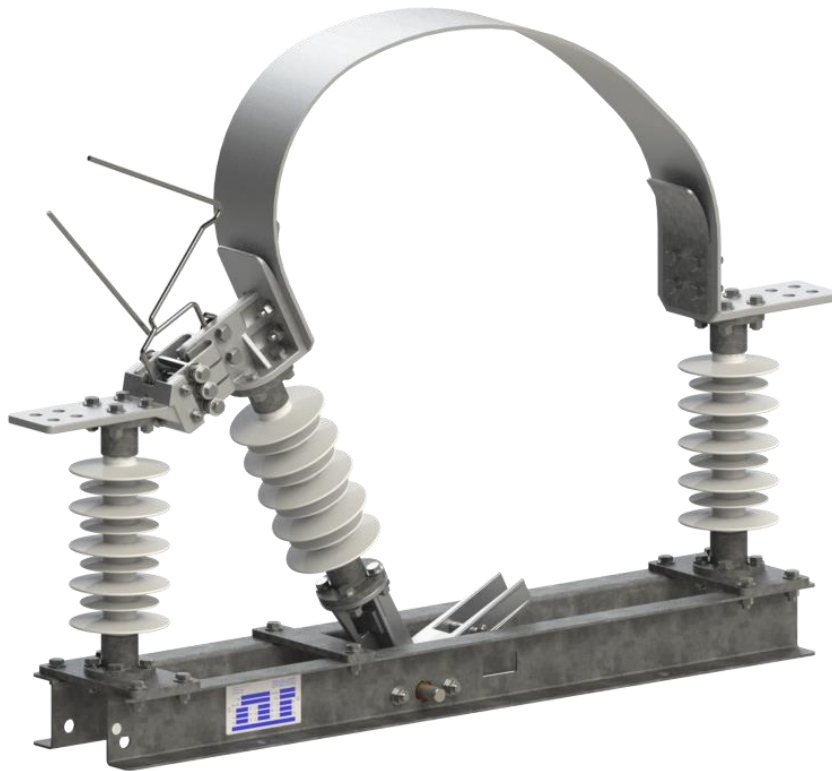


Disconnecter FHF-B1

Disconnecter for 15 kV and 25 kV AC-overhead contact lines



The disconnecter FHF-B1 is used to switch or isolate overhead contact lines in railways with an AC voltage up to 25 kV.

In addition it is possible to switch small capacitive and inductive currents up to 6 A, which might occur at a load-free state.

The disconnecter FHF-B1 is of rocker type with two fixed and one movable insulators, the latter ensuring the switching, whereas the former two, placed at the disconnecter's extremities, support the terminals. The length variation is absorbed by flexible copper strips. The flat terminals allow different connections.

The disconnecter is operated motorised or manually by rod or Flexball® (flexible rod). In addition two disconnecters can be transformed to one bipolar disconnecter.

Our disconnecters are manufactured according to EN 62271-1, EN 62271-102 and EN 50152-2.

Thanks to very long experience in the branch, our company has been awarded with accreditations by different national railways.

Features

- All steel parts made of stainless or hot-dip galvanised steel
- Robust and torsion-free frame
- Minimum bending of the connection wire due to fixed terminals
- Fixing on the supporting structure either by straps (free setting) or screws
- Easy on-site installation and setting
- High reliability ~ 10'000 cycles
- All conducting parts either silver, nickel or tin-plated
- Maintenance-free
- Options:
 - Status indication with voltage-free contacts (1x open, 1x closed); 2 limit switches and terminal box
 - Porcelain insulators instead of silicone insulators

Technical data

Rated values		15kV	25kV	
Nominal voltage	U_n	15	25	kV
Rated insulation voltage (acc. to IEC 62497-1)	U_{Nm}	17.5	27.5	kV
Rated voltage (acc. to IEC 62271-1)	U_r	36	52	kV
Rated frequency	f_r	16.7	50	Hz
Rated normal current	I_r	2'000	2'000	A

Withstand values		15kV	25kV	
1-minute power frequency withstand voltage (dry & wet)		U_d		
A – To earth and between poles		70	95	kV
B – Across the isolating distance		95	110	kV
Impulse withstand voltage (1.2/50 μ s)		U_{Ni}		
A – To earth and between poles		170	250	kV
B – Across the isolating distance		195	290	kV

Short-Circuit current		15kV	25kV	
Rated short time withstand current	I_k	40	31.5	kA
Rated peak withstand current	I_p	100	80	kA
Rated duration of short circuit	t_k	1	3	s

