

Vigilohm System

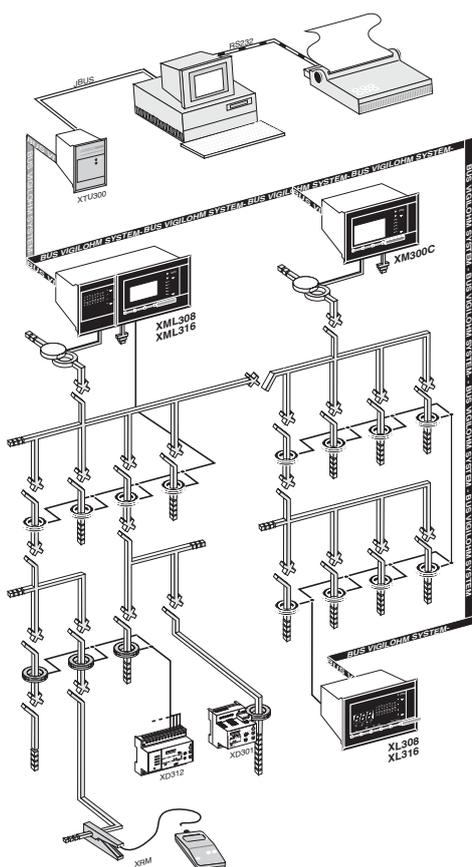
XM300C

XML308 / XL308

XML316 / XL316

Permanent insulation monitoring

User's manual



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- address and transmission rate of the interface JBUS
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- password modification
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operate your XL..... page 47

- use of the XL keyboard
- display state
- visualization
- modification
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**problems
during the self test page 50**

- follow this procedure
- identification of error messages

any problems? page 52

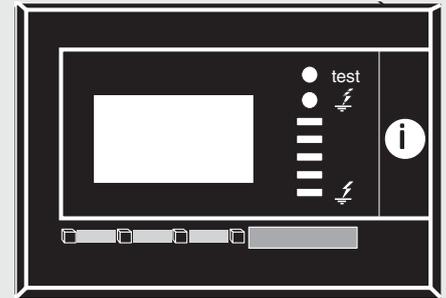
- seek out the cause

introduction

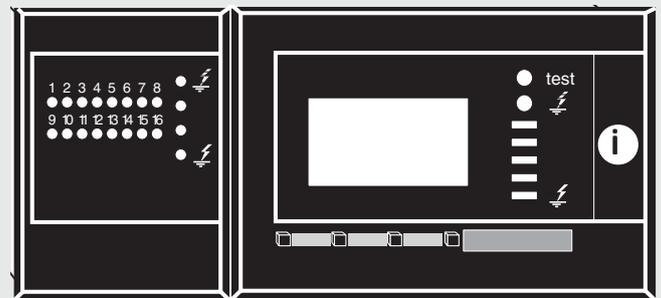
This manual regroups the information on the three types of devices forming the **Vigilohm System** series.

description of your device

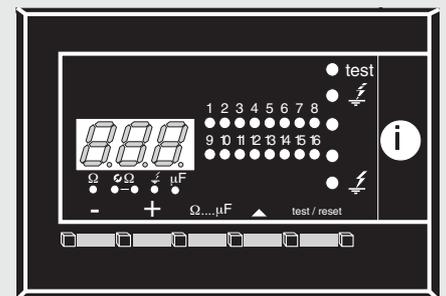
type: **XM300C**
function: communicating **CPI**
principle: ensures overall insulation monitoring by continually measuring the insulation resistance value and the earth coupling capacitance of the network.
Enables interchange with devices of the **Vigilohm system** series. (XM, XML, XL).



type: **XML308 / 316**
function: communicating **CPI**
principle: + 8 / 16 channel **localizer**
ensures overall insulation monitoring by continually measuring the insulation resistance value and earth coupling capacitance of the network.
Enables interchange with devices of the **Vigilohm system** series (XM, XML, XL).
The localizer part continually measures the insulation resistance value and earth coupling capacitance of each monitored feeder.

