Cam operated switches

Gave
low voltage electrical manufacturer

Contents

Company

Gave Electro is an international manufacturer of electrical control products and solutions with an extensive professional record since it was founded in 1944. It has developed technical capabilities on the low voltage breaking, control and protection fields acquiring strong reputation on its control equipment solutions.

Innovation

Innovative thinking is our philosophy. We create better more effective products and processes applying new ideas that benefit from our longstanding experience. A dedicated engineering team boosting your competitiveness.

Specialist in electrical control technology

Quality & Service Commitment

Gave Electro follows a total quality management (TQM) system as an integrative philosophy of management for continuously improving the quality of products and processes. This system functions on the premise that the quality of products and processes is the responsibility of everyone who is involved with the creation or consumption of the products and involves management, workforce, suppliers, and even customers, in order to meet or exceed customer expectations.

Constant rigorous product testing is undertaken during all production process in order to guarantee product reliability and repeatability. Testing capabilities include:

- Electrical and mechanical endurance
- Ingress protection (IP) testing
- EMC reinforced testing
- Optical and thermal parts analysis
- Dielectric testing
- Flammability and ignitability (glow wire test)

We commit to service our customer by providing support in planning, installation, training, trouble shooting, maintenance, upgrading, and disposal of a product.

Cam operated switches

This chapter presents the complete range of the cam switches market leader characterised by its robustness and reliability.

A complete range that allows any type of electrical scheme with multiple contacts and positions without compromising its high electrical characteristics.

The range also is well known for its adaptability to industrial applications.

«A compact and efficient range»

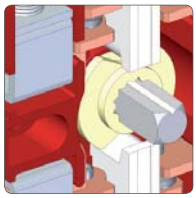
Size D0
Up to 25A

Size D1
Up to 40A

Size D2
Up to 125A

Size D3
Up to 250A

General characteristics



Advanced electromechanics

High electrical endurance (3 times above standard requirements).

Clamp-yoke connection

Contact surfaces grooved for optimal grip and conductivity.

Internal and external links

Factory assembled links. Insulated external links protect against direct contact on live parts.

Protection degree IP20

Terminals protected against solid objects up to 12,5mm according to IEC 60529.

Marking

Product marked with permanent ink indicating reference and electrical characteristics.

Insert bolts

Bolts inserted on the breaking mechanism making simple switch mounting, saving time and avoiding loose components.

Simple "click" front plate fixing

Front plate designed for easy fixing by simple push-in on the mounting plate.

IEC 60947-3

Switch-disconnector

A mechanical connection device capable of making, carrying and breaking currents under normal circuit conditions, possibly including specified operating overload conditions, and for a specified duration carrying currents in abnormal circuit conditions such as short-circuit conditions (a switch may be able to make shortcircuit currents, but it cannot break them). In its breaking position meets the specific insulation conditions required for a circuit disconnector.

Cam technology
The best electrical and mechanical endurance

Low rating industrial applications are characterised by continuous switching operations that entail constant on load current making and breaking. Cam technology is well known for its remarkable electromechanical endurance that offers outstanding characteristics reaching up to 20 times the standard value requirements which makes it the best solution for such industrial applications.

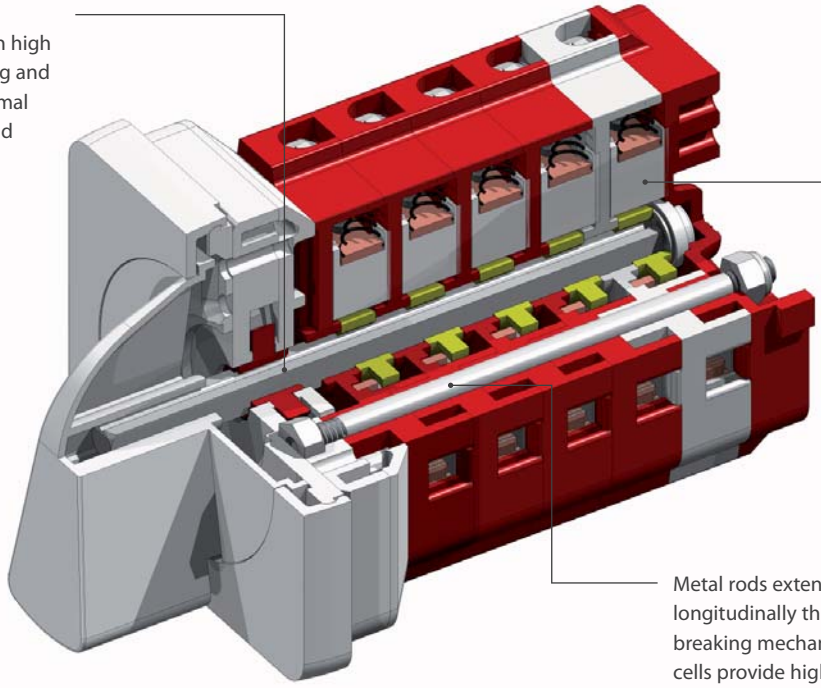
Designed specially for industrial requirements

The particular needs of OEMs are typically conditioned by the installation environment and often involve the use of a large number of contacts.

It is also common to require specific versions with dedicated fixing parts, wiring connections or special devices.

Product design on A5/L5 series includes a number of intrinsic features that ensure maximum product reliability in industrial applications.

The shaft made of galvanized steel with high resistance to bending and torsion ensures optimal contacts opening and closing.

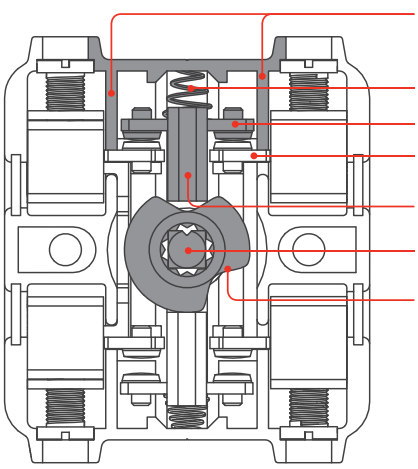


Contact cells with deep inlet locking system that provides great strength to the assembly.

Metal rods extending longitudinally through the breaking mechanism and contact cells provide high robustness to the complete set.

Positively driven operation

Welded contacts or a broken spring can be the cause of a serious failure in an industrial facility. Positive opening contacts ensures that NC/NO contacts are not simultaneously connected.

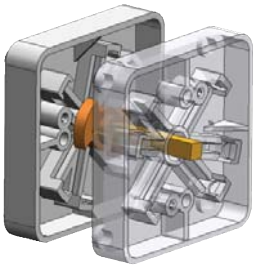


The movement of the positive opening cams ❶ causes the moving support ❷ to move upwards, forcing disconnection of contacts bridge ❸ from the fixed contacts ❹.

Connection system

Clamping yoke connection known as the best on the market.

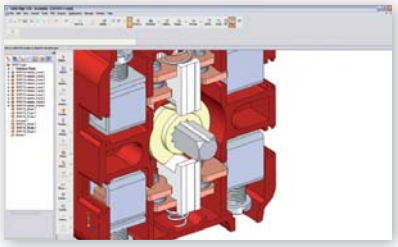
- Secure connection stable on temperature changes and vibrations.
- Captive screw.
- Surface treatment for minimum contact resistance.



Double breaking mechanisms

A high number of contacts or an improvement on electrical characteristics can be achieved by increasing the force on the breaking mechanism. The solution is a system with several breaking mechanisms (double or triple).

The double mechanism system can also be used to design released switches so that the speed and force are independent of operator action as defined in IEC 947-3 2.14.

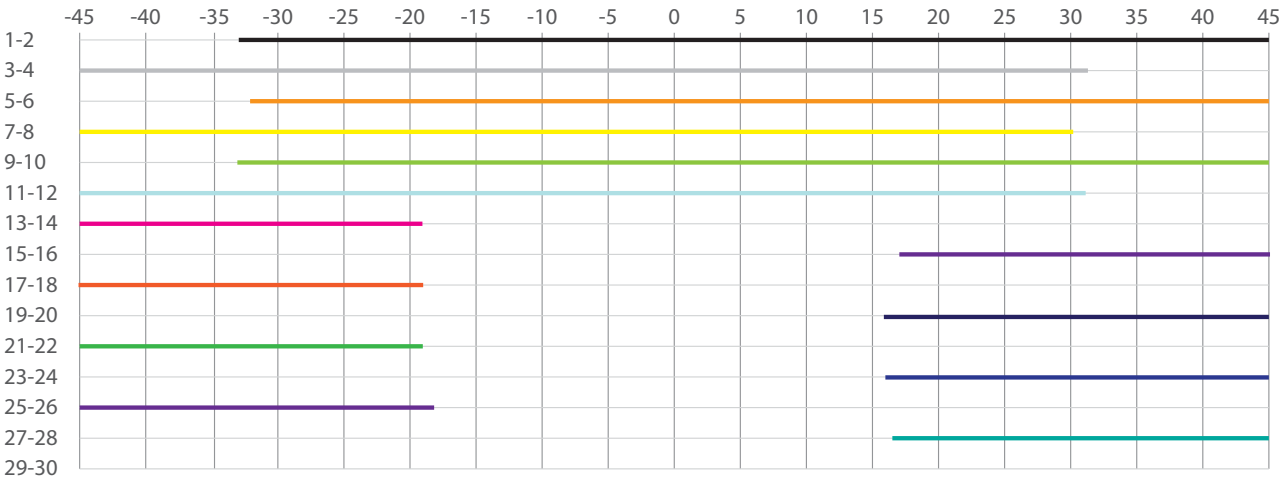


Precision mechanics

Computer aided engineering is used to analyse different mechanical options. Kinematic characteristics are examined and virtual tests are performed prior to prototyping stage. Variables to combine are:

- Springs force on breaking mechanism and contact cells.
- Design on the breaking mechanism star.
- Contact cams design.

Individual control of contacts behaviour is used to guarantee electrical simultaneity during make/break operations.



Dedicated components and designs

Contact elements

Contacts on the standard product range are based on silver alloys that are characterised by high arc and welding resistance while maintaining stability at high temperatures and providing remarkable erosion endurance.

Plastic materials

The switch body is made of polyester reinforced with fiber glass featuring high electrical characteristics. The material is UL certified and provides excellent insulating properties (CTI index) and arc resistance (HAI index). Safety in case of emergency is guaranteed by its self-extinguishing properties.

Fixing elements, actuators and special connections

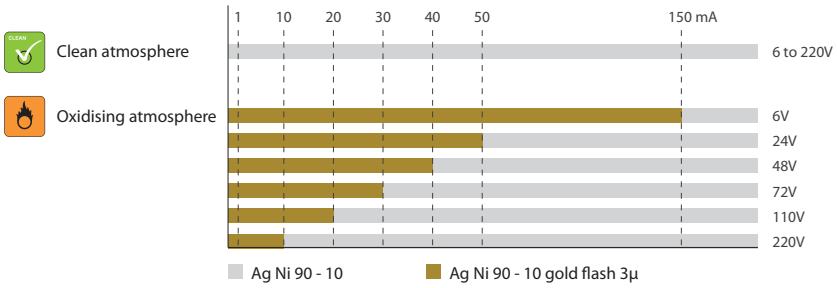
Industrial equipment manufacturers are typically constrained by a large number of limitations when developing their designs, consequently high switch adaptability in fixing and connection is essential to fit on industrial designs.
Special shafts, fixing plates, screw specific materials and heads, individual output terminals, ...

Suitable for harsh environments

Gave is able to provide product solutions for applications in harsh environments such as highly corrosive atmospheres, fire resistance, electromagnetic pollution, ...
The requirements of these applications involve the use of adapted components including the use of special materials.

Contact elements

Control and signalling in harsh environment sometimes requires some specific contact elements, specially under low current and/or low voltage application. Gold flashed contacts are available. The below selection table is used to establish when gold plated contact is required based on its voltage and current operation.



Advanced materials

Critical parts on standard products and complete assemblies on F-Protec series use high performance polymers mixed with additives able to endure erosion while providing a outstanding dimensional stability under normal or high temperature conditions (controlled CTE).

Metallic parts

Highly corrosive atmospheres such as those on chemical industries, heavy industries and offshore installations may require the use of stainless steel parts. We can make special stainless steel parts such as rods, shafts, springs, screws and nuts.
Applications on environments highly sensitive to electromagnetic pollution may require the use of brass metal parts, we can make special production series on terminals, bolts and shafts.

Reference system

Cam switches technology is typically defined by its large production flexibility permitting special solutions to multiple specific requirements that we find in the industrial world.

These requirements are characterised by a variety of electrical schemes, large number of mounting possibilities and an assortment of accessories. Referencing tailor made solutions is determined by production units and will generate a constructive file permitting livelong tracking and future duplicates. Most common products can be ordered by standardised references as detailed on the following reference system description.

Series

Rating

0 12 A	3 32 A	7 100 A	A 160 A
1 16 A	4 40 A	9 125 A	B 200 A
2 25 A	6 63 A		C 250 A

A - 552 2 1 0 0

Handle

- \- Standard
- A Reverse colour to standard (switches only)
- B Padlock locking (red / yellow)
- C Padlock locking (grey / black)
- I Front plate and screw handle in black
- N Black colour in front plate and handle
- H Lockout handle (red / yellow)
- J Lockout handle (grey / black)

Electrical scheme

Mounting type

- 0 Panel mounting
- 2 Key lockable handle
- 3 Key interlock
- 6 With undervoltage release
- 7 IP65 plastic enclosed switch
- 8 Aluminium enclosed switch
- 9 Inox enclosed switch

Front plate type

- 0 Standard
- \- Without plate and handle

Fixing

- 0 Fixing 36 x 36
- 1 Fixing 48 x 48
- 5 Fixing 1 in size D0

Technical data

c UL us

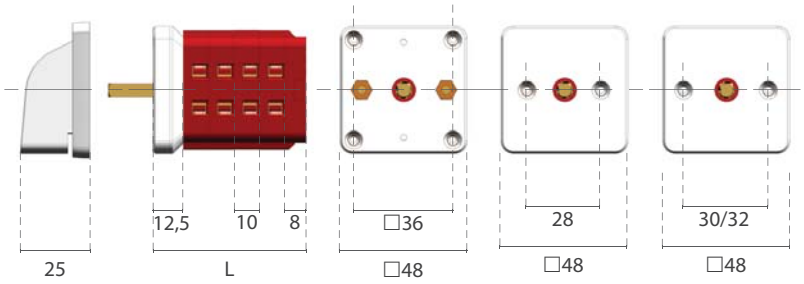
¡ATTENTION!
Retighten **all connection screws** after wiring the equipment.

