

NEW Fuse-switch disconnecter

Fuse-switch disconnectors for cylindrical fuse-links

Advantages of cylindrical fuse-switch disconnecter EFD

→ Compliance with IEC 60947-1, IEC 60947-3, UL 4248-1, UL 4248-4, UL 4248-8 and UL 486E



→ More space for finger to open fuse carrier



→ Mounting on standard DIN 35 mm rail (DIN EN60715). The sizes 22x58 can be also fixed with screws on a flat base



→ All contact surfaces are silver plated



→ Complete protection against touch according to IP20

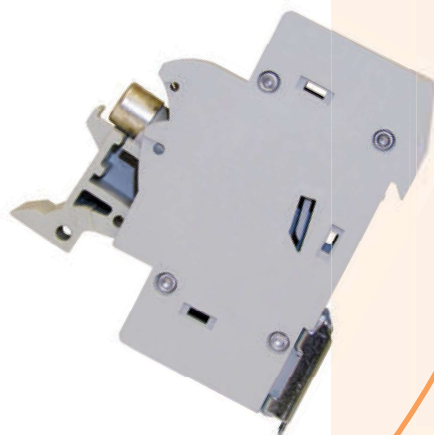
→ Changing of a fuse-link without danger of direct touch of parts under voltage



→ Possibility of sealing in ON or OFF positions



→ All plastic parts are made of material resistant to extremely high temperatures. Fuse carrier assures that a fuse link is not in touch with a housing



→ For all sizes a **version with electronic indicator** is available. There are two technical types of indicator:

- **L (LED)** with built-in LED diode which blinks after the fuse-link operates. The indicator is capable of operating in conditions of open circuit with minimum capacitance between connection cables. Operating voltage range from 50V to 690V.

- **I (NEON)** with neon lamp which is constantly lit after the fuse-link operates. The operational voltage range from 100V to 750V a.c.



→ Modular design – it is possible to assemble multi-pole versions at the building site for EFD 8, EFD 10, EFD 14 and EFD 22

Fuse-switch disconnectors for cylindrical fuse-links

Fuse-switch disconnecter EFD 8

Rated current
max. 20 ARated operational voltage
400 VUtilization category
AC 22BFor fuse-links size
8x32

1-pole

U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Adapter	Weight [g]	Packaging [pcs]
400	20	002520001	-		63	12/108
		002520011	L-LED		64	
		002520021	I-NEON		64	
		002520301	-	✓	68	
		002520311	L-LED	✓	69	
		002520321	I-NEON	✓	69	

1-pole + N

U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Adapter	Weight [g]	Packaging [pcs]
400	20	002520002	-		128	6/54
		002520012	L-LED		129	
		002520022	I-NEON		129	
		002520302	-	✓	138	
		002520312	L-LED	✓	139	
		002520322	I-NEON	✓	139	
		*002520007	-		128	
		*002520017	L-LED		129	
		*002520027	I-NEON		129	
		*002520307	-	✓	138	
		*002520317	L-LED	✓	139	
		*002520327	I-NEON	✓	139	

*N pole on left "French version"

2-pole

U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Adapter	Weight [g]	Packaging [pcs]
400	20	002520003	-		123	6/54
		002520013	L-LED		125	
		002520023	I-NEON		125	
		002520303	-	✓	134	
		002520313	L-LED	✓	135	
		002520323	I-NEON	✓	135	

3-pole

U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Adapter	Weight [g]	Packaging [pcs]
400	20	002520004	-		184	4/36
		002520014	L-LED		186	
		002520024	I-NEON		186	
		002520304	-	✓	200	
		002520314	L-LED	✓	201	
		002520324	I-NEON	✓	201	



**3-pole + N**

U_e/U_i [V]	I_{max} [A]	Code No.	Indica- tor	Adapter	Weight [g]	Packaging [pcs]
400	20	002520005	-		252	3/27
		002520015	L-LED		254	
		002520025	I-NEON		254	
		002520305	-	✓	273	
		002520315	L-LED	✓	274	
		002520325	I-NEON	✓	274	
		*002520008	-		252	
		*002520018	L-LED		254	
		*002520028	I-NEON		254	
		*002520308	-	✓	273	
		*002520318	L-LED	✓	274	
		*002520328	I-NEON	✓	274	

