockable with 1 padlock (Ø4 to Ø6)	Yellow 45 x 45	4 screws	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

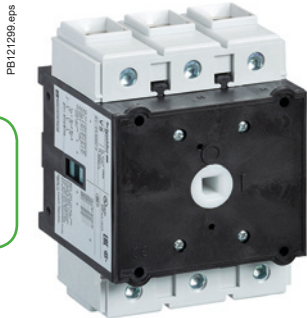
Handle	Front plate mm	Fixing	Rating A	Reference	Weight kg
Black, not padlockable	Black 45 x 45	4 screws	25	VVD0	0.250
			32	VVD1	0.250
			40	VVD2	0.250
			63	VVD3	0.560
			80	VVD4	0.560



TeSys Vario Switch-disconnectors for high performance applications

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



V5

Switch-disconnectors



VZ0



VZ11



VZ15



VZ20

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

TeSys Vario Switch-disconnectors for high performance applications

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

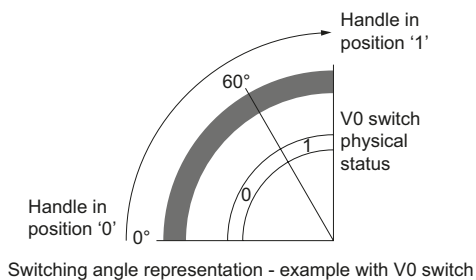
VZ7 or VZ20	+	V0●	+	VZ7 or VZ20	VZ7	+	VZ7
or				or	or		or
VZ11 or VZ12	+	V0	+	VZ11 or VZ12	VZ20	+	VZ20
or				or	or		or
VZ14 or VZ15	+		+	VZ14 or VZ15	VZ13	+	VZ13
or				or	or		or
VZ0●/VZ0 to VZ4	+		+	VZ0●/VZ0 to VZ4	VZ16	+	VZ16

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

VZ0●	+	VZ0●	+	V0●	+	VZ0●	+	VZ7	or	VZ20	or	VZ11	or	VZ14
VZ0	+	VZ0	+	V0	+	VZ0	+	VZ7	or	VZ20	or	VZ11	or	VZ14
VZ1	+	VZ1	+	V1	+	VZ1	+	VZ7	or	VZ20	or	VZ11	or	VZ14
VZ2	+	VZ2	+	V2	+	VZ2	+	VZ7	or	VZ20	or	VZ11	or	VZ14
VZ3	+	VZ3	+	V3	+	VZ3	+	VZ7	or	VZ20	or	VZ12	or	VZ15
VZ4	+	VZ4	+	V4	+	VZ4	+	VZ7	or	VZ20	or	VZ12	or	VZ15

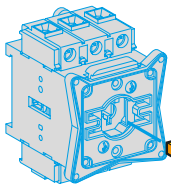
Note: The add-on modules mounted next to the switch body are main pole modules. Maximum of 3 main pole modules per switch body.

Auxiliary switch switching angles



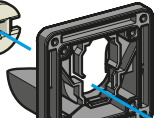
		0: contact open 1: contact close			
		Handle travel 0 > 1			
		0°	30°	60°	90°
3-pole switch-disconnectors				60°	
V02 / V01 / V0 / V1 / V2 / V3 / V4 / V5 / V6			0	1	
Main pole modules				60°	
VZ02 / VZ01 / VZ0 / VZ1 / VZ2 / VZ3 / VZ4			0	1	
Neutral pole modules with early make and late break contacts				45°	
VZ11 / VZ12 / VZ13			0	1	
Auxiliary contact block modules with 2 auxiliary contacts (N/0+N/C) VZ7					75°
N/0			0		1
N/C		1		0	
					20°
Auxiliary contact block modules with 2 auxiliary contacts (N/0+N/C) VZ20				60°	
			0	1	
			0	1	
				60°	

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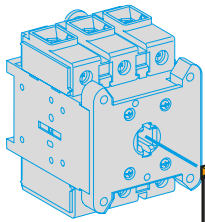