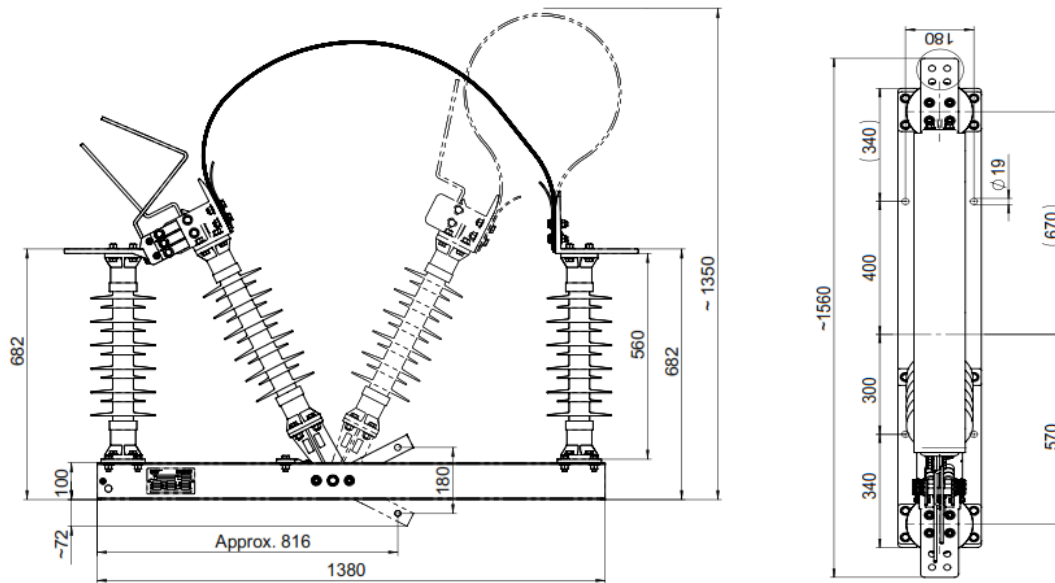
Making and breaking current		15kV	25kV	
Breaking current at power factor 0.7	I_{break}	2	2	A
Making current at power factor 0.7	I_{make}	2	2	A
Breaking current at power factor 0.35	I_{break2}	6	6	A

Geometry		15kV	25kV	
Minimum creepage distance (silicone insulators)		870	1255	mm
Operating stroke		120	180	mm
Weight		62	68	Kg
Further dimensions		See drawing		

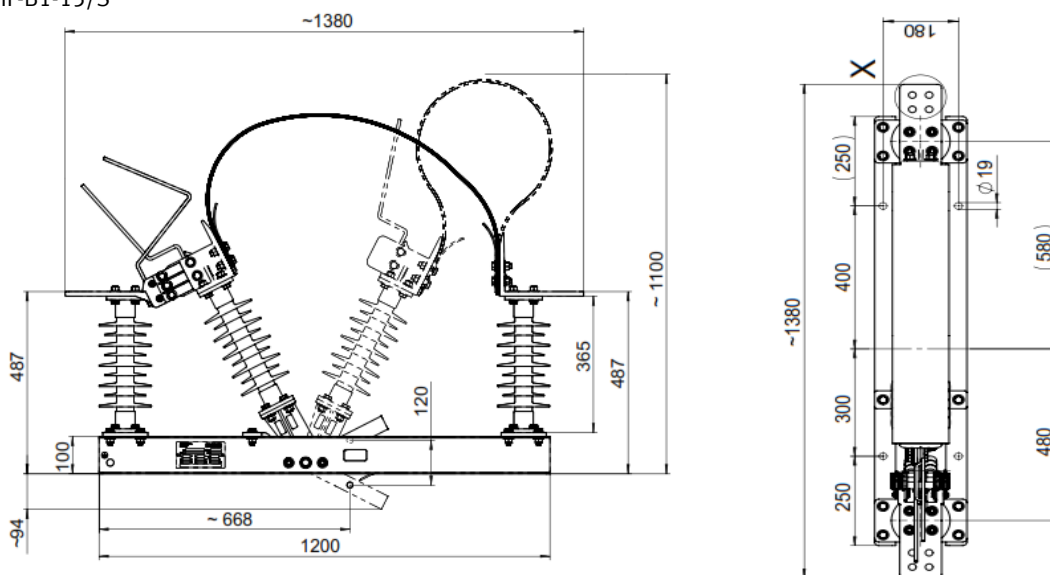
Lifetime		
Mechanical life	10'000	Cycles
Environmental conditions		
Operating temperature	-30 up to +40	°C
Relative humidity	100	%
Solar radiation	1'000	W/m ²
Operating altitude	1'000	a.s.l.
Icing	10	mm
Pollution degree (acc. to IEC 62497-1)	PD4B	
Wind speed	34	m/s
Available options		FHF-B1
Forced earthing		-
Status indication		✓
Bipolar switch		✓
Norms		
EN 50152-2	Railway applications - Fixed installations - Particular requirements for alternating current switchgear - Part 2: Disconnectors, earthing switches and switches with nominal voltage above 1 kV	
IEC 62505-2	Railway applications - Fixed installations - Particular requirements for a.c. switchgear - Part 2: Single-phase disconnectors, earthing switches and switches with Un above 1 kV	
IEC 62271-1	High-voltage switchgear and controlgear - Part 1: Common specifications	
IEC 62271-102	High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches	
IEC 62497-1	Railway applications - Insulation coordination - Part 1: Basic requirements - Clearances and creepage distances for all electrical and electronic equipment	

Dimensional drawings

FHF-B1-25/S



FHF-B1-15/S



Ordering information

Basic types	Description	Article-No.
FHF-B1-25/S	Disconnecter 25 kV with silicone insulators	22257
FHF-B1-15/S	Disconnecter 15 kV with silicone insulators	22258

Options:

- I = Status indication with voltage-free contacts (1x open, 1x closed); 2 limit switches and terminal box
- P = Porcelain insulators instead of silicone insulators

The information given in this document is subject to change without notice