			12A	16A	25A	25A	32A	40A	63A	100A	125A	160A	200A	250A
Fixing			0	0	0	1	1	1	1	1	1	1	1	1
Size			D0	D0	D0	D1	D1	D1	D2	D2	D2	D3	D3	D3
Thermal rating		Ith A	16	20	25	25	40	40	70	100	125	160	200	250
Max. fuse protection (gG-aM)		In A	20	25	25	25	40	40	80	125	125	160	200	250
Impulse voltage		Uimp kV	4	4	4	4	4	4	4	4	4	4	4	4
Conditional shortcircuit current		Icc kA	6	6	6	6	6	6	8	8	8	-	-	-
Operating voltage		Ue V~	690	690	690	690	690	690	690	690	690	690	690	690
Insulating voltage		V~	690	690	690	690	690	690	690	690	690	690	690	690
Insulating voltage		V…	400	400	400	400	600	600	600	600	600	600	600	600
Operational rating		Ie A	12	16	25	25	32	40	63	100	125	160	200	250
Wire section	Stranded	mm^2	2,5 - 6	2,5 - 6	2,5 - 6	6 - 25	6 - 25	6 - 25	-	-	-	-	-	-
	Flexible	mm^2	2,5 - 6	2,5 - 6	2,5 - 6	6 - 16	6 - 16	6 - 16	16 - 50	16 - 50	16 - 50	70	95	120
		AWG	10	10	10	10	6	6	6 - 1	6 - 1	6 - 1	-	-	-
Torque		Nm	1,6	1,6	1,6	2	2	2	3,5	3,5	3,5	-	-	-
Connection screws			M4	M4	M4	M5	M5	M5	M8	M8	M8	M8	M8	M8
Terminal														
AC 21	kW	3 x 230V	3	5,5	7,5	7,5	11	15	22	37	37	45	55	75
	Dummy kW	3 x 400V	7,5	11	15	15	18,5	22	37	55	75	90	110	132
	cosØ >0,95 kW	3 x 500V	11	15	18,5	18,5	22	30	45	75	90	110	132	160
AC 22	kW	3 x 230V	2,2	4	7,5	7,5	7,5	11	22	30	30	37	45	55
	Mixed load kW	3 x 400V	5,5	7,5	11	11	15	22	30	45	55	75	90	110
	0,65 <cosØ <0,95 kW	3 x 500V	7,5	11	15	15	18,5	22	37	55	75	90	110	132
AC 23	kW	3 x 230V	2,2	3	4	4	5,5	7,5	15	18,5	18,5	30	38	-
	Motor load VA kW	3 x 400V	4	5,5	7,5	7,5	11	18,5	22	30	37	52	65	-
	0,45 <cosØ <0,65 kW	3 x 500V	5,5	7,5	11	11	15	22	30	37	45	65	80	-
AC 11	VA	3 x 110V	600	1000	1400	1400	2000	-	-	-	-	-	-	-
	Circuit loads VA	3 x 230V	1200	2000	2800	2800	4000	-	-	-	-	-	-	-
	Magnetic VA	3 x 430V	2000	3500	4800	4800	7000	-	-	-	-	-	-	-
UL 508 Manual motor controller	1-phase 110-120V	hp	1	1,5	2	2	2	2	5	10	10	-	-	-
	1-phase 220-240V	hp	1,5	2	3	3	3	5	10	15	15	-	-	-
	3-phase 220-240V	hp	1	2	2	2	7,5	7,5	15	25	25	-	-	-
	3-phase 380-415V	hp	2	2	3	3	10	10	25	30	30	-	-	-
	3-phase 440-480V	hp	3	3	5	5	10	15	30	40	40	-	-	-
	3-phase 550-600V	hp	3	5	7	7	15	20	32	50	50	-	-	-

Dimensions standard connection

A5 standard series are defined by its outstanding compact size. The fixing system enables to rotate the switch 90 degrees in either direction in order to adjust the input/output cables to the installation requirements. This possibility also exists for rear mounting and DIN rail mounting.

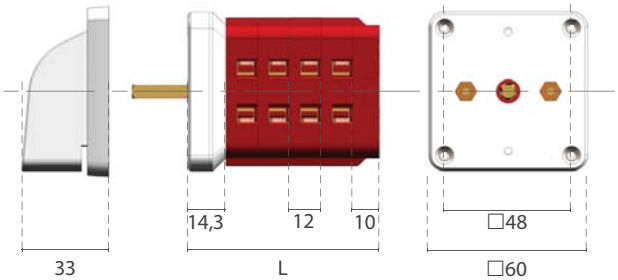
Size D0



1,6 Nm
PZ2

Cells	1	2	3	4	5	6	7	8	9	10	11	12
Length (L)	30,5	40,5	50,5	60,5	70,5	80,5	90,5	100,5	110,5	120,5	130,5	140,5

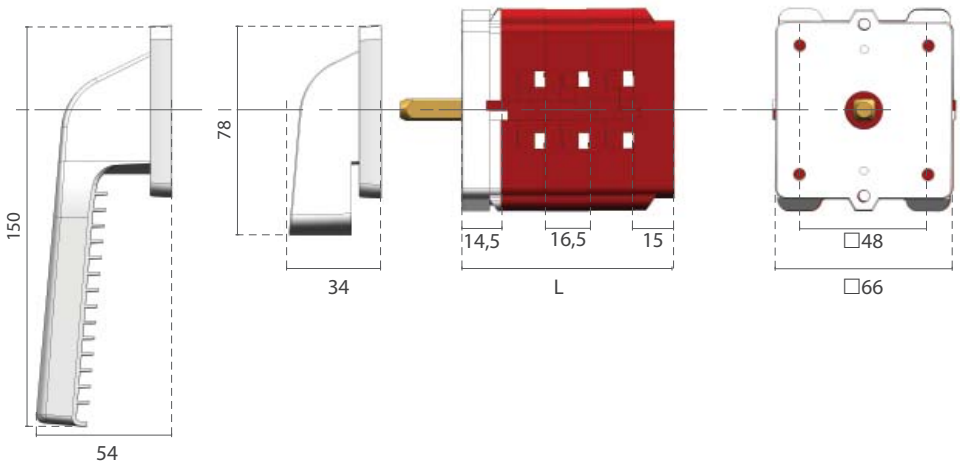
Size D1



2,0 Nm
PZ2

Cells	1	2	3	4	5	6	7	8	9	10	11	12
Length (L)	36,3	48,3	60,3	72,3	84,3	96,3	108,3	120,3	132,3	144,3	156,3	168,3

Size D2

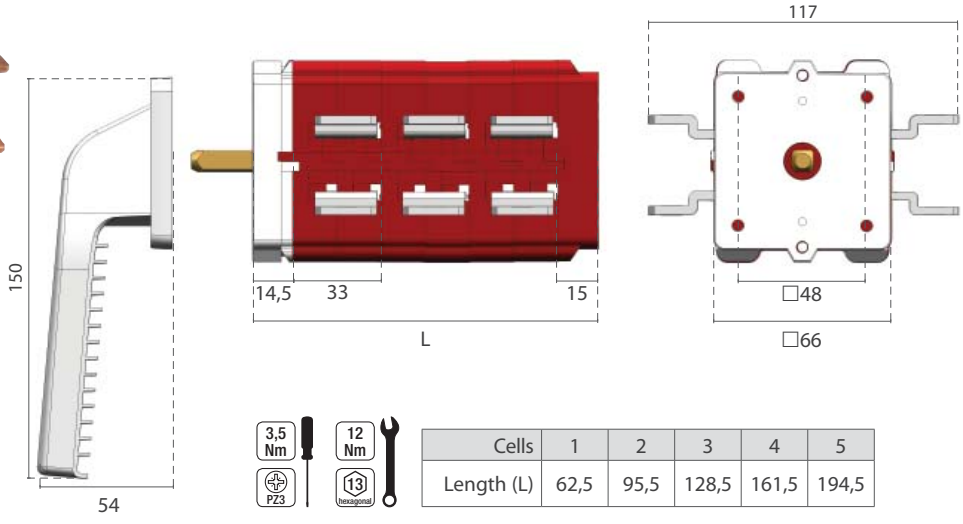


3,5 Nm
PZ3

Cells	1	2	3	4	5	6	7	8	9	10
Length (L)	46,0	62,5	79,0	95,5	112,0	128,5	145,0	161,5	178,0	194,5

Lever handle from 100A switches

Size D3



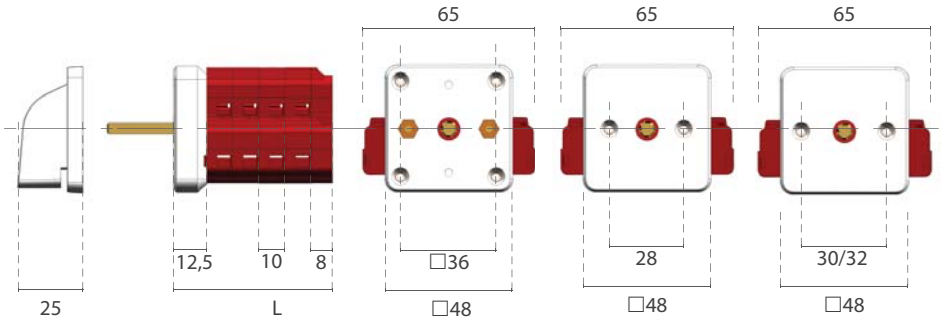
3,5 Nm
PZ3
12 Nm
13 hexagonal

Cells	1	2	3	4	5
Length (L)	62,5	95,5	128,5	161,5	194,5

Dimensions lateral connection

Cabinets with confined spaces pose a challenge especially when the device should be installed near the cabinet walls, using the L series and its special shape we find a solution to this problem. L series shape offers a blind face and all screwing operations are made from the same side. It is also very useful on devices with a large number of contacts as it facilitates control and maintenance operations.

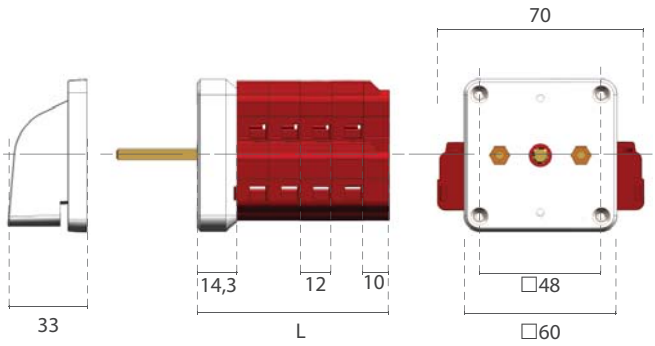
Size D0-L



1,6 Nm
PZ2

Cells	1	2	3	4	5	6	7	8	9	10	11	12
Length (L)	30,5	40,5	50,5	60,5	70,5	80,5	90,5	100,5	110,5	120,5	130,5	140,5

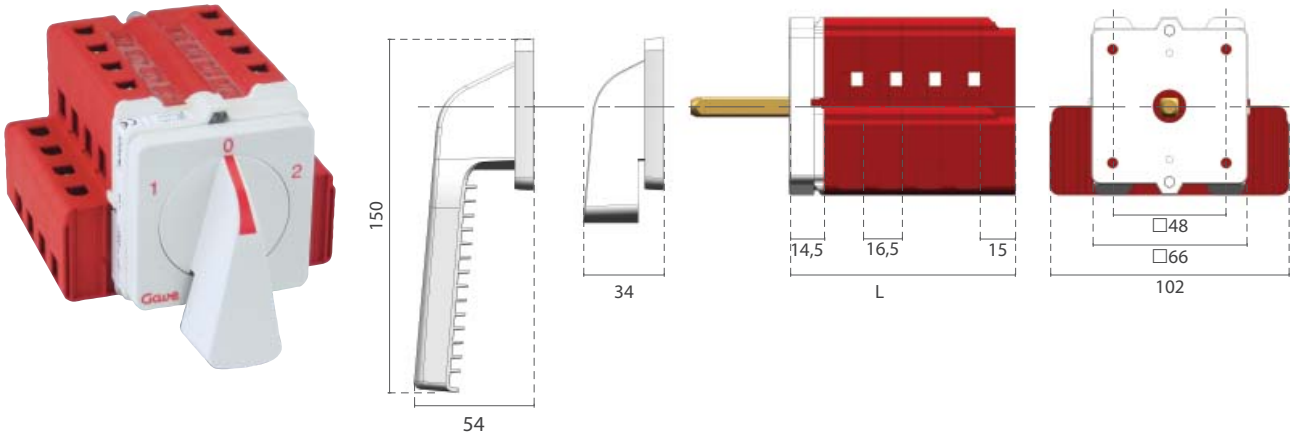
Size D1-L



2,0 Nm
PZ2

Cells	1	2	3	4	5	6	7	8	9	10	11	12
Length (L)	36,3	48,3	60,3	72,3	84,3	96,3	108,3	120,3	132,3	144,3	156,3	168,3

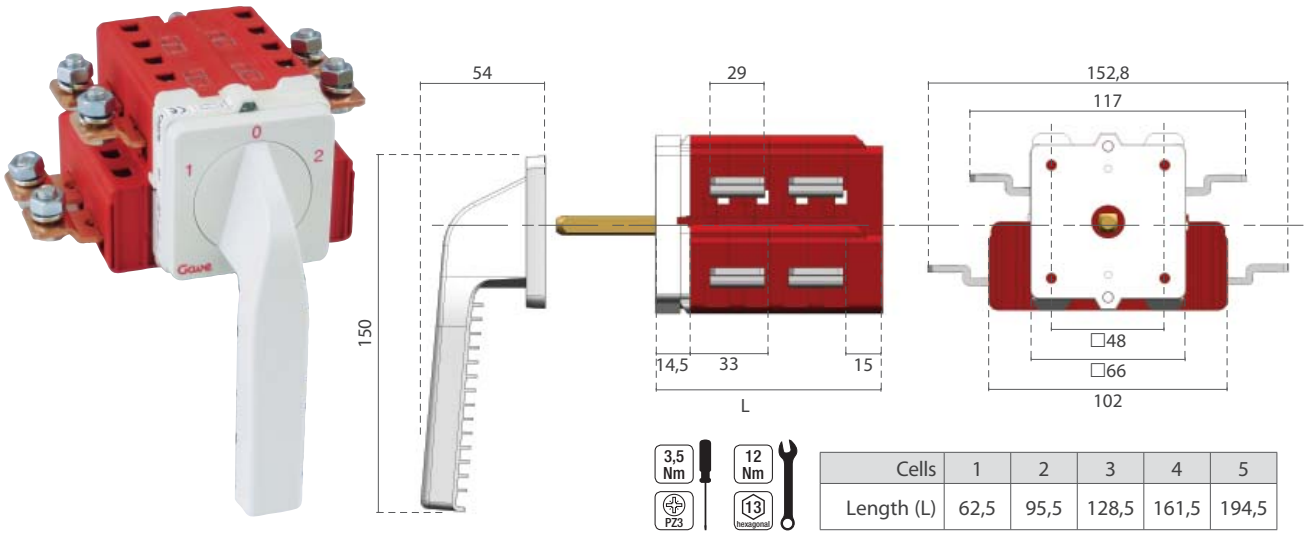
Size D2-L



3,5 Nm
PZ3

Cells	1	2	3	4	5	6	7	8	9	10
Length (L)	46,0	62,5	79,0	95,5	112,0	128,5	145,0	161,5	178,0	194,5