*N pole on left "French version"

Fuse-switch disconnector EFD 10Rated current
max. 32 ARated operational voltage
690 VUtilization category
AC 22BFor fuse-links size
10x38**1-pole**

U_e/U_i [V]	I_{max} [A]	Code No.	Indica- tor	Adapter	Weight [g]	Packaging [pcs]
690	32	002540001	-		63	12/108
		002540011	L-LED		64	
		002540021	I-NEON		64	
		002540301	-	✓	68	
		002540311	L-LED	✓	69	
		002540321	I-NEON	✓	69	

1-pole + N

U_e/U_i [V]	I_{max} [A]	Code No.	Indica- tor	Adapter	Weight [g]	Packaging [pcs]
400/690	32	002540002	-		128	6/54
		002540012	L-LED		129	
		002540022	I-NEON		129	
		002540302	-	✓	138	
		002540312	L-LED	✓	139	
		002540322	I-NEON	✓	139	
		*002540007	-		128	
		*002540017	L-LED		129	
		*002540027	I-NEON		129	
		*002540307	-	✓	138	
		*002540317	L-LED	✓	139	
		*002540327	I-NEON	✓	139	

*N pole on left "French version"

**2-pole**

U_e/U_i [V]	I_{max} [A]	Code No.	Indica- tor	Adapter	Weight [g]	Packaging [pcs]
690	32	002540003	-		123	6/54
		002540013	L-LED		125	
		002540023	I-NEON		125	
		002540303	-	✓	134	
		002540313	L-LED	✓	135	
		002540323	I-NEON	✓	135	

Fuse-switch disconnectors for cylindrical fuse-links

3-pole

U_e/U_i [V]	I_{max} [A]	Code No.	Indica- tor	Adapter	Weight [g]	Packaging [pcs]
690	32	002540004	-		184	4/36
		002540014	L-LED		186	
		002540024	I-NEON		186	
		002540304	-	✓	200	
		002540314	L-LED	✓	201	
		002540324	I-NEON	✓	201	

3-pole + N

U_e/U_i [V]	I_{max} [A]	Code No.	Indica- tor	Adapter	Weight [g]	Packaging [pcs]
690	32	002540005	-		252	3/27
		002540015	L-LED		254	
		002540025	I-NEON		254	
		002540305	-	✓	273	
		002540315	L-LED	✓	274	
		002540325	I-NEON	✓	274	
		*002540008	-		252	
		*002540018	L-LED		254	
		*002540028	I-NEON		254	
		*002540308	-	✓	273	
		*002540318	L-LED	✓	274	
		*002540328	I-NEON	✓	274	

* N pole on left "French version"



Fuse-switch disconnector EFD CC

Rated current
max. 30 ARated operational voltage
600 VFor fuse-links
Class CC acc to UL4248-4

1-pole

U_e/U_i [V]	I_{max} [A]	Code No.	Indica- tor	Adapter	Weight [g]	Packaging [pcs]
600	30	002540101	-		63	12/108
		002540111	L-LED		64	
		002540401	-	✓	68	
		002540411	L-LED	✓	69	

2-pole

U_e/U_i [V]	I_{max} [A]	Code No.	Indica- tor	Adapter	Weight [g]	Packaging [pcs]
600	30	002540103	-		123	6/54
		002540113	L-LED		125	
		002540403	-	✓	134	
		002540413	L-LED	✓	135	

3-pole

U_e/U_i [V]	I_{max} [A]	Code No.	Indica- tor	Adapter	Weight [g]	Packaging [pcs]
600	30	002540104	-		184	4/36
		002540114	L-LED		186	
		002540404	-	✓	199	
		002540414	L-LED	✓	201	



Fuse-switch disconnecter EFD 14

Rated current
max. 50 A

Rated operational voltage
690 V

Utilization category
AC 22B

For fuse-links size
14x51



1-pole					
U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
690	50	002560001	-	102	12/96
		002560011	L-LED	103	

