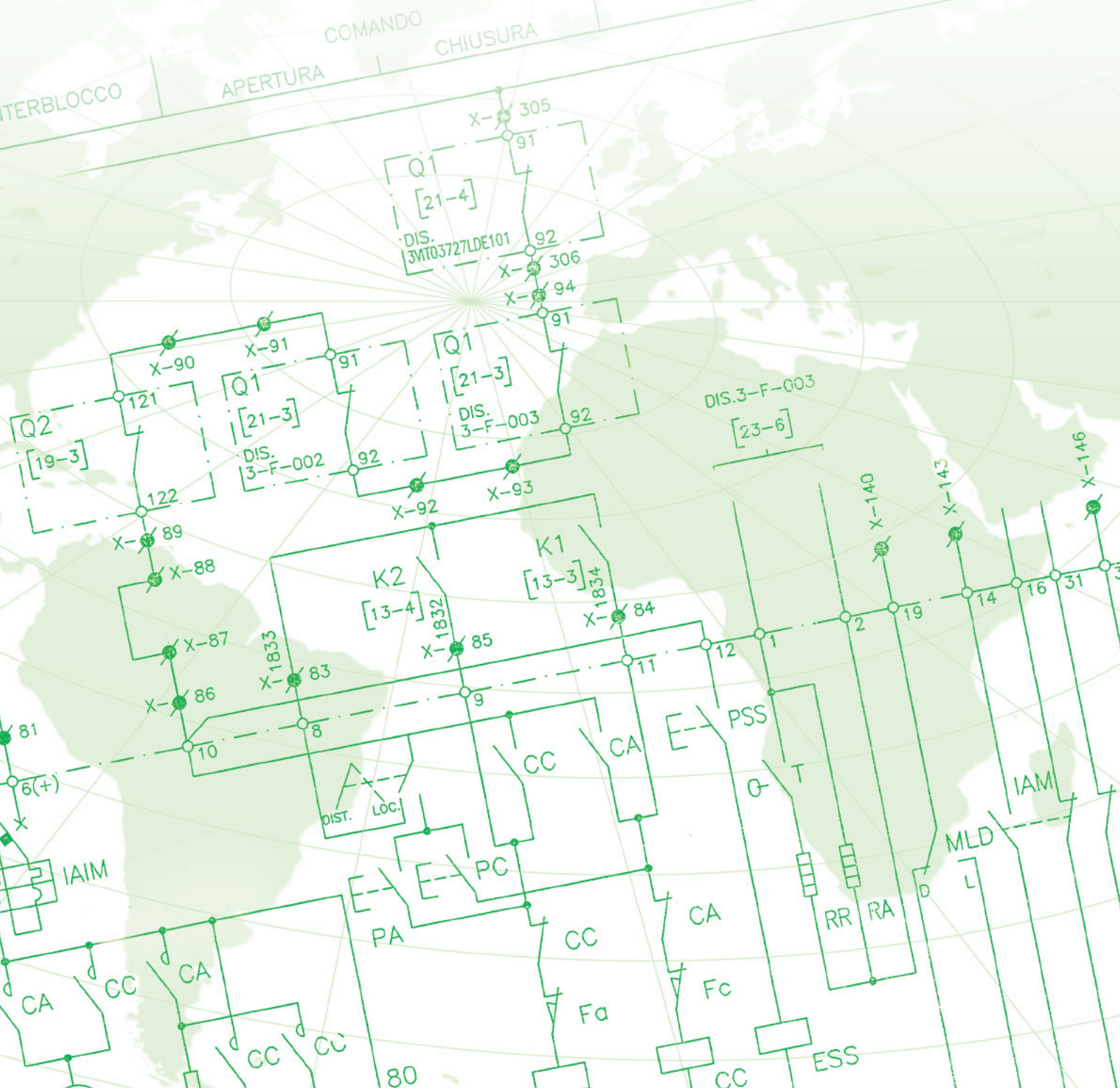




COMELETRIC

Specialized rotary and control switches

DISCREPANCY SWITCHES
CONTROL DISCREPANCY SWITCHES
STANDARD ELECTRIC DIAGRAMS



Models Available Index

Available for:

Series: FRM10	Models: M101 - M107 Maintained Action Contact : M102
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Series: DR20	Models: DR105 - DR108 Maintained Action Contact : DR104
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Series: FRMM 6	Models: M601 - M604 - M612 -M614
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Series: FRMM 6 IP20	Models: M701- M704 - M705
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Series: FRMM 2000	Models: M201 - M202
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The maximum number of packets varies depending on the series and model.
The maximum number of the packets is stated in the catalogue and in the dimensional drawing of the various models.

Ordering Method

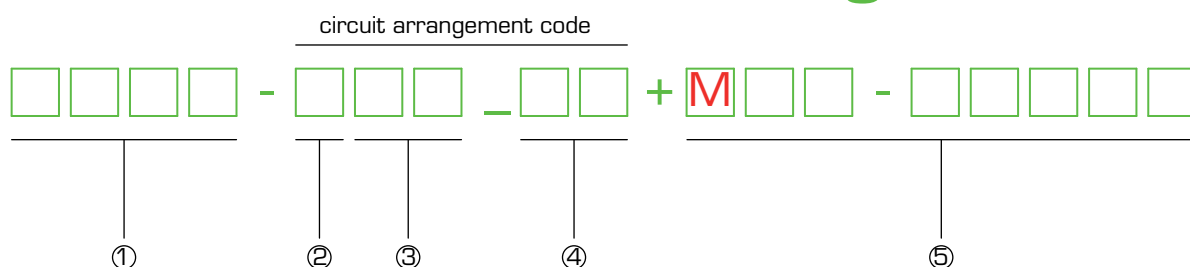
In this catalogue you may find some electric diagrams and instructions for composing independently order codes of standard discrepancy switches.

For special diagrams or diagrams which are not present in this catalogue use the form on page

Schemes of this catalogue and their use in the codes are applicable only to the series of switches shown on the previous page. They **are not applicable to the series FR10 - R20 - R16 - FRMC 6 - FRMC 6 IP20 - FRMC 2000 - FR10 62 - FR10 68 - FR10 adf - FRB10 - FRMC 6 80 - LR20.**

These diagrams and the composition of these codes are available in their respective catalogues.

Product Coding



① Model Number of the switch.

Model number means the assembly and construction form unique for each Discrepancy switch, this reference identifies the series, the type of the discrepancy switch, the dimensions, the type of knob, etc.....

This model number is indicated in the catalogues along with its dimensional drawing and panel cutout. In the previous page there is a list, for the various series of model numbers of the most common types.

② Type of Movements.

This is the reference of the type of movement and the positions that the switch should have, from a minimum of 2 up to a maximum of 4, for the series of discrepancy switches shown in this catalogue.

The movements of the knob can be of 45° or 90°.

③ n° of Packets.

As number of packets, it means by how many isolating discs should be made the switch. The number of packets affects the number of poles required. Generally in each packet you have a contact NORMALLY OPEN and a contact NORMALLY CLOSED, but this can vary depending on the wiring diagram. In each reference catalogue, next to the table of lengths, it is shown the maximum number of packets suitable for that specific model number.

one Packet



④ n° of Electric diagram.

This number, along with point 2 and 3 is an indication of the electric diagram of the switch required. It includes the wiring diagram in reference to the diagrams shown below. It has no specific meaning, it is just a sequence number that is used to represent a specific scheme of the switch assembly.

⑤ n° Escutcheon Plate.

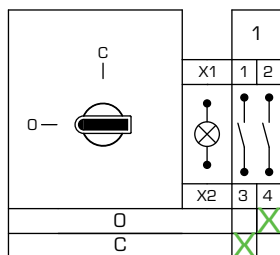
This code is referred to the shape, type and engraving of the Frontplate. On page 15 of this catalogue, all instructions to create codes of the frontplates frequently used.

Standard Development Diagrams

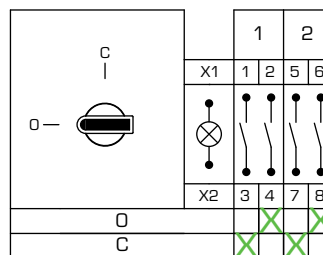
The Circuit arrangement number has to be mentioned in the product code (point 2-3-4).