VN12, VN20
V02...V2

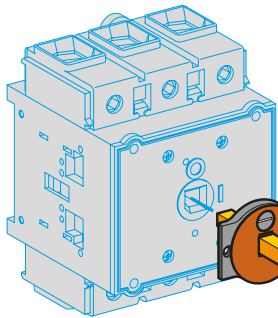
VZN17, VZN30



KZ32, KZ83

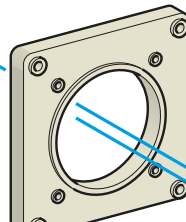


V3, V4



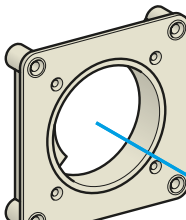
V5, V6

VZ18, VZ31

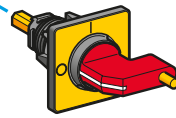


KZ81

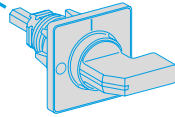
VZ18, VZ31



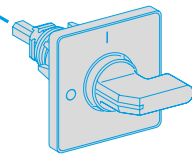
KZ74



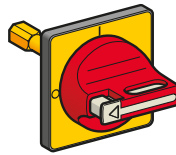
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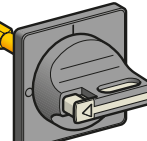
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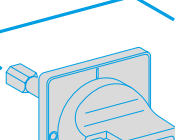
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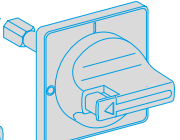
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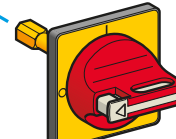
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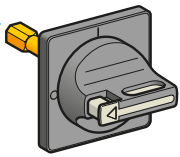
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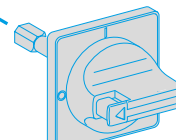
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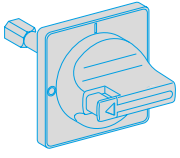
KCF2PZ



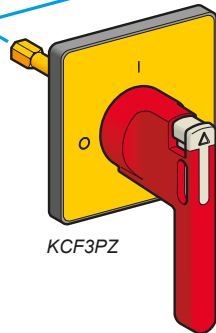
KAF2PZ



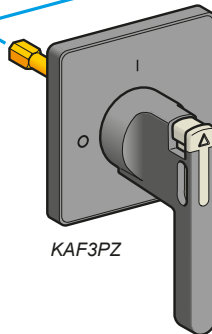
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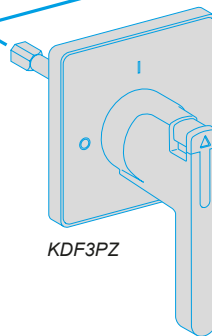
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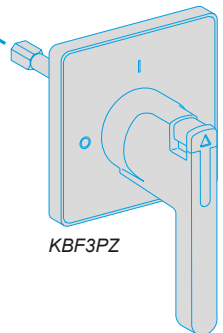
KCF3PZ



KAF3PZ



KDF3PZ



KBF3PZ

Switch-disconnectors

- Marking on operator $\circ \downarrow$.
- 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 Handle	Front plate		Reference
		Dimensions	Fixing	
		mm		
VN12, VN20 V02...V2	Red, padlockable with 1 padlock (Ø4 to Ø6)	Yellow	Ø22.5	KCC1YZ
		45 x 45	4 screws	KCE1YZ
	Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow	Ø22.5	KCD1PZ
		60 x 60	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

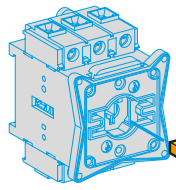
For switch body	Operator Handle	Front plate		Reference
		Dimensions	Fixing	
		mm		
VN12, VN20 V02...V2	Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black	Ø22.5	KAD1PZ
		60 x 60	4 screws	KAF1PZ
V3 and V4	Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 60 x 60	4 screws	KAF2PZ
V5 and V6	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 **KZ106** must be ordered separately (see page B3/14).

Switch-disconnectors

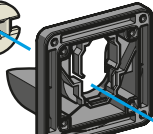


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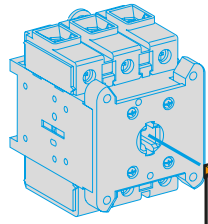


