

Busbar Coupler with Double-Isolation Circuit Breaker up to 24 kV

Introduction

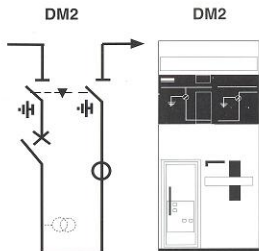
DM2 belongs to SM6 product range and called as double isolation circuit breaker. This modular unit is used for the MV section of MV/LV substation in secondary distribution system up to 24 kV.

Application :

DM2 is double isolation circuit breaker unit with fixed breaker, normally used as busbar coupler.

The position of out going line can be chosen on right side or left side.

This cubicle is normally installed together in the system with other parts of SM6 product range such as IM, QM, CM, GAM, etc. in accordance with the design of a distribution system.



Characteristic :

Rated maximum Voltage (kV)	12		24	
	7.2	12	17.5	24
Rated voltage (kVrms)				
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	
- circuit breaker (A)	400/630		400/630	
Short time withstand current				
- for rated current 400 A (kA/1s)	12.5/14.5		12.5/14.5	
- for rated current 630 A (kA/1s)	12.5/14.5		12.5/14.5	
	16		16	
	20		20	

Making capacity is equal to 2.5 times the short-time withstand current.

Merlin Gerin

Modicon

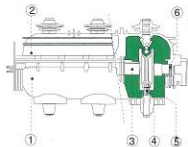
Square D

Telemecanique

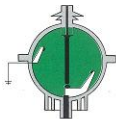
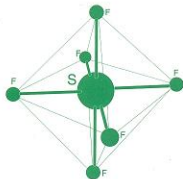
Schneider
Electric

We do more with electricity.

Load break switch or disconnector and earthing switch :



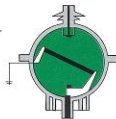
- 1 enclosure
- 2 cover
- 3 operating shaft
- 4 fixed contact
- 5 moving contact
- 6 seal



Contacts closed



Contacts open



Contacts earthed

SM6 load break switches and earthing switches use sulphur hexafluoride gas (SF_6) 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 characteristics :

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

Basic Equipment :

- Fluarc SF1 circuit breaker 630 A.
- Three phase busbar 630 Amp.
- Disconnecter and earthing switch.
- RI circuit breaker operating mechanism.
- CS disconnecter operating mechanism.
- Enlarge low voltage compartment.
- Three current transformers.
- Auxiliary contacts on circuit breaker.
- Downstream earthing switch.
- Heater 50 W, 220 V

Optional Accessories :

- **For Circuit Breaker :**
- Motor operating mechanism.
- Low energy MITOP or Undervoltage opening release.
- Opening and closing shunt trip.
- Operation counter.
- Three voltage transformers

Standard Recommendation

IEC standard :

IEC 298, 265, 129, 694, 420, 56

UTE standard :

NFC 13.100, 13.200, 64.130, 64.160

EDF specification :

HNI 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)

Over all dimension	DM2
Width	750 mm
Depth	1220 mm
Height	1600 mm
LV compartment (h')	450 mm

Approximate weight : 400 kg

Current transformer for DM2 unit

Type ARM3/N2F :

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

Short-time withstand current Ith (kA)

I _n (A)	10-20	25-50	50-100	100-200	200-400	300-600
I _{th} (kA)	5			12.5		25
t (s)	1	0.8		1		
measurement	5A			30 VA - class 0.5		
and	1A			1VA-10P20		
protection	5A	5 VA - 5P10			7.5 VA-5P15	

Voltage Transformers for DM2 unit (option)

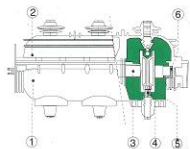
Type VRQ2-N (*)

rated voltage (kV)	24			
primary voltage (kV)	10/√3	15/√3	15-20/√3	20/√3
secondary voltage (V)	100/√3			
thermal power (VA)		250	150-250	250
accuracy class	0.5	0.5-1	0.5	0.5-1
rated output for single primary winding (VA)	30	30		30
rated output for double primary winding (VA)			30-50	

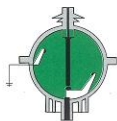
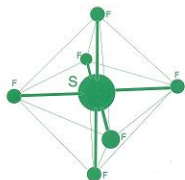
(*) VRQ2-N for grounded neutral system

VRQ2 for ungrounded neutral system

Load break switch or disconnecter and earthing switch :



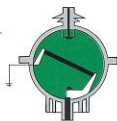
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