

MV Load Break Switch

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NEPEAN POWER



NEPEAN Power is a proven leader in the supply and manufacture of quality engineered solutions, products and technologies. Established in 1994, through the commitment of our dedicated team we have become a supplier of choice.

FN18 is a type of switch disconnecter and earthing switch based on a modular principle, giving it a wide range of functionality. With a unique design that extinguishes electric arcs and enables high switching capacity, they represent an attractive solution as a key breaking element, for applications in enclosed switchgear and transformer compact substations. The main areas of application for FN18 are as line switch disconnectors and earthing switches in medium-voltage networks. The switch disconnectors and earthing switches are manufactured according to global quality and environmental standards and confirmed by ISO9001 and ISO14001 certificates.

The basic unit consists of a frame made up of insulators and current carrying parts allowing two different types of operating mechanisms to be mounted on the frame and an earthing switch type FN:

- Snap action mechanism type K
- Stored spring energy mechanism type A

Suitable for both direct mounting and free-standing components.

These modules can be easily configured according to customer expectations. Accessories, such as shunt trip, under-voltage release, auxiliary switches, motor operation and various systems for manual operation can easily be added.

The FN18 disconnecter and earthing switch is available up to 1,250A with a short circuit withstand of 31.5kA for 1 second.

Ordering Information

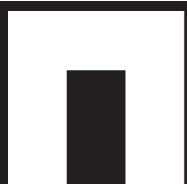
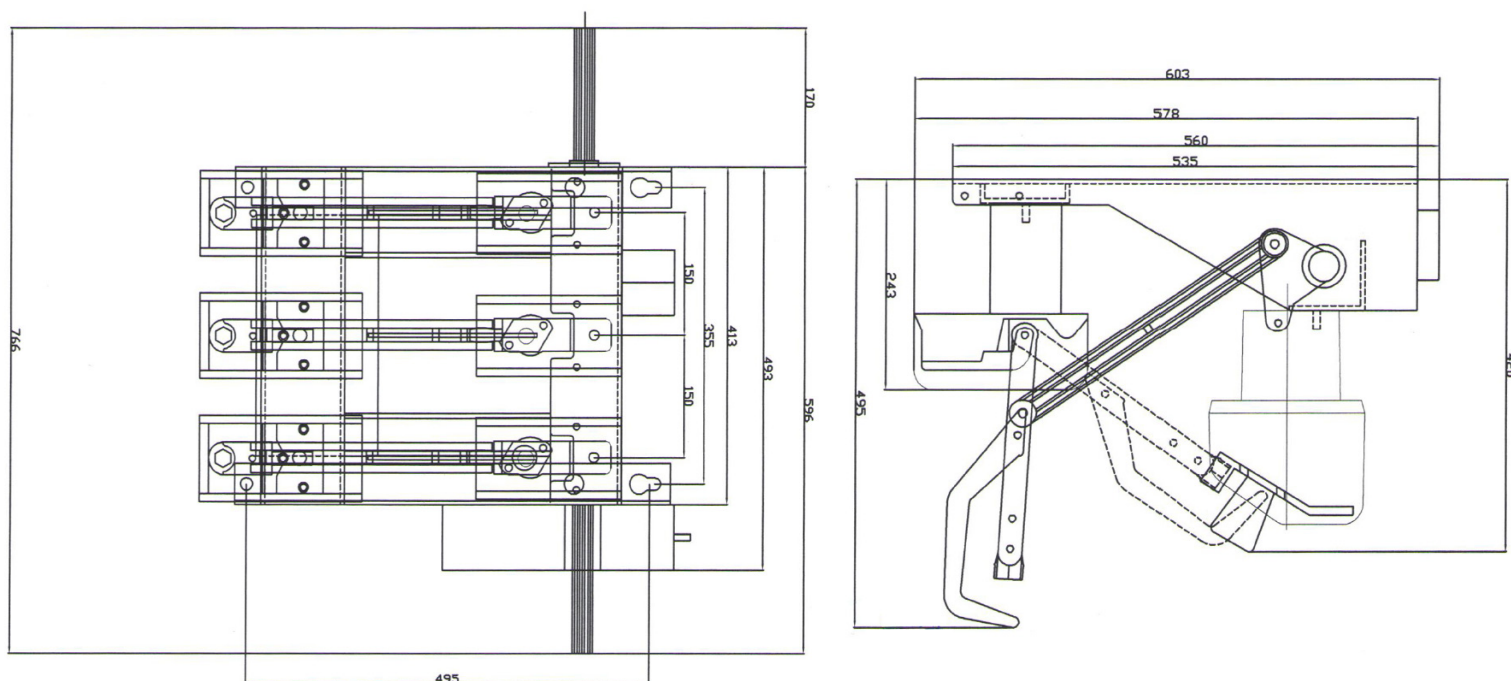
Item	Description	Part Number
1	LBS. Rated voltage 12kV. Rated current 630A with K-Mech, phase distance 150mm with left side extension. Left and right side operation, includes operating head and auxiliary switch	FN18-12
Optional Spares	2 HE Operating Handle 170mm	FN18 01010
	3 Auxiliary Switch 2NO+2NC for LBS	FN18 02001
	1.1 HE Operating Head	FN18 01001
	1.2 HE Bevel Gear	FN18 01002

