



Closed



Open



Visual Break

EFEN LV Vertical Fuse Switch Disconnect

EFEN E3 disconnecter is the next practicable step in LV network safety

DS0034 R4 EFEN LV Vertical Fuse Switch Disconnect Datasheet 10/2025

Isolating electricity supply at distribution substations can be made safer with the latest generation of EFEN disconnectors.

The new E3 disconnecter keeps live terminals fully shrouded from touch at all times.

In the open position the E3 disconnecter holds the disconnected fuse under its cover, which maintains an IP2x barrier preventing finger touch of either source or load terminal. With distributed generation on the rise and more connected solar feeding into the LV network from residential and commercial premises, a fully shrouded approach better protects operators by eliminating the risk of exposed live fuse terminals.

In the E3 disconnecter the whole fuse is withdrawn in a parallel direction by leveraging the manually dependent switch in a way that opens both terminals of each fuse blade at the same time. This halves the arc voltage by

creating two smaller arcs – one at each terminal.

E3 disconnectors also manage heat more effectively, reducing the risk of over-heating. Heat build-up is minimised by improved housing ventilation and busbar design.

The improved design also delivers improved switching capacity with non-resistive loads and higher short-circuit rating for improved performance in fault conditions.

The versatile range includes both simultaneous three phase switching as well as individual single phase switching from 100 A to 630 A. E3 disconnectors are available as either 1000 A or 2000 A isolators with knife links in place of fuses.

Other ratings are available on request, including parallel arrangements. Rear-connect and side connect configurations are also available.

E3 Fuse Switch Disconnectors: Characteristics & Ratings

For Fuse-Links ACC. to DIN 43620/1		Size	000/00	000/00	2	3
Busbar System		mm	100	185	185	185
Rated operational current I_e	400V	A	160	160	400	630
	500V	A	160	160	400	630
	690V	A	160	160	315	500
Conventional free air thermal current I_{th}		A	220	220	400	630
Rated operational voltage U_e		V	690	690	690	690
Rated insulation voltage U_i		V	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp}		KV	8	8	12	12
Rated conditional short circuit current	400V	KA	100	120	120	120
	500V	KA	100	120	120	120
	690V	KA	100	100	100	100
Utilisation category VDE 0660 T107/EN/IEC 60947-3	400V		AC-23B	AC-23B	AC-23B	AC-23B
	500V		AC-22B	AC-22B	AC-22B	AC-22B
	690V		AC-22B	AC-22B	AC-21B	AC-21B
Mechanical durability		Cycles	1400	1400	800	800
Electrical durability		Cycles	200	200	200	200
Type of protection ACC. DIN/EN 60529/VDE 0470 T1		IP	30	30	20	20
Maximum power dissipation of the NH Fuse-Links		W	12	12	34	48
Total power loss at I_{th} (without fuse links)		W	20	22	56	111
Degree of pollution			3	3	3	3
Overvoltage category			IV	IV	IV	IV
Rated frequency		Hz	50-60	50-60	50-60	50-60
Weight without NH Fuse-links		KG	1.30	2.00	5.00	5.60

E3 Isolators: Characteristics & Ratings

Description		Size	Unit	1000A	2000A
Rated operational voltage		U_e	Vac	690	690
Rated operational current		I_e	A	1000	2000
Rated insulation voltage		U_i	Vac	1000	1000
Rated impulse withstand voltage		U_{imp}	kV	12	12
Rated frequency		I_{cw}	Hz	5-60	5-60
Rated withstand short circuit current			kA	15	22
				25 ²	40 ²
Utilisation category AC	400 V			AC-22B	AC-22B
	500 V			AC-21B	AC-21B
	690 V			AC-21B	AC-21B
Mechanical durability - Cycles			N	800	600
Electrical durability - Cycles			N	200	200
Maximum power dissipation without fuse links			W	270	540
IP protection (with front lid open)		IP		20	20
Degree of pollution				3	3
Overvoltage category				IV	IV
Material		All material conforms to RoHS			