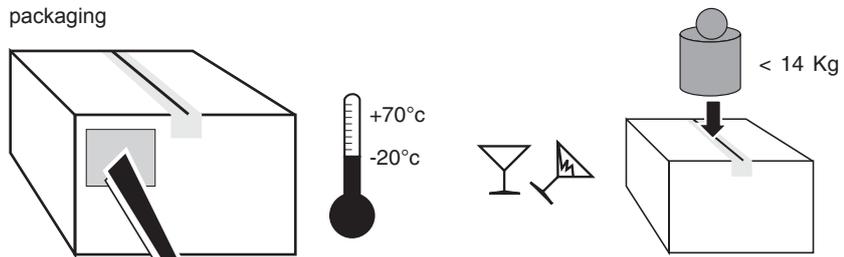


type: **XL308 / 316**
function: 8 / 16 channel **localizer**
principle: associated with a CPI (XM300C or XML), ensures local insulation monitoring by continually measuring the insulation resistance value and earth coupling capacitance of each monitored feeder.

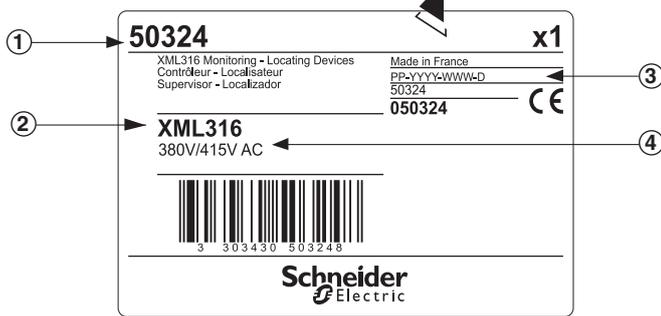


discover your device

protect the qualities of your device prior to installation



identify your device



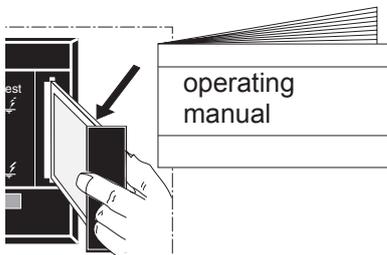
- ① commercial reference
(see table below)
- ② commercial name
- ③ manufacturing code
- ④ auxiliary supply

- example:**
- ① commercial reference: **50541**
(see opposite table)
 - ② commercial name: **XM300C**
 - ③ manufacturing code: n/a
 - ④ auxiliary supply: **220 V/240 V AC**

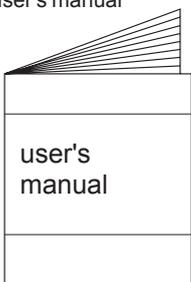
auxiliary supply	ref. XM300C	ref. XML316	ref. XML308	ref. XL308	ref. XL316
AC 50 / 60 Hz					
115 V / 127 V AC	50540	50490	50322	50606	50615
220 V / 240 V AC	50541	50491	50323	50607	50616
380 V / 415 V AC	50542	50492	50324	50608	50617

check the content of the parcel

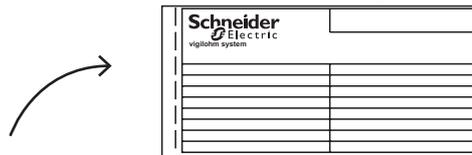
1- pull-out drawer containing a simplified keyboard / screen operating manual



