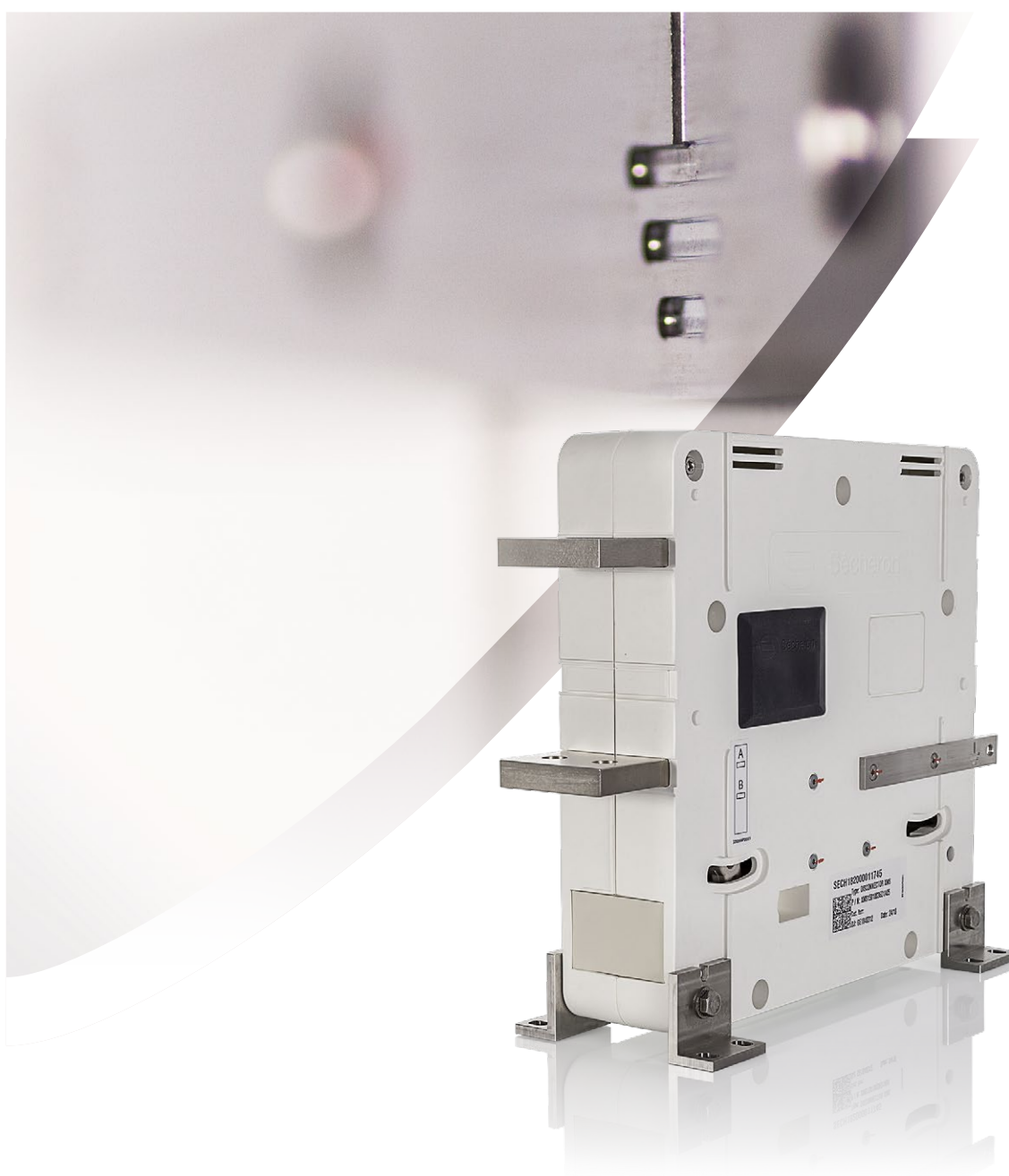


ELECTRICAL SAFETY SOLUTIONS /

INDOOR DISCONNECT SWITCH Type **XMS**

RAIL VEHICLES / FIXED INSTALLATIONS



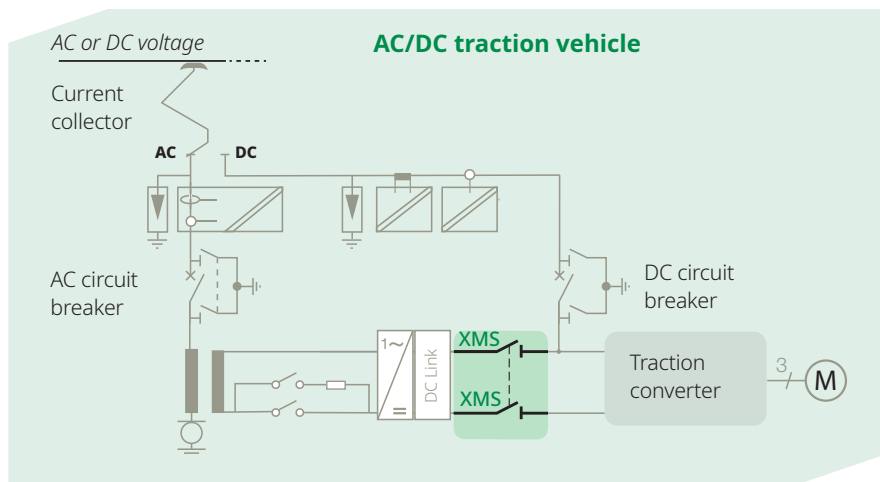
GENERAL INFORMATION

The **XMS** disconnecter is designed to connect and isolate electrical circuits in traction vehicles. It offers our customers a complementary solution to the use of Sécheron's BMS contactors for rated thermal currents up to 1,500 A and rated voltages up to 4,000 V. The various applications suitable to this device include the selection of the adapted voltage on the

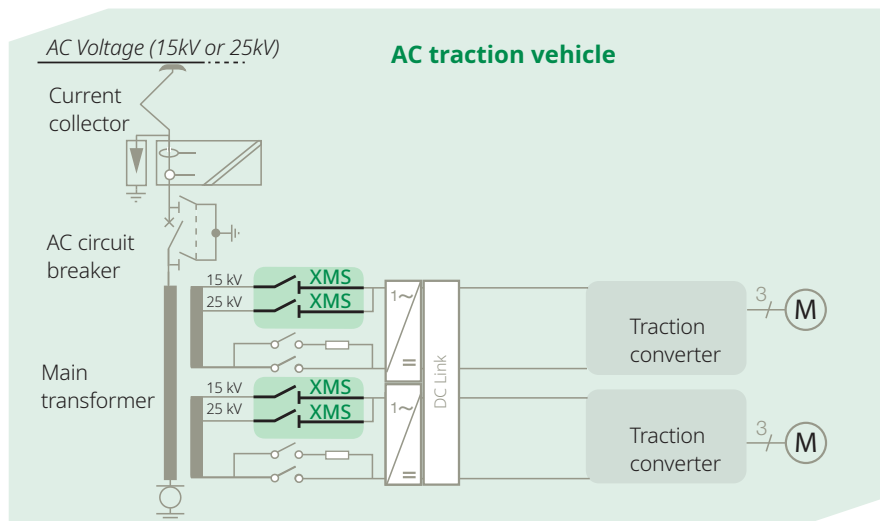
secondary winding of the transformer for dual voltage AC vehicles, as well as the isolation of the main traction inverters for EMUs or Metros.