VN12, VN20
V02...V2

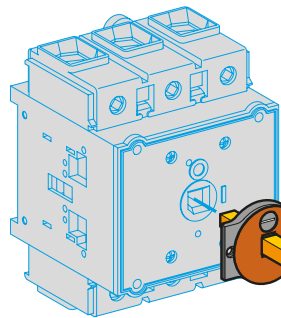
VZN17, VZN30



KZ32, KZ83

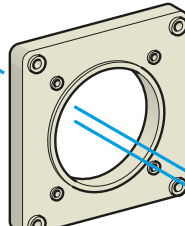


V3, V4



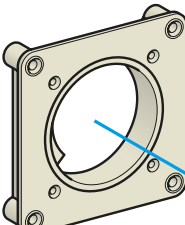
V5, V6

VZ18, VZ31



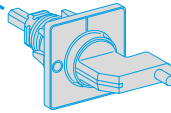
KZ81

VZ18, VZ31



KZ74

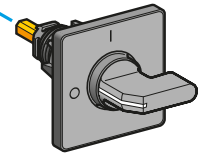
Switch-disconnectors



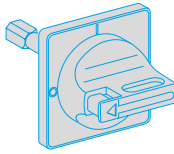
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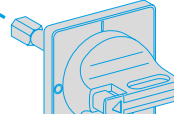
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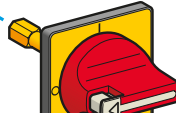
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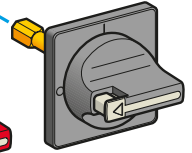
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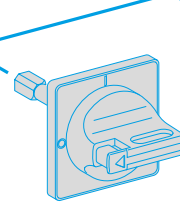
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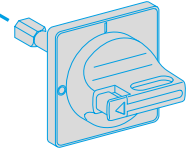
KD•1PZ



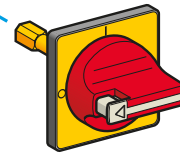
KB•1PZ



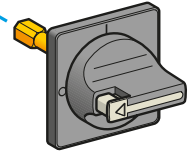
KCF2PZ



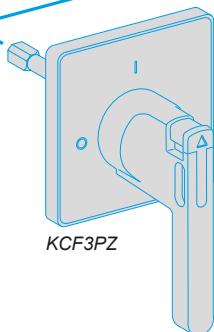
KAF2PZ



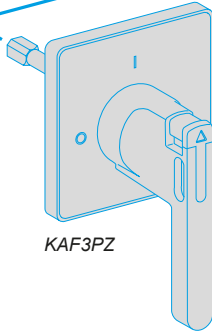
KDF2PZ



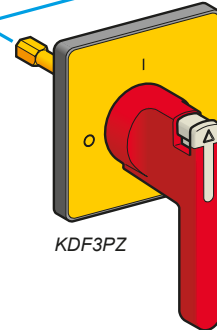
KBF2PZ



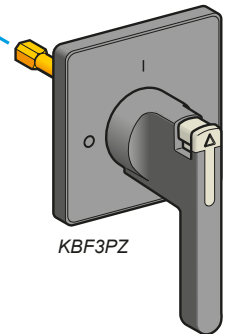
KCF3PZ



KAF3PZ



KDF3PZ



KBF3PZ

- Marking on operator $\circ \downarrow$.
- Degree of protection IP 65.

Handles and front plates for Emergency stop switch-disconnectors

For switch body	Operator Handle	Front plate		Reference
		Dimensions	Fixing	
		mm		
VN12, VN20 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 Handle	Front plate		Reference
		Dimensions	Fixing	
		mm		
VN12, VN20 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 **KZ106** must be ordered separately (see next page).



TeSys

TeSys Mini-Vario and Vario accessories

Product references



VZ8



VZ26



VZ29

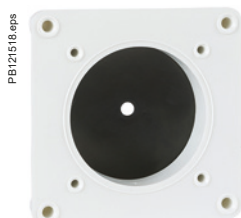
Switch-disconnectors



VZ31



KZ32



KZ81

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)	VZ02...VZ2, VZ11, VZ14	VZ26
	VZ3, VZ4, VZ12, VZ15	VZ27
	VZ13, VZ16	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 mm	Sold in lots of	Unit reference
Shaft extensions	VN12, VN20 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	VN12, VN20 V02...V2	–	5	KZ32
	V3...V6	–	5	KZ74

Description	For use on	Front plate dimensions mm	Sold in lots of	Unit reference
Plates for door mounting of handles with 4 screw fixing	VN12, VN20 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.

