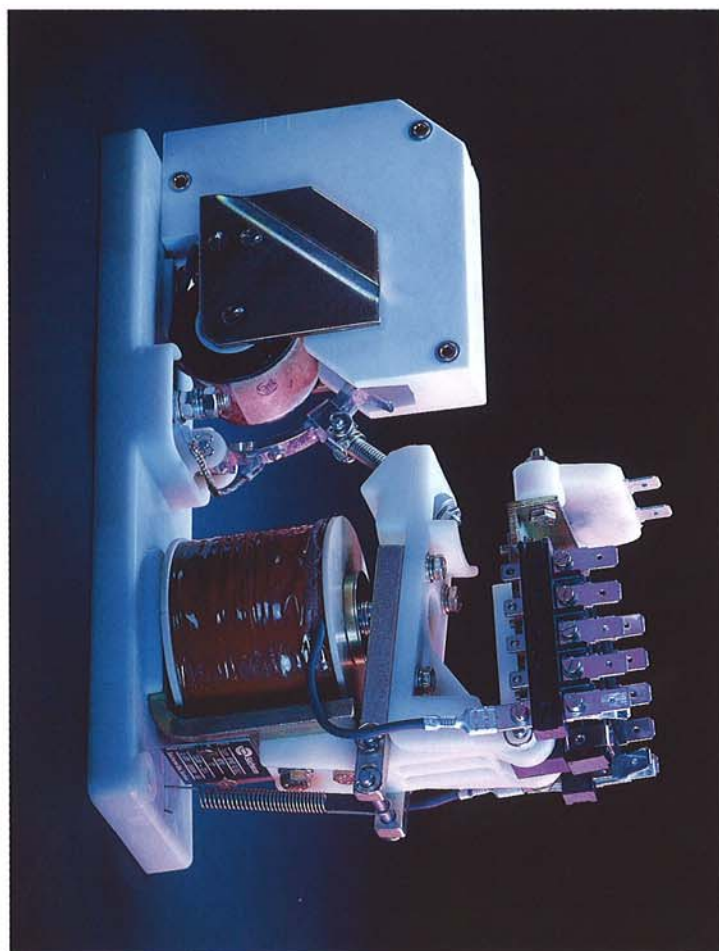


**Contactor Type *BMS 15.002*  
for Traction and Industry**



 **Sécheron**

## 1. General

The Sécheron contactor Type BMS 15.002 is a single-pole, polarity-independent, air-break circuit-breaker for direct and alternating current with electromagnetic actuation and opening through spring pressure when the holding current is switched off.

## 2. Applications

The contactor has been specially designed for use under the extremely harsh operating conditions encountered with electric traction vehicles and for particularly high switching rates.

They are used on railway vehicles primarily as heating and filter capacitor precharging contactors and as contactor relays in auxiliary circuits.

This type of contactor is also used in industrial equipment.

## 3. Construction

The contactor consists of the following modules:

- Contact unit
- Actuating solenoid
- Arc chute
- Electromagnetic arc blow-out coil
- Auxiliary contacts
- Base plate

## 4. Modules

4.1 The *contact unit* consists of a fixed contact holder and a moving contact lever. Both parts are fitted with easily replaceable, silver arcing contacts.

4.2 *Actuation* of the moving contact is achieved using a solenoid plunger together with an actuating lever. It is opened by the armature resetting spring. The actuator is designed for continuous duty and requires no economy resistor. If required a varistor can be connected in parallel with the solenoid.

4.3 In the *arc chute* the arc cools down and produces the necessary over-voltage.

4.4 The *blow-out coil*, adapted to the effective current, ensures rapid and reliable extinction of the arc.

For the effective current values following blow-out coils are available:  
0.53A - 1.54A - 3.4A - 4.2A - 5.2A - 7.3A - 9.7A - 15.5A - 21.9A - 24.3A.

4.5 The 4 *auxiliary contacts* are designed as bridge contacts and can be either normally open and/or normally closed contacts.

4.6 The *base plate* upon which the other modules are mounted is made of synthetic resin and is, similar to other parts, constantly upgraded in line with the latest ecological findings.