Fitting the XMS with clever technical solutions has enabled Sécheron to develop a device with a high level of performance, combined with the highest reliability.

APPLICATIONS, TYPICAL EXAMPLES



The XMS disconnecter is an off-load switch, mainly used in railway's multi-system locomotives and trains.



XMS is also used for DC traction power substations and other industrial plants.

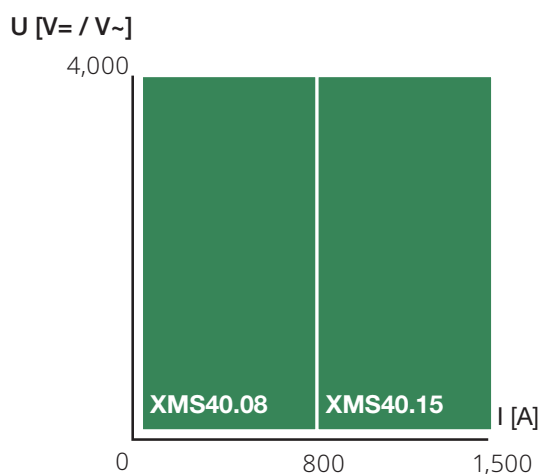
MAIN FEATURES

- Operational voltage rated up to 4,000 (V_{AC/DC})
- Rated thermal current 800 A and 1,500 A
- Multi-poles versions up to 3 poles
- Electromagnetic closing and opening
- High overvoltage category, OV3
- High resistance to pollution (degree PD3).
- Complies with standards EN/IEC60077-1; EN/IEC60077-2; EN/IEC61373; EN45445