Notes

1. Switch disconnects (isolators) are to be used with knife switches
2. With handle lock

Product Selection Table			Current Rating (A)	Busbar Pitch (mm)	Nominal Width (mm)	Cable Clamps	Cable Connection Adaptors			3-Phase	Low Profile	Removable Links	Busbar Connections				
Din Size	Hiko Code	Function				V-clamps	Extended	3-hole Compact	4-hole Compact				Rear	Side (L)	Side (R)	Bus coupler	
00	EFV00160	Fuse switch disconnect	160	185	50	V				P							
00	EFV00160P	Fuse switch disconnect	160	185	50												
00	EFV00160H100	Fuse switch disconnect	160	100	50												
00	EFV00160H100P	Fuse switch disconnect	160	100	50												
00	EFV00320CDH100	Fuse switch disconnect	320	100	100												
2	EFV2400	Fuse switch disconnect	400	185	100												
2	EFV2400C	Fuse switch disconnect	400	185	100												
2	EFV2400CP	Fuse switch disconnect	400	185	100												
2	EFV2400P	Fuse switch disconnect	400	185	100												
2	EFV2400V	Fuse switch disconnect	400	185	100												
2	EFV2400VP	Fuse switch disconnect	400	185	100												
3	EFV3630	Fuse switch disconnect	630	185	100	V				P							
3	EFV3630C	Fuse switch disconnect	630	185	100												
3	EFV3630CP	Fuse switch disconnect	630	185	100												
3	EFV3630E	Fuse switch disconnect	630	185	100												
3	EFV3630L	Fuse switch disconnect	630	185	100												
3	EFV3630P	Fuse switch disconnect	630	185	100												
3	EFV3630R	Fuse switch disconnect	630	185	100												
3	EFV3630SL	Fuse switch disconnect	630	185	200												
3	EFV3630SR	Fuse switch disconnect	630	185	200												
3	EFV3630V	Fuse switch disconnect	630	185	100												
3	EFV3630VP	Fuse switch disconnect	630	185	100												
3	EFV3800	Switch disconnect1	1,000	185	100	V				P							
3	EFV3910C	Fuse switch disconnect	910	185	100												
3	EFV3910CP	Fuse switch disconnect	910	185	100												
3	EFV31000	Switch disconnect1	1,000	185	100												
3	EFV31000B	Switch Isolator	1000	185	100												
3	EFV31000C	Switch Isolator	1000	185	100												
3	EFV31000E	Switch Isolator	1000	185	100												
3	EFV31000L	Switch Isolator	1000	185	100												
3	EFV31000R	Switch Isolator	1000	185	100												
3	EFV31000SL	Switch Isolator	1000	185	200												
3	EFV31000SR	Switch Isolator	1000	185	200												
3	EFV31000V	Switch Isolator	1000	185	100	V											
3	EFV31000Q	Switch Isolator	1000	185	100												
3	EFV31000QC	Switch Isolator	1000	185	100												
3	EFV31000QE	Switch Isolator	1000	185	100												

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Din Size	Hiko Code	Function				V-clamps	Extended	3-hole Compact	4-hole Compact				Rear	Side (L)	Side (R)	Bus coupler			
3	EFV31000QL	Switch Isolator	1000	185	100					P	L	Q							
3	EFV31000QP	Switch Isolator	1000	185	100							Q							
3	EFV31000QR	Switch Isolator	1000	185	100							Q					R		
3	EFV31000QSL	Switch Isolator	1000	185	200							Q						SL	
3	EFV31000QSR	Switch Isolator	1000	185	200							Q							SR
3	EFV31000QV	Switch Isolator	1000	185	100							Q							
2x3	EFV31250CD	Fuse switch disconnect	1250	185	200	V													
2x3	EFV31250CDP	Fuse switch disconnect	1250	185	200			C		P									
2x3	EFV31250ED	Fuse switch disconnect	1250	185	200	E													
2x3	EFV31250FD	Fuse switch disconnect	1250	185	200				F										
2x3	EFV32000CD	Switch Isolator	2000	185	200			C											
2x3	EFV32000ED	Switch Isolator	2000	185	200	E													
2x3	EFV32000FD	Switch Isolator	2000	185	200				F										
2x3	EFV32000QCD	Switch Isolator	2000	185	200			C				Q							
2x3	EFV32000QCDP	Switch Isolator	2000	185	200			C		P		Q							
2x3	EFV32000QED	Switch Isolator	2000	185	200	E						Q							
2x3	EFV32000QFD	Switch Isolator	2000	185	200				F			Q							
2x3	EFV32000QFDP	Switch Isolator	2000	185	200					P		Q							
2x3	EFV31820CD	Fuse switch disconnect	1820A	185	200			C											
2x3	EFV31820CDP	Fuse switch disconnect	1820A	185	200			C		P									
2x3	EFV31820FD	Fuse switch disconnect	1820A	185	200														
2x3	EFV31820FDP	Fuse switch disconnect	1820A	185	200				F	P									
4A	EFV41600	Fuse switch disconnect	1,600	185	150														
4A	EFV41250	Fuse switch disconnect	1,250	185	150														

Examples

EFV00160P 160A DIN 00/185 fuse-switch-disconnect with three phase handles
 EFV32000QCD 2 x DIN3 Switch isolator with removable links and compact connection adaptors

Other literature available on request

Reports, drawings, technical data sheets, installation instructions, O&M guidelines

Also available

Fuse links
 Solid copper (knife) links
 CTs with non-standard ratings and for external mounting
 LV switchgear assembly frames, cabinets and underground pits