Type : A

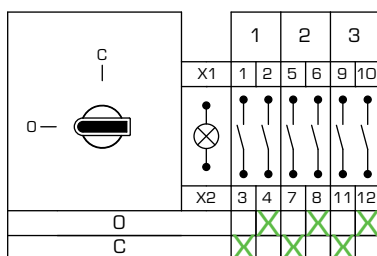
Circuit Arrangement n° **A01_01**



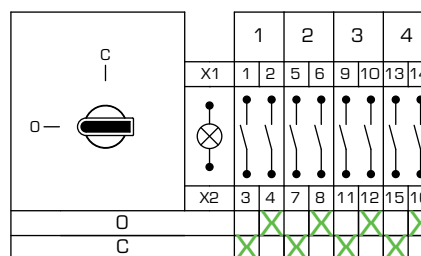
Circuit Arrangement n° **A02_01**



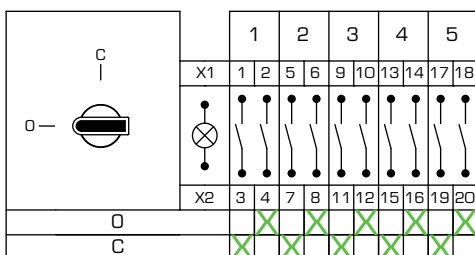
Circuit Arrangement n° **A03_01**



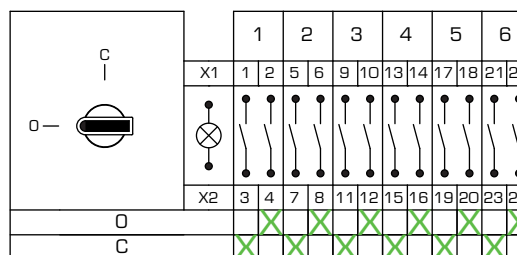
Circuit Arrangement n° **A04_01**



Circuit Arrangement n° **A05_01**

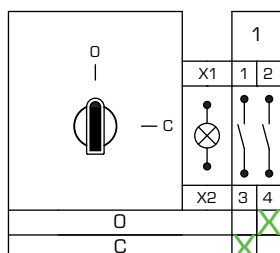


Circuit Arrangement n° **A06_01**



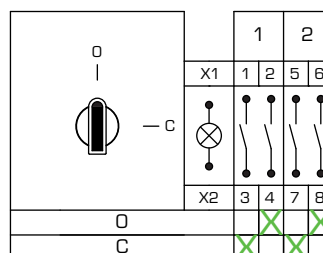
HORIZONTAL MOUNTING

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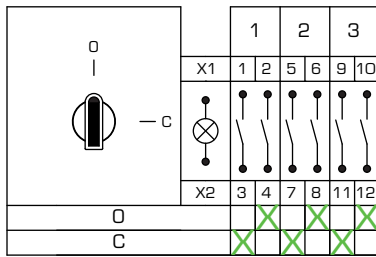
HORIZONTAL MOUNTING

Circuit Arrangement n° **A02_03**



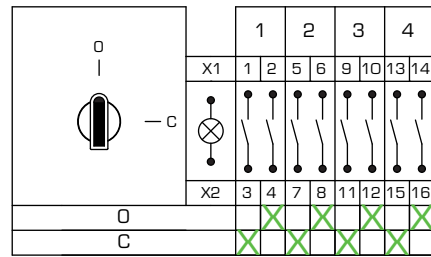
HORIZONTAL MOUNTING

Circuit Arrangement n° **A03_03**



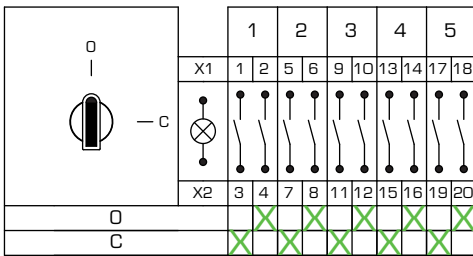
HORIZONTAL MOUNTING

Circuit Arrangement n° **A04_03**



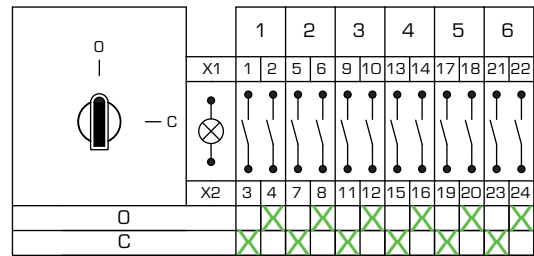
HORIZONTAL MOUNTING

Circuit Arrangement n° **A05_03**



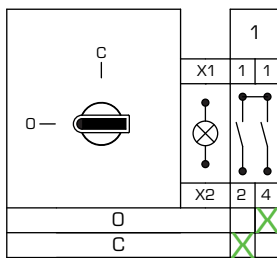
HORIZONTAL MOUNTING

Circuit Arrangement n° **A06_03**

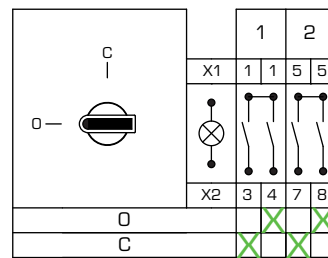


Type : B

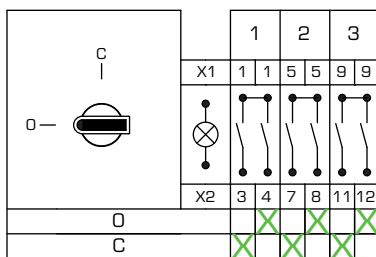
Circuit Arrangement n° **B01_01**



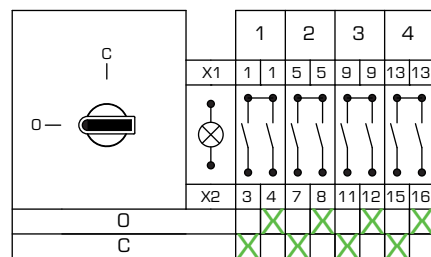
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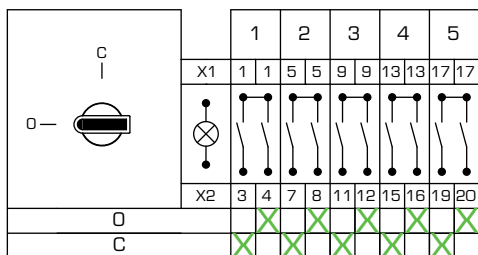
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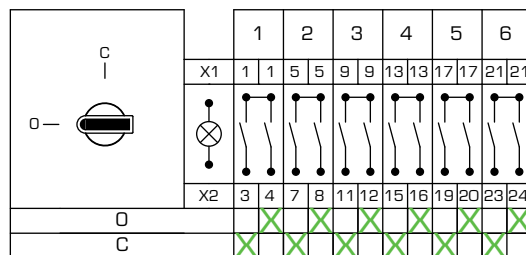
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Circuit Arrangement n° B05_01

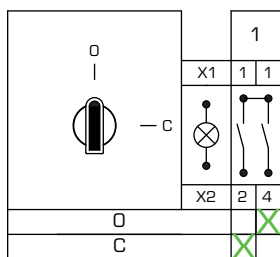


Circuit Arrangement n° B06_01



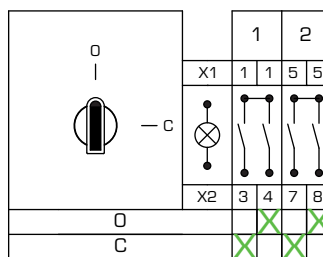
HORIZONTAL MOUNTING

Circuit Arrangement n° B01_03



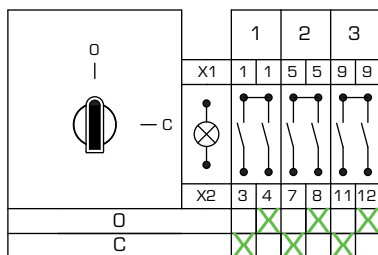
HORIZONTAL MOUNTING

Circuit Arrangement n° B02_03



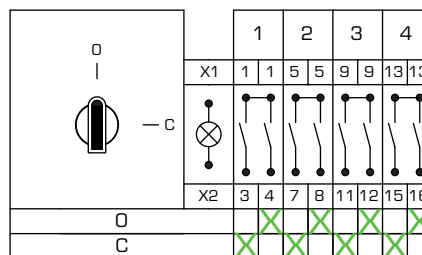
HORIZONTAL MOUNTING

Circuit Arrangement n° B03_03



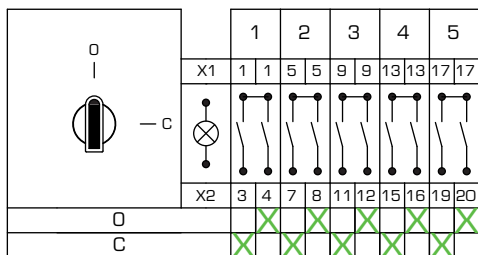
HORIZONTAL MOUNTING

Circuit Arrangement n° B04_03



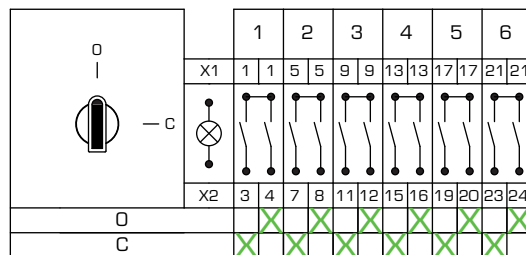
HORIZONTAL MOUNTING

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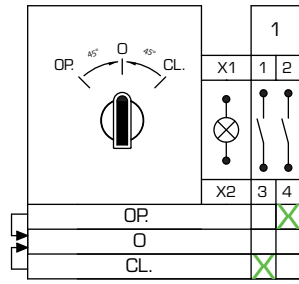
HORIZONTAL MOUNTING