2- user's manual



3- device address and feeder locating table



4- connectors

							
	output relays 9 points	auxiliary supply 3 points	earth faston terminal	system 2 points	BUS 4 points	toroids 16 points	circuit-breaker contact 3 points
XM300C	1	1	1	1	1	0	1
XML308	1	1	1	1	1	1	1
XML316	1	1	1	1	1	2	1
XL308	1	1	1	0	1	1	0
XL316	1	1	1	0	1	2	0

install your device

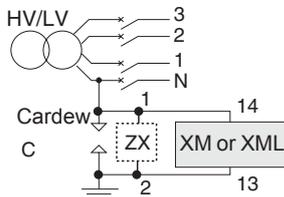
systems to be monitoring

- alternating or mixed system with ungrounded neutral or grounded by impedance of the ZX type.
phase to phase voltage: available neutral < 760V*~
unavailable neutral < 440V*~
frequency 45 - 1000 Hz

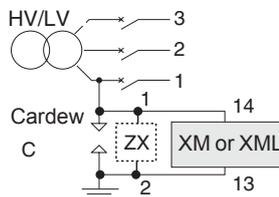
- ungrounded DC or rectified system.
phase to phase voltage < 500V ~

* for higher voltage, use an additional plate PHT 1000 (consult our catalogue).

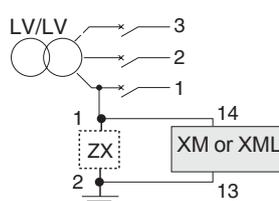
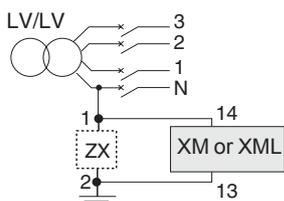
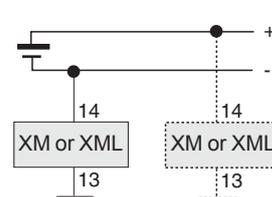
U < 760V ~



U < 440V ~



U < 500V ~



Interfaces to use

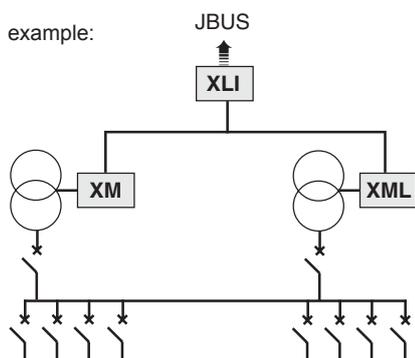
		type of system to be monitored (device number)		
		1 XL or 1 XM	XM or XML ≤ 4 and XL ≤ 8	
			with coupling	without coupling
communication function	link to printer	XLI300 + supervisor	XLI300 + supervisor	XTU300 + supervisor
	JBUS link	XLI300	XLI300 ¹	XTU300 ²
		nothing	XAS ³	XTU300

- XPI300: printer interface
- XLI300: supervisor interface.
- XTU300: supervisor interface (busbar coupling).
- XAS: Bus supply box (if no XLI 300, XPI 300, XTU 300).

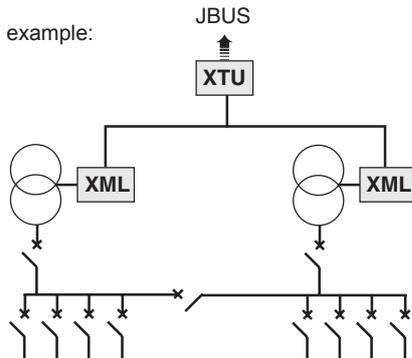
interface references

aux. supply	ref. XPI 300	ref. XLI 300	ref. XTU 300	ref. XAS
115-127 V	50525	50515	50545	50520
220-240 V	50526	50516	50546	50521
380-415 V	50527	50517	50547	50522
500-525 V	50528	50518	50548	50523