Size D3-L



3,5 Nm
PZ3
12 Nm
13 hexagonal

Cells	1	2	3	4	5
Length (L)	62,5	95,5	128,5	161,5	194,5

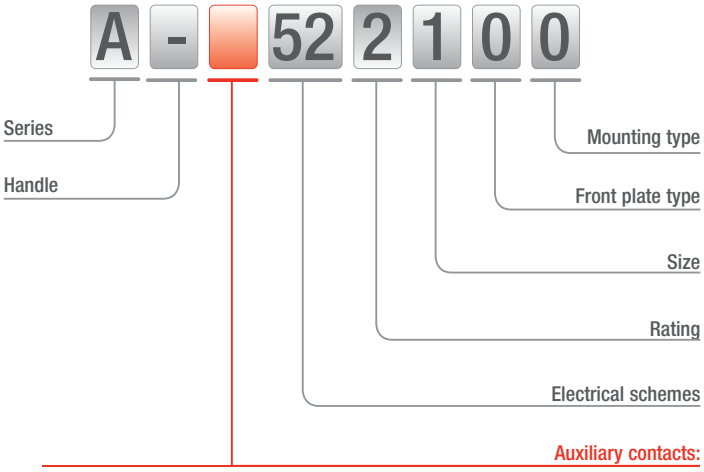
Auxiliary contacts

General characteristics

- On 55x, 56x and 57x electrical references.
- Auxiliary contact 12A.
- Mounted on independent cells.

Reference system

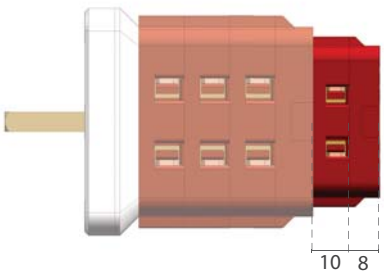
The first digit on the electrical scheme is exchanged by a letter indicating the auxiliary contact type.



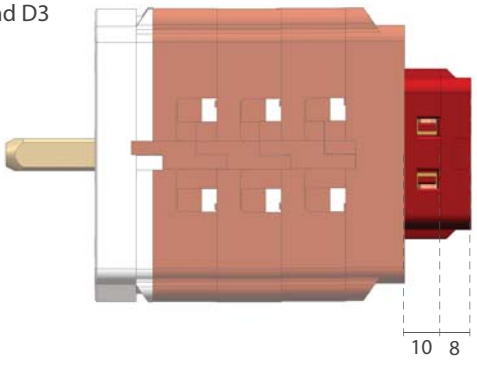
A 1 simultaneous auxiliary contact (close at the same time with main contacts)
B 1 early make / late break auxiliary contact (close before main contacts)
C 1 early break / late make auxiliary contact (open before main contacts)
D 2 simultaneous auxiliary contacts (close at the same time with main contacts)
E 2 early make / late break auxiliary contact (close before main contacts)
F 2 early break / late make auxiliary contact (open before main contacts)
G 2 simultaneous auxiliary contacts 1NO+1NC (only on-off switches)
H 4 simultaneous auxiliary contacts (close at the same time with main contacts)

Dimensions

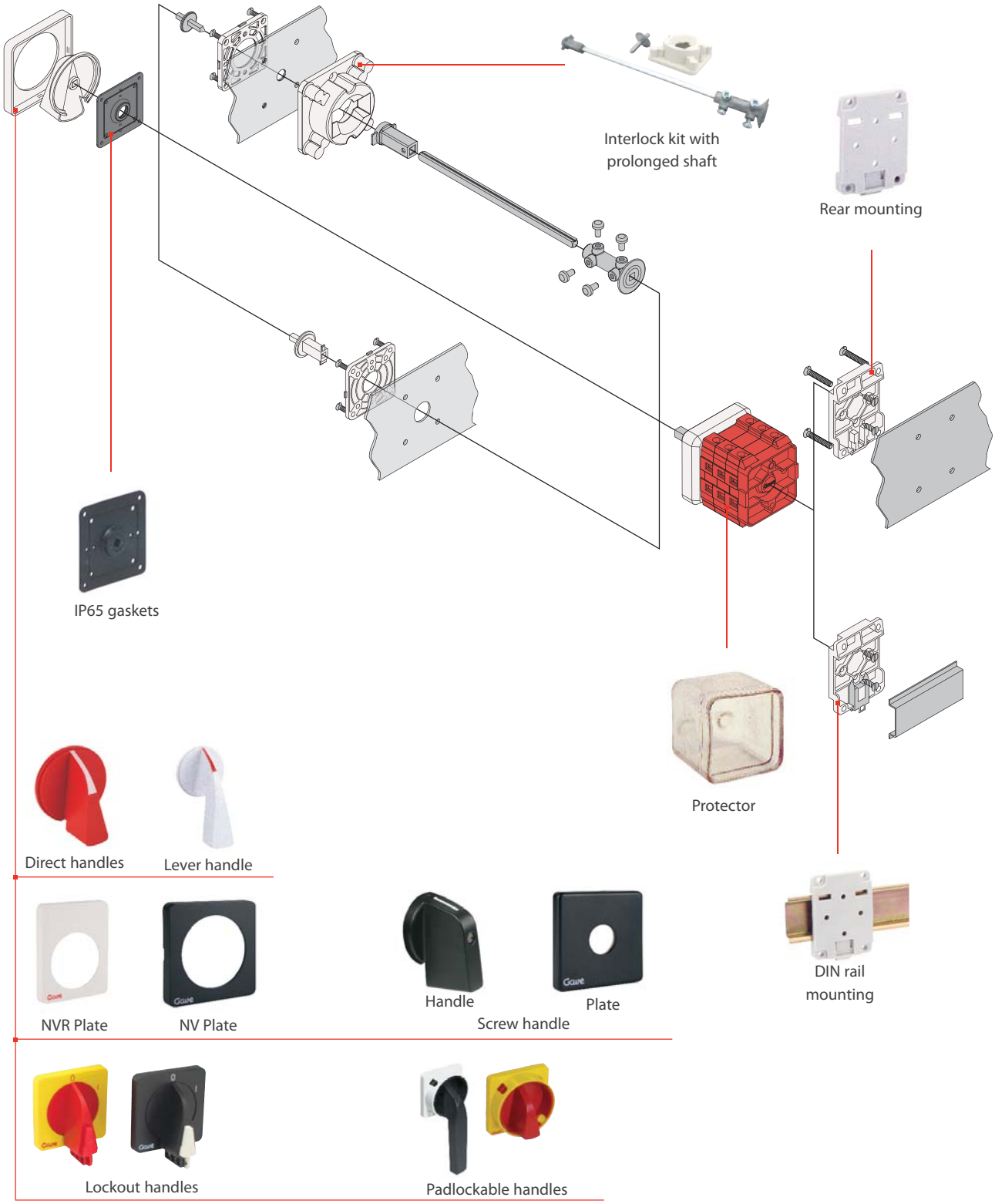
Size D1



Size D2 and D3



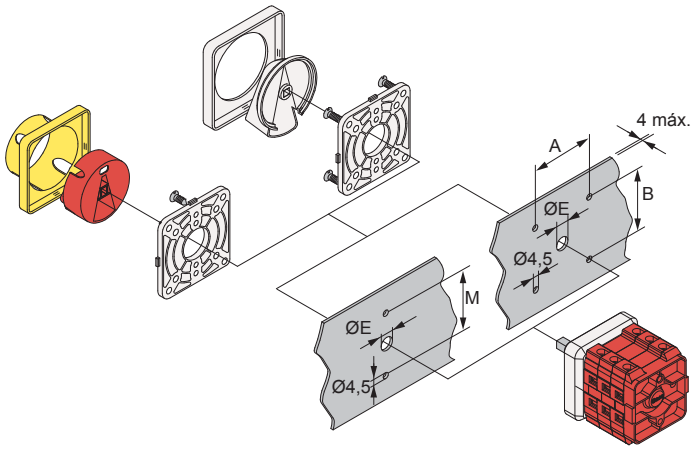
Mounting possibilities



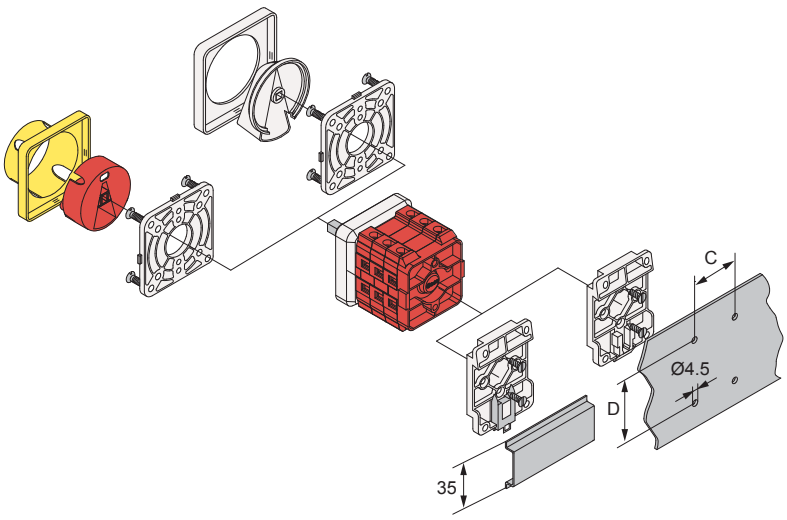
Mounting schemes

Direct mounting

Frontal mounting

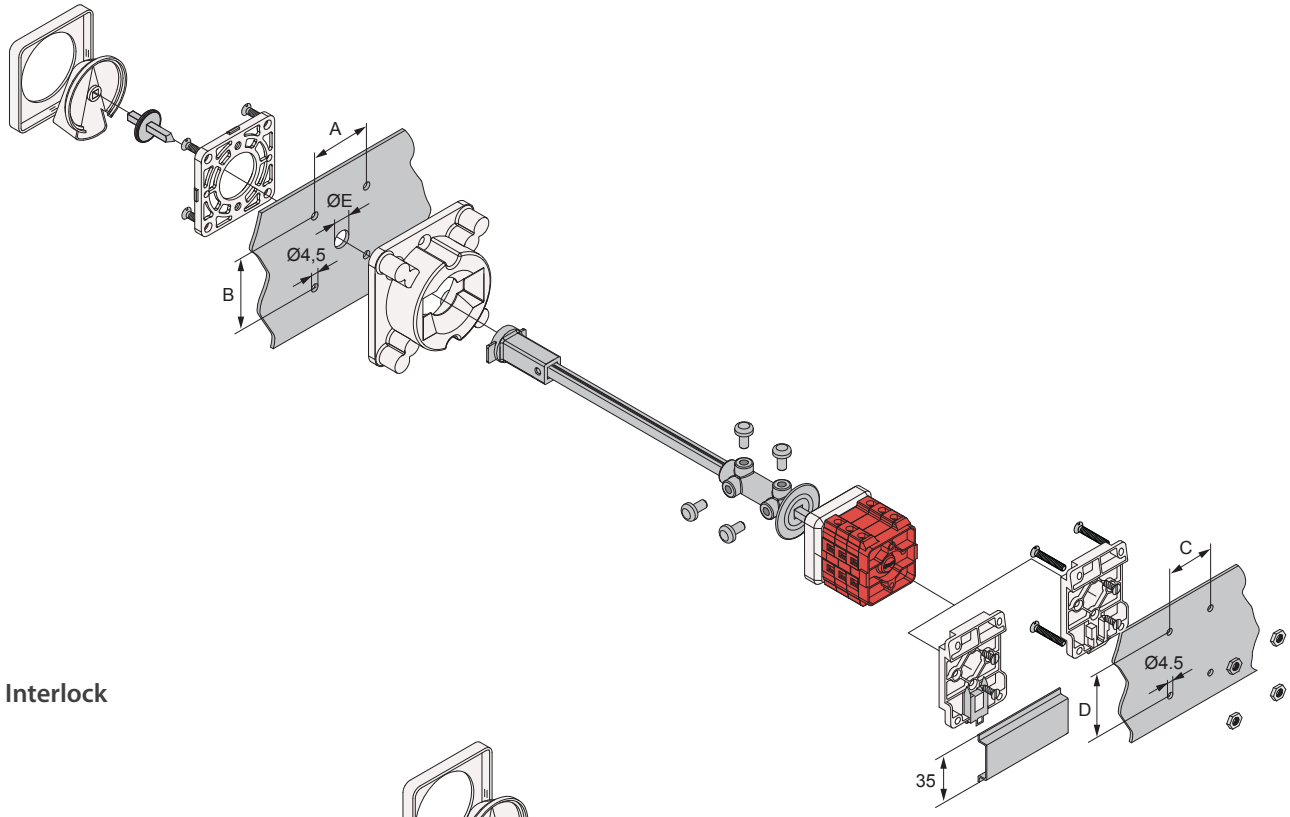


DIN rail or rear mounting

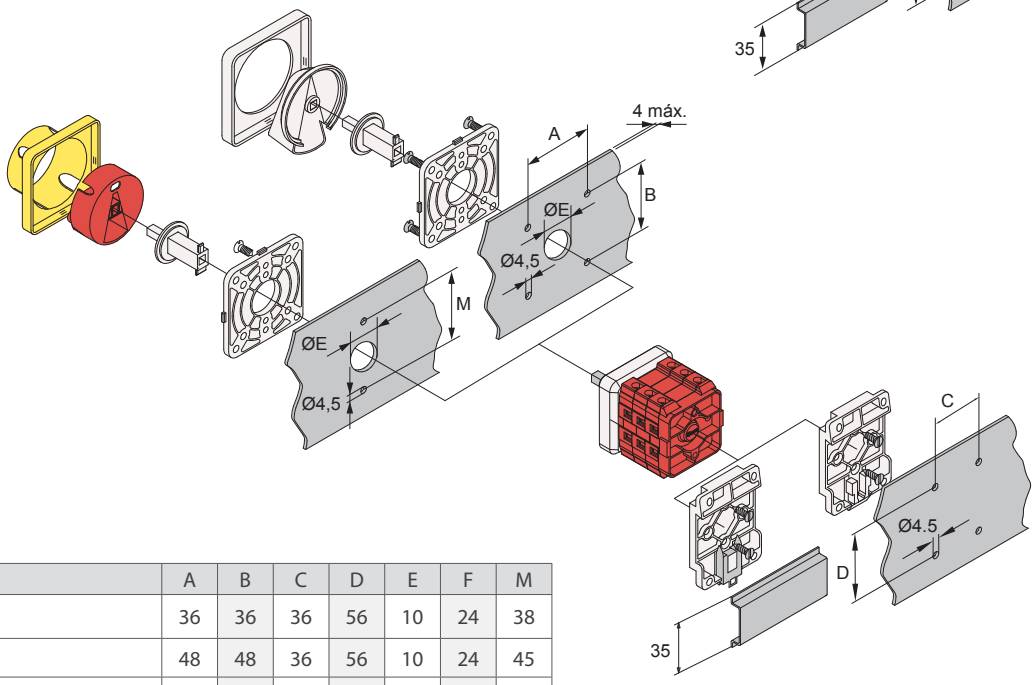


Interlock mounting

Prolonged shaft and interlock



Interlock

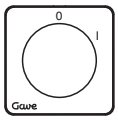


values in mm

Size	In (A)	A	B	C	D	E	F	M
D0	12-16-25	36	36	36	56	10	24	38
D1	25-32-40	48	48	36	56	10	24	45
D2-D3	63-100-125-160-200-250	48	48	78	78	14	24	45