TeSys

TeSys Mini-Vario and Vario accessories

Product references

PB121519.eps



KZ15

PB121520.eps



KZ67

PB121521.eps



Z01

Accessories for operators

Description	For use on	Front plate dimensions mm	Sold in lots of	Unit reference	
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	KZ14	–	20	KZ76	
	KZ16	–	10	KZ77	
	KZ101	–	5	KZ100	
Seals	VN12, VN20	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	

Switch-disconnectors



Technical Data for Designers

Contents

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Mini-Vario:

> Dimensions B3/22 to B3/23

> Schemes B3/23

Vario:

> Dimensions B3/24 to B3/25

> Schemes B3/25

TeSys

TeSys Mini-Vario, Vario Switch-disconnectors

Characteristics

Characteristics

Environment

Switch type (bare type)	VN12 VZN12	V02 VZ02	VN20 VZN20	V01 VZ01	V0	VZ0	VVD0 VVE0	V1	VZ1	VVD1 VVE1
Conforming to standards	IEC/EN 60947-3 and UL/CSA 60947-4-1									
Product certifications	UL, CSA	UL, CSA, DNV-GL, CCC, IEC	UL, CSA	UL, CSA, DNV-GL, IEC, EAC, CCC ⁽¹⁾						
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 60695-2-11									
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)	VN12 VZN12	V02 VZ02	VN20 VZN20	V01 VZ01	V0	VZ0	VVD0 VVE0	V1	VZ1	VVD1 VVE1		
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					
Power dissipation per pole for the above operational currents	AC-23A		W -		1.25		2					
	AC-21A		W -		3.2		5					
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					
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				

(1) CCC: except for VVD, VVE switches.

References:
page B3/3

Dimensions:
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Schemes:
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B3/18

Life Is On

Schneider
Electric

Switch-
disconnectors

Ref.



V2 VZ2	VVD2 VVE2	V3 VZ3	VVD3 VVE3	V4 VZ4	VVD4 VVE4	V5	V6	VZ7 VZ20	VZN05 VZN06
IEC/EN 60947-3 and UL/CSA 60947-4-1								IEC/EN 60947-5-1, UL/CSA 60947-5-1	

UL, CSA, DNV-GL, IEC, EAC, CCC ⁽¹⁾

IP 20 conforming to IEC 60529

-20...+50

960 conforming to IEC 60695-2-11

30

-

1

-

V2 VZ2	VVD2 VVE2	V3 VZ3	VVD3 VVE3	V4 VZ4	VVD4 VVE4	V5	V6	VZ7 VZ20	VZN05 VZN06
690									

8

6

40	63	80	125	175	12	12
32	50	63	100	140	10	10
2.4	4.2	5.1	7.5	11	-	-
5.4	6.4	12.5	15	25	-	-
40	63	80	125	160	le/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	16

(1) CCC: except for VVD, VVE switches.

References:
page B3/3

Dimensions:
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Switch-
disconnectors

Ref.



Characteristics

Electrical characteristics, d.c. operation

Switch type (bare type)				VN12 VZN12	V02 VZ02	VN20 VZN20	V01 VZ01	V0 VZ0	VVD0 VVE0	V1 VZ1	VVD1 VVE1	
	Rated operational current DC-1 (L/R = 1ms)	24 V	1 contact	A	12			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		
Ref. 	Rated operational current DC-2 to DC-5 (L/R = 1ms)	24 V	1 contact	A	12			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)				VN12 VZN12	V02 VZ02	VN20 VZN20	V01 VZ01	V0 VZ0	VVD0 VVE0	V1 VZ1	VVD1 VVE1
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	mm ²	4	6	4	6					
	Solid cable	mm ²	4	10	4	10					
Tightening torque		N.m	0.7	2.1	0.7	2.1					

V2 VZ2	VVD2 VVE2	V3 VZ3	VVD3 VVE3	V4 VZ4	VVD4 VVE4	V5	V6	VZ7 VZ20	VZN05 VZN06
40		63		80		125	175	8 (le/DC-1)	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	8 (le/DC-1)	
40		63		80		125	175	–	
40		63		80		125	175	–	
35		40		50		60	70	4 (le/DC-1)	
40		63		80		125	175	–	
40		63		80		125	175	–	
12		20		25		30	37	2 (le/DC-1)	
20		63		80		125	175	–	
40		63		80		125	175	–	
4		6		8		12	15	1 (le/DC-1)	
14		25		30		40	50	–	
25		30		40		80	100	–	
2		4		5		3	10	0.8 (le/DC-1)	
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 VZ2	VVD2 VVE2	V3 VZ3	VVD3 VVE3	V4 VZ4	VVD4 VVE4	V5	V6	VZ7 VZ20	VZN05 VZN06
0.1		0.03						0.1	0.05
0.1		0.03						0.1 (AC-15)	0.05
30000								30000 (DC-1)	
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	

Switch-
disconnectors

Ref.