Circuit Arrangement n° B06_03

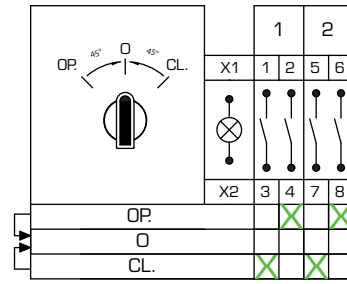


Type : C

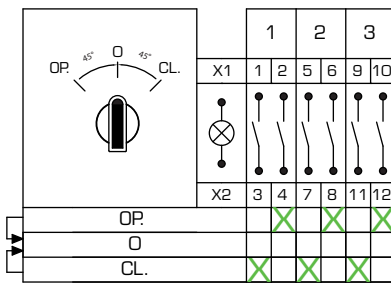
Circuit Arrangement n° CO1_01



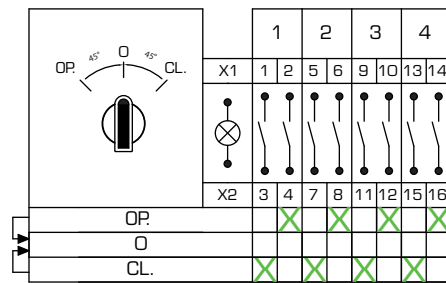
Circuit Arrangement n° CO2_01



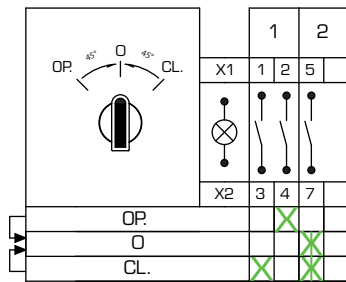
Circuit Arrangement n° CO3_01



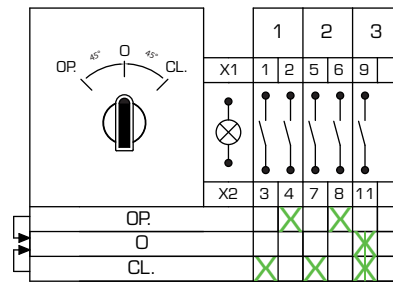
Circuit Arrangement n° CO4_01



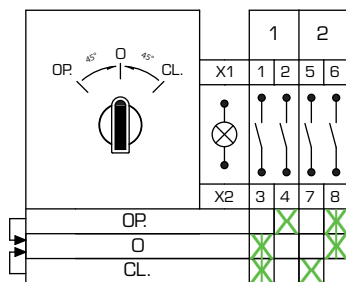
Circuit Arrangement n° SCO2_01



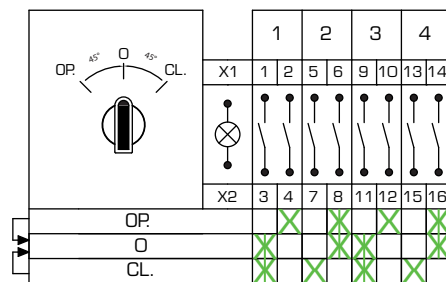
Circuit Arrangement n° SCO3_01(2-1)



Circuit Arrangement n° CO2_04



Circuit Arrangement n° CO4_04(2-2)



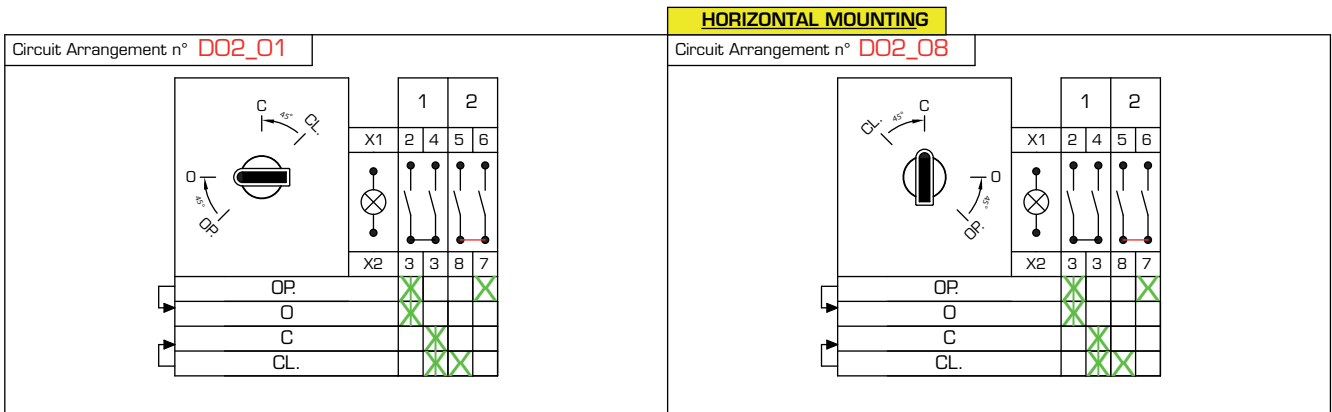
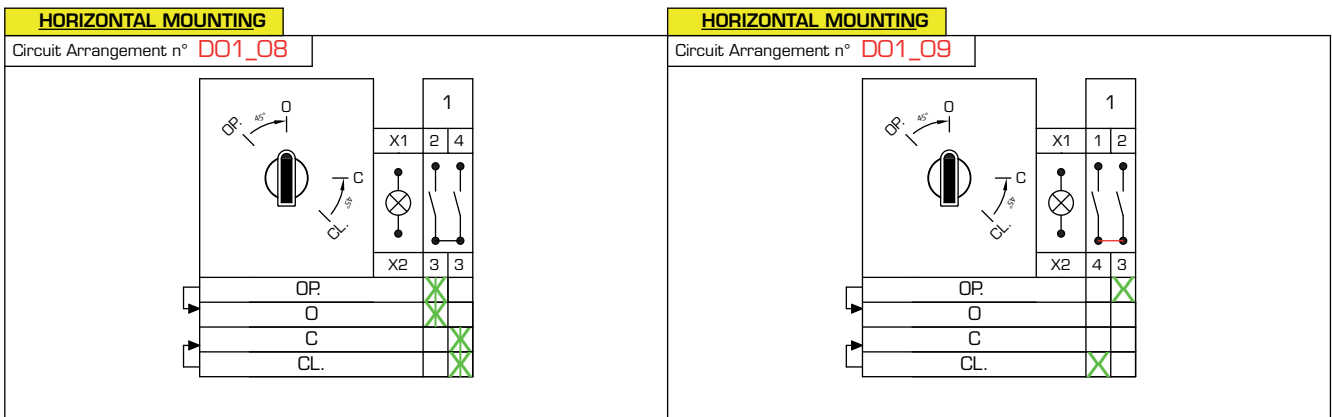
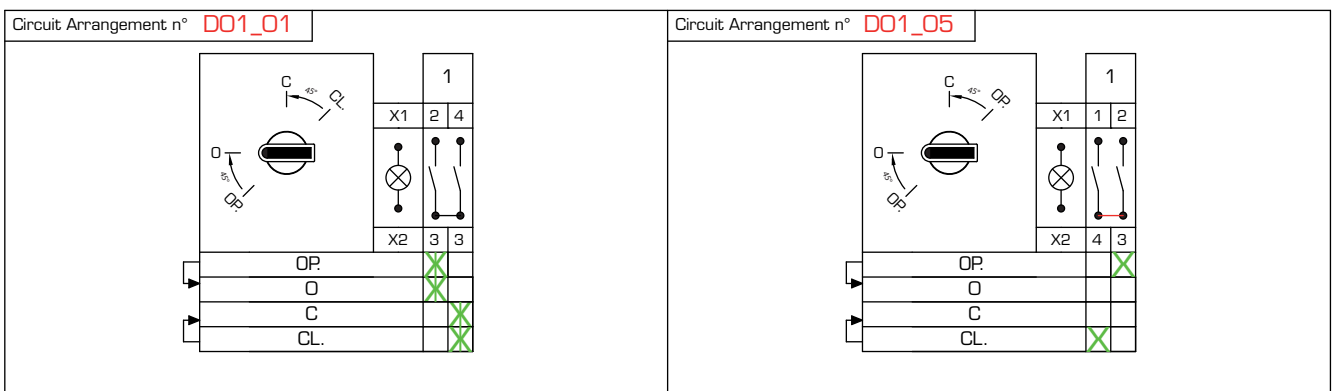
Additional Information

Principle of operation Type : D - E and T.