Standard references

Switches

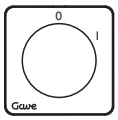


Size D0

Poles	Cells	Scheme	12A	16A	25A
1	1	550	A-5500000	A-5501000	A-5502000
2	1	551	A-5510000	A-5511000	A-5512000
3	2	552	A-5520000	A-5521000	A-5522000
4	2	553	A-5530000	A-5531000	A-5532000
5	3	555	A-5550000	A-5551000	A-5552000
6	3	556	A-5560000	A-5561000	A-5562000
7	4	557	A-5570000	A-5571000	A-5572000

Size D1

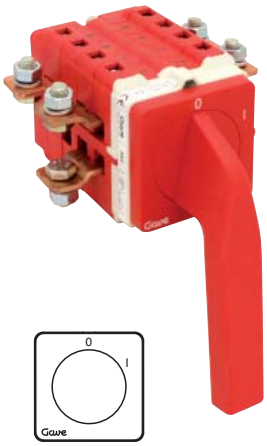
Poles	Cells	Scheme	25A	32A	40A
1	1	550	A-5502100	A-5503100	A-5504100
2	1	551	A-5512100	A-5513100	A-5514100
3	2	552	A-5522100	A-5523100	A-5524100
4	2	553	A-5532100	A-5533100	A-5534100
5	3	555	A-5552100	A-5553100	A-5554100
6	3	556	A-5562100	A-5563100	A-5564100
7	4	557	A-5572100	A-5573100	A-5574100



Size D2

Poles	Cells	Scheme	63A	100A	125A
1	1	550	A-5506100	A-5507100	A-5509100
2	1	551	A-5516100	A-5517100	A-5519100
3	2	552	A-5526100	A-5527100	A-5529100
4	2	553	A-5536100	A-5537100	A-5539100
5	3	555	A-5556100	A-5557100	
6	3	556	A-5566100	A-5567100	
7	4	557	A-5576100	A-5577100	

Switches (continued)



Size D3

Poles	Cells	Scheme	160A	200A	250A
1	1	550	A-550A100	A-550B100	A-550C100
2	1	551	A-551A100	A-551B100	A-551C100
3	2	552	A-552A100	A-552B100	A-552C100
4	2	553	A-553A100	A-553B100	A-553C100

Switches with spring return to 0

Size D0

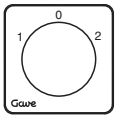
Poles	Cells	Scheme	12A	16A	25A
1	1	820	A-8200000	A-8201000	A-8202000

Size D1

Poles	Cells	Scheme	25A	32A	40A
1	1	820	A-8202100		

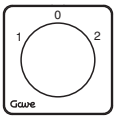
Standard references for direct mounting (continued)

Changeover switches 1-0-2



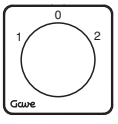
Size D0

Poles	Cells	Scheme	12A	16A	25A
1	1	560	A-5600000	A-5601000	A-5602000
2	2	561	A-5610000	A-5611000	A-5612000
3	3	562	A-5620000	A-5621000	A-5622000
4	4	563	A-5630000	A-5631000	A-5632000
5	5	565	A-5650000	A-5651000	A-5652000
6	6	566	A-5660000	A-5661000	A-5662000



Size D1

Poles	Cells	Scheme	25A	32A	40A
1	1	560	A-5602100	A-5603100	A-5604100
2	2	561	A-5612100	A-5613100	A-5614100
3	3	562	A-5622100	A-5623100	A-5624100
4	4	563	A-5632100	A-5633100	A-5634100
5	5	565	A-5652100	A-5653100	A-5654100
6	6	566	A-5662100	A-5663100	A-5664100



Size D2

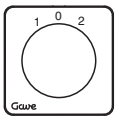
Poles	Cells	Scheme	63A	100A	125A
1	1	560	A-5606100	A-5607100	A-5609100
2	2	561	A-5616100	A-5617100	A-5619100
3	3	562	A-5626100	A-5627100	A-5629100
4	4	563	A-5636100	A-5637100	A-5639100
5	5	565	A-5656100	A-5657100	
6	6	566	A-5666100	A-5667100	

Changeover switches 1-0-2 (continued)

Size D3

Poles	Cells	Scheme	160A	200A	250A
1	1	560	A-560A100	A-560B100	A-560C100
2	2	561	A-561A100	A-561B100	A-561C100
3	3	562	A-562A100	A-562B100	A-562C100
4	4	563	A-563A100	A-563B100	A-563C100

Changeover switches 1-0-2 with spring return to 0



Size D0

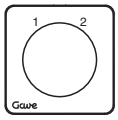
Poles	Cells	Scheme	12A	16A	25A
1	1	830	A-8300000	A-8301000	A-8302000

Size D1

Poles	Cells	Scheme	25A	32A	40A
1	1	830	A-8302100		

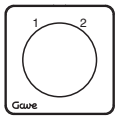
Standard references for direct mounting (continued)

Changeover switches 1-2



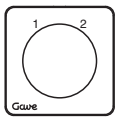
Size D0

Poles	Cells	Scheme	12A	16A	25A
1	1	570	A-5700000	A-5701000	A-5702000
2	2	571	A-5710000	A-5711000	A-5712000
3	3	572	A-5720000	A-5721000	A-5722000
4	4	573	A-5730000	A-5731000	A-5732000
5	5	575	A-5750000	A-5751000	A-5752000
6	6	576	A-5760000	A-5761000	A-5762000



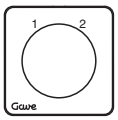
Size D1

Poles	Cells	Scheme	25A	32A	40A
1	1	570	A-5702100	A-5703100	A-5704100
2	2	571	A-5712100	A-5713100	A-5714100
3	3	572	A-5722100	A-5723100	A-5724100
4	4	573	A-5732100	A-5733100	A-5734100
5	5	575	A-5752100	A-5753100	A-5754100
6	6	576	A-5762100	A-5763100	A-5764100



Size D2

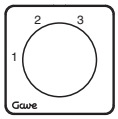
Poles	Cells	Scheme	63A	100A	125A
1	1	570	A-5706100	A-5707100	A-5709100
2	2	571	A-5716100	A-5717100	A-5719100
3	3	572	A-5726100	A-5727100	A-5729100
4	4	573	A-5736100	A-5737100	A-5739100
5	5	575	A-5756100	A-5757100	
6	6	576	A-5766100	A-5767100	



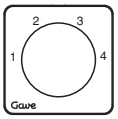
Size D3

Poles	Cells	Scheme	160A	200A	250A
1	1	570	A-570A100	A-570B100	A-570C100
2	2	571	A-571A100	A-571B100	A-571C100
3	3	572	A-572A100	A-572B100	A-572C100
4	4	573	A-573A100	A-573B100	A-573C100

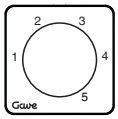
Step switches without 0 position



580



581



582

SINGLE POLE

Size D0

Positions	Cells	Scheme	12A	16A	25A
3	2	580	A-5800000	A-5801000	A-5802000
4	2	581	A-5810000	A-5811000	A-5812000
5	3	582	A-5820000	A-5821000	A-5822000

Size D1

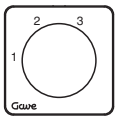
Positions	Cells	Scheme	25A	32A	40A
3	2	580	A-5802100	A-5803100	A-5804100
4	2	581	A-5812100	A-5813100	A-5814100
5	3	582	A-5822100	A-5823100	A-5824100

Size D2

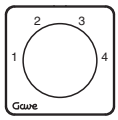
Positions	Cells	Scheme	63A	100A	125A
3	2	580	A-5806100	A-5807100	
4	2	581	A-5816100	A-5817100	
5	3	582	A-5826100	A-5827100	

Standard references for direct mounting (continued)

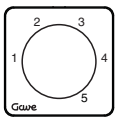
Step switches without 0 position (continued)



590



591



592

DOUBLE POLE

Size D0

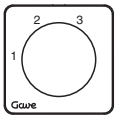
Positions	Cells	Scheme	12A	16A	25A
3	3	590	A-5900000	A-5901000	A-5902000
4	4	591	A-5910000	A-5911000	A-5912000
5	5	592	A-5920000	A-5921000	A-5922000

Size D1

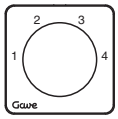
Positions	Cells	Scheme	25A	32A	40A
3	3	590	A-5902100	A-5903100	A-5904100
4	4	591	A-5912100	A-5913100	A-5914100
5	5	592	A-5922100	A-5923100	A-5924100

Size D1

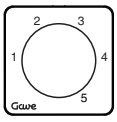
Positions	Cells	Scheme	63A	100A	125A
3	3	590	A-5906100	A-5907100	
4	4	591	A-5916100	A-5917100	
5	5	592	A-5926100	A-5927100	



600



601



602

TRIPLE POLE

Size D0

Positions	Cells	Scheme	12A	16A	25A
3	5	600	A-6000000	A-6001000	A-6002000
4	6	601	A-6010000	A-6011000	A-6012000
5	8	602	A-6020000	A-6021000	A-6022000

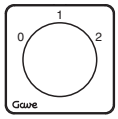
Size D1

Positions	Cells	Scheme	25A	32A	40A
3	5	600	A-6002100	A-6003100	A-6004100
4	6	601	A-6012100	A-6013100	A-6014100
5	8	602	A-6022100	A-6023100	A-6024100

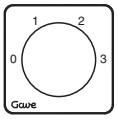
Size D2

Positions	Cells	Scheme	63A	100A	125A
3	5	600	A-6006100	A-6007100	
4	6	601	A-6016100	A-6017100	
5	8	602	A-6026100	A-6027100	

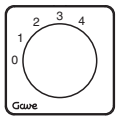
Step switches with 0 position



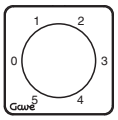
610



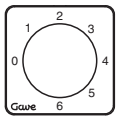
611



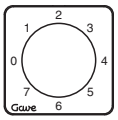
612



613



614



615

SINGLE POLE

Size D0

Positions	Cells	Scheme	12A	16A	25A
2	1	610	A-6100000	A-6101000	A-6102000
3	2	611	A-6110000	A-6111000	A-6112000
4	2	612	A-6120000	A-6121000	A-6122000
5	3	613	A-6130000	A-6131000	A-6132000
6	3	614	A-6140000	A-6141000	A-6142000
7	4	615	A-6150000	A-6151000	A-6152000

Size D1

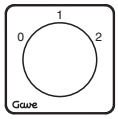
Positions	Cells	Scheme	25A	32A	40A
2	1	610	A-6102100	A-6103100	A-6104100
3	2	611	A-6112100	A-6113100	A-6114100
4	2	612	A-6122100	A-6123100	A-6124100
5	3	613	A-6132100	A-6133100	A-6134100
6	3	614	A-6142100	A-6143100	A-6144100
7	4	615	A-6152100	A-6153100	A-6154100

Size D2

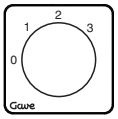
Positions	Cells	Scheme	63A	100A	125A
2	1	610	A-6106100	A-6107100	
3	2	611	A-6116100	A-6117100	
4	2	612	A-6126100	A-6127100	
5	3	613	A-6136100	A-6137100	
6	3	614	A-6146100	A-6147100	
7	4	615	A-6156100	A-6157100	

Standard references for direct mounting (continued)

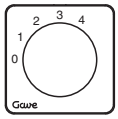
Step switches with 0 position (continued)



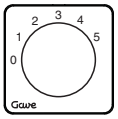
620



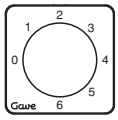
621



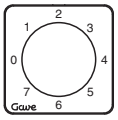
622



623



624



625

DOUBLE POLE
Size D0

Positions	Cells	Scheme	12A	16A	25A
2	2	620	A-6200000	A-6201000	A-6202000
3	3	621	A-6210000	A-6211000	A-6212000
4	4	622	A-6220000	A-6221000	A-6222000
5	5	623	A-6230000	A-6231000	A-6232000
6	7	624	A-6240000	A-6241000	A-6242000
7	8	625	A-6250000	A-6251000	A-6252000

Size D1

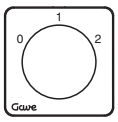
Positions	Cells	Scheme	25A	32A	40A
2	2	620	A-6202100	A-6203100	A-6204100
3	3	621	A-6212100	A-6213100	A-6214100
4	4	622	A-6222100	A-6223100	A-6224100
5	5	623	A-6232100	A-6233100	A-6234100
6	7	624	A-6242100	A-6243100	A-6244100
7	8	625	A-6252100	A-6253100	A-6254100