TeSys

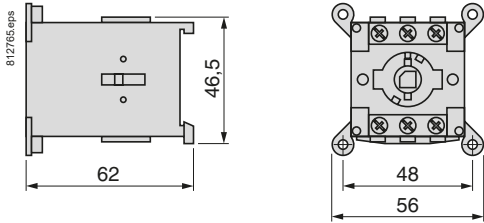
TeSys Mini-Vario Switch-disconnectors

Dimensions, mounting

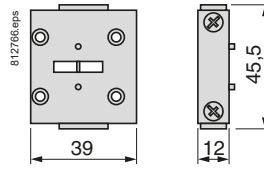
Dimensions

Switch-disconnectors

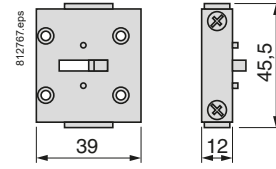
Switch bodies VN12, VN20



Add-on modules VZN12, VZN20



Add-on modules VZN11, VZN14 VZN05 and VZN06



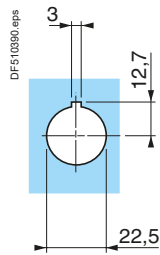
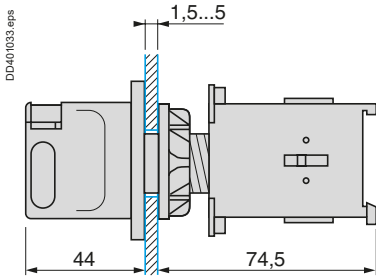
Switch-disconnectors

Mounting

Switch-disconnector mounted on enclosure door

VCDN12, VCDN20, VBDN12, VBDN20

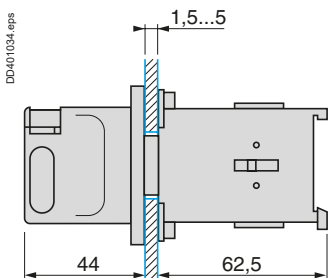
Single hole fixing



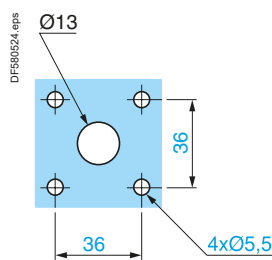
Ref.



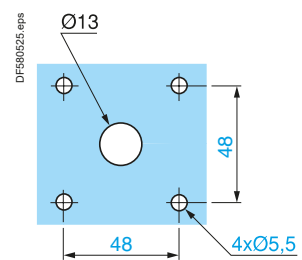
VN12, VN20
4 screw fixing



45 x 45 front plate



60 x 60 front plate



TeSys

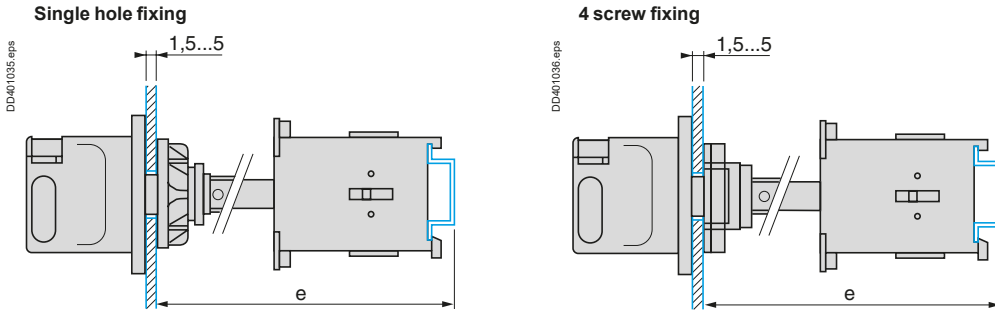
TeSys Mini-Vario Switch-disconnectors

Mounting, schemes

Mounting (continued)