The switches with the movements type D - E and T are basically called control discrepancy switches. The control discrepancy switch has two fixed positions with a movement of 90° and two extra impulses of 45° on the positions of open and close. The knob is first rotated by 90° to command the relative Disconnector Switch/Circuit Breaker. This is however, a "pre-selection" phase of the desired command, the operation is confirmed by pressing and rotating the knob by 45°, which, once released, will return automatically into position. The Type T is the discrepancy switch with the MAINTAINED ACTION CONTACTS, these contacts maintain the last confirmed operation until the opposite operation is confirmed. The Type F is the same of type D and E but with "O" position.

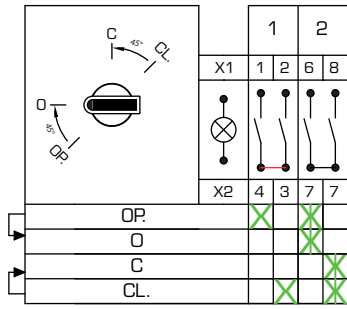
Standard Development Diagrams

The Circuit arrangement number has to be mentioned in the product code (point 2-3-4).

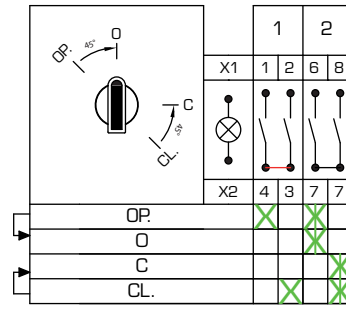


HORIZONTAL MOUNTING

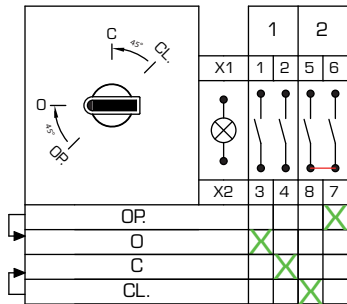
Circuit Arrangement n° **DO2_06**



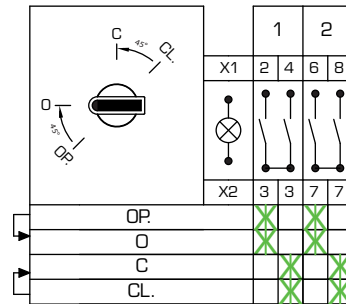
Circuit Arrangement n° **DO2_09**



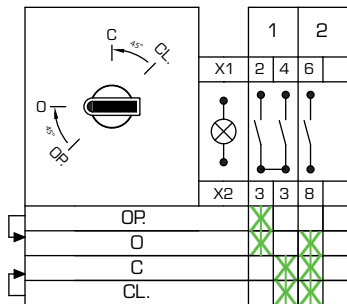
Circuit Arrangement n° **DO2_43(1-1)**



Circuit Arrangement n° **DO2_02**

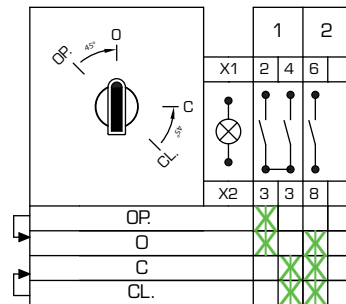


Circuit Arrangement n° **DO2_45(1-1)**

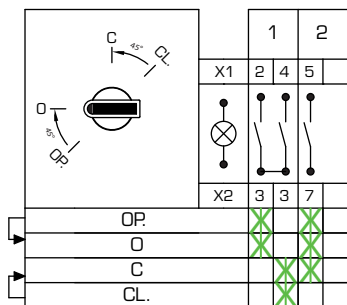


HORIZONTAL MOUNTING

Circuit Arrangement n° **DO2_47(1-1)**

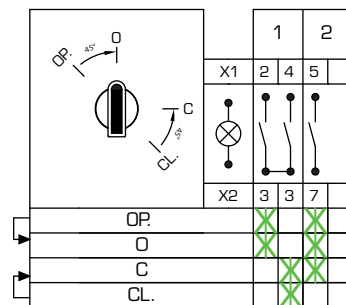


Circuit Arrangement n° **DO2_45(1-1)**

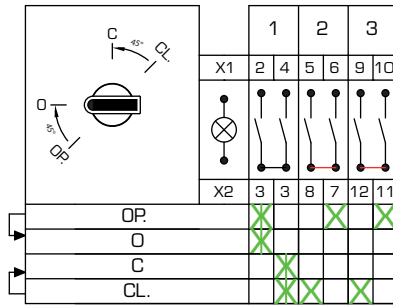


HORIZONTAL MOUNTING

Circuit Arrangement n° **DO2_48(1-1)**

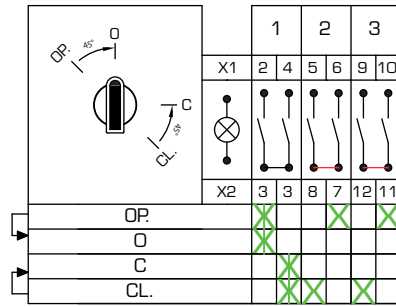


Circuit Arrangement n° D03_01

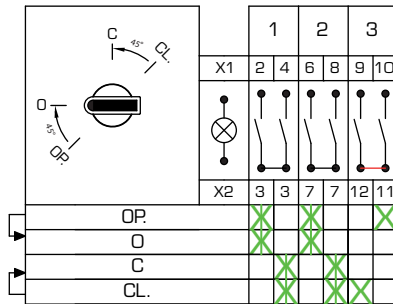


HORIZONTAL MOUNTING

Circuit Arrangement n° D03_08

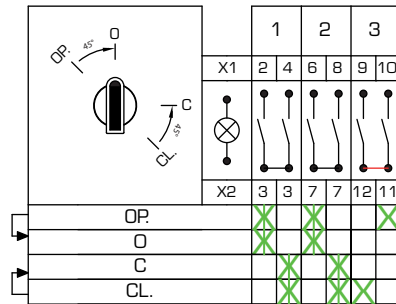


Circuit Arrangement n° D03_02

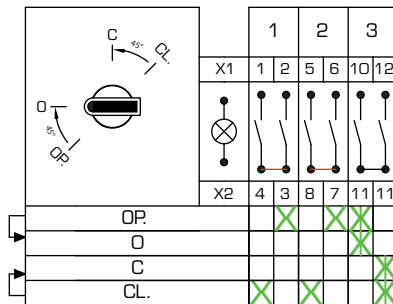


HORIZONTAL MOUNTING

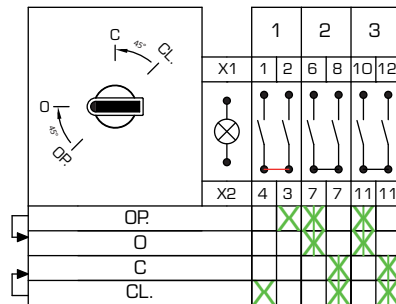
Circuit Arrangement n° D03_15



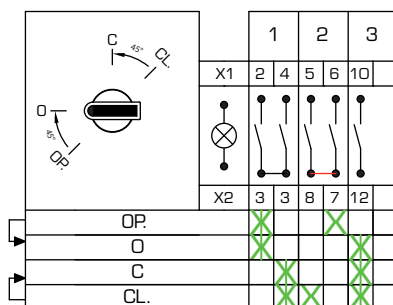
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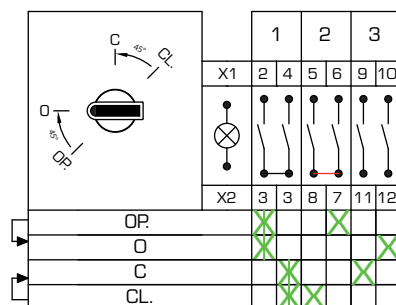
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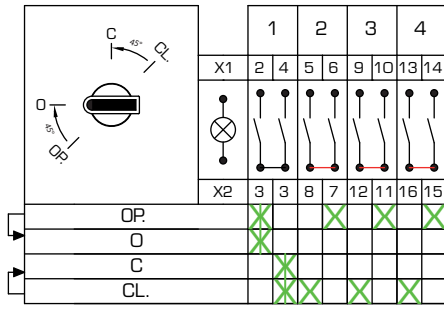
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Circuit Arrangement n° E03_01