1-pole + N					
U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
690	50	002560002	-	226	6/48
		002560012	L-LED	227	
		*002560007	-	226	
		*002560017	L-LED	227	

*N pole on left "French version"



2-pole					
U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
690	50	002560003	-	206	6/48
		002560013	L-LED	208	

3-pole					
U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
690	50	002560004	-	310	4/32
		002560014	L-LED	313	

3-pole + N					
U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
690	50	002560005	-	434	3/24
		002560015	L-LED	437	
		*002560008	-	434	
		*002560018	L-LED	437	

*N pole on left "French version"



Fuse-switch disconnecter EFD 22

Rated current
max. 100 A

Rated operational voltage
690 V

Utilization category
AC 21B

For fuse-links size
22x58

1-pole					
U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
690	100	002570001	-	156	3/105
		002570011	L-LED	158	

Fuse-switch disconnectors for cylindrical fuse-links

1-pole + N

U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
690	100	002570002	-	351	2/48
		002570012	L-LED	353	
		*002570007	-	351	
		*002570017	L-LED	353	

*N pole on left "French version"

2-pole

U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
690	100	002570003	-	317	2/48
		002570013	L-LED	321	

3-pole

U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
690	100	002570004	-	476	1/35
		002570014	L-LED	485	

3-pole + N

U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
690	100	002570005	-	671	1/24
		002570015	L-LED	677	
		*002570008	-	671	
		*002570018	L-LED	677	

*N pole on left "French version"



Fuse-switch disconnector EFD J30

Rated current
max. 30 ARated operational voltage
600 VFor fuse-links
Class J acc to UL4248-8**1-pole**

U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
600	30	002570101	-	156	3/105
		002570111	L-LED	158	

2-pole

U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
600	30	002570103	-	317	2/48
		002570113	L-LED	321	

3-pole

U_e/U_i [V]	I_{max} [A]	Code No.	Indicator	Weight [g]	Packaging [pcs]
600	30	002570104	-	476	1/35
		002570114	L-LED	485	



Accessories

**Auxiliary switch PS EFD**

U_n [V]	I_n [A]	Code No. EFD14	Code No. EFD22	Weight [g]	Packaging [pcs]	Contact
250	5	002569001	002579001	50	1/10	1 x make 1 x break

* Can be used with VLC 14 and VLC 22 Fuse-switch disconnectors

Auxiliary switch PS EFD is intended to be mounted with disconnectors EFD 14 and EFD 22 for all versions (1p, 2p, 1p+N, 3p, 3p+N). The width of apparatus is 9 mm, other dimensions comply with EFD 14 and EFD 22 series switches. Auxiliary switch PS EFD signals the operation of CH 14 or CH 22 fuse-links only in the case a fuse-link is fitted with striking pin - see IEC 60 269-2 Figure 1a (III).

**Connection kit****New!**

Description	Code No.	For use with	Weight [g]	Packaging [pcs]
Connection kit 2p	002540948	EFD 8, EFD 10, EFH 10, PCF 8, PCF 10	96	1*/20
Connection kit 3p	002540949	EFD 8, EFD 10, PCF 8, PCF 10	162	1*/20
Connection kit 2p	002560948	EFD 14, EFH 14	144	1*/20
Connection kit 3p	002560949	EFD 14	217	1*/20
Connection kit 2p	002570948	EFD 22, EFD J30	191	1*/20
Connection kit 3p	002570949	EFD 22, EFD J30	300	1*/20