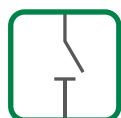
MAIN BENEFITS

- ✓ Short opening and closing times
- ✓ Identical switching electrical pulse for closing and opening operations
- ✓ High short time withstand current value
- ✓ Horizontal and vertical mounting positions
- ✓ Low power consumption
- ✓ Small clearance distance requirements
- ✓ Reduced weight and dimensions

SECHERON XMS RANGE



For 2-pole and 3-pole versions, the main contacts are mechanically linked or can be independent as an option.



XMS
1 pole



XMS
2 poles



XMS
3 poles

DATA FOR PRODUCT SELECTION

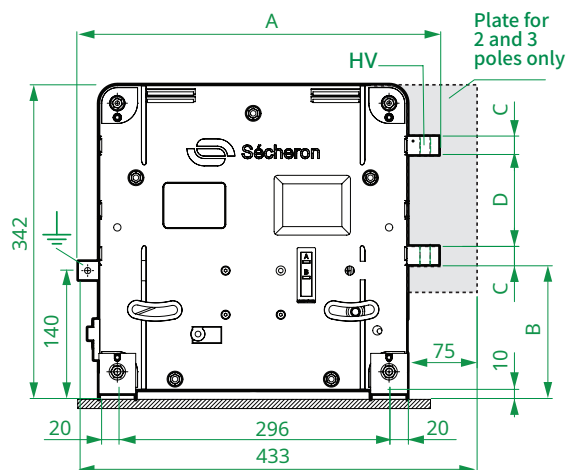
Symbol	Unit	XMS 40.08	XMS 40.15
MAIN HIGH VOLTAGE CIRCUIT			
Component category		A2	
Type of main contact		Bi-stable	
Number of poles		1 pole, 2 poles and 3 poles	
Rated operational voltage	U_e		
- DC voltage	[V]		4,000
- AC voltage	[V]	4,000 (up to 400 Hz)	4,000 (50 Hz)
Rated insulation voltage	U_i		
- Over voltage category OV3	[V]		4,000
- Over voltage category OV2			5,000
Conventional free air thermal current per pole ⁽¹⁾	I_{th} [A]	800	1,500
Rated short-time withstand current	$I_{cw/t}$ [kA]/[ms]		60/ 100
Maximum breaking capacity ⁽²⁾			
- Under 4000 V _{DC}	I_c [mA]		100
Maximum making capacity ⁽³⁾			
- Under 100 V _{DC}	I_r [A]		10
Rated power-frequency test voltage (50 Hz/1min)	U_{50} [kV]		12
Rated impulse withstand voltage (1.2/50 μ s)	U_{imp} [kV]		25
⁽¹⁾ At $T_{amb} = +40^\circ\text{C}$ for DC and AC (50/60 Hz) voltage. For higher frequency, please contact Sécheron. ⁽²⁾ Maximum seldom breaking capacity. ⁽³⁾ Maximum seldom making capacity.			
LOW VOLTAGE CIRCUIT			
Control circuit			
Nominal supply voltage	U_n [V _{DC}]	1 pole	2 poles
Range of voltage			3 poles
Nominal switching power (0.5 s)	P_c [W]	365	730
Nominal holding power	P_h [W]		0
Mechanical switching time ⁽⁴⁾	t_{cc} [ms]		<100
⁽⁴⁾ At U_n and $T_{amb} = +20^\circ\text{C}$.			
Auxiliary contacts			
Type of contacts		Potential free (PF)	
Rated voltage	[V _{DC}]	24 to 110	
Conventional thermal current	I_{th} [A]	10	
Utilization category according to EN60947			
- AC-15 230 V _{AC}		1.0 A	
- DC-13 110 V _{DC}		0.5 A	
Minimum let-through current at 24 V _{DC} ⁽⁵⁾	[mA]	≥ 10 (silver contacts) or $4 \leq I < 10$ (gold contacts)	
⁽⁵⁾ For a dry and clean environment.			
Low voltage interface			
Control circuits		Wago terminal or AMP 18 pins connector	
Insulation			
Rated power-frequency withstand voltage (50 Hz / 1min)			
- LV circuit to earth	U_a [kV]	1.5	
OPERATING CONDITIONS			
Installation		Indoor	
Altitude	[m]	$\leq 2,000$	
Working ambient temperature	T_{amb} [°C]	- 40 to + 70	
Humidity		95% at + 40°C	
Pollution degree		PD3	
Minimum mechanical durability	N Operations	125,000	