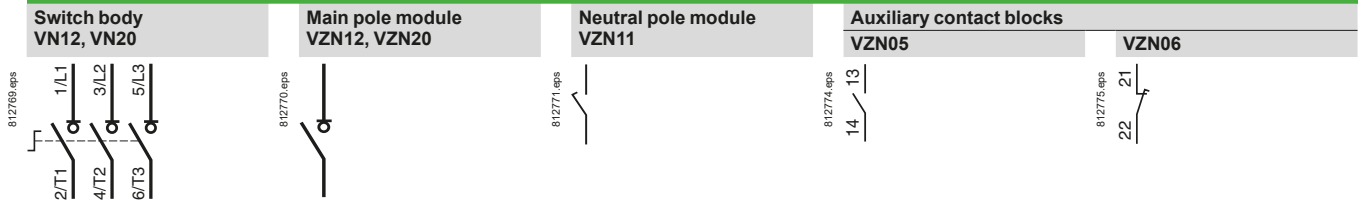
Switch-disconnector mounted at back of enclosure with shaft extension VZN17 or VZN30 (clip-on mounting on L rail)

VN12, VN20



	Shaft extension	Distance (e) enclosure back/door mm
VN12, VN20	VZN17	300...330
	VZN30	400...430

Schemes



Switch-disconnectors

Ref.



TeSys

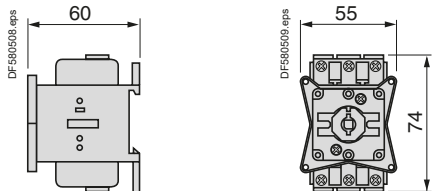
TeSys Vario Switch-disconnectors

Dimensions, mounting

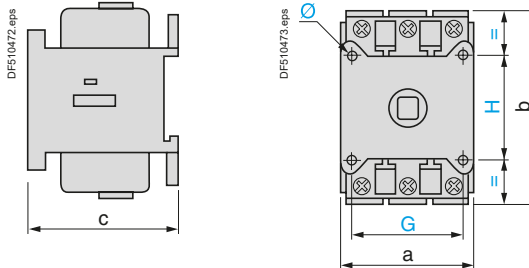
Dimensions

Switch-disconnectors

Switch bodies V0 \bullet , V0 to V2

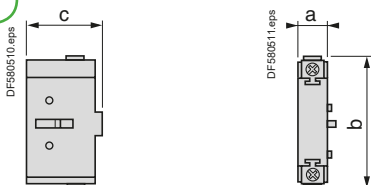


Switch bodies V3 to V6

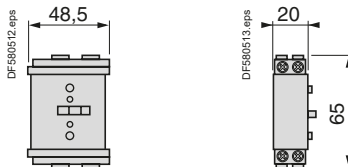


	a	b	c	G	H	Ø
V3, V4	60	83	65	48	48	5.5
V5, V6	90	125	90	68	68	5.5

Add-on modules VZ02 to VZ4 and VZ11 to VZ16



Add-on modules VZ7, VZ20



Switch-disconnectors

Ref.

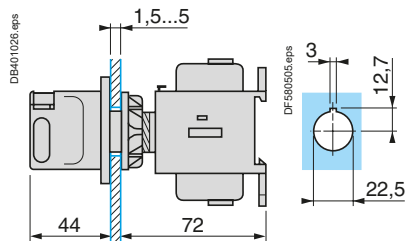


	a	b	c
VZ02 and VZ01, VZ0 to VZ2, VZ11, VZ14	16	74	35
VZ3, VZ4, VZ12, VZ15	20	83	46
VZ13, VZ16	30	125	63

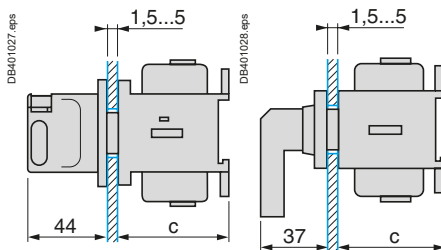
Mounting

Switch-disconnector mounted on enclosure door

Single hole fixing V0 \bullet , V0 to V2

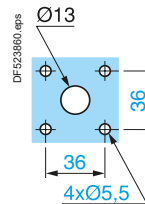


4 screw fixing V0 \bullet , V0 to V4

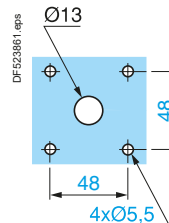


	c
V0 \bullet , V0 to V2	60
V3, V4	65

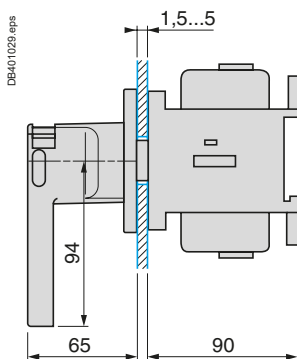
4 screw fixing 45 x 45 front plate V0 \bullet , V0 to V2