Size D2

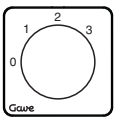
Positions	Cells	Scheme	63A	100A	125A
2	2	620	A-6206100	A-6207100	
3	3	621	A-6216100	A-6217100	
4	4	622	A-6226100	A-6227100	
5	5	623	A-6236100	A-6237100	
6	7	624	A-6246100	A-6247100	
7	8	625	A-6256100	A-6257100	

TRIPLE POLE
Size D0

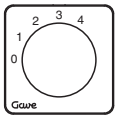
Positions	Cells	Scheme	12A	16A	25A
2	3	630	A-6300000	A-6301000	A-6302000
3	5	631	A-6310000	A-6311000	A-6312000
4	6	632	A-6320000	A-6321000	A-6322000



630



631



632

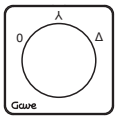
Size D1

Positions	Cells	Scheme	25A	32A	40A
2	3	630	A-6302100	A-6303100	A-6304100
3	5	631	A-6312100	A-6313100	A-6314100
4	6	632	A-6322100	A-6323100	A-6324100

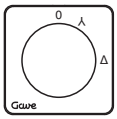
Size D1

Positions	Cells	Scheme	63A	100A	
2	3	630	A-6306100	A-6307100	
3	5	631	A-6316100	A-6317100	
4	6	632	A-6326100	A-6327100	

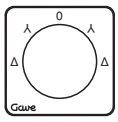
Star-delta changeover switches



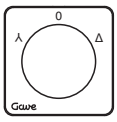
640



641



643



647

Size D0

Positions	Cells	Scheme	12A	16A	25A
3	4	640	A-6400000	A-6401000	A-6402000
3*	4	641	A-6410000	A-6411000	A-6412000
5	5	643	A-6430000	A-6431000	A-6432000
3	4	647	A-6470000	A-6471000	A-6472000

Size D1

Positions	Cells	Scheme	25A	32A	40A
3	4	640	A-6402100	A-6403100	A-6404100
3*	4	641	A-6412100	A-6413100	A-6414100
5	5	643	A-6432100	A-6433100	A-6434100
3	4	647	A-6472100	A-6473100	A-6474100

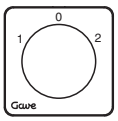
Size D2

Positions	Cells	Scheme	63A	100A	
3	4	640	A-6406100	A-6407100	
3*	4	641	A-6416100	A-6417100	
5	5	643	A-6436100	A-6437100	
3	4	647	A-6476100	A-6477100	

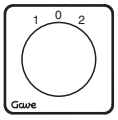
* With spring return to off

Standard references for direct mounting (continued)

Reversing switches



670 / 671



871

Size D0

Positions	Cells	Scheme	12A	16A	25A
2	2	670	A-6700000	A-6701000	A-6702000
3	3	671	A-6710000	A-6711000	A-6712000
3*	3	871	A-8710000	A-8711000	A-8712000

Size D1

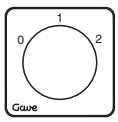
Positions	Cells	Scheme	25A	32A	40A
2	2	670	A-6702100	A-6703100	A-6704100
3	3	671	A-6712100	A-6713100	A-6714100
3*	3	871	A-8712100	-	-

Size D2

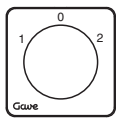
Positions	Cells	Scheme	63A	100A	
2	2	670	A-6706100	A-6707100	
3	3	671	A-6716100	A-6717100	
3*	3	871	-	-	

* With spring return to off

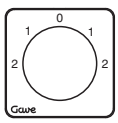
Pole changing switches for 2 speeds



680



681



682

Size D0

Positions	Cells	Scheme	12A	16A	25A
3	4	680	A-6800000	A-6801000	A-6802000
3	4	681	A-6810000	A-6811000	A-6812000
3	7	682	A-6820000	A-6821000	A-6822000

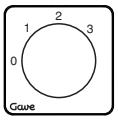
Size D1

Positions	Cells	Scheme	25A	32A	40A
3	4	680	A-6802100	A-6803100	A-6804100
3	4	681	A-6812100	A-6813100	A-6814100
3	7	682	A-6822100	A-6823100	A-6824100

Size D2

Positions	Cells	Scheme	63A	100A	
3	4	680	A-6806100	A-6807100	
3	4	681	A-6816100	A-6817100	
3	7	682	A-6826100	A-6827100	

Pole changing switches for 3 speeds



Size D0

Positions	Cells	Scheme	12A	16A	25A
4	6	700	A-7000000	A-7001000	A-7002000

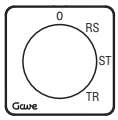
Size D1

Positions	Cells	Scheme	25A	32A	40A
4	6	700	A-7002100	A-7003100	A-7004100

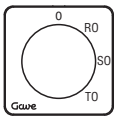
Size D2

Positions	Cells	Scheme	63A	100A	
4	6	700	A-7006100	A-7007100	

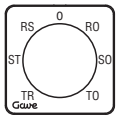
Voltmeter changeover switches



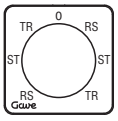
743



744



746



747

Size D0

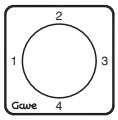
Phases	Cells	Scheme	12A	16A	25A
3	2	743	A-7430000	A-7431000	A-7432000
3+N	2	744	A-7440000	A-7441000	A-7442000
3+N	3	746	A-7460000	A-7461000	A-7462000
3	4	747	A-7470000	A-7471000	A-7472000

Size D1

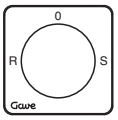
Phases	Cells	Scheme	25A		
3	2	743	A-7432100		
3+N	2	744	A-7442100		
3+N	3	746	A-7462100		
3	4	747	A-7472100		

Standard references for direct mounting (continued)

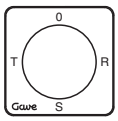
Ammeter changeover switches



760



761



762 / 763 / 767

Size D0

Phases	Cells	Scheme	12A	16A	25A
4	4	760	A-7600000	A-7601000	A-7602000
2	3	761	A-7610000	A-7611000	A-7612000
3	5	762	A-7620000	A-7621000	A-7622000
3+N	6	763	A-7630000	A-7631000	A-7632000
3	3	767	A-7670000	A-7671000	A-7672000

Size D1

Phases	Cells	Scheme	25A	32A	40A
4	4	760	A-7602100	A-7603100	A-7604100
2	3	761	A-7612100	A-7613100	A-7614100
3	5	762	A-7622100	A-7623100	A-7624100
3+N	6	763	A-7632100	A-7633100	A-7634100
3	3	767	A-7672100	A-7673100	A-7674100

Manipulator changeover switches

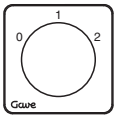
Size D0

Positions	Cells	Scheme	12A	16A	25A
2	1	794	A-7940000	A-7941000	A-7942000

Size D1

Positions	Cells	Scheme	25A	32A	
2	1	794	A-7942100	A-7943100	

Group changeover switches



Size D0

Sectors	Cells	Scheme	12A	16A	25A
2	1	800	A-8000000	A-8001000	A-8002000

Size D1

Sectors	Cells	Scheme	25A	32A	40A
2	1	800	A-8002100	A-8003100	A-8004100

Circuit breaker for motor starting

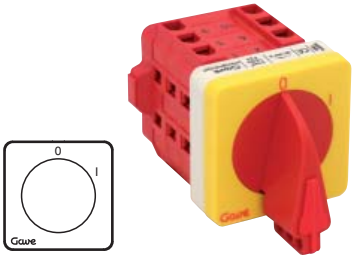
Size 0

Poles	Cells	Scheme	12A	16A	25A
2	2	840	A-8400000	A-8401000	A-8402000

Size 1

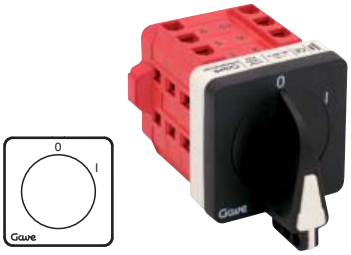
Poles	Cells	Scheme	25A	32A	40A
2	2	840	A-8402100	A-8403100	A-8404100

Switches with lockout handle



Handle and plate red/yellow
Size D0

Poles	Cells	Scheme	12A	16A	25A
2	1	AH551	AH5510000	AH5511000	AH5512000
3	2	AH552	AH5520000	AH5521000	AH5522000
4	2	AH553	AH5530000	AH5531000	AH5532000

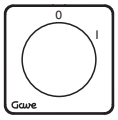


Handle and plate black/grey
Size D0

Poles	Cells	Scheme	12A	16A	25A
2	1	AJ551	AJ5510000	AJ5511000	AJ5512000
3	2	AJ552	AJ5520000	AJ5521000	AJ5522000
4	2	AJ553	AJ5530000	AJ5531000	AJ5532000

Standard references for direct mounting (continued)

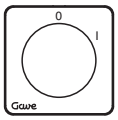
Safety switches with padlockable handle



Handle and plate red/yellow

Size D0

Poles	Cells	Scheme	12A	16A	25A
2	1	AB551	AB5510000	AB5511000	AB5512000
3	2	AB552	AB5520000	AB5521000	AB5522000
4	2	AB553	AB5530000	AB5531000	AB5532000



Size D1

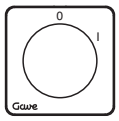
Poles	Cells	Scheme	25A	32A	40A
2	1	AB551	AB5512100	AB5513100	AB5514100
3	2	AB552	AB5522100	AB5523100	AB5524100
4	2	AB553	AB5532100	AB5533100	AB5534100

Size D2

Poles	Cells	Scheme	63A	100A	125A
2	1	AB551	AB5516100	AB5517100	AB5519100
3	2	AB552	AB5526100	AB5527100	AB5529100
4	2	AB553	AB5536100	AB5537100	AB5539100

Size D3

Poles	Cells	Scheme	160A	200A	250A
2	1	AB551	AB551A100	AB551B100	AB551C100
3	2	AB552	AB552A100	AB552B100	AB552C100
4	2	AB553	AB553A100	AB553B100	AB553C100



Handle and plate black/grey

Size D0

Poles	Cells	Scheme	12A	16A	25A
2	1	AC551	AC5510000	AC5511000	AC5512000
3	2	AC552	AC5520000	AC5521000	AC5522000
4	2	AC553	AC5530000	AC5531000	AC5532000

Size D1

Poles	Cells	Scheme	25A	32A	40A
2	1	AC551	AC5512100	AC5513100	AC5514100
3	2	AC552	AC5522100	AC5523100	AC5524100
4	2	AC553	AC5532100	AC5533100	AC5534100

Size D2

Poles	Cells	Scheme	63A	100A	125A
2	1	AC551	AC5516100	AC5517100	AC5519100
3	2	AC552	AC5526100	AC5527100	AC5529100
4	2	AC553	AC5536100	AC5537100	AC5539100

Size D3

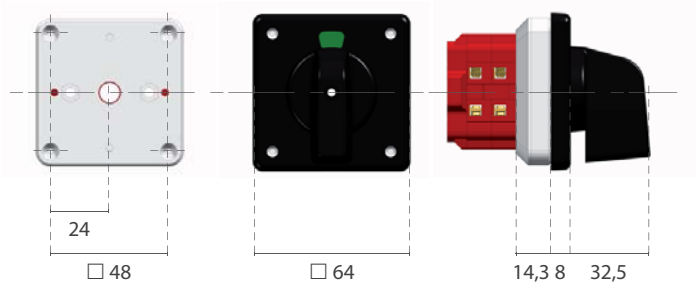
Poles	Cells	Scheme	160A	200A	250A
2	1	AC551	AC551A100	AC551B100	AC551C100
3	2	AC552	AC552A100	AC552B100	AC552C100
4	2	AC553	AC553A100	AC553B100	AC553C100

Special mountings

Mechanical red/green flag indicator

Central red/green flag indicates last executed operation. Indicates the position of the contacts even though the operating handle is in central position.

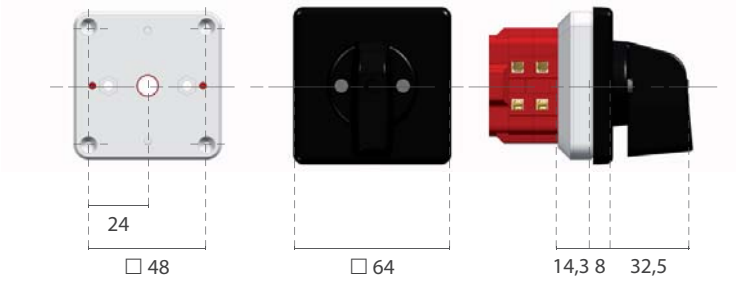
Characteristics	Availability			
	D0	D1	D2	D3
Central red/green flag indicates latest executed operation. Mounting from origin.		●		



Voltage selector lock

Front plate and handle with screw insert lock (220 or 380). Aimed at mobile equipment that might change its operating voltage depending on the installation they work.

Characteristics	Availability			
	D0	D1	D2	D3
Front plate and handle with screw insert lock that allows operation from position 0 to 220 or 380. Mounting from origin.	●*	●	●	

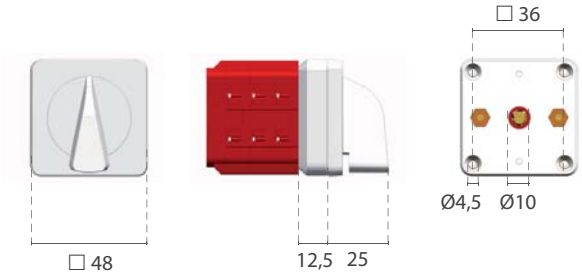


* Fixing 1 in size D0

Unidirectional

It allows the switch actuation in one single direction of rotation. Suitable for applications where we need to ensure a process sequence.