1 without coupling

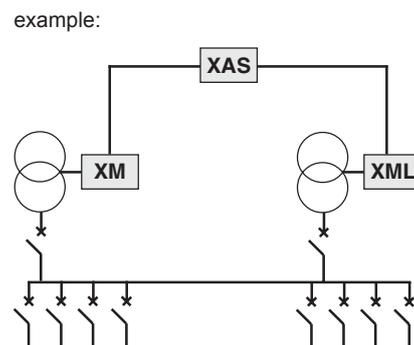


2 with coupling



3 without coupling

- no communication with outside without interface



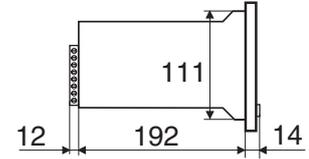
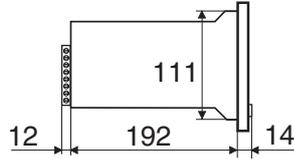
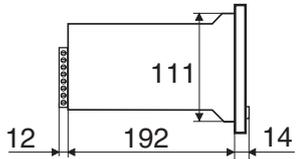
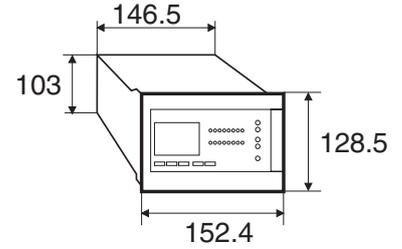
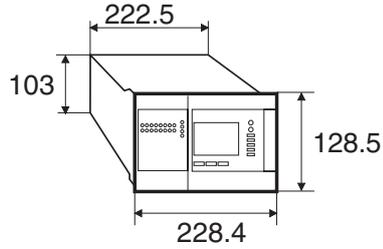
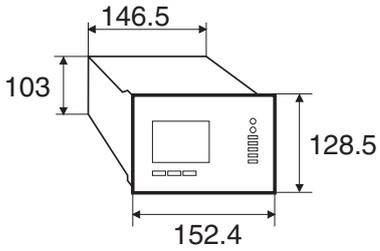
install your device

XM 300C

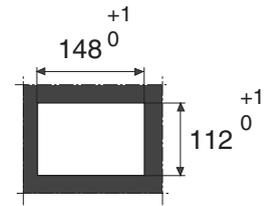
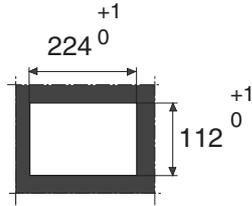
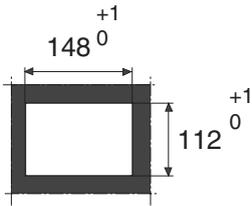
XML 308 / 316

XL 308 / 316

dimensions



cutouts

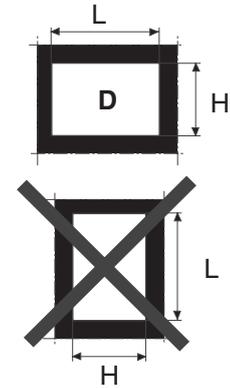
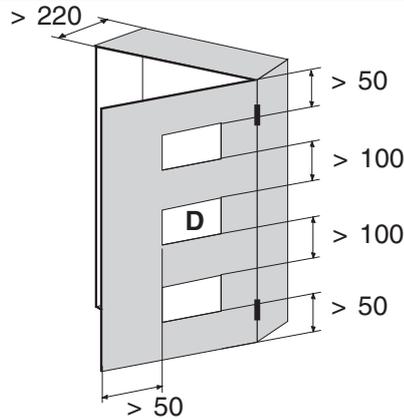