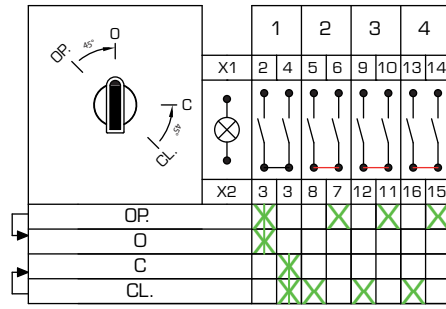


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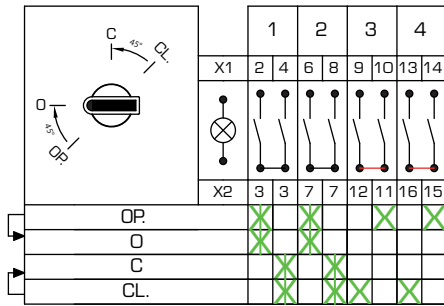


HORIZONTAL MOUNTING

Circuit Arrangement n° **DO4_08**

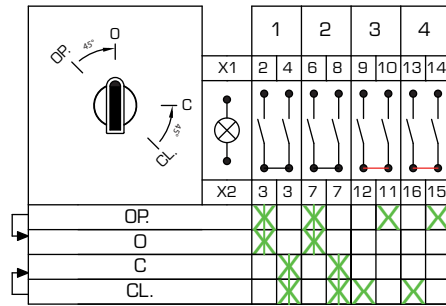


Circuit Arrangement n° **DO4_02**

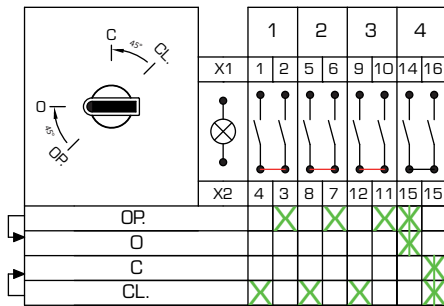


HORIZONTAL MOUNTING

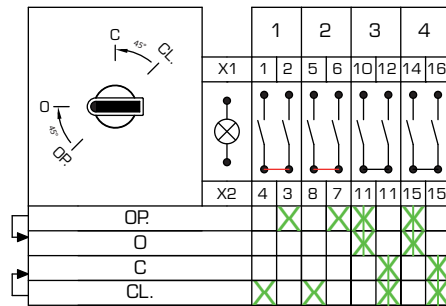
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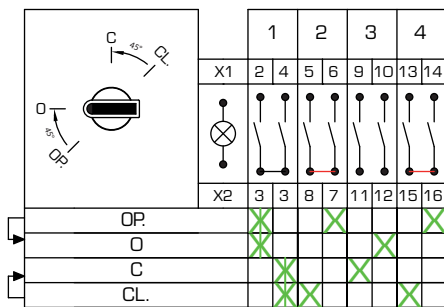
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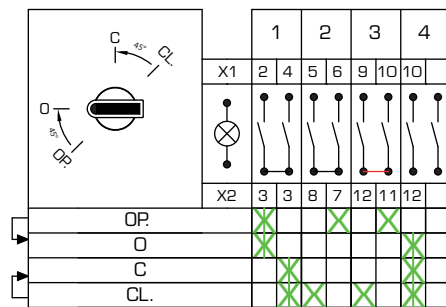
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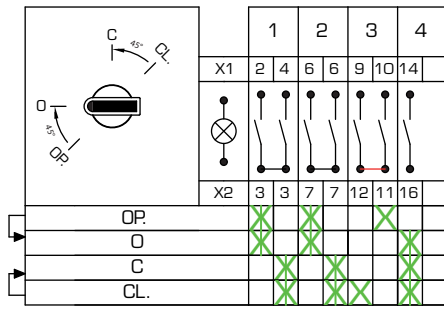
Circuit Arrangement n° **EO4_01**



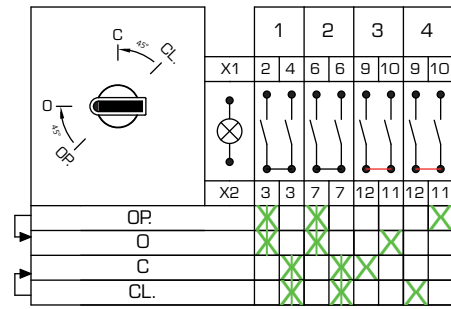
Circuit Arrangement n° **DO4_51(1-2-1)**



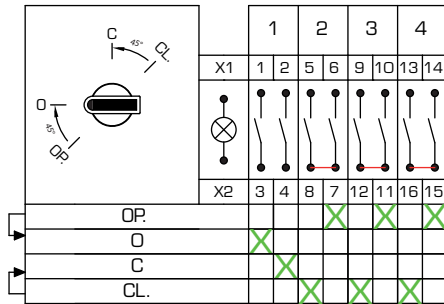
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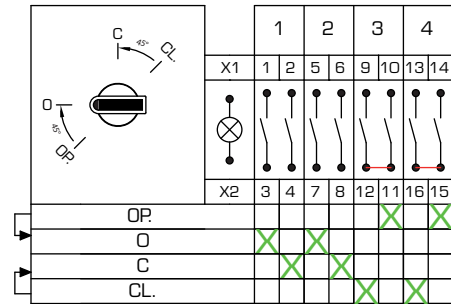
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Circuit Arrangement n° DD4_43(1-3)

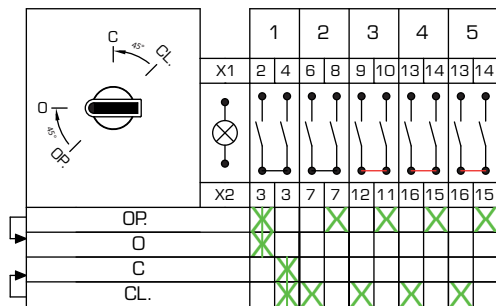


Circuit Arrangement n° DD4_43(2-2)

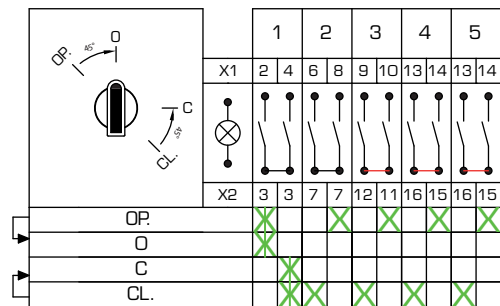


HORIZONTAL MOUNTING

Circuit Arrangement n° DD5_01

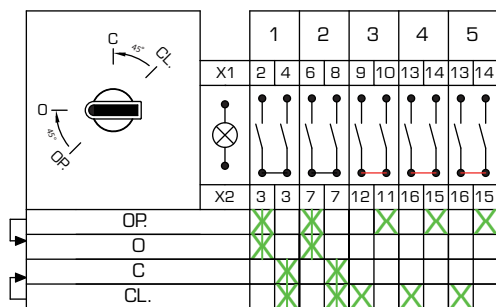


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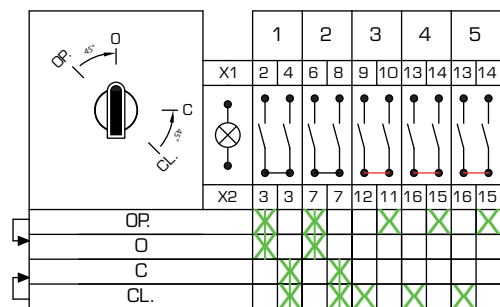