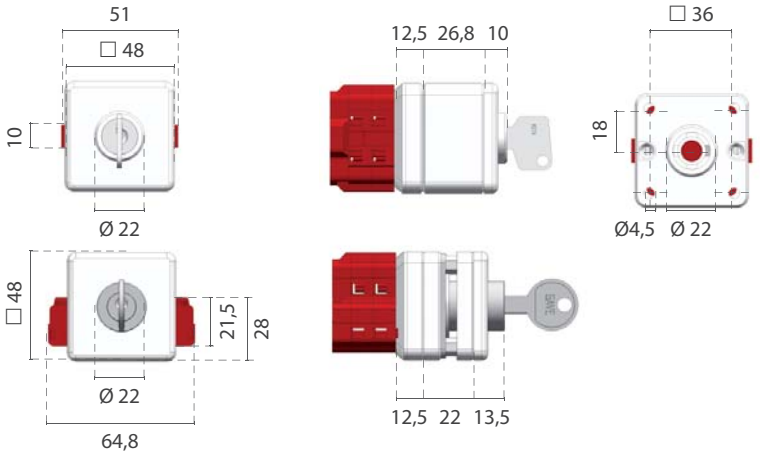
Characteristics	Availability			
	D0	D1	D2	D3
Allows to operate in a single direction. Mounting from origin.	●	●		



Key operating padlock

Suitable for installations where we under any circumstances access control is required for switch operation.
Standard key removable from one single up to four positions. Maximum number of cells up to 5 contact on size D0 or 4 size D1.

Characteristics	Availability			
	D0	D1	D2	D3
Standard key removable and lockable up to four different positions. Mounting from origin.	●	●		
Security KABA key removable and lockable only in on position. Mounting from origin.	●	●		

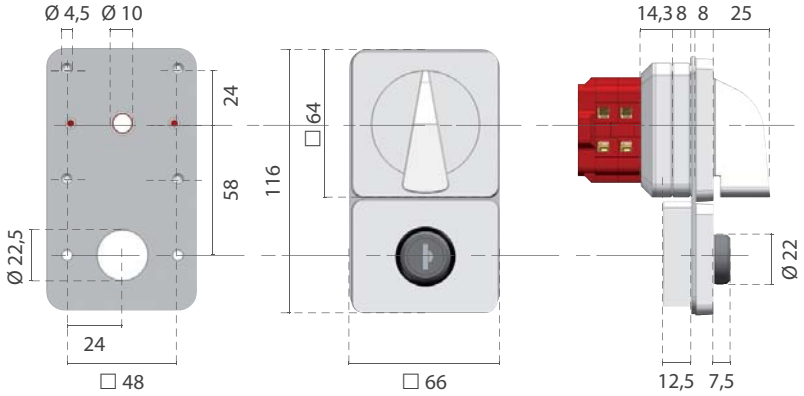


Special mountings (continued)

Key interlock

Intended to those installations where we wish to temporarily restrict access to the switch actuator. Removable and lockable in any position.

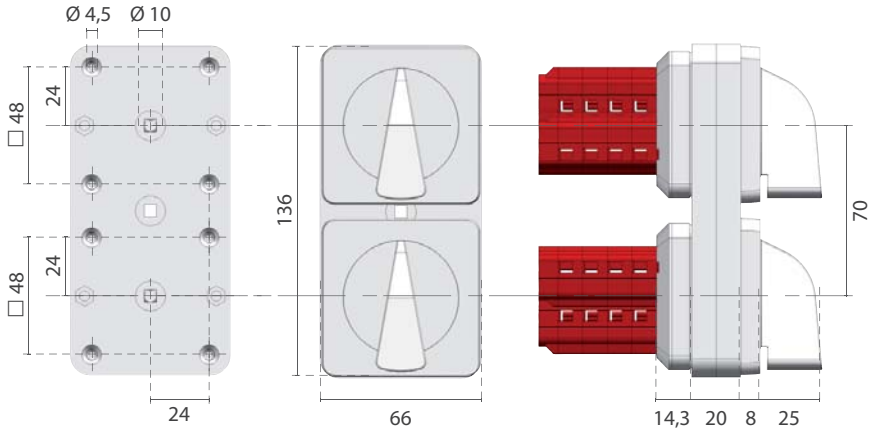
Characteristics	Availability			
	D0	D1	D2	D3
Key removable and lockable in all positions Mounting from origin.	●*	●	●	



Switch lock mounting

One switch can lock the other switch in a preset position. The use of L contact cells enables to wire the switches mounted on the panel. Screws retightening on maintenance operations is also possible.

Characteristics	Availability			
	D0	D1	D2	D3
One position in main switch locks operation on secondary switch. Mounting from origin.	●*	●		

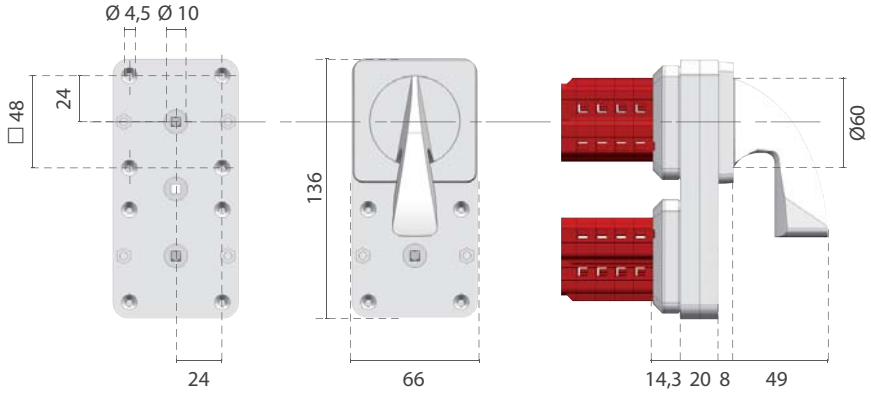


* Fixing 1 in size D0

Tandem operation

Intended for devices with more than 24 contacts. The use of L contact cells allows to wire the switch when mounted on the panel. Screws retightening on maintenance operations is also possible.

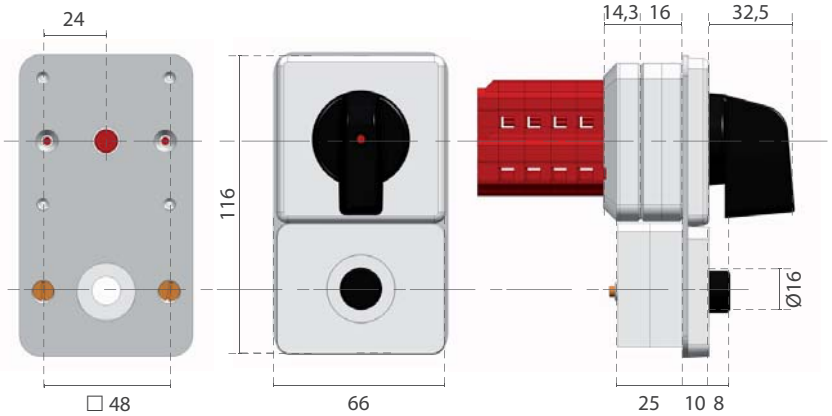
Characteristics	Availability			
	D0	D1	D2	D3
Switches above 24 contacts. Mounting from origin.	●*	●		



Push button interlock

Safety device intended for installations where we want to avoid an inadequate switch operation. In order to actuate the switch the pushbutton must be kept pressed.

Characteristics	Availability			
	D0	D1	D2	D3
Push button releases cam switch handle. Mounting from origin.	●*	●		



* Fixing 1 in size D0

Shafts and fixing plates

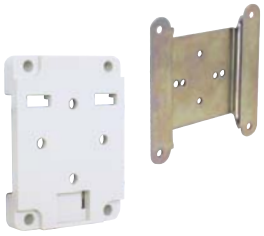
Length L non standard

Special shafts

Characteristics	Availability			
	D0	D1	D2	D3
Custom made shaft length. Specific material construction. Mounting from origin.	●	●	●	●

Crossing shaft

Characteristics	Availability			
	D0	D1	D2	D3
Crossing shaft which runs through the switch body enabling front or rear actuation. Customised shaft lengths. Mounting from origin.	●	●	●	●



Base mounting plates

References	Includes	Availability			
		D0	D1	D2	D3
AK0000003	2 x PZ2	●	●		
AK0000006	2 x PZ2			●	●

DIN rail mounting plates

References	Includes	Availability			
		D0	D1	D2	D3
AK0100007	2 x PZ2	●	●		

Prolonged shaft

References	Length	Availability			
		D0	D1	D2	D3
AK0800003	200 mm	●	●		
AK0800006	200 mm			●	●

Clutches

Devices that permit back plate or DIN rail switch mounting while keeping with external handle operation. The handle unit detaches from the rotary shaft when opening the panel door (compatible with direct handle and padlockable handle).
The assembly kits are supplied with rear mounting plate or DIN rail mounting plate (by model).
The kit without interlock permits panel door opening in all positions, and the version with interlock allows door opening uniquely on 0 disconnect position. This increases the safety and it is specially adequate on main switch or safety switch functions.

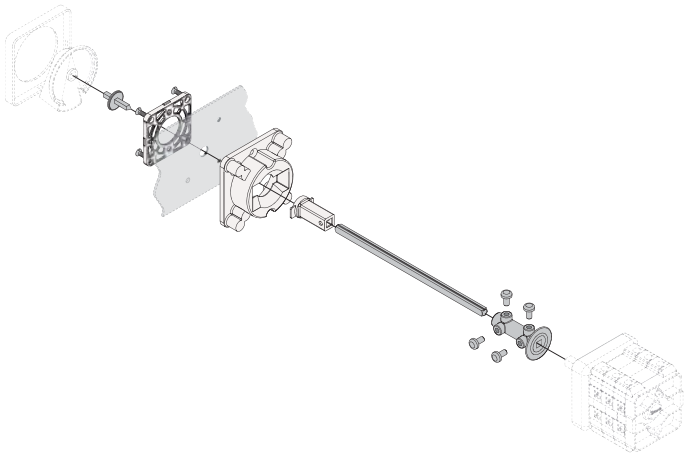
Kit with prolonged shaft (A)

References						
Sizes D0 and D1	Sizes D2 and D3	Clutch	DIN mounting plate	Base mounting plate	Interlock	Prolonged shaft
AK1630003	AK1630006	●		●		●
AK1730003	AK1730006	●		●	●	●
AK1640003	AK1640006*	●	●			●
AK1740003	AK1740006*	●	●		●	●

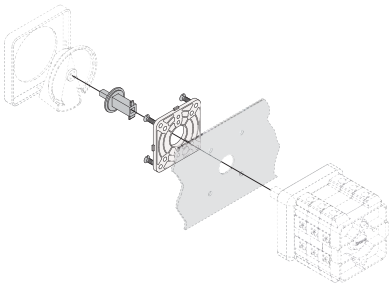
Kit without prolonged shaft (B)

References						
Sizes D0 and D1	Sizes D2 and D3	Clutch	DIN mounting plate	Base mounting plate	Interlock	Prolonged shaft
AK0230003	AK0230006	●		●		
AK0240003	AK0240006*	●	●			

A



B



Mechanical coding

The shaft and the clutch are mechanically coded to ensure the right installation and operation.

* Only up to 4 cells 63-125A

Handles, plates and inscriptions

Standard handles

References	Colour	Availability			
		D0	D1	D2	D3
AK1000010	Grey	●			
AK1000020	Red	●			
AK1000040	Black	●			
AK1000011	Grey		●		
AK1000021	Red		●		
AK1000041	Black		●		
AK1000016	Grey			●	
AK1000026	Red			●	
AK1000046	Black			●	

Standard lever handles

References	Colour	Availability			
		D0	D1	D2	D3
AK1100011	Grey		●		
AK1100021	Red		●		
AK1100041	Black		●		
AK1100016	Grey			●	●
AK1100026	Red			●	●
AK1100046	Black			●	●

Screw handles

References	Colour	Availability			
		D0	D1	D2	D3
AK1010040	Black	●			
AK1010041	Black		●		
AK1010046	Black			●	

NV plates (without inscriptions)

NV plates are standard size (48x48 D0 and 64x64 D1-3), are supplied without any printing and are suitable for different types of labelling. They can support plotter marking and engraving marking. The surface treatment offer high adherence making it suitable for attaching labels.

References	Colour	Availability			
		D0	D1	D2	D3
AK1800100	Grey	●			
AK1800200	Red	●			
AK1800400	Black	●			
AK1830400	Black and screw fixing	●			
AK1800104	Grey		●		
AK1800204	Red		●		
AK1800404	Black		●		
AK1830404	Black and screw fixing		●		

NVR plates (without inscriptions)

NVR plates offer an extended area at the top (48x60 and 64x76) where it can be displayed the name of the switch function within the same plate where positions are indicated, thereby operator interfacing with the panel becomes easier.

References	Colour	Availability			
		D0	D1	D2	D3
AK1900100	Grey	●			
AK1900200	Red	●			
AK1900104	Grey		●	●	●
AK1900204	Red		●	●	●

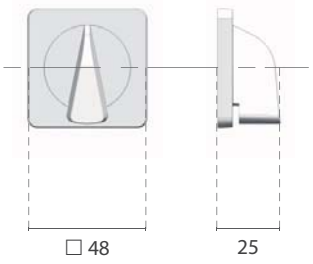
Handle and plate sets

Standard

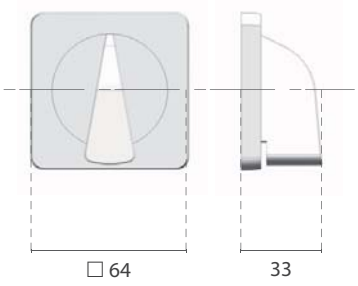
References	Colour	Availability			
		D0	D1	D2	D3
AK2000010	Grey	●			
AK2000020	Red	●			
AK2000040	Black	●			
AK2000011	Grey		●		
AK2000021	Red		●		
AK2000041	Black		●		
AK2000016	Grey			●	
AK2000026	Red			●	
AK2000046	Black			●	
AK2000018	Grey			●	●
AK2000028	Red			●	●
AK2000048	Black			●	●

Plates without inscription. For plate models with inscription, consult.