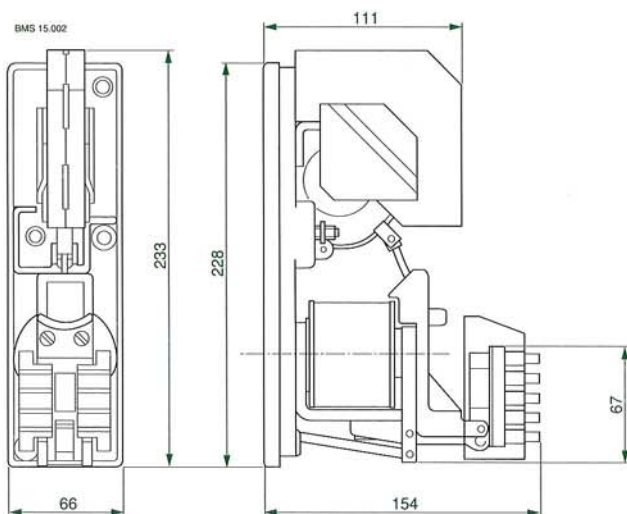
### Additional important data when ordering:

- Voltage for the drive (e.g. 110 V DC)
- Number of auxiliary contacts (e.g. 4)
- Diagram of auxiliary contacts (e.g. NC, NO, NO, NC)
- Effective current to determine the arc blow-out coil (see 4.4)

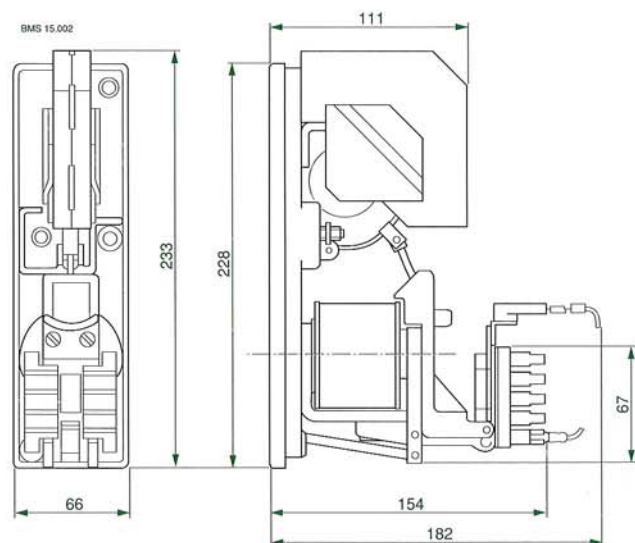
Further technical data see separate descriptions.

## 5. Main dimensions

Version without varistor



Version with varistor



## 6. Main technical data

### 6.1 General

Weight	2.2 kg
Mounting	vertically on wall or scaffold
Ambient temperature	-40°C - +40°C
Switching frequency	max. 2 switchings per second
Mechanical life duration	min. 5 x 10 <sup>6</sup> switchings
Standard specifications	IEC publ. 77 (1968)
IEC publ.	158.1 (1970)
VDE 0660	

### 6.2 Main circuit

Number of poles, nature of contact	1 normally open		
Rated voltage	1500 V		
Max. operating voltage	1800 V		
Suitable supply to 60 Hz	DC or AC from 16 <sup>2</sup> / <sub>3</sub> Hz up		
Rated current	20A		
1 hour rated current	24A		
5 minutes rated current	32A		
Closing current limit	80 A		
Interrupting current limit (ohmic)			
DC	1800 V	30 A	
	1500 V	40 A	
	1000 V	50 A	
		16 <sup>2</sup> / <sub>3</sub> Hz	50 Hz
AC	1800 V	30 A	40 A
	1500 V	40 A	50 A
	1000 V	50 A	50 A
Closing time (U <sub>n</sub> )	approx. 100 ms		
Interrupting time (mech.)	approx. 30 ms		

### 6.3 Control circuit

#### Actuation

Construction	electromagnet with resetting spring
Rated voltage U <sub>n</sub>	12 V DC - 220 V DC
Operating voltage	0.7 - 1.25 U <sub>n</sub>
Power consumption at U <sub>n</sub>	approx. 15 W

#### Auxiliary contacts

Number of poles, nature of contacts	4; N/O and/or N/C	
Rated voltage	220 V DC	
Rated current	5 A	
Closing current max.	25 A	
Interrupting current max.		
DC	48 V	8 A
	110 V	3 A
AC	220 V	8 A
Minimum transit current	20 mA	