PRODUCT INTEGRATION

MAIN DIMENSIONS (STANDARD VERSION)

HV connections	M11 screws (...08), M14 screws (...15)
Earth connections	M8 screws
LV Connections	Wago terminal
Fixing points	M8 screws

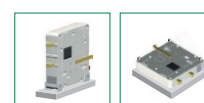
Dimensions without tolerances are indicative. All dimensions are in mm. The maximum allowed flatness deviation of the support frame is 0.5 mm.



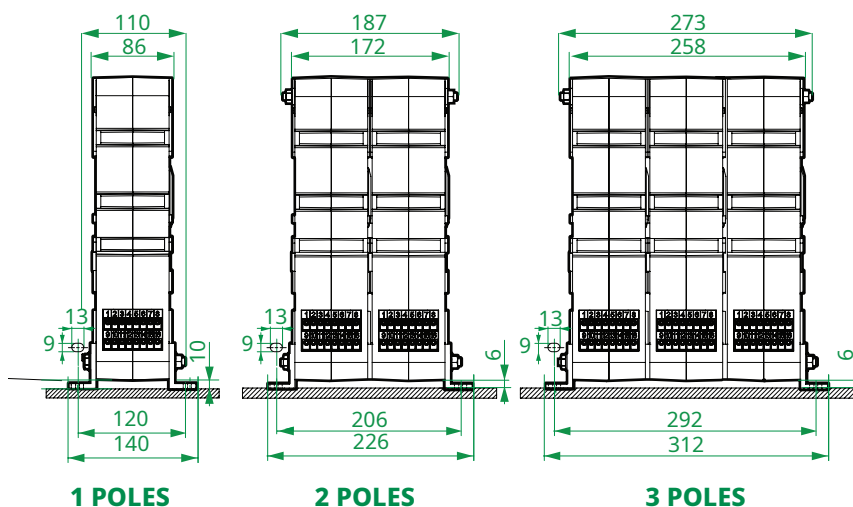
XMS40.08/

XMS40.15

Horizontal/Vertical installation



Dimensions [mm]	XMS40.08	XMS40.15
A	392	412
B	146	151
C	20	15
D	100	102
Weight per pole	10 kg	13 kg

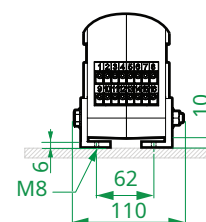


1 POLES

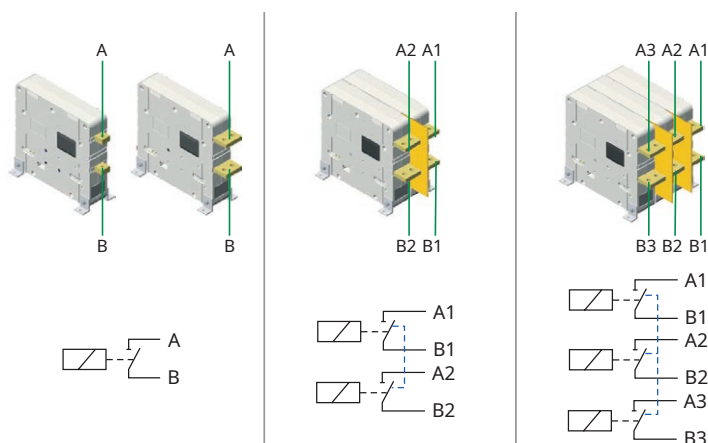
2 POLES

3 POLES

OPTIONAL INWARDS FIXATION AVAILABLE



AVAILABLE XMS CONFIGURATION

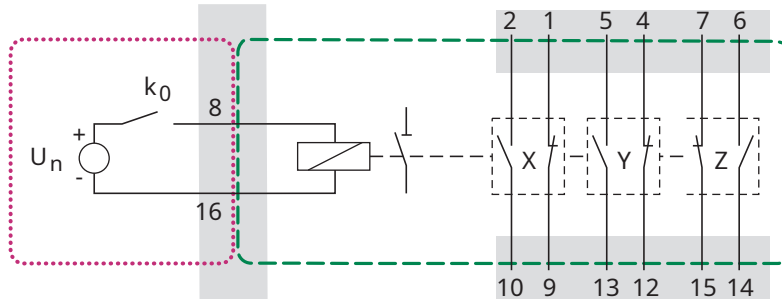


The multipole versions are delivered with the poles mechanically connected.