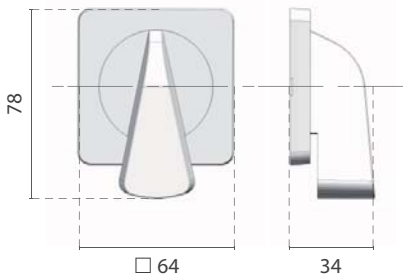
Size D0



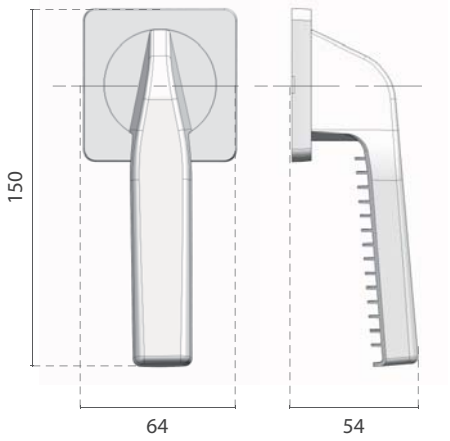
Size D1



Size D2



Size D2 and D3

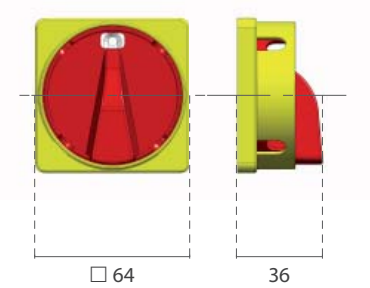


Padlockable

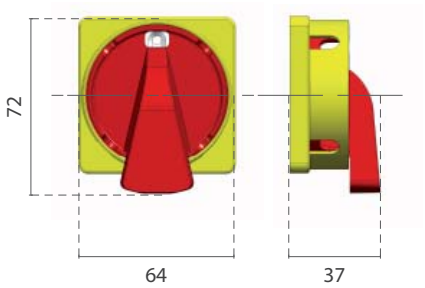
Padlockable handles can use up to 4 padlocks of maximum 8mm diameter. Locking positions are each 90º. On standard switches the device only locks in the off position which is located at 0º.
The size of the frontal plate is 64x64 and provides good panel visibility of the switch.

References	Colour	Handle	Availability			
			D0	D1	D2	D3
AK1200523	Red/yellow	Short	●	●		
AK1200526	Red/yellow	Short			●	
AK1200528	Red/yellow	Lever			●	●
AK1200143	Black/grey	Short	●	●		
AK1200146	Black/grey	Short			●	
AK1200148	Black/grey	Lever			●	●

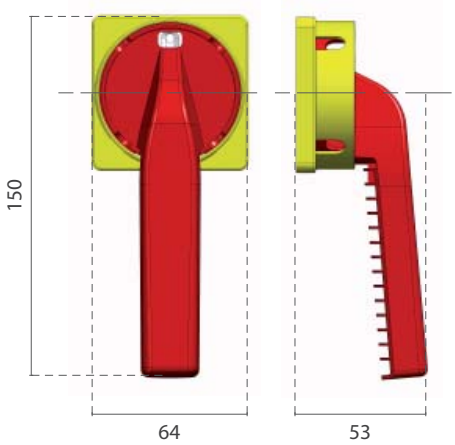
Size D0



Size D0 and D1



Size D2 and D3

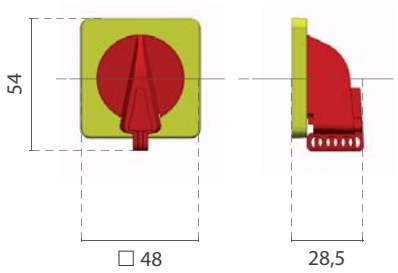


Handle and plate sets (continued)

Lockout

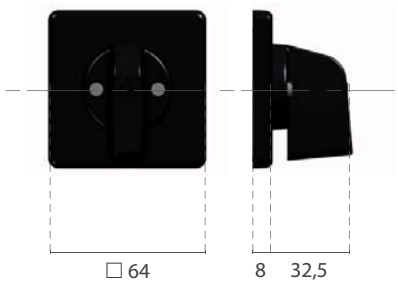
Lockout handles use a cover plate 48x48 and are specially suitable for those applications with limited space.
Pushing the projecting piece of the knob we can insert up to 3 padlocks of maximum 4mm diammeter to lock the knob on 0 position.

References	Colour	Availability			
		D0	D1	D2	D3
AK1300523	Red/yellow	●			
AK1300143	Black/grey	●			



Voltage selector lock

References	Positions	Availability			
		D0	D1	D2	D3
AK2700010	220-0-380		●		
AK2700046	220-0-380			●	
AK2700017	380-0-220		●		



Protection accessories

Protectors

References	Cells	Availability			
		D0	D1	D2	D3
AK0601000	1 and 2 cells	●			
AK0602000	3 to 5 cells	●			
AK0603000	6 to 8 cells	●			
AK0601001	1 and 2 cells		●		
AK0602001	3 to 5 cells		●		
AK0603001	6 to 8 cells		●		

IP65 gaskets

References	Availability			
	D0	D1	D2	D3
AK2240003	●	●		
AK2240006			●	●

Terminal shrouds

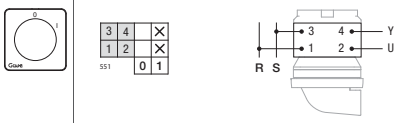
References	Cells	Availability			
		D0	D1	D2	D3
AK0702009	2 cells				●
AK0703009	3 cells				●
AK0704009	4 cells				●

Standard electrical schemes

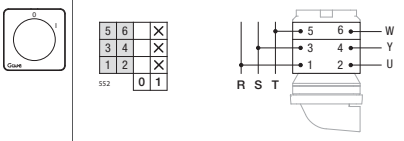
Switches

550 1 pole — 1 cell

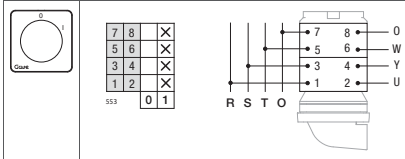
551 2 poles — 1 cell



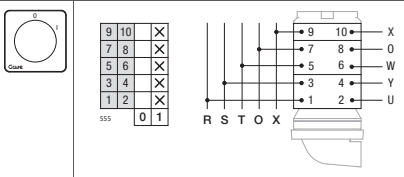
552 3 poles — 2 cells



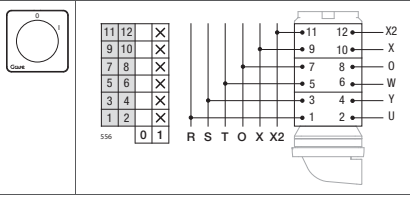
553 4 poles — 2 cells



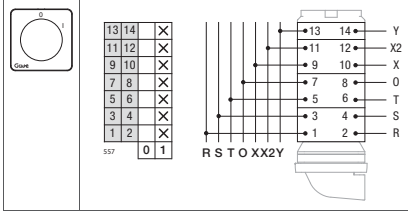
555 5 poles — 3 cells



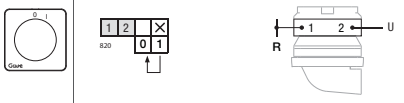
556 6 poles — 3 cells



557 7 poles — 4 cells

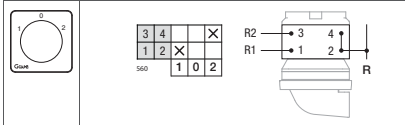


820 1 pole with spring return to 0 — 1 cell

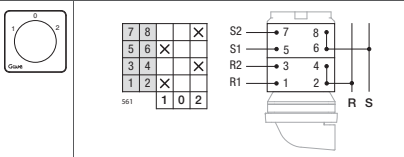


Changeover switches 1-0-2

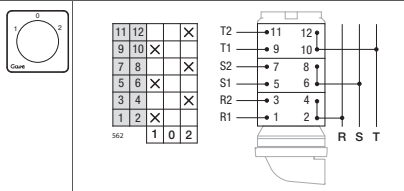
560 1 pole — 1 cell



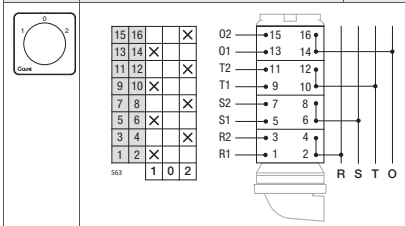
561 2 poles — 2 cells



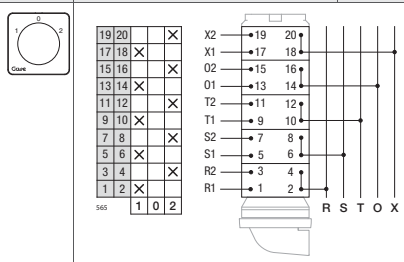
562 3 poles — 3 cells



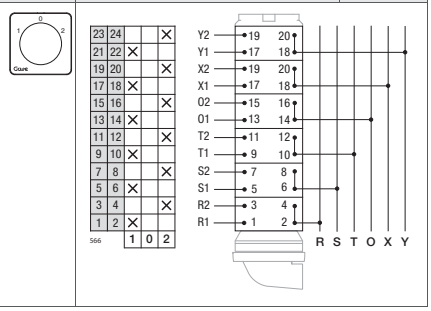
563 4 poles — 4 cells



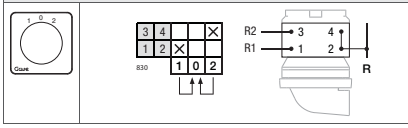
565 5 poles — 5 cells



566 6 poles — 6 cells



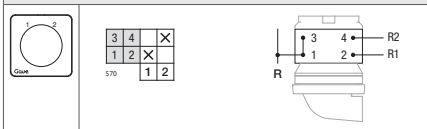
830 1 pole with spring return to 0 — 1 cell



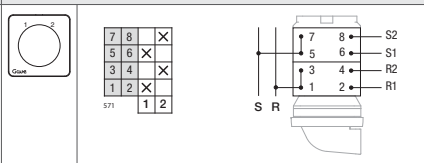
More schemes in our dedicated catalogue, see it here.

Changeover switches 1-2

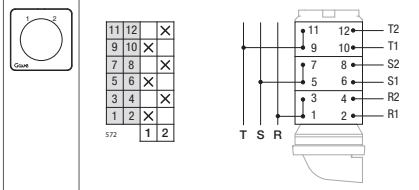
570 1 pole 1 cell



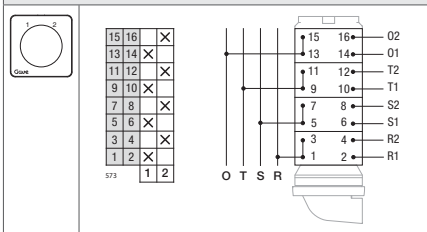
571 2 poles 2 cells



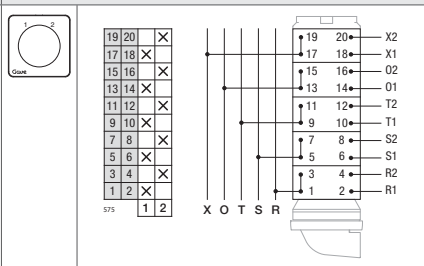
572 3 poles 3 cells



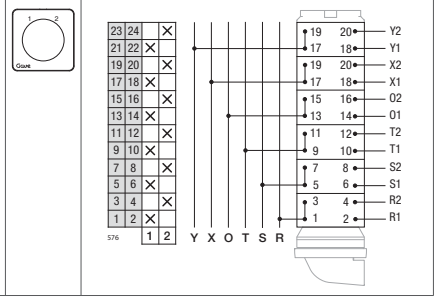
573 4 pole 4 cells



575 5 poles 5 cells

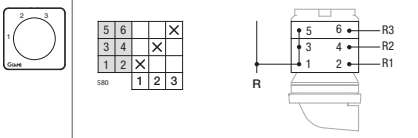


576 6 poles 6 cells

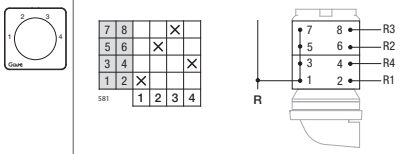


Step changeover switches without 0 position

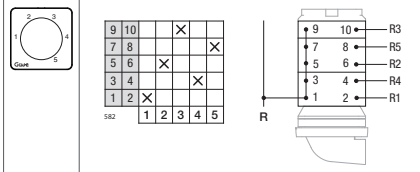
580 3 positions 2 cells



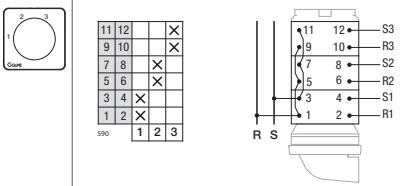
581 4 positions 2 cells



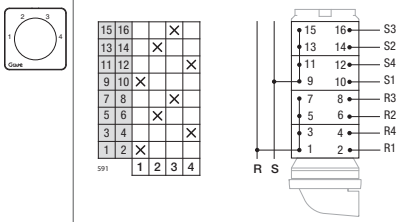
582 5 positions 3 cells



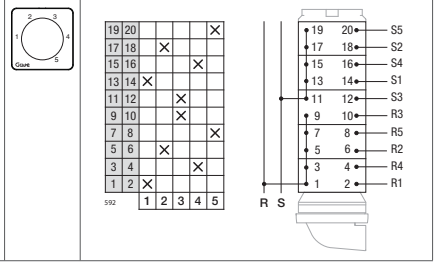
590 3 positions 3 cells



591 4 positions 4 cells



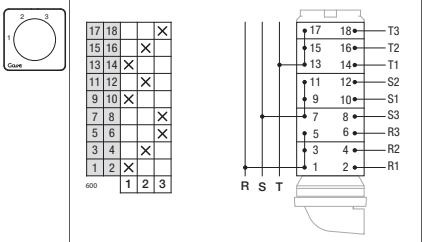
592 5 positions 5 cells



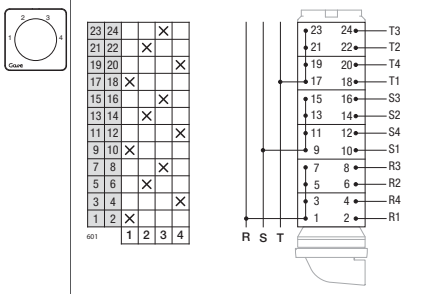
Standard electrical schemes (continued)

Step changeover switches without 0 position (continued)

