Weber EFEN LV Horizontal Fuse Switch Disconnects

The best of both worlds with Weber EFEN SILAS and IN Series

Horizontal fuse-switch-disconnects provide an alternative mounting and connection method to vertical disconnects, for example for single circuit supplies and for the safe and cost effective upgrade or replacement of earlier generations of fuse switches.

The Weber EFEN SILAS range has been used successfully in the New Zealand for 30+ years and is now complemented by the EFEN IN series.

Both the SILAS and IN series use the widely available and economic DIN blade fuse cartridges, and offer an excellent level of operator safety thanks to their AC22B switching capacity.

Both may be used in AC or DC applications, as specified by their ratings.

The SILAS range is designed for independent mounting for single switch protection applications by virtue of its terminal covers. These features are ideally suited to solar applications or wherever battery protection is required in an internal installation.

SILAS is also suitable for multiple feeder mounting on busbars with ratings from 160 A to 630 A.

The EFEN IN series of switches is available from 160 to 1,600 A and is a more compact design. Cable covers are supplied: these can be removed for use in applications where a protective enclosure is used. Its compact size makes the IN ideal for network pillar applications.

Sizes 00, 1, 2 and 3 of the IN series and sizes 1, 2 and 3 of the SILAS series have the added advantage of phase protection barriers moulded into the base.

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Horizontal fuse switch disconnects and isolators: characteristics and ratings according to IEC 60947-3

IN series		DIN size	000/00	1	2	3	4A
Rated operational current, I_e	690 V	A	160	250	400	630	1,250 1.600
Conventional free-air thermal current I_{th}	690 V	A	160	250	400	630	1,250 1,600
Rated operational voltage, U_e		V	690	690	690	690	690
Rated insulation voltage, U_i		V	800	800	800	800	800
Rated impulse withstand voltage, U_{imp}		kVpk	8	8	8	8	8
Rated conditional short circuit current	400 V	kA	100	100	100[1]	100	50
(when protected with NH fuse-links)	690 V	kA	50	50	50	50	50
Utilisation category	400 V		AC-22B	AC-22B	AC-22B	AC-22B	AC-22B
	690 V		AC-21B	AC-21B	AC-21B	AC-21B	AC-21B
	440 Vdc[2]		DC-21B	DC-21B	DC-21B	DC-21B	DC-21B
Mechanical service life		Cycles	1,600	1,600	1,000	1,000	600
Permissible ambient temperature		°C			'-25 to +55		
Degree of protection to IEC 60529					IP3X		
Maximum permissible power dissipation of the NH fuse-links		W	12	23	34	48	115 140
Weight without fuse links		kg	0.5	2.0	3.3	5.3	14.0

SILAS Series		DIN size	000/00	1	2	3
Rated operational current, I_e	690 V	A	160	250	400	630
Conventional free-air thermal current I_{th}	690 V	A	160	250	400	630
Rated operational voltage, U_e		V	690	690	690	690
Rated insulation voltage, U_i		V	1,000	1,000	1,000	1,000
Rated impulse withstand voltage, U_{imp}		kVpk	8	8	8	8
Rated conditional short circuit current (when protected with NH fuse-links)	690 V	kA	80	80	50	80
Utilisation category	400 V		AC-23B	AC-23B	AC-23B	AC-23B
	690 V		AC-21B	AC-22B	AC-22B	AC-22B
	220Vdc		DC-22B	DC-21B	DC-21B	DC-21B
	440 Vdc		Note[3]	DC-21B	DC-21B	DC-21B
Mechanical service life		Cycles	1,600	1,600	1,000	1,000
Permissible ambient temperature		°C	'-25 to +55			
Degree of protection to IEC 60529			IP3X			
Maximum permissible power dissipation of the NH fuse-links		W	12	23	34	48
Weight without fuse links		kg	0.8	2.2	3.6	4.1

Notes

1. With pilot tool
2. When equipped with L1 and L3 with two poles; 1-pole Ue = 220 Vdc
3. Please enquire

Tightening torques for terminals and busbar mounting

IN series	DIN size	000/00	1	2	3	4A
Multiple use screw terminal	Nm	14	32	32	32	32/56
Pressure plates with bolts / prism clamps		4	8	14	14	-
Busbar mounting		6	10	10	14	-

SILAS Series	DIN size	000/00	1	2	3
Multiple use screw terminal	Nm	12	20	20	20
Pressure plates with bolts / prism clamps		3	6	8	8
Busbar mounting		3	6	8	8
Box clamps		5	12	20	20

Conductor application ranges

IN series	Conductor type		Cross section	000/00	1	2	3	4A
Multiple use screw terminal	-	-	-	M8	M10	M10	M10	M12/M16
Pressure plates with bolts	CU	RE	mm²	1.5-16	1.5-16	-	-	-
		RM/SM		2-25	6-50	6-70	6-70	
Pressure plates with bolts and prism clamps	CU/AL	RE/RM/ SE/SM		2.5-70	70-150	70-240	70-240	-
Flat conductor (max W x H)	-	-	mm	10x6	16x15	21x15	21x15	-

IN series	Conductor type		Cross section	000/00	1	2	3
Multiple use screw terminal	-	-	-	M8	M10	M10	M10
Pressure plates with bolts	CU	RE	mm²	6-50	70-150	-	-
		RM/SM		6-25	6-50	6-70	6-70
Pressure plates with bolts and prism clamps	CU/AL	RE/RM/ SE/SM		6-70	70-150	120-240	150-300
Box clamps	CU	RE/RM		2.5-95	35-150	95-300	95-300
		RE/RM		-	50-150	120-300	120-300
	AL	RE/RM		-	35-150	95-300	95-300
		RE/RM		-	50-150	120-300	120-300
Flat conductor (max W x H)	-	-	mm	-	15x20	20 x 32	20 x 32

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Horizontal fuse switch disconnects and isolators: product selection table and dimensions

Hamer code	Type	DIN size	Current rating (A)	Configuration	Mounting system	Optional V-clamps[1]	Nominal height (mm)	Nominal width (mm)	Nominal depth (mm)
EFH00160	IN	00	160	Three phase single throw	Base plate	Yes	156	106	90
EFH1250		1	250				270	184	110
EFH2400		2	400				281	210	127
EFH3630		3	630				289	250	132
EFH41600		4A	1,600			No	330	378	233
EFS00160		00	160	Single phase		Yes	200	50	95
EFS1250		1	250				284	100	142
EFS2400		2	400				284	100	142
EFS3630		3	630				284	115	142
EFS41600		4A	1,600			No	330	126	233
EFS2400B		2	400		Busbar	Yes	284	100	142
EFS3630B		3	630				284	115	142
WE500	SILAS	0	160	Three phase single throw	Base plate	Yes	194	106	80
WE510		1	250				306	184	110
WE520		2	400				306	210	130
WE530		3	630				306	250	130

Notes

1. Add "V" suffix to Hamer code to specify V-clamps.

Also available

Fuse links
Solid copper (knife) links
LV switchgear assembly frames, cabinets and underground pits
Other literature available on request
Type test reports, drawings, technical data sheets

For more information contact your Hamer representative
Hamer Limited reserve the right to amend product details without notice.
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