D SERIES

DISCREPANCY

Cam Switches

Discrepancy
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(D Series)

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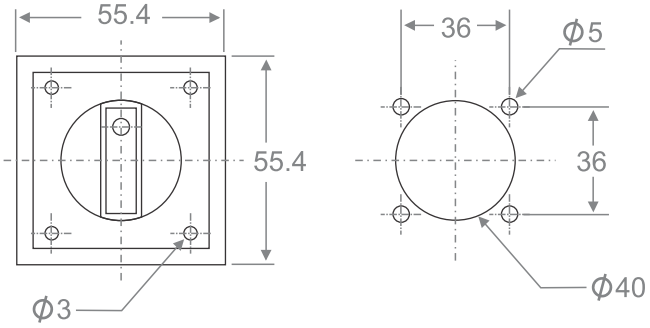
General features

The discrepancy control switch is used in switch gear installations for controlling circuit breakers and isolating switches as well as for displaying and monitoring their switching positions in mimic diagrams. When the switch symbol lights up, it is indicated that the position of the control discrepancy switch does not coincide with that of the associated circuit breaker or isolating switch.
Discrepancy switches are also used to control and monitor the trip indicators of switches and circuit breakers equipped with remote control as well as to send short impulses, especially for the remote control of meters, solenoid valves etc. These switches are widely used in MV switchgear installations and in railway transportation control systems.
TRS Co. is the first and only manufacturer of discrepancy cam switch in Iran

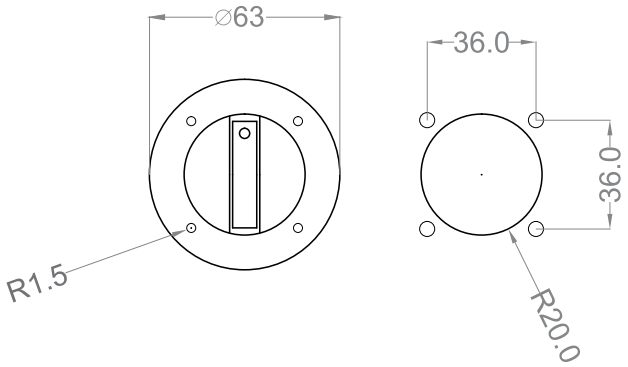
- Modular design makes it easy to extend switch stages
- Body made of anti-flame polyamide (VL94 degree class V-0)
- Electrical terminal section protection degree: IP20
- Enclosure and switch plate section protection degree: IP40
- Conformity with IEC60947/EN60947
- Tested and confirmed by NRI*.
- Double break bimetal contacts made of copper and silver alloy.
- Silver alloy-copper contacts
- Terminal screw are equipped with self raising washers to facilitate wiring
- Easy installation and wiring
- Optional lockable switch plate (Using switch key or release button)
- Compatible with operation voltage ratings: 24,48, 110, 220
- Compact design and proper dimensions
- Reasonable price
- Fast delivery
- Possibility to modify or customize the switch design and function based on customer needs. Please contact us for customized designs.

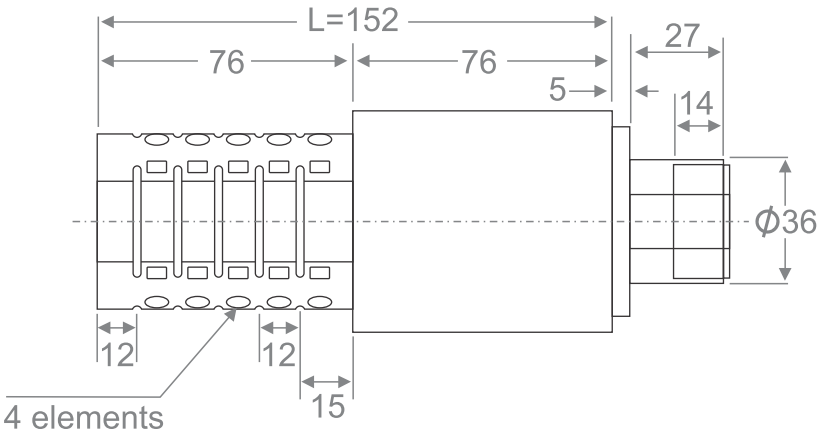
*NRI: Niroo Research Institute is the major research organization affiliated to the Ministry of Energy of Iran.

