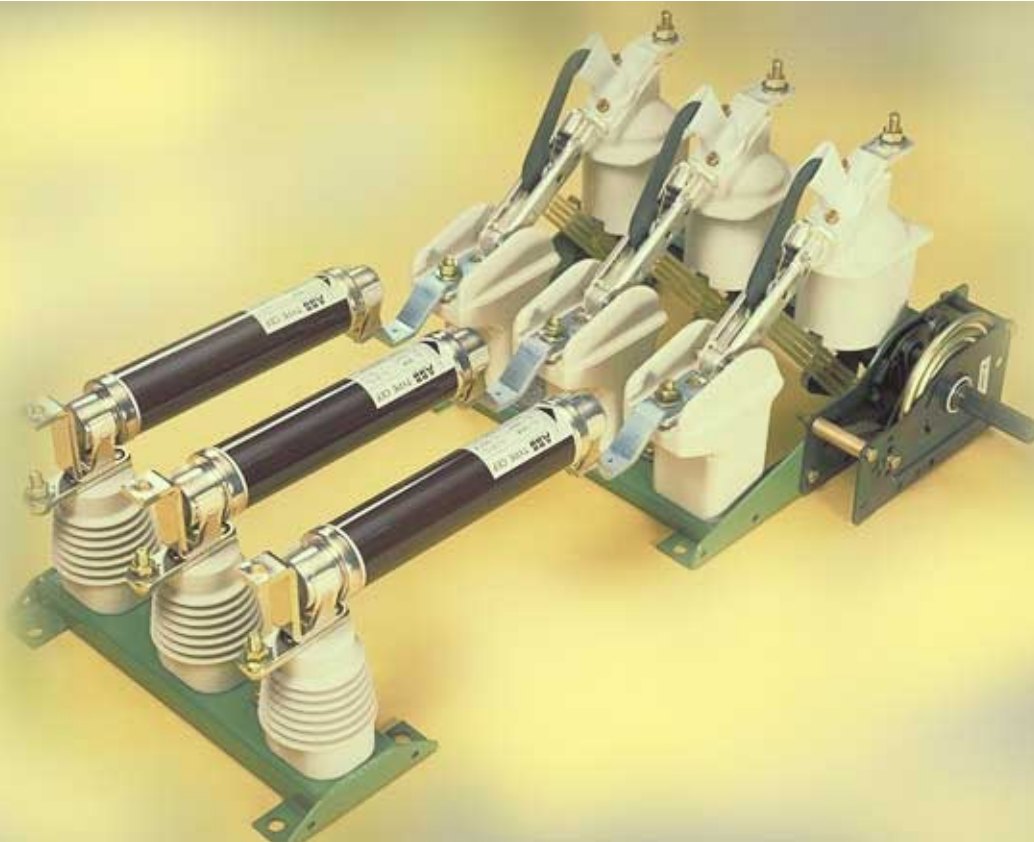


Triple-pole switch disconnecter type NAL

Fuse switch disconnecter type NALF

12 and 17,5 and 24 kV / 400, 630 and 1250 A



Based on a modular principle

Applications

- as line and transformer switches within distribution networks
- as motor switches
- as capacitor switches