It is however also possible to get multipole version with independent poles (shown on page 7).

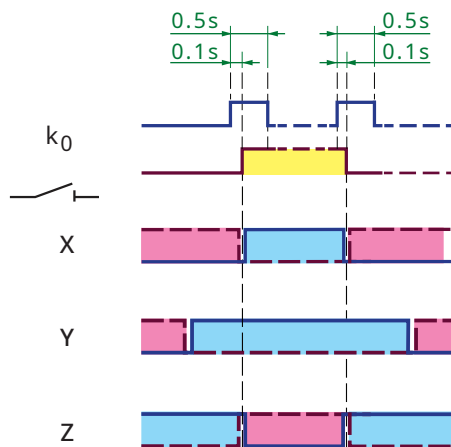
CONTROL AND LOW VOLTAGE WIRING DIAGRAM

/// LOW VOLTAGE WIRING DIAGRAM (Wago terminal)



Legend of the schemes:

- XMS disconnector main contact
- 1a+1b - Switch PF
- XMS closing coil
- Wago terminal
- Sécheron's scope
- Customer's scope



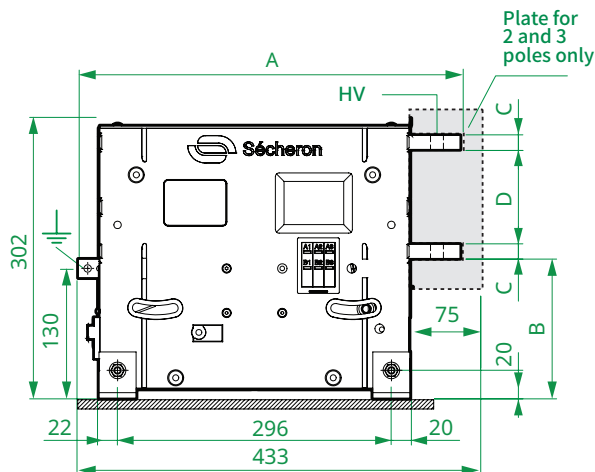
Wago terminal

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Time lapse is in second [s].

OPTIONS (SUBJECT TO ADDITIONAL COSTS)

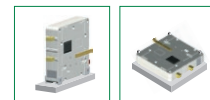
/// SMALL HEIGHT VERSION



XMS40.08S/

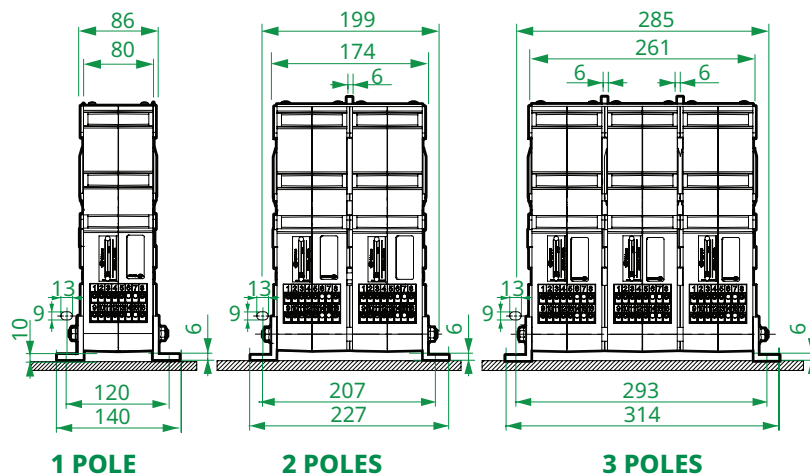
XMS40.15S

Horizontal/Vertical installation

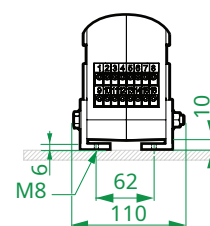


Dimensions [mm]	XMS40.08	XMS40.15
A	392	412
B	146	151
C	20	15
D	100	102
Weight per pole	10 kg	13 kg