Square Type:



Round Type:





D Series								
No. of Stages	1	2	3	4	5	6	7	8
L (mm)	116	128	140	152	164	176	188	200

Specifications

Rated insulation voltage (Ui)	690 V
Rated current-carrying capacity (Ith)	20 A
Max wire size	5.5 mm^2
Screw size	M4x9
Withstand voltage	2,500 Vac / 1 min
Rated impulse withstand voltage	4 KV
Contact resistance	50 m ohm max.
Mechanical life	500,000 operations or more
Electrical life	100,000 operations or more
Shock resistance	500m/s^2 or more (in 6 directions) (Contact part: 300m/s^2)
Vibration resistance	Vibration range: 10 to 150Hz, Acceleration: 20m/s^2, Time: 1 hour (in 3 directions)
Min, applicable load	5V AC / 500mA, 5V DC / 100mA (in suitable operating conditions)
Operating temperature	– 20 to 60°C
Storing temperature	– 40 to 70°C
Altitude	2,000 m max.

AC			DC				
Rated operating voltage (V)	Rated operating current Resistance load (A)	Rated operating current Inductive load (A)	Rated operating voltage (V)	Rated operating current Resistance load (A)	Rated operating current Inductive load (A)	2 contacts in series connection Rated operating current Resistance load (A)	2 contacts in series connection Rated operating current Inductive load (A)
110	20	15	24	15	10	20	20
220	15	10	48	10	6	18	15
440	4	3	110	3	1.5	4.5	4
–	–	–	220	1.2	0.8	2	1.5

*Inductive load AC: power factor 0.6 to 0.7
DC: Time constant 40±6ms

EN60947 / IEC60947 STANDARD CONFORMABLE RATINGS

(1) Standard operating conditions

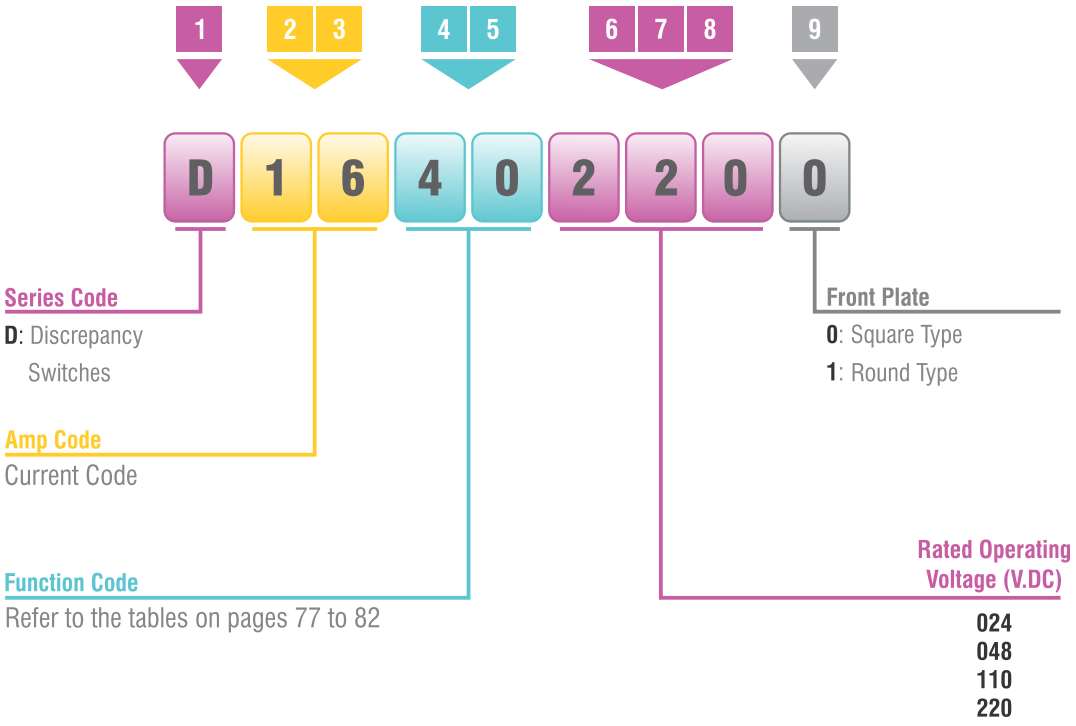
No.	Item	Condition	Remarks
1	Ambient temperature	–5 to 40°C	IEC60947-1 6.1.1
2	Humidity	50% (at maximum temperature 40°C), Less than 90% (at other temperature 20°C)	IEC60947-1 6.1.3
3	Altitude	2000 m max.	IEC60947-1 6.1.2