HORIZONTAL MOUNTING

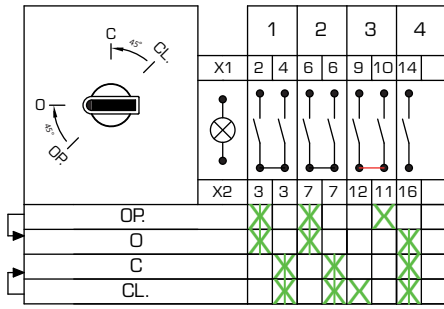
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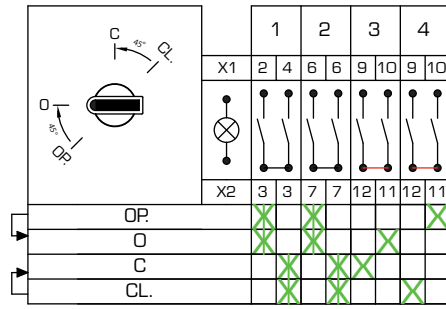
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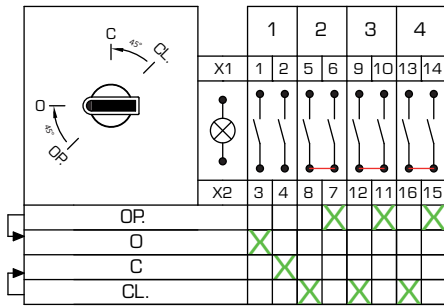
Circuit Arrangement n° **DO4_50(2-1)**



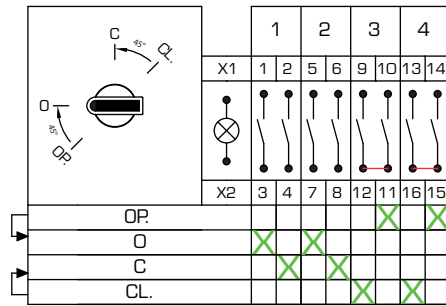
Circuit Arrangement n° **EO4_12(2-1)**



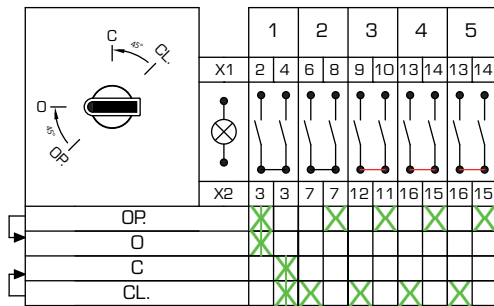
Circuit Arrangement n° **DO4_43(1-3)**



Circuit Arrangement n° **DO4_43(2-2)**

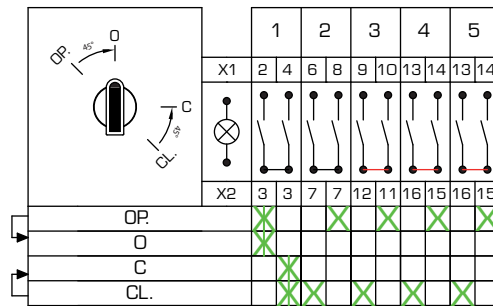


Circuit Arrangement n° **DO5_01**

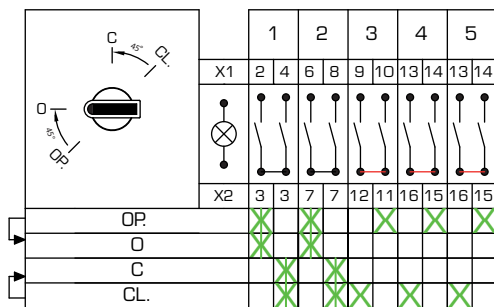


HORIZONTAL MOUNTING

Circuit Arrangement n° **DO5_08**

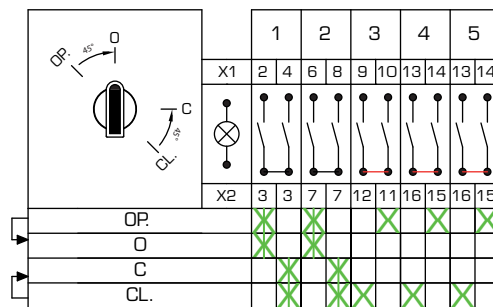


Circuit Arrangement n° **DO5_02**



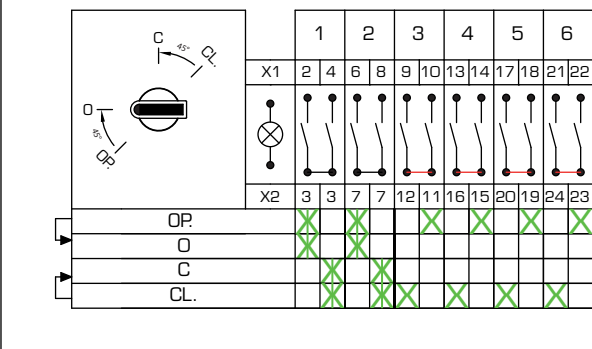
HORIZONTAL MOUNTING

Circuit Arrangement n° **DO5_15**

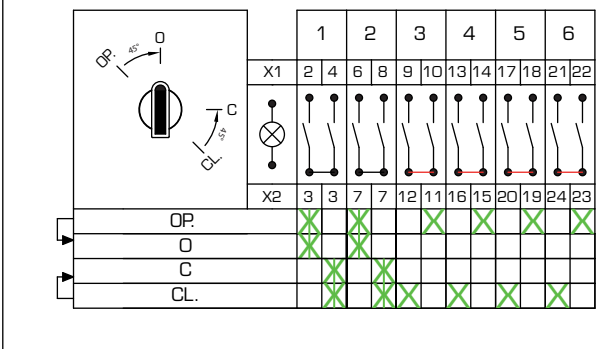


HORIZONTAL MOUNTING

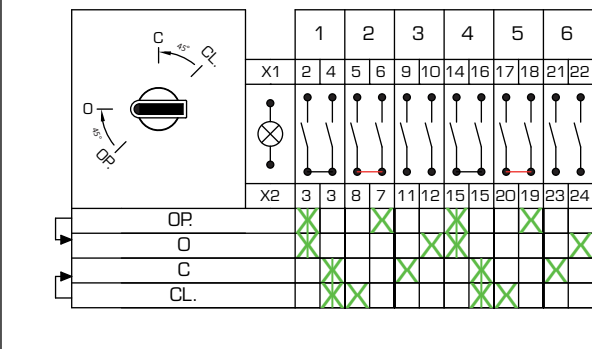
Circuit Arrangement n° **DO6_02**



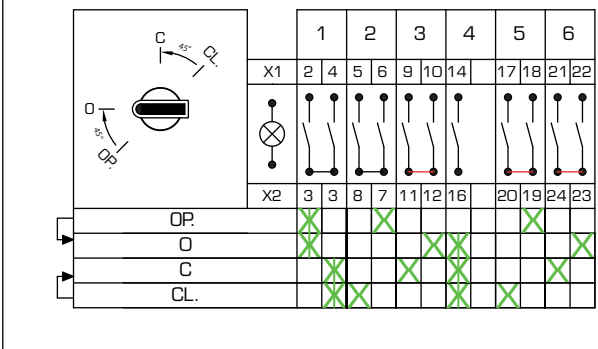
Circuit Arrangement n° **DO6_08**



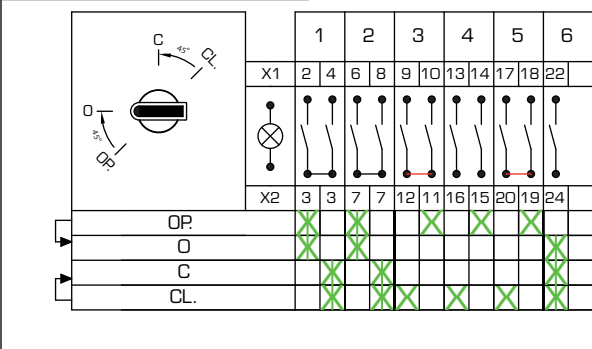
Circuit Arrangement n° **EO6_01**



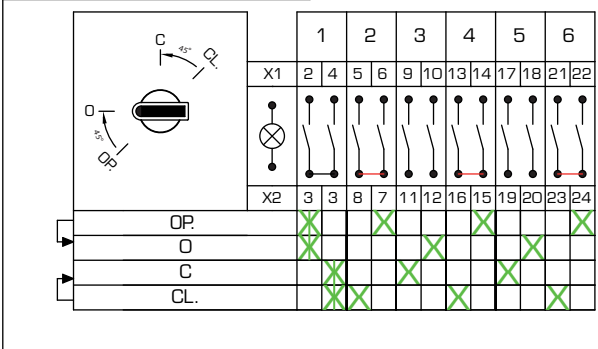
Circuit Arrangement n° **EO6_52(1-2)**



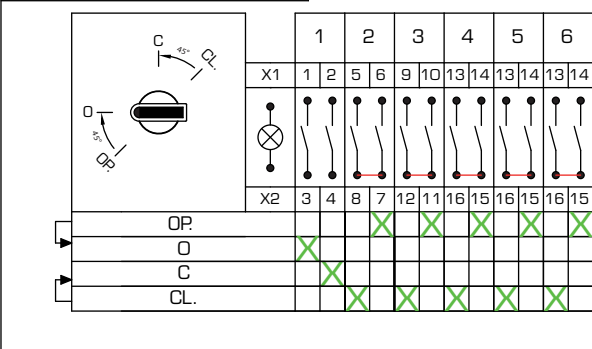
Circuit Arrangement n° **DO6_50(2-3-1)**