MV Load Break Switch

Technical Specification

FN18-12					
Rated Voltage	Un	kV	12kV		
Rated Current	In	A	400	630	1250
Max Rated Current	I	A	400	630	1150
Short Circuit Making Capacity	I _{ma}	kA peak	67	67	67
Peak Withstand Current	I _{dyn}	kA peak	82	82	82
Short Time Current	1 sec	I _{th}	kA eff	31.5	31.5
	2 sec	I _{th}	kA eff	25	25
	3 sec	I _{th}	kA eff	20	20
Mainly Active Load Breaking Capacity (test duty 1, IEC 60265-1 (265))	I	A	400	630	1250
Mainly Capacitive Breaking Capacity (test duty 4, IEC 60265-1 (265))	I	A	150	150	150
Mainly Inductive Breaking Capacity cosφ=0.15		A	16	16	16
Max. Breaking Capacity in Co-operation with Fuses IEC 62271-105(IEC 420 1990-11)		A	1600	1600	
Power Frequency Withstand Voltage 50Hz 1 min.	To earth and between poles		kV	42	
	Across isolating distance		kV	45	
Impulse Withstand Voltage 1.2/50μs	To earth and between poles		kV	75	
	Across isolating distance		kV	85	
Pole Distance	P	mm	150		
Max Operating Torque at	Closing K/A mech.		Nm	115-120 Nm	
	Opening K/A mech.		Nm	K-mech. 120Nm/A-mech. 3Nm	
Operating Angle on the Shaft		Degrees	130		
Opening Time		ms	40-60		

Dimensions



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MV Earthing Switch



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The basic unit consists of a frame made up of insulators and current carrying parts allowing two different types of operating mechanisms to be mounted on the frame and an earthing switch type FN:

- Snap action mechanism type K
- Stored spring energy mechanism type A

Suitable for both direct mounting and free-standing components.

These modules can be easily configured according to customer expectations. Accessories, such as shunt trip, under-voltage release, auxiliary switches, motor operation and various systems for manual operation can easily be added.

The FN18 disconnecter and earthing switch is available up to 1,250A with a short circuit withstand of 31.5kA for 1 second.

Ordering Information

Item	Description	Part Number
1	DB150 Earthing Switch with short circuit breaking capacity, it can be a separate installation. Phase distance is 150mm. Product is complete with handle, aux switch and operating head.	FN18 11001
Optional Spares	2 HE Operating Handle 170mm	FN18 01010
	3 Auxiliary Switch 2NO+2NC for LBS	FN18 02001
	1.1 HE Operating Head	FN18 01001
	1.2 HE Bevel Gear	FN18 01002