precautions

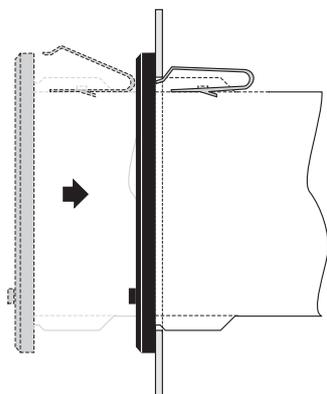
■ respect the distances between devices

■ mount the devices horizontally

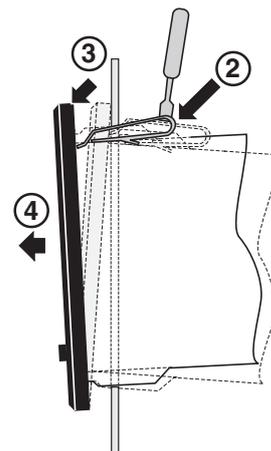
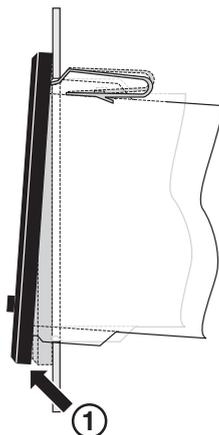
note: to ensure a good legibility of display, it is best to place the device at least 1 m 70 from the ground.



securing



dismantling



install your device

use the specific accessories for mounting in Prisma P cabinet

XM 300C

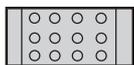
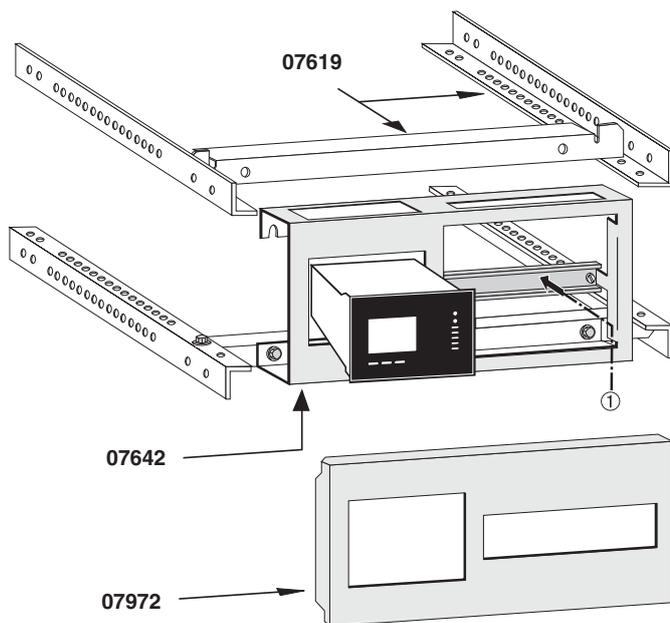


plate
reference:
07642

front cover
reference:
07972

securing accessories: 2 supports + 4 crosspieces
reference: **07619**

■ for further information, consult the Prisma P design block catalogue.
ref: **01302**



① - DIN rail for mounting Multi 9 type box.