(2) Rating

No.	Item	Condition				Remarks
1	Overvoltage class	III				IEC60664-1 2.2.2.1.1
2	Pollution degree	Level 3				IEC60947-5-1 6.1.3.2
3	Rated insulation voltage (Ui)	690 V				IEC60947-1 4.3.1.2
4	Rated impulse withstand voltage (Uimp)	4 kV				IEC60947-1 4.3.1.3
5	Operating load class Rated operating current (Ie) Rated operating voltage (Ue) *Electrical durability	Name	Operating load class	Ue(V)	Ie(A)	IEC60947-5-1 Annex A
		A600	AC-15	240	3	
				100,000 operations or more*		
		P600	DC-13	250	0.55	
				20,000 operations or more*		
6	Rated frequency	50 / 60 Hz				IEC60947-5-1 4.3.3
7	Customary free air heat current (Ith)	20 A				IEC60947-1 4.3.2.1
8	Maximum rating of short-circuit protection device	20 A				IEC60947-5-1 8.3.4.3
9	Short-circuit current under rated conditions	1,000 A (cosphi=1)				IEC60947-5-1 4.3.6.4
10	Mechanical durability	100,000 operation or more				60947-5-1 Annex1C C.2

discrepancy cam switches (D Series) Code

Each discrepancy cam switch is defined using a unique **9** digit code:



Example:

The code, **D.16.40.220.0** belongs to a Discrepancy Switch with 16 Amp rated current, 220 volt rated DC voltage with a square type front plate and functioning according to function diagram no. 040.

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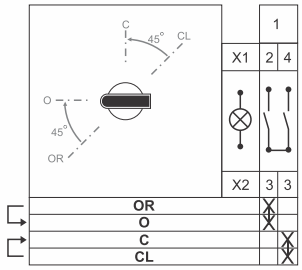

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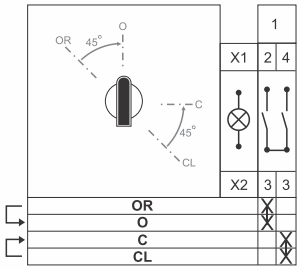

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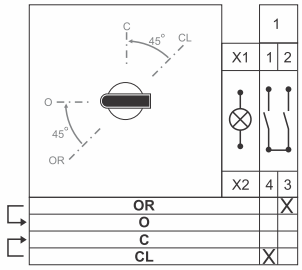

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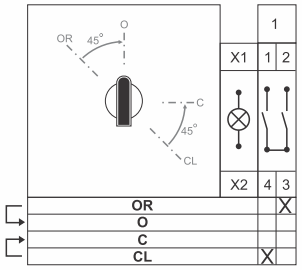

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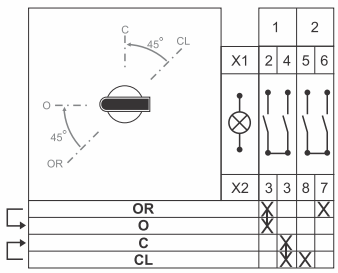

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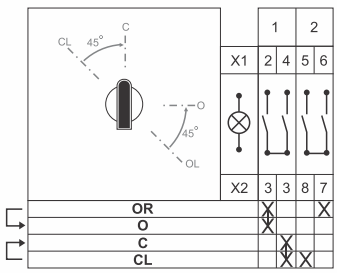