* Note: 1 kit suffices for the assembly of 50 sets

Fuse-switch disconnectors for cylindrical fuse-links EFD

Technical data EFD

	EFD 8		EFD 10		EFD CC		EFD 14		EFD 22		EFD J30			
Fuse type	CH 8x32		CH 10x38		Class CC		CH 14x51		CH 22x58		Class J, size J30			
	IEC		IEC	UL	UL		IEC	UL	IEC	UL	UL			
Versions	Without indicator/LED indicator/NEON indicator		Without indicator / LED indicator											
Number of poles	1p, 1p+N, 2p, 3p, 3p+N		1p, 2p, 3p		1p, 1p+N, 2p, 3p, 3p+N		1p, 2p, 3p	1p, 1p+N, 2p, 3p, 3p+N		1p, 2p, 3p				
Rated operational voltage Ue	400V a.c.		690V a.c.		600V a.c./d.c.	600V a.c./d.c.	690V a.c.		600V a.c./d.c.	690V a.c.		600V a.c./d.c.	600V a.c./d.c.	
Rated operational current Ie	20A		32A		30A	30A	50A		50A	100A		100A	30A	
Maximum rated current of fuselinks	690V		10A gG				25A gG 25A aM			50A gG 50A aM				
	500V		25A gG 16A aM				50A gG			100A gG				
	400V	20A gG 10A aM	32A gG				50A aM			100A aM				
Rated frequency	50Hz		50Hz		60Hz		60Hz		50Hz	60Hz	50Hz		60Hz	
Rated short-time withstand current Icw	240A		300A/1s				600A/1s			1200A/1s				
Conventional free air thermal current Ith							50A			100A				
Rated conditional short-circuit current	50kA		100kA/400V		100kA		200kA		gG: 120kA/500V (50A gG) aM: 50kA/400V (50A aM)	100kA	gG: 120kA/500V (100A gG) aM: 50kA/400V (100A aM)		100kA	200kA
Rated insulation voltage Ui	400V		690V				690V			690V				
Rated imp. withstand voltage Uimp	8kV		8kV				8kV			8kV				
Overvoltage category (according to Table H.1 in IEC 60947-1 and according to IEC 60099-1)	III		III				III			III				
Max power dissipation of the fuse-link (W)	gG: 2,5W aM: 0,9W		gG: 3W aM: 1,2W		3W		gG: 5W aM: 3W			gG: 9,5W aM: 7W		6W		
LED indicator operating range	50V-690V a.c.		50V - 600V a.c. 80V - 600V d.c.		50V-690V a.c.		50V - 600V a.c. 80V - 600V d.c.	50V-690V a.c.		50V - 600V a.c. 80V - 600V d.c.				
NEON indicator operating range	100V-750V a.c.		100V-750V a.c.											
Utilization category	AC-22B		AC-22B		Do not operate under load		AC-22B at 690V/50A		Do not operate under load	AC-21B at 690V/100A		Do not operate under load		
Operational performance (cycles with current)	300		300				300			300				
Operational performance (cycles without current)	1700		1700				1700			1700				
Humidity														
Operating ambient temperature	-5°C ... +40°C						-5°C ... +40°C			-5°C ... +40°C				
Store ambient temperature	-25°C ... +55°C						-25°C ... +55°C			-25°C ... +55°C				
Degree of protection (IEC 60529)	IP 20		IP 20				IP 20			IP 20				
Terminal capacity	1-25mm²		1-25mm²		AWG 18-8 solid&stranded Cu only		1,5-35mm² rigid or flexible		AWG 16-6 solid&stranded Cu only	4-50mm² rigid or flexible		AWG 12-2 solid&stranded Cu only		
Screw	PZ M5		PZ M5		PZ M5	PZ M5	PZ M5		PZ M5	PZ M6		PZ M6	PZ M6	
Torque	2Nm		2Nm		2Nm; 17,7 lb-in		2,5-3Nm		2Nm; 17,7 lb-in	3Nm		3Nm; 26,6 lb-in		
Mounting on EN 60715 rail	35mm rail													
Sealing possibility	ON and OFF													
Standards - fuse links	IEC/EN 60269-2		IEC/EN 60269-2	IEC/EN 60269-2	UL 248-4 IEC/EN 60269-2	IEC/EN 60269-2		IEC/EN 60269-2	IEC/EN 60269-2		IEC/EN 60269-2	UL 248-8 IEC/EN 60269-2		
Standards - Fuse-switch disconnectors/fuse holders	IEC 60947-1 IEC 60947-3		UL 4248-1 UL 4248-4 UL 486E		IEC 60947-1 IEC 60947-3		UL 4248-1 UL 486E		IEC 60947-1 IEC 60947-3		UL 4248-1 UL 486E		UL 4248-1 UL 4248-8 UL 486E	
Test reports	CCA/CB		CCA/CB		UL	UL	CCA/CB		UL	CCA/CB		UL	UL	
Certificates					UL _{US}	UL _{US}	UL _{US}		UL _{US}			UL _{US}	UL _{US}	

