

Medium voltage switchgear specification

Standards

alfa-12 switchgear and the main apparatus contained in it comply with the following Standards:

- IEC 62271-1 for general purposes
- IEC 62271-200 for switchgear
- IEC 62271-102 for earthing switch
- IEC 62271-100 for circuit breakers
- IEC 61850 Communication networks and systems for power utility automation
- IEC 61869 Instrument transformers
- IEC 60529 Degrees of protection provided by enclosures

Technical Data

Technical Data & Type Description		Feeder Panel	Bus Coupler Panel	Bus Riser Panel	Metering BVT/Earthing Panel
Rated Voltage	[KV]	12 / 17.5 kV			
Rated Main Current	[A]	630			N/A
Switchgear Dimension W x D x H	W [mm]	650 1000 ⁽²⁾			650 1000 ⁽⁴⁾
	D [mm]	1850 ⁽³⁾			
	H [mm]	2350 / 2500 ⁽⁴⁾			
Ingress of Protection	IP4X/41	IP40 / IP41*			
Switchgear Insulation Medium		Air Insulated			
Switchgear Power Frequency Withstand Voltage	kV	38			
Switchgear Lightning Impulse Withstand Voltage	kVp	95			
Switchgear Short Circuit Withstand Current	kA (sec)	up to 31.5kA / 3s			
Arcing Due to Internal Fault	kA (sec)	up to 31.5 kA / 1s			
Class of Internal Arc Protection		AFLR			
Main and Dropper Busbar (Sub Busbar) Material		Copper			
Enclosure Material		Alu-Zinc 2			
Capacitive Switching		C2*		N/A	
Type of Interrupting Medium		SF6		N/A	
Voltage Transformer		VT*		VT*	

Configuration (Functional Units)

Incomer and Feeder OF/IF

Rated Voltage	12 / 17.5	kV
Service Voltage	11 / 13.8	kV
Rated Power Frequency Withstand Voltage	38	kV
Rated Impulse Withstand Voltage	95	kV
Rated Short Time Current	up to 31.5	kA
Rated Short Circuit Time	3	sec
Rated Operation Sequence	O-0.3s-CO-3min-CO	
Rated Peak Current	80	kA
Ambient Temperature	40	C
Rated Frequency	50 / 60	Hz
Rated Busbar Current	Up to 3600	A
Control Voltage	125 ⁽¹⁾	VDC
Degree of Protection	IP 4X / IP41*	
Color/Painting	RAL 7035 ⁽¹⁾	
Internal Arc Classification	AFLR	
Internal Arc Fault	up to 31.5	kA

Configuration (Functional Units)

Rated Voltage	12 / 17.5	kV
Service Voltage	11 / 13.8	kV
Rated Power Frequency Withstand Voltage	38	kV
Rated Impulse Withstand Voltage	95	kV
Rated Short Time Current	up to 31.5	kA
Rated Short Circuit Time	3	sec
Rated Operation Sequence	O-0.3s-CO-3min-CO	
Rated Peak Current	80	kA
Ambient Temperature	40	C
Rated Frequency	50 / 60	Hz
Rated Busbar Current	Up to 3600	A
Control Voltage	125 ⁽¹⁾	VDC
Degree of Protection	IP4X / IP41*	
Color/Painting	RAL7035 ⁽¹⁾	
Internal Arc Classification	AFLR	
Internal Arc Fault	up to 31.5	kA