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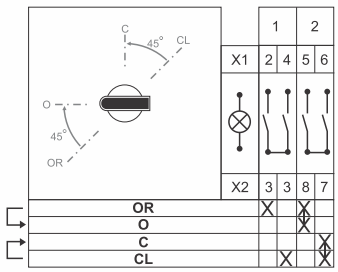

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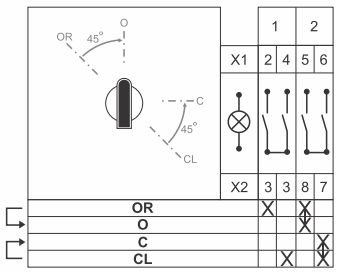

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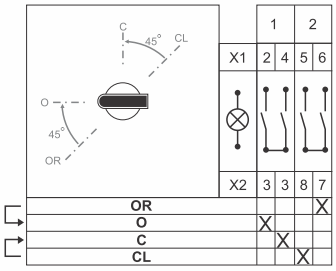

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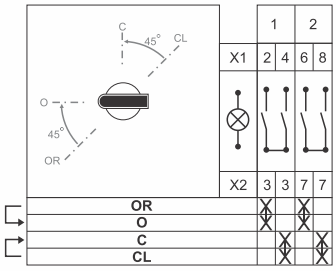

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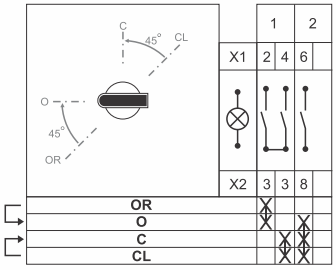

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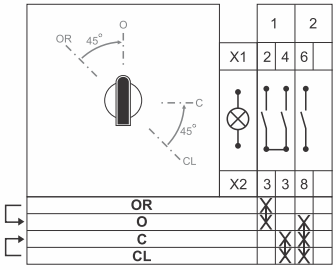

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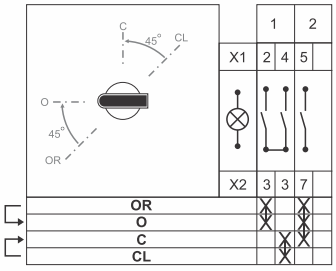

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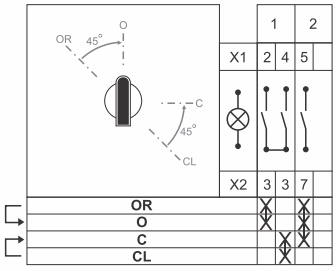

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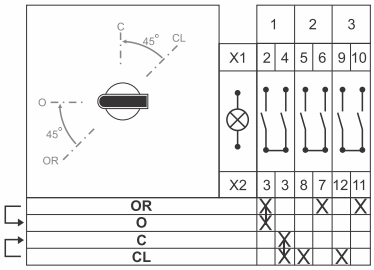

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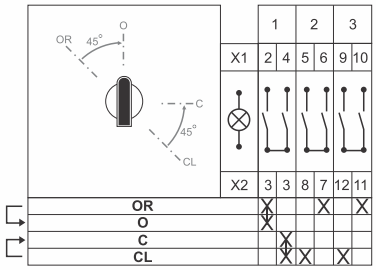

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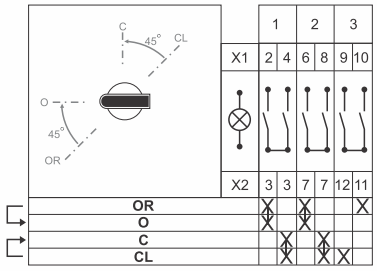

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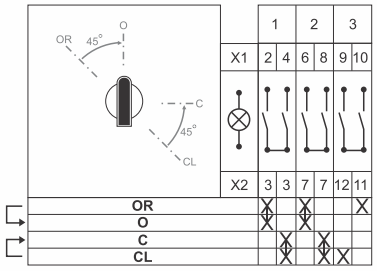