Technical data

Technical data EFD

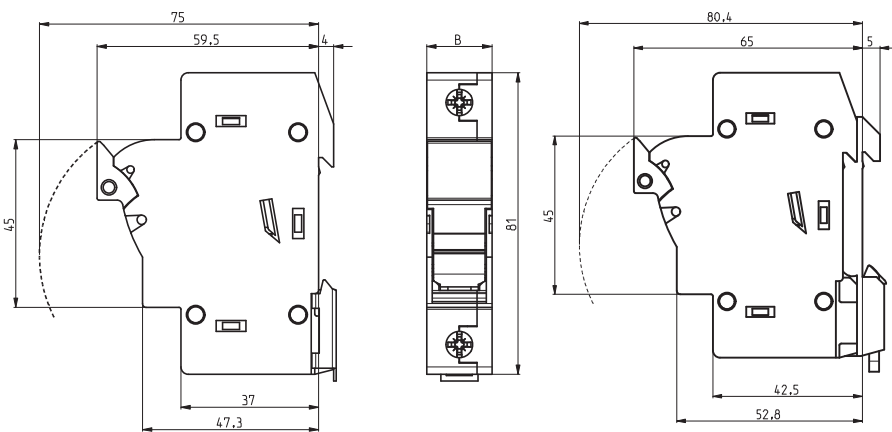
	EFD 8	EFD 10		EFD CC	EFD 14		EFD 22		EFD J30
Fuse type	CH 8x32	CH 10x38		Class CC	CH 14x51		CH 22x58		Class J, size J30
	IEC	IEC	UL	UL	IEC	UL	IEC	UL	UL
Derating factor of current I_n for different ambient temperatures	20°	1							
	30°	0,95							
	40°	0,9							
	50°	0,8							
	60°	0,7							
	70°	0,5							
Derating factor of current I_n for side by side mounting fuse holders (nr. of poles)	1-4	1							
	5-6	0,8							
	7-9	0,7							
	≥10	0,6							

Fuse-switch disconnecter EFD 8, EFD 10

type	dimension B
EFD 8, 10 1p	17,5
EFD 8, 10 1p+N	35
EFD 8, 10 2p	35
EFD 8, 10 3p	52,5
EFD 8, 10 3p+N	70

Fuse-switch disconnecter EFD CC

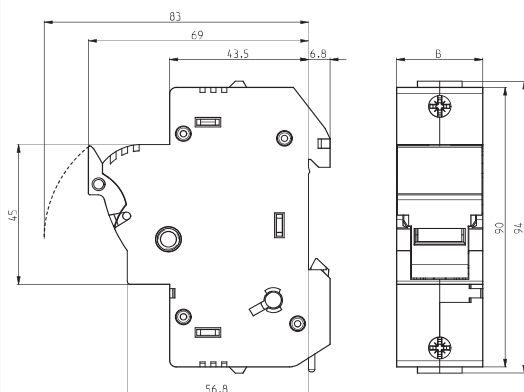
type	dimension B
EFD CC 1p	17,5
EFD CC 2p	35
EFD CC 3p	52,5



Version with adapter

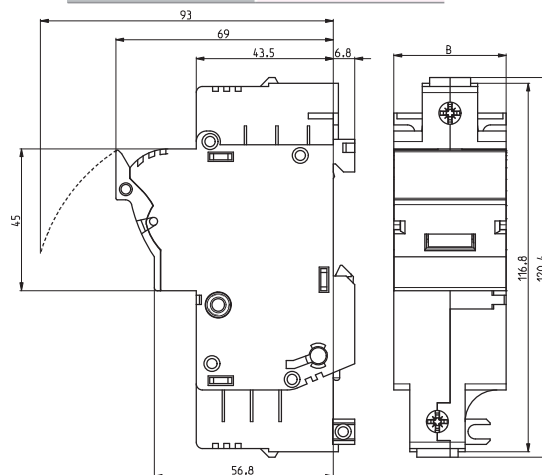
Fuse-switch disconnecter EFD 14

type	dimension B
EFD 14 1p	27
EFD 14 1p+N	54
EFD 14 2p	54
EFD 14 3p	81
EFD 14 3p+N	108