3-pole switch disconnecter
and switch fuse combination

Optional automatic fuse tripping

Optional fuse base on the
opening side

More than 550 000 units in
serve world wide

Manufactured according to
ISO 9001 and ISO 14001

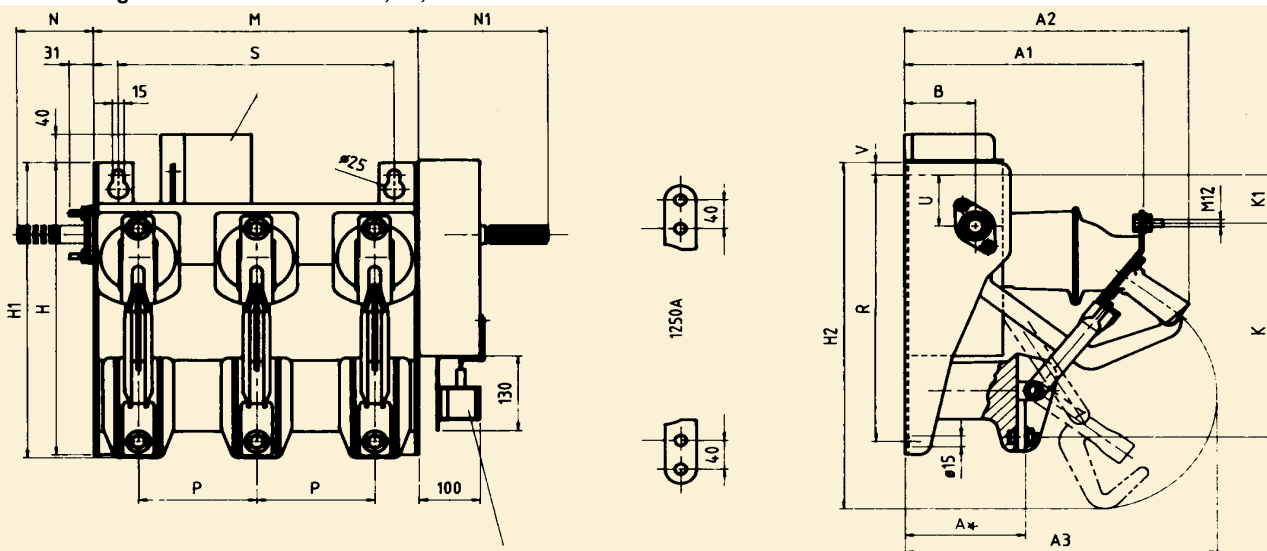
Accessories can easily be
added

ABB

Technical specification Switch disconnecter type NAL

Rated voltage	Un	kV	12 kV			17,5 kV			24 kV		
			400	630	1250	400	630	1250	400	630	1250
Rated current	In	A	400	630	1250	400	630	1250	400	630	1250
Max. rated current	I	A	400	630	1150	400	630	1150	400	630	1150
Short circuit making capacity	I _{ma}	kA peak	67	67	67	50	50	50	50	50	50
Peak withstand current	I _{dyn}	kA peak	75	75	75	50	50	50	50	50	50
Short time current	1 sec.	I _{th}	30	30	30	25	25	25	20	20	20
	2 sec.	"	"	"	25	"	"	"	20	20	20
	3 sec.	"	"	"	20	"	"	"	16	16	16
Mainly active load breaking capacity (test duty 1 and 2, IEC 265)	I	A	400	630	1250	400	630	1250	400	630	1250
Mainly capacitive breaking capacity (test duty 4, IEC 265)	I	A	150	150	150	45	45	45	80	80	80
Mainly inductive breaking capacity											
cos φ = 0,15		A	16	16	16	16	16	16	16	16	16
Rated earth fault breaking capacity, IEC 265											
Earth fault breaking capacity, fig. 6	I	A	150	150	150	70	70	70	25	25	25
Capacitive breaking capacity, fig. 7	I	A	90	90	90	40	40	40	21*	21*	21*
		* at 20,6 kV									
Max. breaking capacity in co-operation with fuses (IEC 420 1990-11)		A	1600	1600		800	800		800	800	
Max. fuse size	In	A	125	125		63	63		63	63	
Power frequency withstand voltage 50 Hz 1 min.											
- to earth and between poles		kV		35			45			55	
- across isolating distance		kV		45			60			70	
Impulse withstand voltage 1,2/50 us.											
- to earth and between poles		kV		75			95			125	
- across isolating distance		kV		85			110			145	
Pole distance	P	mm		150 and 210			170			235 and 275	
Max. operating torque at:											
- closing K/A mech.		Nm					115 - 120 Nm				
- opening K/A mech.		Nm					K-mech. 120 Nm / A-mech. 3 Nm				
Operating angle on the shaft		degrees					130				
Opening time		ms					40 - 60				

Dimensional drawings switch disconnector 12, 17,5 and 24 kV NAL with mechanism



Type	A	A ₁	A ₂	A ₃	B	H	H ₁	H ₂	K	K ₁	M	N	N ₁	P	R	S	U	V
NAL 12-A/K/KS, P=150	166	320	362	394	90	422	428	510	310	63	412	122	164	150	375	350	75	33
NAL 17,5 A/K/KS, P=170	225	375	418	511	98	534	577	600	441	87	452	122	164	170	500	395	90	18
NAL 24 A/K/KS, P=235	225	375	418	511	98	534	577	600	441	87	582	186	202	235	500	525	90	18
NAL 12-A/K/KS, P=210	166	320	362	394	90	422	428	510	310	63	532	122	164	210	375	470	75	33
NAL 24 A/K/KS, P=275	225	375	418	511	98	534	577	600	441	87	662	186	202	275	500	605	90	18



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