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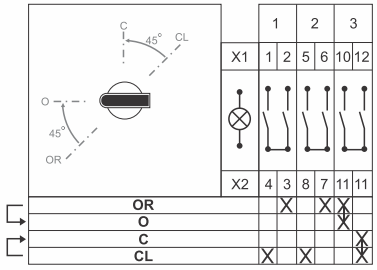

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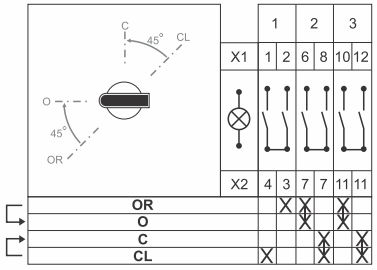

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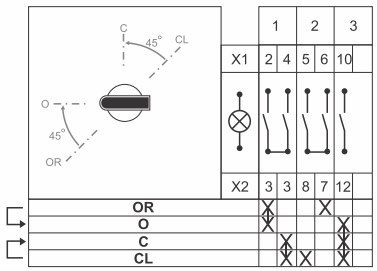

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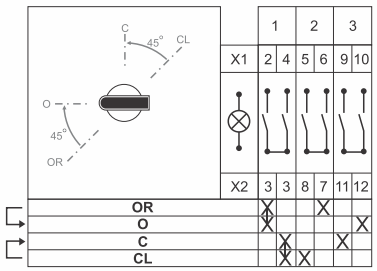

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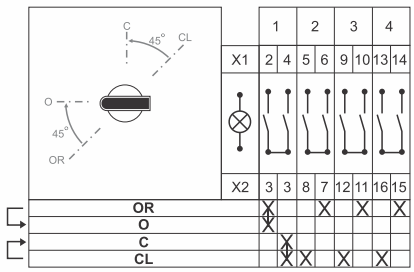

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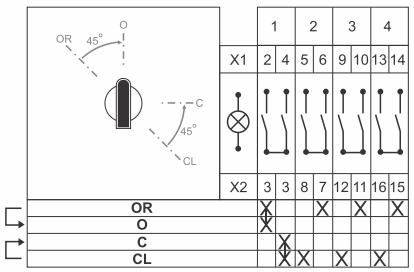

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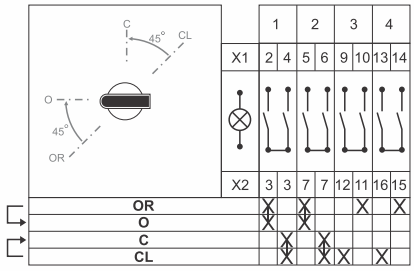

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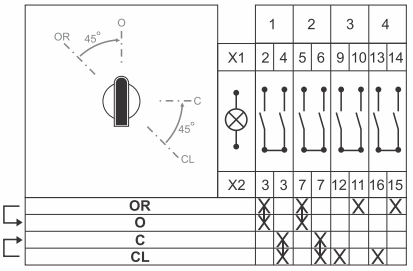

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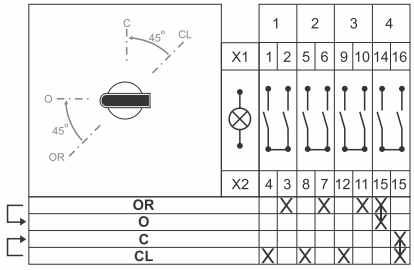

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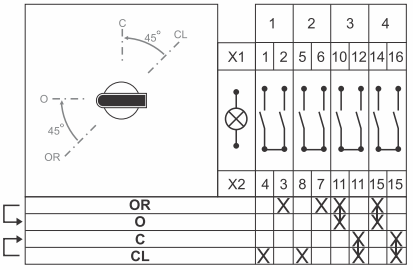