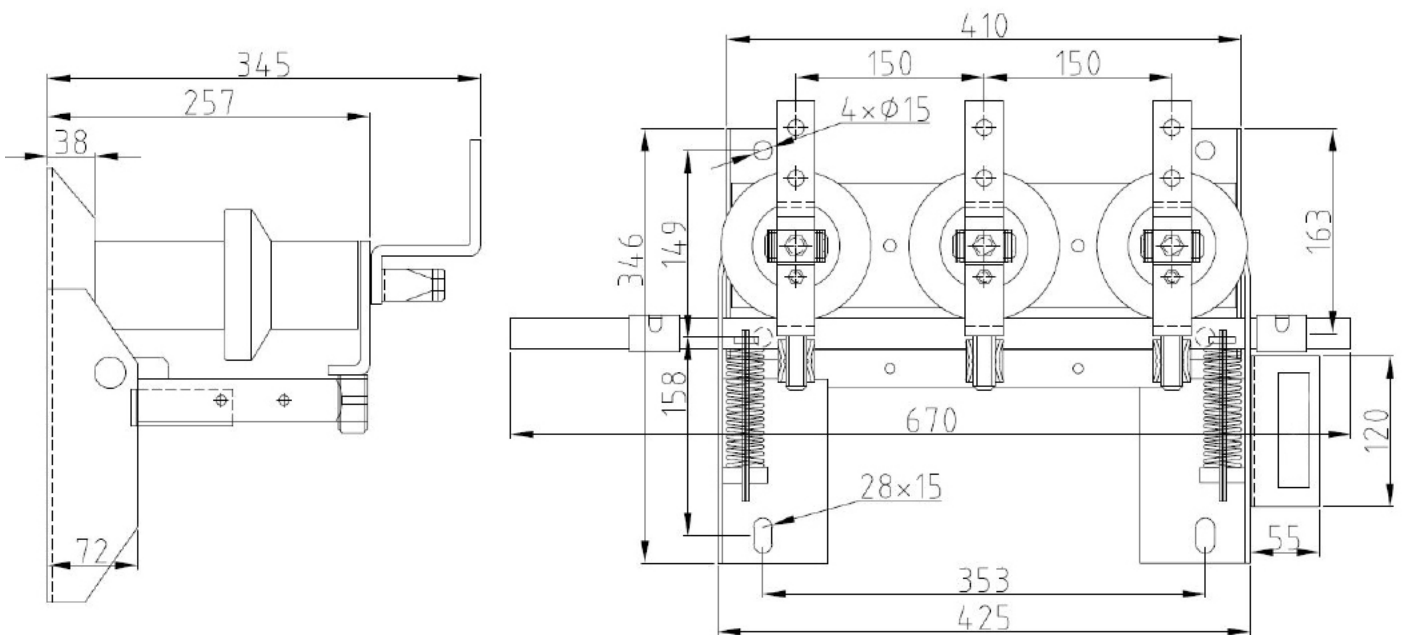
MV Earthing Switch

Technical Specification

Earthing Switch Type DB150 for FN18			
Rated Voltage		kV	12
Peak Withstand Current*		kA peak	62/82
Short Time Current	1 sec	kA eff	31.5
	2 sec	kA eff	25
	3 sec	kA eff	20
Short Circuit Making Capacity*		kA peak	62/67
Test Voltage 50Hz 1 min.		kV	42
Power Frequency Withstand Voltage 1.2/50us		kV	82
Pole Distance		mm	150