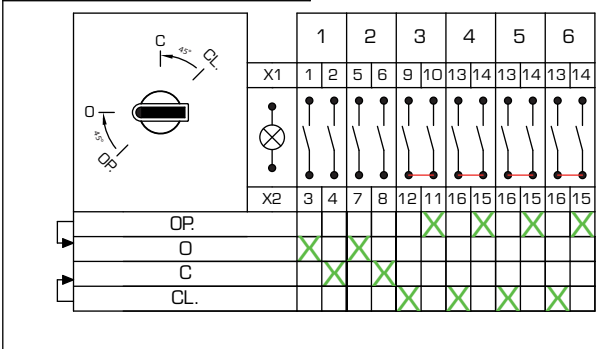
Circuit Arrangement n° **EO6_14(1-3)**



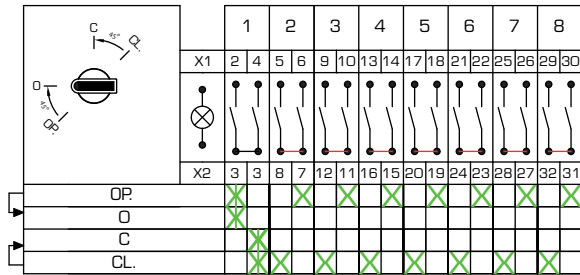
Circuit Arrangement n° **DO6_43(1-5)**



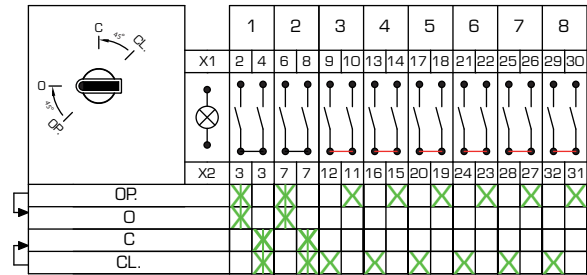
Circuit Arrangement n° **DO6_43(2-4)**



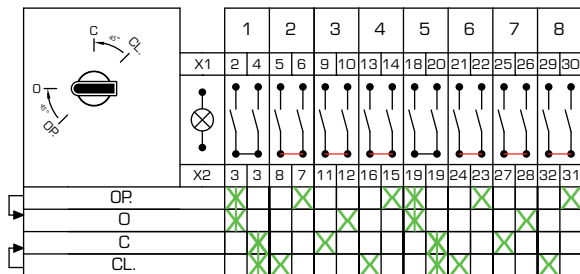
Circuit Arrangement n° **DO8_01**



Circuit Arrangement n° **DO8_02**

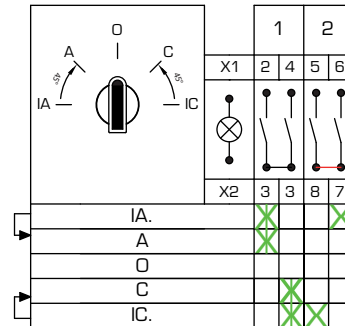


Circuit Arrangement n° **E08_01**



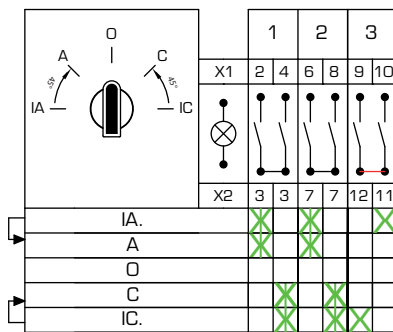
AVAILABLE ONLY IN DR20 AND FRM10 SERIES

Circuit Arrangement n° **FO4_01**



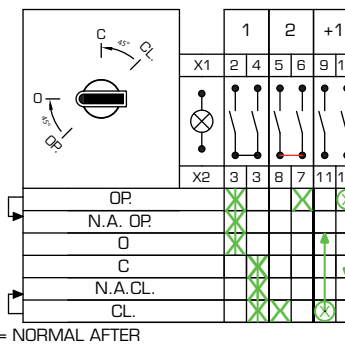
AVAILABLE ONLY IN DR20 AND FRM10 SERIES

Circuit Arrangement n° **FO3_02**



AVAILABLE ONLY IN DR20 AND FRM10 SERIES

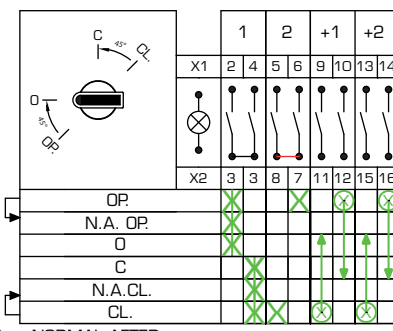
Circuit Arrangement n° **T02+1_01**



N.A. = NORMAL AFTER

AVAILABLE ONLY IN DR20 AND FRM10 SERIES

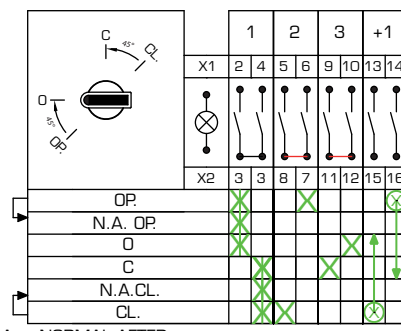
Circuit Arrangement n° **T02+2_01**



N.A. = NORMAL AFTER

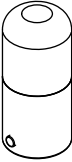
AVAILABLE ONLY IN DR20 AND FRM10 SERIES

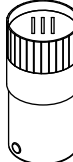
Circuit Arrangement n° **T03+1_02**

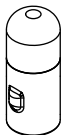



N.A. = NORMAL AFTER


Lamps


BA9s Bayonet Socket Incandescent type.				
	Voltage	mA	W	ordering code
	24V	125mA	3W	1380/24
	110V	60mA	6W	1380/110
	130V	50mA	6W	1380/130
	220V	6mA	3W	1380/220
Colour Available:		Incandescent	Discrepancy switch Series:	FRM10 DR20

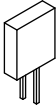
BA9s Bayonet Socket LED type:				
	Voltage	mA	W	ordering code
	24Vdc	15mA	0.4W	1410/24Colour
	48Vdc	14mA	0.7W	1410/48Colour
	110Vdc	10mA	1.1W	1410/110Colour
	130Vdc	10mA	1.3W	1410/130Colour
	220Vdc	6mA	1.3W	1410/220Colour
Colour Available:		B=White G=Yellow	R=Red V=Green	Discrepancy switch Series: FRM 10 DR20

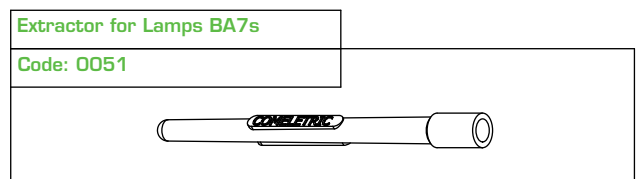
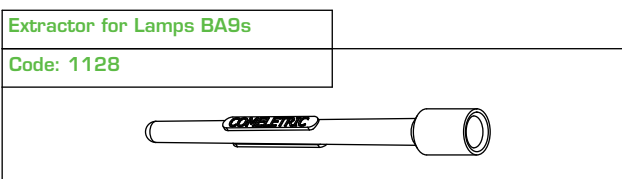
BA7s Bayonet Socket Incandescent type.				
	Voltage	mA	W	ordering code
	24V	100mA	3W	0250/24-3
	48V	40mA	2W	0250/48-40
	60V	40mA	2.5W	0250/60-40
Colour Available:		Incandescent	Discrepancy switch Series:	FRMM 6 FRMM 6 IP20

BA7s Bayonet Socket LED type:				
	Voltage	mA	W	ordering code
	24Vdc	15mA	0.4W	0258/24Colour
	48Vdc	14mA	0.7W	0258/48Colour
	110Vdc	10mA	1.1W	0258/110Colour
	130Vdc	10mA	1.3W	0258/130Colour
Colour Available:		B=White G=Yellow	R=Red V=Green	Discrepancy switch Series: FRMM 6 FRMM 6 IP20