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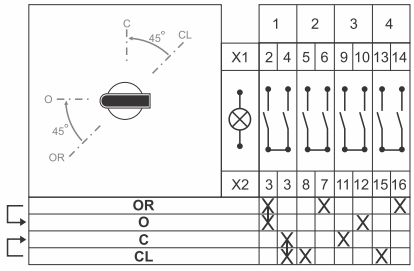

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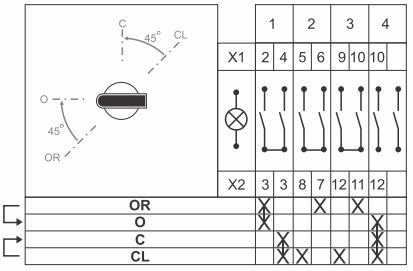

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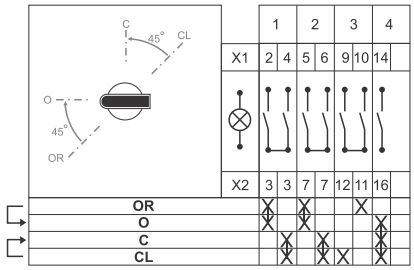

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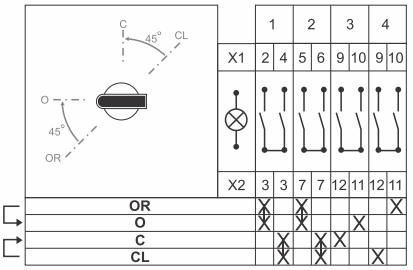

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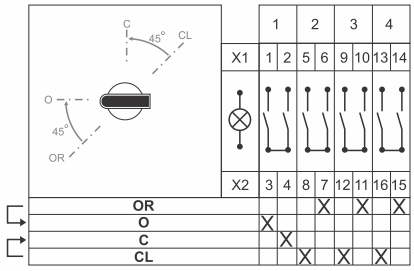

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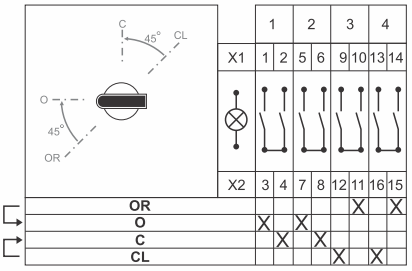

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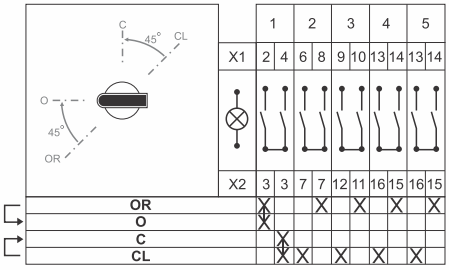

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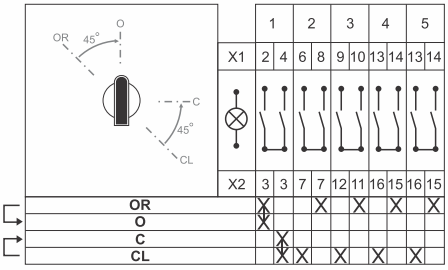

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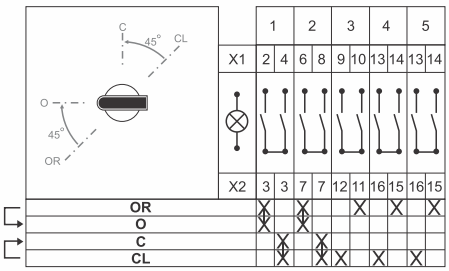

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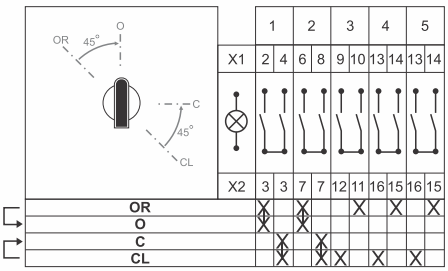