/// SMALL HEIGHT VERSION

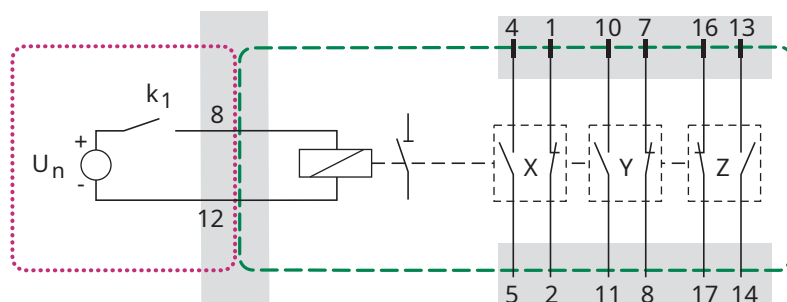


OPTIONAL INWARDS FIXATION AVAILABLE

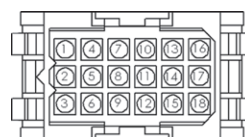


/// LOW VOLTAGE AMP CONNECTOR

LOW VOLTAGE WIRING DIAGRAM



AMP connector



Legend of the schemes:

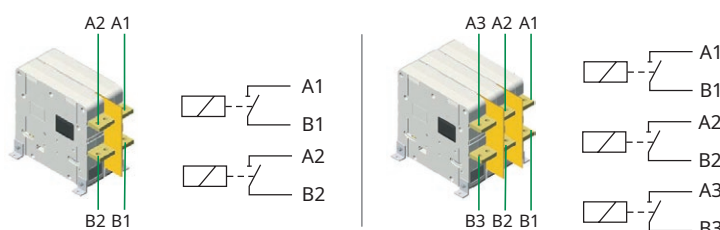
	XMS disconnect main contact
	1a+1b - Switch PF
	XMS closing coil
	Wago terminal
	Sécheron's scope
	Customer's scope

MOBILE CONNECTORS

Mobile connectors	
Type	Secheron's number
AMP connector 18 pins for 0.5 mm ²	SG201013R1
AMP connector 18 pins for 1.5 mm ²	SG201013R2

The low voltage AMP mobile connector can be ordered separately.

/// MULTIPOLE VERSION WITH INDEPENDENT POLES



The multipole versions are delivered with the poles mechanically connected.

It is however also possible to get multipole version with independent poles as shown beside.

DESIGNATION CODE FOR ORDERING

- Be sure to establish the designation code from the latest version of our brochure by downloading it from the website: www.secheron.com.
- Be careful to write down the complete alphanumeric designation code with 18 characters when placing your order.
- For technical reasons some variants and options indicated in the designation code might not be combined.
- For other configurations not described in the brochure, please contact Sécheron.

Example of customer's choice:	XMS	40	15	0	2	L	110	2	0	A	0	1
Line:	10	11	12	13	14	15	16	17	18	19	20	21

The bold part of this designation code defines the device type, and the complete designation defines the identification number of the product, as displayed on the identification plate attached to the product.

DESIGNATION CODE

Line	Description	Designation	Standard	Options	Customer's choice
10	Product type	XMS	XMS		XMS
11	Rated operational voltage	4,000	40		40
12	Rated conventional free air thermal current	800 A 1,500 A	08 15		
13	Height	Standard (342 mm) Small (293 mm)	0	S	
14	Number of poles	1-pole 2-poles 3-poles	1 2 3		
15	Mechanical link between poles	Yes No	L	0	
16	Nominal control voltage	24 V _{DC} 36 V _{DC} 48 V _{DC} 72 V _{DC} 84 V _{DC} 110 V _{DC}	024 036 048 072 084 110		
17	Auxiliary contacts (per pole) ⁽¹⁾	2a + 2b - (switch PF) - silver type 2a + 2b - (switch PF) - gold type 3a + 3b - (switch PF) - silver type 3a + 3b - (switch PF) - gold type	1X+1Y 1X+1Y 2X 2X+1Z	2 D 1 4	
18	Low voltage interface	Wago terminal AMP 18 pins connector	0	1	
19	Fixing angle position	4 bottom-outwards 4 bottom-inwards	A	B	
20	Spare digit		0		0
21	Spare digit		1		1

⁽¹⁾ Other configuration on request.

The low voltage mobile connector must be ordered separately (refer to the table page 7).

AMP mobile connector: SG201013R1 SG201013R2

Signature:

Name:

Place and date:



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