■ **front cover configuration:**

- 1 XM300C + 3 XD301 or
- 1 XM300C + 2 XD312 or
- 1 XM300C + 1 XD301 and 1 XD312

XML 308 / 316 - XL 308 / 316

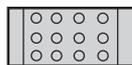


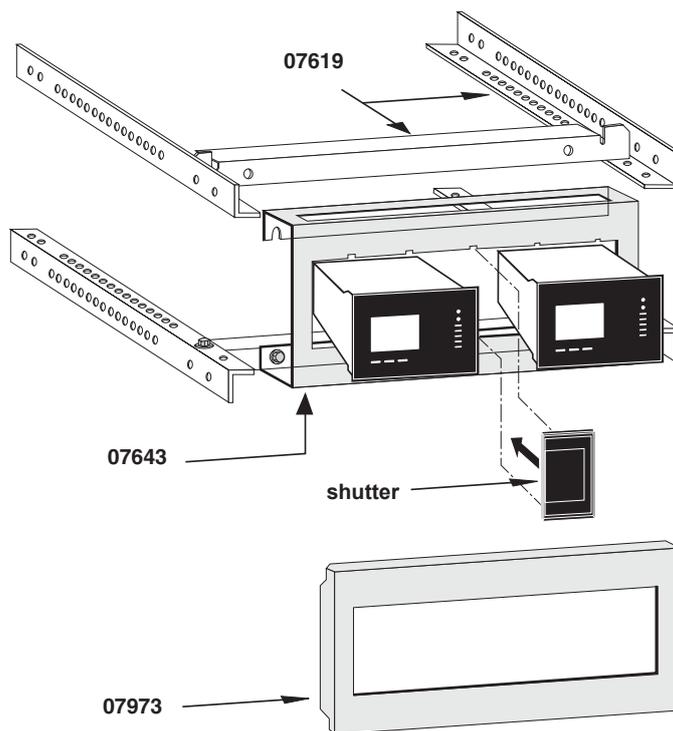
plate
reference:
07643

front cover
reference:
07973

shutter

securing accessories: 2 supports + 4 crosspieces
reference: **07619**

■ for further information, consult the Prisma P design block catalogue.
ref: **01302**



■ **front cover configuration:**

- 1 XML 308 / 116 or XM300C + 2 interfaces (XTU300, XLI300, XPI300, XAS type)
- 1 XML 308 / 316 or XM300C + 1 XL308 or XL316

install your device

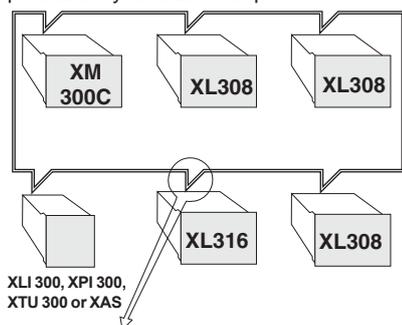
Identify your feeders

■ A self-adhesive label, provided with your operating manual enables you to identify your feeders.

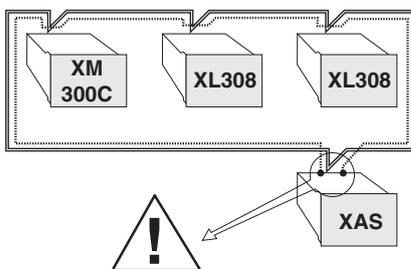
Schneider Electric Vigilohm System		adresse / 31 address
tor 1: escalator 1	tor 9:	
tor 2: electric oven 1	tor 10:	
tor 3: electric oven 2	tor 11:	
tor 4: electric oven 3	tor 12:	
tor 5: air conditioning 1	tor 13:	
tor 6: desk 1 st step	tor 14:	
tor 7: escalator 2	tor 15:	
tor 8: escalator 3	tor 16:	

wiring rules

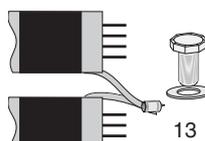
■ communication bus: we recommend precaution you make a loop



■ precaution



connect the shield to a device frame at one end only. (preferably with the interface, in this case XAS).



■ maxi. wiring length:

the limit length to be respected is the maximum length of the loop.

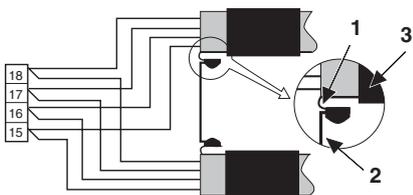
Diagram showing a loop configuration with terminals XM 300C, XL308, and XAS. A warning symbol is present, and the label Lmax is used to denote the maximum length of the loop.

- Capacity between ligne must be less than 100 nF.
- Total resistor must be less than 12 Ω.

diagram 1: 4 cable wiring



connection detail

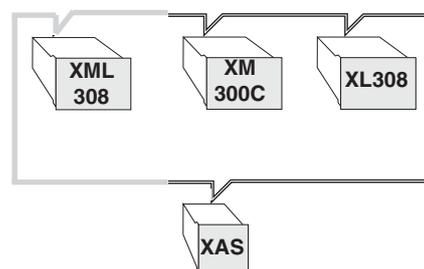


- 1- shield
- 2- 0.35 mm² wire welded at shield
- 3- thermoretractable sleeve

installing a new device on an operational system

■ Without XTU300, the system automatically takes into account the presence of a new device.