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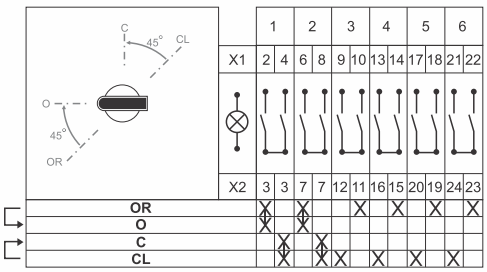

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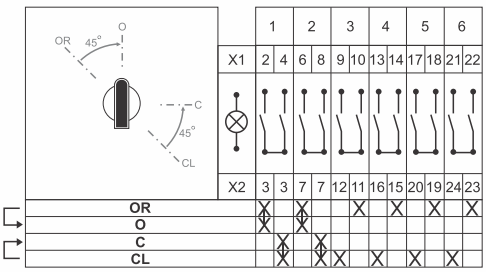

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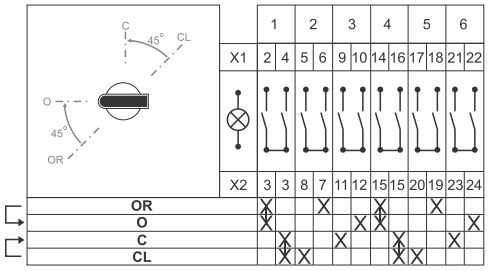

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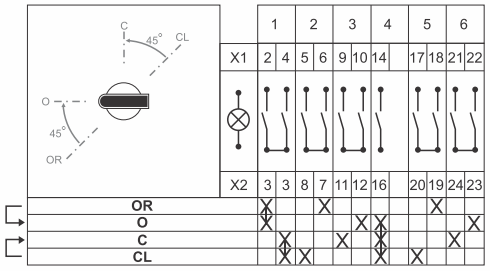

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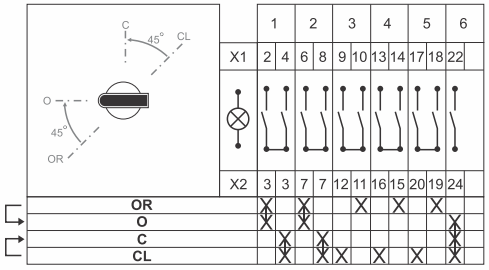

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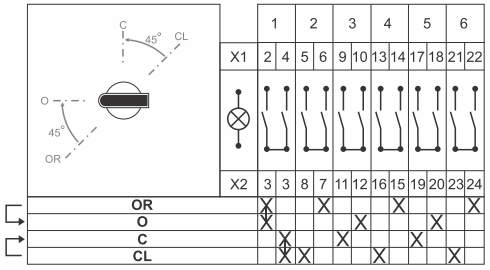

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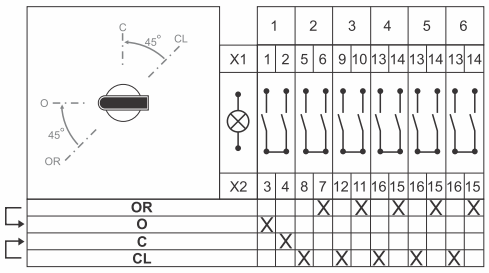

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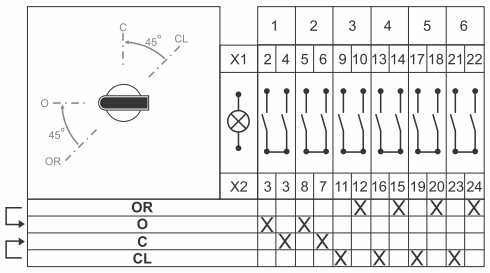

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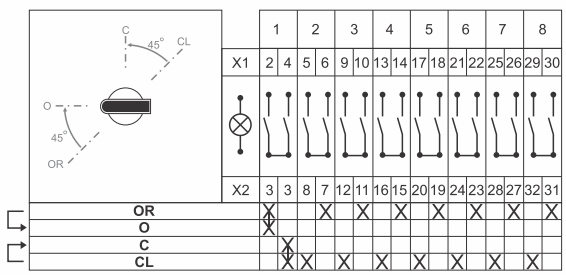

4 8