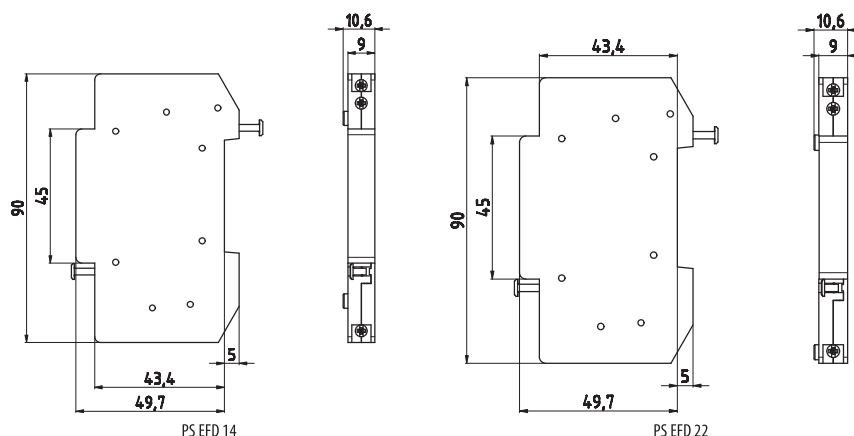


Fuse-switch disconnecter EFD 22 & EFD J30

type	dimension B
EFD 22, J30 1p	35,6
EFD 22 1p+N	71,2
EFD 22, J30 2p	71,2
EFD 22, J30 3p	106,8
EFD 22 3p+N	142,4



Auxiliary switch EFD



Fuse-switch disconnectors for cylindrical fuse-links PCF

Technical data PCF				
	PCF 8		PCF 10	
Fuse type	CH 8x32		CH 10x38	
	IEC		IEC	UL
Versions	Without indicator / LED indicator			
Number of poles	1p, 1p+N, 2p, 3p, 3p+N			1p, 2p, 3p
Rated operational voltage U _e	400V a.c.		690V a.c.	600V a.c./d.c.
Rated operational current I _e	20A		32A	30A
Maximum rated current of fuselinks	690V	10A gG		
	500V	25A gG, 16A aM		
	400V	20A gG, 10A aM	32A gG	
Rated frequency	50Hz		50Hz	60Hz
Rated short-time withstand current I _{cw}	240A		300A	
Rated conditional short-circuit current	50kA		100kA	200kA
Rated insulation voltage U _i	400V		690V	
Rated imp. withstand voltage U _{imp}	4kV		4kV	
Overvoltage category	III		III	
Max power dissipation of the fuse-link (W)	gG: 2,5W / aM: 0,9W		gG: 3W / aM: 1,2W	
LED indicator operating range	50V-690V a.c.		50V-600V a.c., 80V-600V d.c.	
Utilization category	AC-22B		AC-22B	Do not operate under load
Operational performance (cycles with current)	300		300	
Operational performance (cycles without current)	1700		1700	
Humidity	90% at 20°C			
Operating ambient temperature	-5°C ... +40°C			
Store ambient temperature	-25°C ... +55°C			
Degree of protection (IEC 60529)	IP 20		IP 20	
Terminal capacity	0,5-10mm ² , Double connection		20-10 stranded, Cu only	20-10 solid&stranded, Cu only
Screw	PZ M4		PZ M4	PZ M4
Torque	1,2Nm		1,2Nm	1,2Nm
Mounting on EN 60715 rail	35mm rail			
Sealing possibility	ON and OFF			
Standards - fuse links	IEC/EN 60269-2			UL 248-4, IEC/EN 60269-2
Standards - Fuse-switch disconnectors/fuse holders	IEC 60947-1, IEC 60947-3		UL 4248-1	UL 4248-1, UL 4248-4
Test reports	Int.		UL	Int
Certificates			UL	