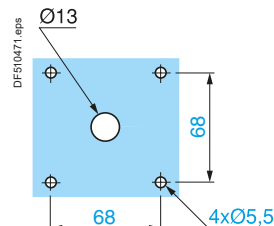
4 screw fixing 60 x 60 front plate V0 \bullet , V0 to V4



V5 and V6. 4 screw fixing



90 x 90 front plate



TeSys

TeSys Vario Switch-disconnectors

Mounting, schemes

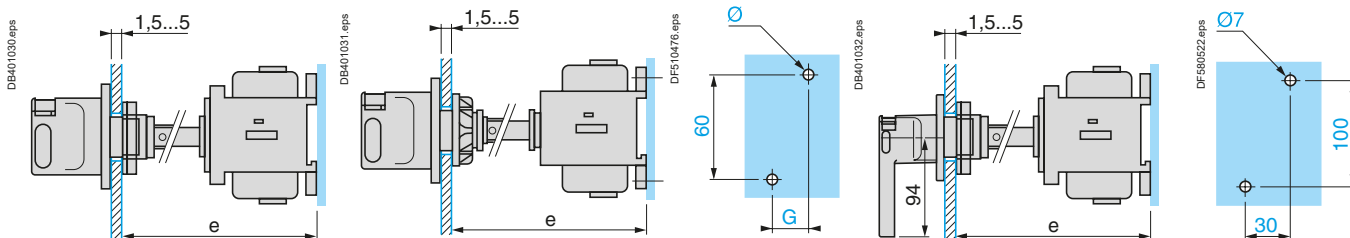
Mounting (continued)

Switch-disconnector mounted at back of enclosure

4 screw fixing
V0 \bullet , V0 to V2 with shaft extension VZ17 or VZ30 (clip-on mounting on \perp rail possible for V0 \bullet to V2)

Single hole fixing
V3 to V4 with shaft extension VZ18 or VZ31

V5 and V6 with shaft extension VZ18 or VZ31



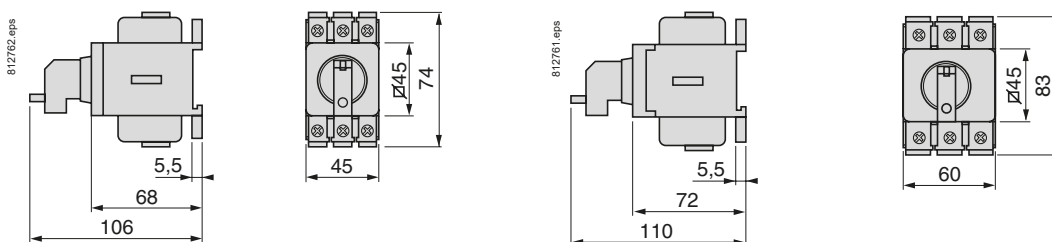
	Shaft extension	Distance (e) enc.back/door mm	Ø	G
V02 and V01 V0 to V2	VZ17	300...330	2 x 4.2	15
	VZ30	400...430	2 x 4.2	15
V3 and V4	VZ18	300...320	2 x 5	20
	VZ31	400...420	2 x 5	20

	Shaft extension	Distance (e) enc.back/door mm
V5 and V6	VZ18	300...350
	VZ31	430...450

Switch-disconnectors for modular distribution boards

VV \bullet 0 to VV \bullet 2

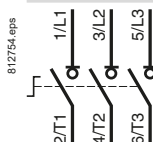
VV \bullet 3 to VV \bullet 4



Schemes

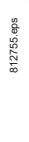
Switch body

V02 and V01
V0 to V6



Main pole module

VZ02 and VZ01
VZ0 to VZ4



Neutral pole module

VZ11 to VZ13



Auxiliary contact blocks

VZ7



VZ20



