

Incoming or Outgoing Load Break Switch Unit up to 24 kV

Introduction

IM and IMC are part of SM6 product range. This SM6 range is made up of modular units and used for the MV section of MV/LV substation in secondary distribution system up to 24 kV.

Application :

IM is usually applied for incoming or out going switchgear for on load switching. IMC is IM type cubicle with additional current transformer for measurement. (for overload protection please consult us).

This IM or IMC is normally installed together in the system with other part of SM6 product range such as QM, QMC, CM, DM1 DM2, etc., in accordance with the design of a distribution system.

Characteristic :

Rated maximum Voltage (kV)	12		24	
Rated voltage (kVrms)	7.2	12	17.5	24
Rated insulation level				
- 50Hz for 1 min (kVrms)	20	28	38	50
- impulse 1.2/50 μ s (kVp)	60	75	95	125
Rated current				
- load break switch (A)	400/630		400/630	
- busbar (A)	630		630	
Short time withstand current				
- for rated current 400 A (kA/1s)	12.5		12.5	
- for rated current 630 A (kA/1s)	12.5		12.5	
	16		16	
	20		20	

Internal arc withstand:

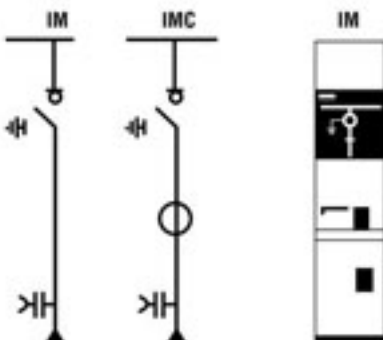
- standard: 12.5 kA 1 s, IAC: A-FL
- enhanced: 16 kA 1 s, IAC: A-FLR & IAC: A-FL in accordance with IEC 62271-200.

Protection index:

- classes: PI (insulating partition)
- loss of service continuity classes: LSC2A
- units: IP3X
- Cubicle: IK08

Basic Equipment :

- SF6 Functional load break switch and earthing switch
- Three phase busbar 630 A
- CIT & CI2 operating mechanism (IM)
- CI1 operating mechanism (IMC)
- Voltage indicators
- Heater 50 W, 220 V
- Three current transformers (IMC)



Optional Accessories :

- Large LV compartment on top of the cubicle, h = 450 mm
- Motor operating mechanism (for further detail please consult us)
- Auxiliary contacts
- Key type interlocks
- Ring CT's
- + Amperemeter (IM)

Standard Recommendation

IEC standard :
IEC 60694, 62271-200, 60265-1, 62271-105, 60255, 62271-100, 62271-102

UTE standard :
NFC 13.100, 13.200, 64.130, 64.160

EDF specification :
HN 64-S-41, 64-S-43
SNI K-29-HB-01
K-30-HB-02

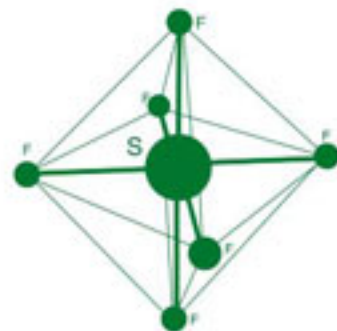
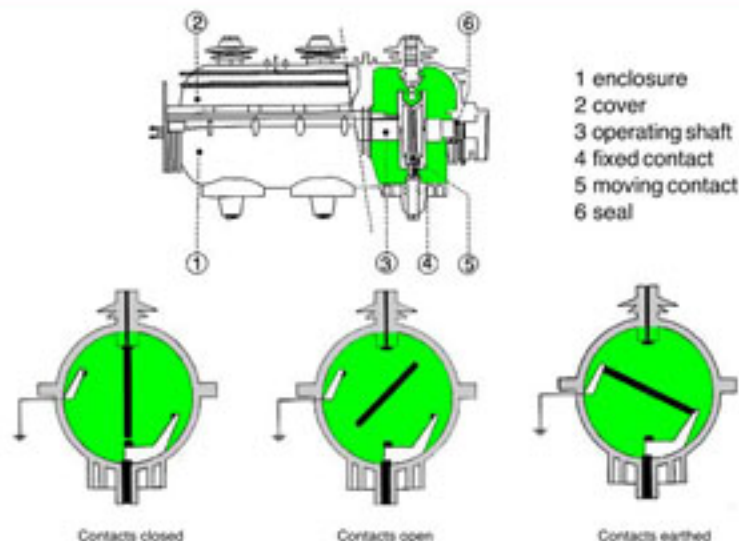
Colour :
White RAL 9002 Smooth
Grey RAL 7030 Smooth (option)

Temperatures:

The cubicles must be stored and installed in a dry area free from dust and with limited temperature variations.

- for stocking: from -40°C to +70°C,
- for working: from -5°C to +40°C,
- other temperatures, consult us.

Load break switch or disconnecter and earthing switch :



SM6 load break switches and earthing switches use sulphur hexafluoride gas (SF₆) for insulation and breaking. The active parts are placed in an insulated enclosure in accordance with the definition of IEC 56 / Appendix EE (1987 edition) for sealed pressure system. These devices offer remarkable characteristic :

- long life service
- maintenance - free active parts
- high electrical endurance
- over - voltage levels very low
- safety operation

Cabling :

Through trenches

Type of cables : single core or three cores (for IM only)

X section (mm ²)	bending radius (mm)	depth of trench (mm)	
		IMC	IM
50	370	400	140
70	400	430	150
95	440	470	160
120	470	500	200
150	500	550	220
185	540	670	270
240	590	730	330

Auxiliary power supply :

For electrical operating mechanism (when applicable)

DC : 110 V or AC : 220 V 50Hz
 24 V 110 V 50Hz
 48 V

Over all dimension	IM	IMC
Width	500 mm	500 mm
Depth	940 mm	940 mm
Height	1600 mm	1600 mm
LV compartment (h') (option)	450 mm	450 mm
Approximate weight	120 kg	200 kg
Cable connect height (measure from floor)	950 mm	450 mm

Cable entry or exit :

- through left or right side
- rear or front with conduit
- top entry and bottom entry type (for top entry the depth of cubicle is added by 600 mm and the height is added by 400 mm)

Current transformer for IMC unit :

transformer type ARM2/N2F

- single primary winding
- double secondary winding for measurement and protection.

Short-time withstand current I_{th} (kA)

I _n (A)	50	75	100
I _{th} (kA)	12.5	16	22
t (s)	1s		
measurement and protection*	5A	7.5 VA - class 0.5	
	5A	10 VA - 5P10	

★ CT for overload protection please consult us

★ Ring CT's for IM please consult us

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