T5.5 Telephone Bulb incandescent type:				
	Voltage	mA	W	ordering code
	24V	50mA	1.2W	0243/24-50
	48V	40mA	2W	0243/48-40
Colour Available:		Incandescent	Discrepancy switch Series:	FRMM 2000 Model M201

T5.5 Telephone Bulb LED type:				
	Voltage	mA	W	ordering code
	24Vdc	15mA	0.4W	0249/24Colour
	48Vdc	14mA	0.7W	0249/48Colour
Colour Available:		B=White G=Yellow	R=Red V=Green	Discrepancy switch Series: FRMM 2000 Model M201

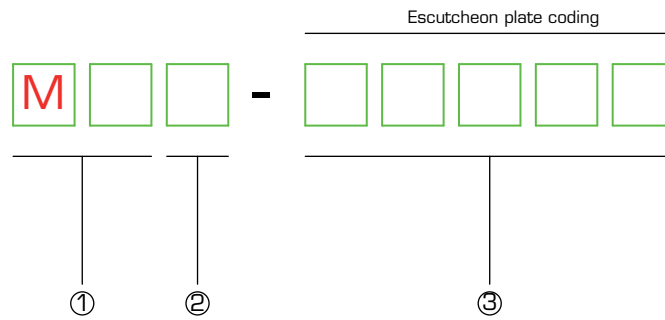
Rectangular LED 2.5 x 7 mm.				
	Voltage	mA	W	ordering code
	2.1V	20mA	0.2W	2132/Colour
Colour Available:		G=Yellow	R=Red V=Green	Discrepancy switch Series: FRMM 2000 Model M202



Standard Escutcheon Plate Ordering

The Escutcheon plate is strictly necessary for fitting the switch to the panel , if none engraving is specified , the frontplate will be supplied Blank , code 00000.

The engraving listed below, are only a little part of those available, require the code of the needed one if not present below.



① n° Escutcheon Plate shape.

This code is referred to the shape of the Frontplate.

The **M** letter stands for the **Discrepancy switch's frontplate**.

MQ = SQUARE ESCUTCHEON PLATE Circuit Breaker control.

MT = ROUND ESCUTCHEON PLATE Disconnecter Switch control.

② n° Escutcheon Plate Dimensions.

This code is referred to the dimensions of the Frontplate.

The dimension is referred to the type of discrepancy switch it is mounted on and it is indicated in the reference catalogue.

③

2 Positions

20002	20256	20264	20299	20584	20585	20586	20587	20588	20589
20590	20022	20001	20591	20488	20592	20593	20594	20595	

3 Positions

30012	30065	30024	30667	30154	30021	30140	30052	30010	30186

4 Positions

40043	40044	40058	40059	40060	40079	40094	40097	40103	40126
40252	40121	40095	40175	40127	40156	40088	40253	40254	40257
40258	40227	40256	40259	40255	40260				

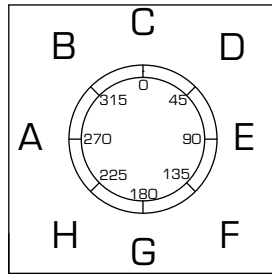
Form for special diagram

Discrepancy Switch Series :

FRM10 DR20

FRMM 6 FRMM 6 IP20 FRMM 2000

Specifications.....



Position Engraving	
Position	Engraving
A	
B	
C	
D	
E	
F	
G	
H	

Lock in Pos.								
	Positions							
Contacts	A	B	C	D	E	F	G	H
	1							
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Model number:

Ordering Code : (it will provided by COMELETIC)

Accessories

Square Front plate Opaline handle

Round Front plate Mosaic Tile Mounting
 (specify the tile brand and size)

Gilded Contacts Special Colour of Lamp
 (specify the colour)

Led Lamp

Voltage of lamp

Notes.

Legenda



Closed contact



Closed contact without current breaking



Make before break overlapping contacts (without current breaking).



Maintained action contact
(the contact closes in the X pos. and maintains the action for the length of the arrow).



Spring return position.



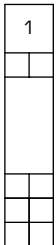
Spring return from left and from right position.



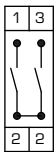
Contact presence.



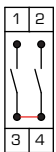
Terminal marking



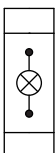
Packet indication



Jumpers.
When the connected terminals have the same number , the jumper is internal.



Jumpers.
When the connected terminals have different numbers, the jumper is external and will not be supplied by COMELETIC.

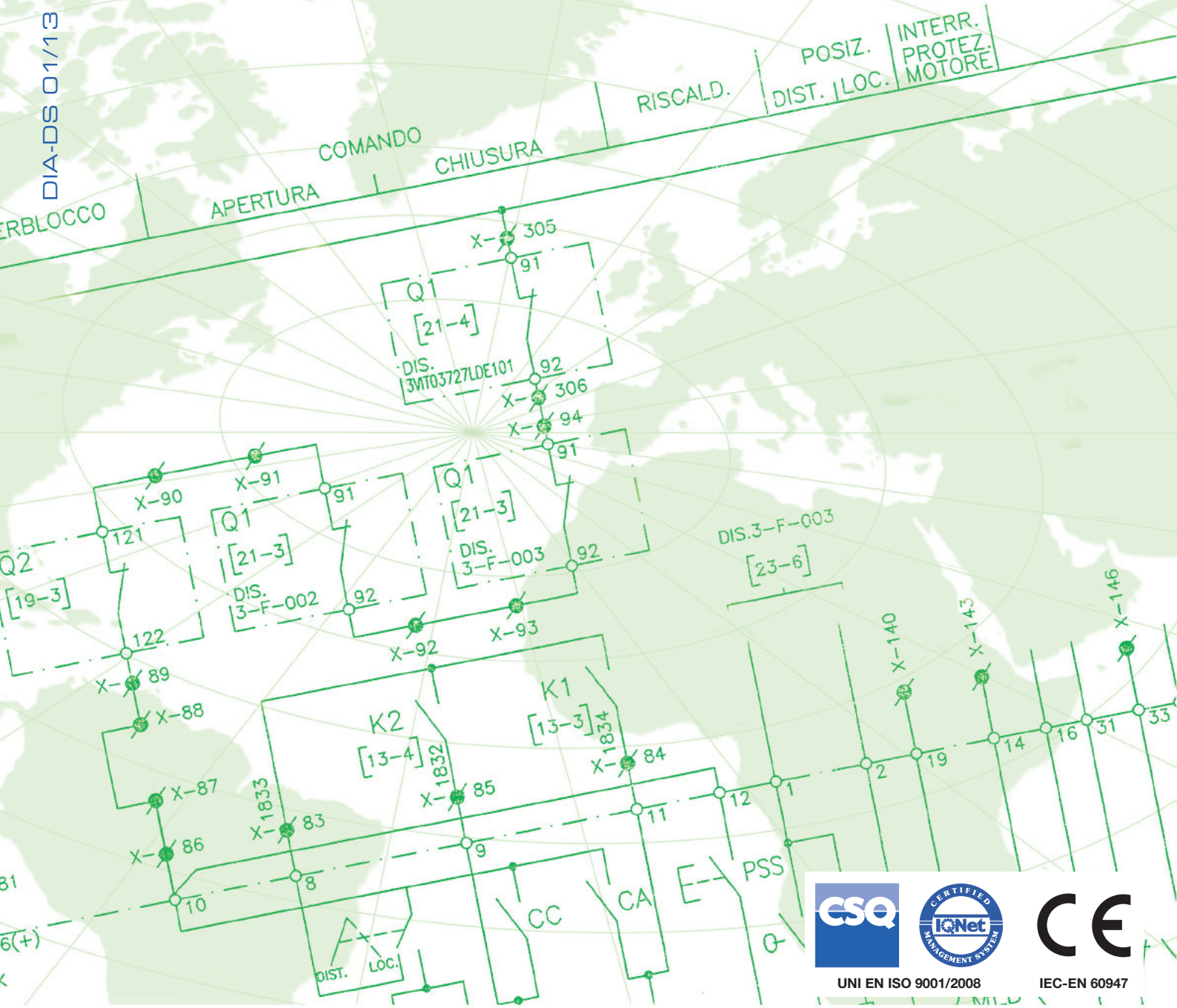


Lamp.

HORIZONTAL MOUNTING

For obtaining the shown movement the switch has to be mounted in horizontal.
The front plate will be engraved for having the right positions.

DIA-DS 01/13



UNI EN ISO 9001/2008

IEC-EN 60947



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