*When fed from switch disconnector/earthing switch side

Dimensions



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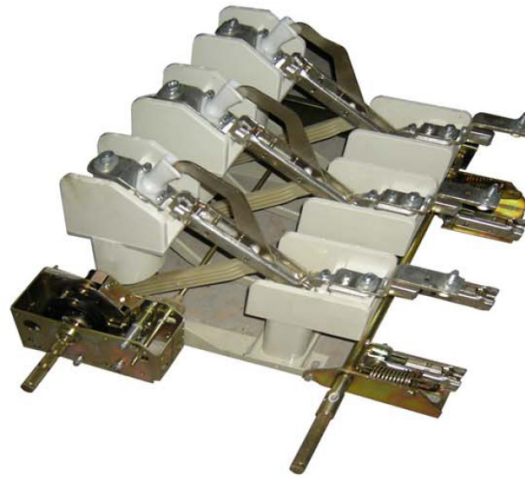
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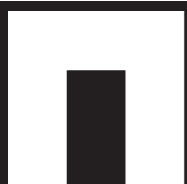
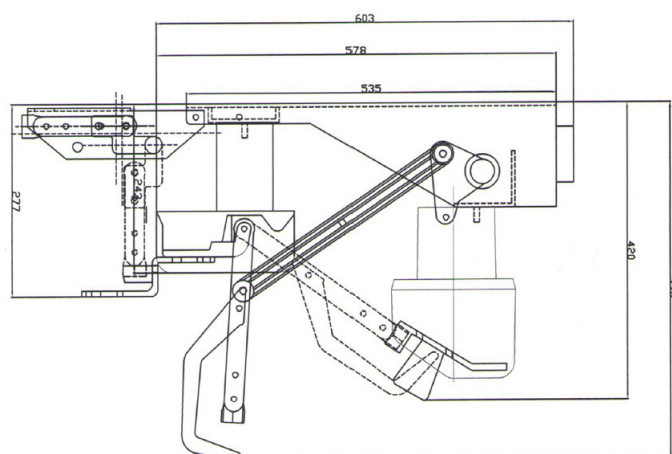
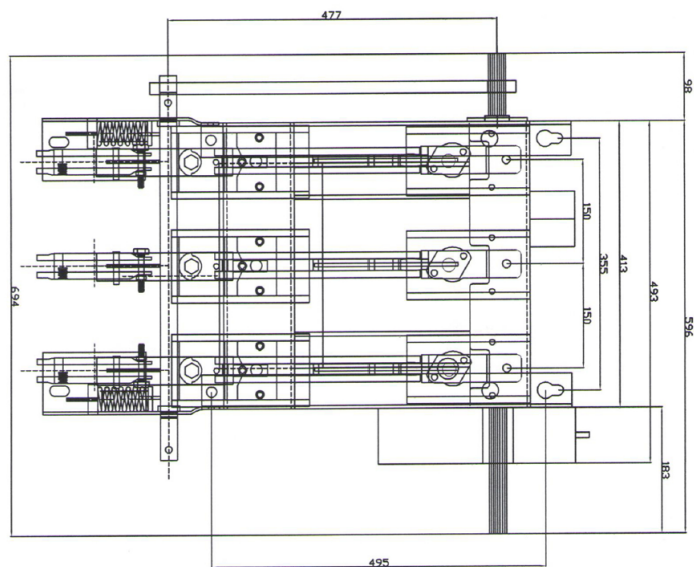
Item	Description	Part Number
1	LBS. Rated Voltage 12kV, Rated Current 630A, with K-Mech, Phase Distance 170mm, Right Side Operation with D Type Earthing Switch, Extension Rod and Interlock	FN18 12-6K150YD
Optional Spares	2 HE Operating Handle 170mm	FN18 01010
	3 Auxiliary Switch 2NO+2NC for LBS	FN18 02001
	1.1 HE Operating Head	FN18 01001
	1.2 HE Bevel Gear	FN18 01002

MV Load Break & Earthing Switch

Technical Specification

MV Load Break & Earthing Switch				
Rated Voltage		kV	12kV	
Rated Current		A	400	630 1250
Max Rated Current		A	400	630 1150
Short Circuit Making Capacity		kA peak	67	67 67
Peak Withstand Current*		kA peak	82	82 82
Short Time Current	1 sec	kA eff	31.5	31.5 31.5
	2 sec	kA eff	25	25 25
	3 sec	kA eff	20	20 20
Mainly Active Load Breaking Capacity		A	400	600 1250
Mainly Capacitive Breaking Capacity		A	150	150 150
Mainly Inductive Breaking Capacity		A	16	16 16
Max. Breaking Capacity in Co-operation with Fuses IEC 62271-105 (IEC 420 1990-11)		A	1600	1600
Power Frequency Withstand Voltage 50Hz	To earth and between poles	kV	42	
	Across isolating distance	kV	45	
Impulse Withstand Voltage 1.2/50µs	To earth and between poles	kV	75	
	Across isolating distance	kV	85	
Pole Distance		mm	150	
Max Operating Torque at	Closing K/A mech.	Nm	115-120 Nm	
	Opening K/A mech.	Nm	K-mech. 120Nm/A-mech. 3Nm	
Operating Angle on the Shaft		Degrees	130	
Opening Time		ms	40-60	

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