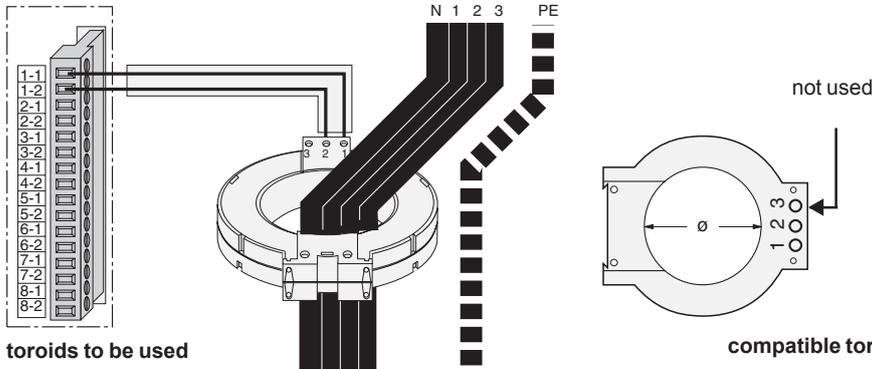
■ You can add a device in a system with XTU 300, if the device has been taken into account in XTU programming.



install your device

toroid transformer

XML308 / 316 - XL308 / 316



- cable to be used
2 conductors shielded cable
L max: 100 m

L (m)	ref.
20	50137
100	50136

nota: do not use the shielding.

toroids to be used

■ A toroids range

dia. type	mm	ref.
TA30	30	50437
PA50	50	50438
IA80	80	50439
MA120	120	50440
SA200	200	50441
GA300	300	50442

■ OA opening toroids range

dia. type	mm	ref.
POA	46	50485
GOA	100	50486

■ XS toroids range

dia. type	mm	ref.
XS30	30	50420
XS50	50	50421
XS80	80	50422
SX120	120	50423
SX200	200	50424

■ N toroids range

dia. type	mm	ref.
TN30	30	50105
PN50	50	50106
IN80	80	50107
MN120	120	50108
SN200	200	50109

compatible toroids (if you are already equipped with).

circuit-breaker position contacts

XM300C - XML308 / 316

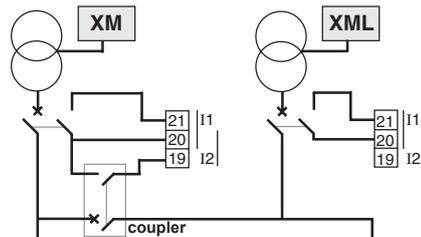
wiring

- 1st case:
only 1 CPI: no position contact required
(these inputs only function when there is a XAS, XLI300, XPI300 or XTU300 interface).

cable to use:
section: $\geq 0.75 \text{ mm}^2$ and $\leq 1.5 \text{ mm}^2$
Lmax = 300 m
simple twisted cable

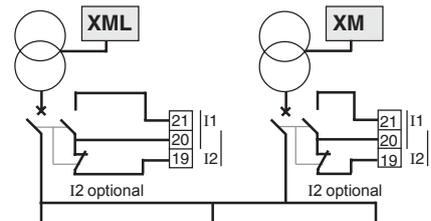
note: for operating mode by changing circuit - breaker position, see interface manual (XLI300, XTU300).

- 2nd case:
you have 1 XTU300 or 1 XCU10



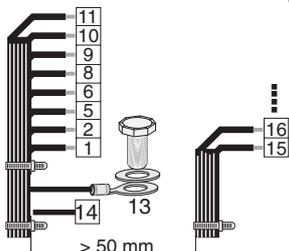
Maxi time between closing switch I1 and switch I2: 200 ms

- 3rd case:
you have 1 XLI300 or 1 XPI300 or 1 XAS



XM300C - XML308 / 316 - XL308 / 316

wiring precautions



distance to respect

- do not secure the stands on the device.

cable cross section to used