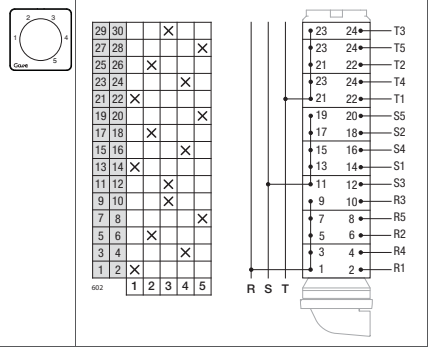
600 3 positions — 5 cells



601 4 positions — 6 cells

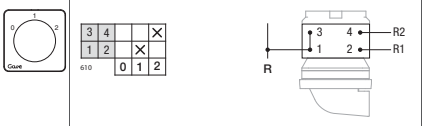


602 5 positions — 8 cells

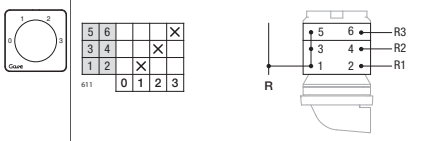


Step changeover switches with 0 position

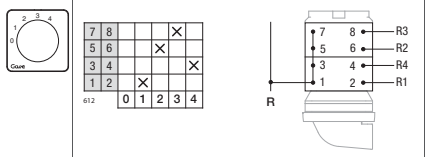
610 2 positions — 1 cell



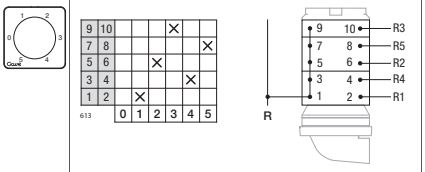
611 3 positions — 2 cells



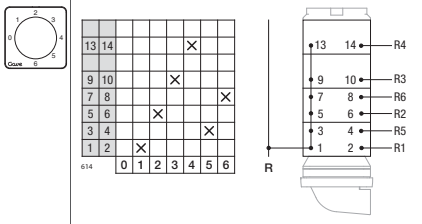
612 4 positions — 2 cells



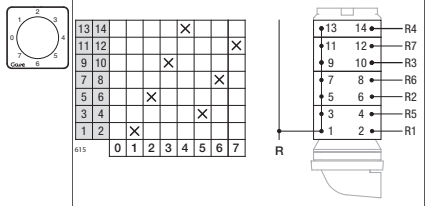
613 5 positions — 3 cells



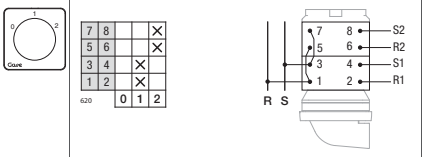
614 6 positions — 4 cells



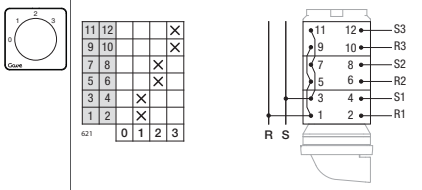
615 7 positions — 4 cells



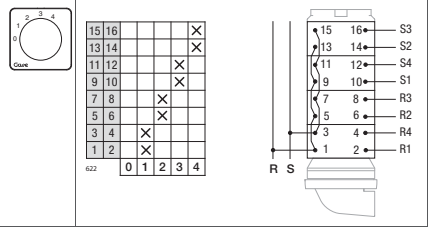
620 2 positions — 2 cells



621 3 positions — 3 cells

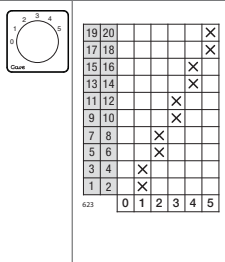


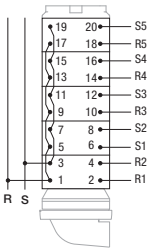
622 4 positions — 4 cells



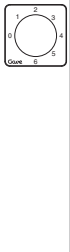
More schemes in our dedicated catalogue, see it here.

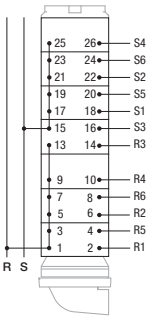
623 — 5 positions — 5 cells



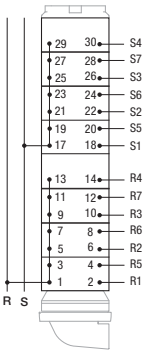


624 — 6 positions — 7 cells

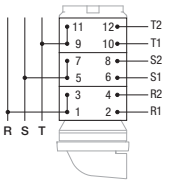




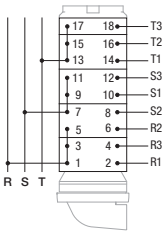
625 — 7 positions — 8 cells



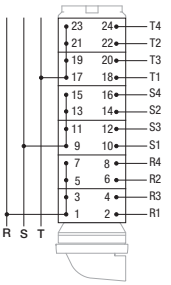
630 — 2 positions — 3 cells



631 — 3 positions — 5 cells

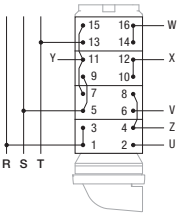


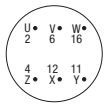
632 — 4 positions — 6 cells



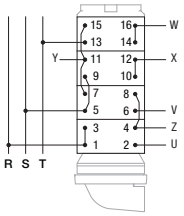
Star-delta changeover switches

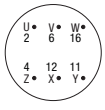
640 — Standard — 4 cells



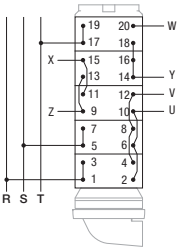


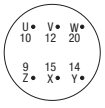
641 — Return from λ a 0 — 4 cells



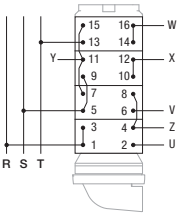


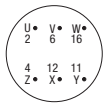
643 — Reversing — 5 cells





647 — Star or delta selector — 4 cells

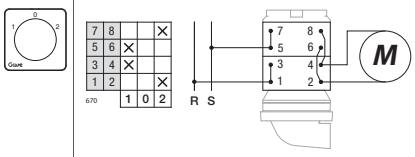




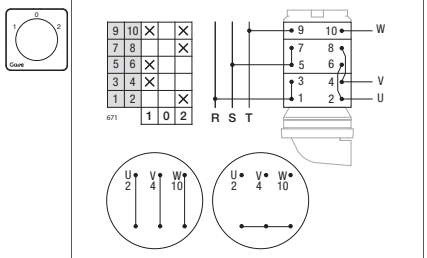
Standard electrical schemes (continued)

Inverters

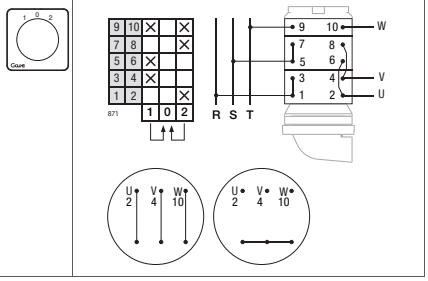
670	2 poles	2 cells



671	3 poles	3 cells

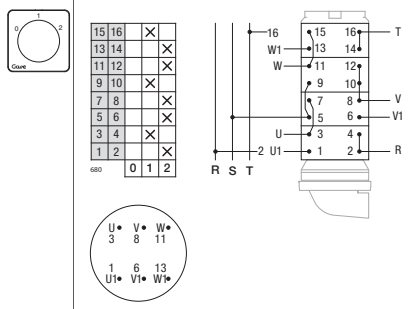


871	3 poles with return to 0	3 cells

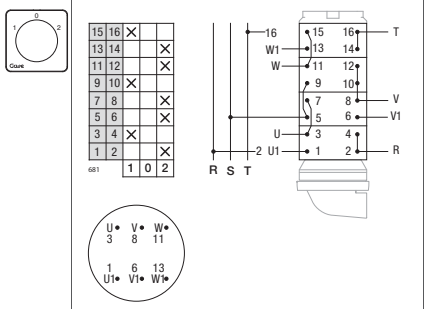


Pole changing switches for 2 speeds

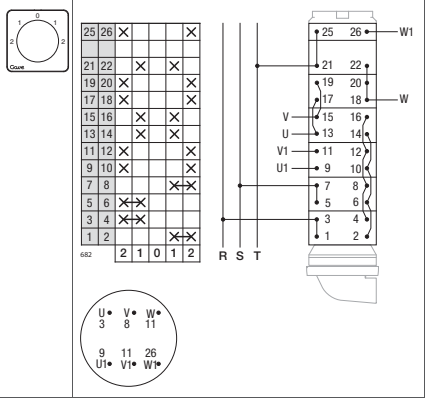
680	Dahlander single winding 0 - Δ - 人	4 cells



681	Dahlander single winding Δ - 0 - 人	4 cells

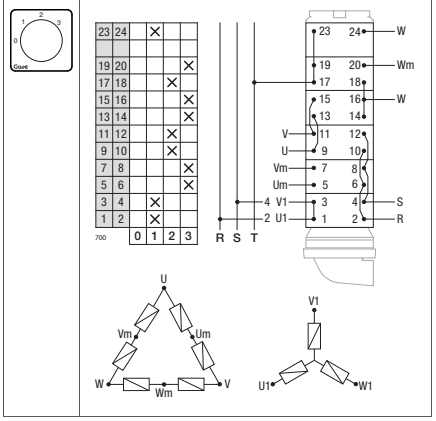


682	Dahlander inverter 人 - Δ - 0 - Δ - 人	7 cells



Pole changing switches for 3 speeds

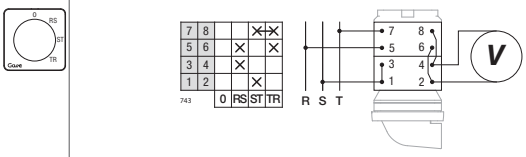
700	2 windings 0 - 人 - Δ - 人	6 cells



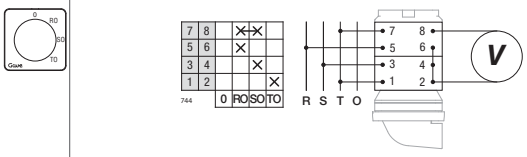
More schemes in our dedicated catalogue, see it here.

Voltmeter changeover switches

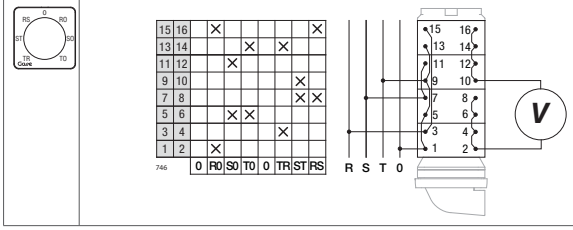
743	3 Phases	2 cells



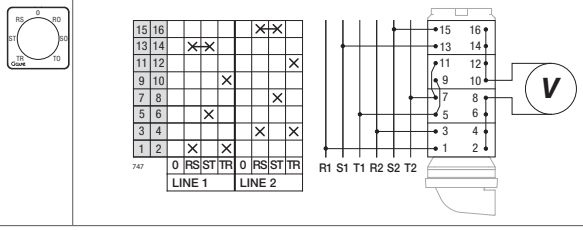
744	3 Phases + N	2 cells



746	3 Phases / 3 Phases + N	4 cells

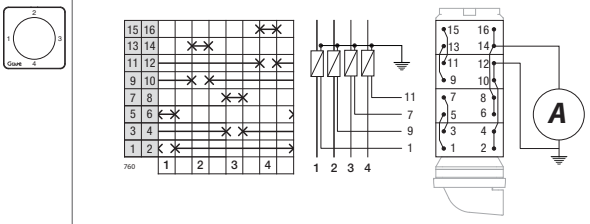


747	Between phases (2 independent tree phase lines)	4 cells

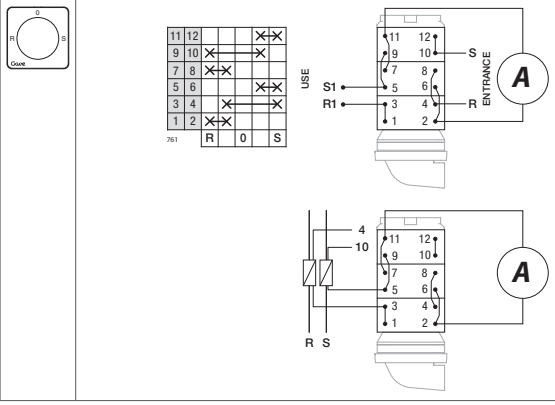


Ammeter changeover switches

760	4 circuits (with transformers)	4 cells



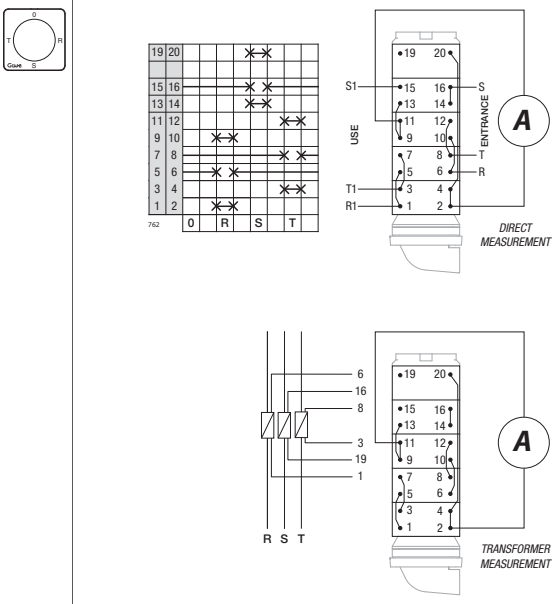
761	2 circuits (direct or with transformers)	3 cells



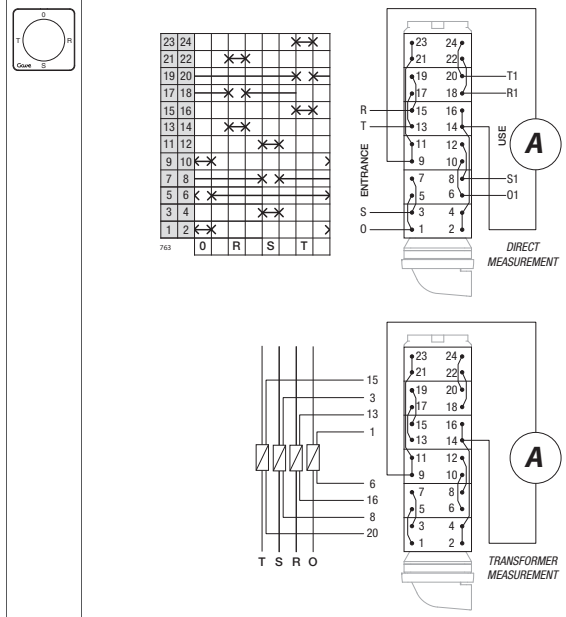
Standard electrical schemes (continued)

Ammeter changeover switches (continued)

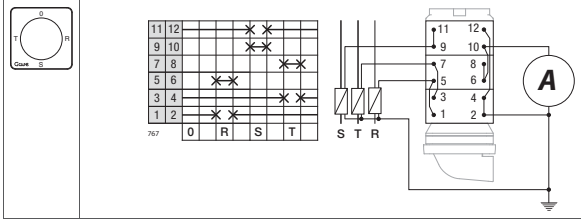
762 — 3 circuits (direct or with transformer) — 5 cells



763 — 4 circuits (direct or with transformer) — 6 cells

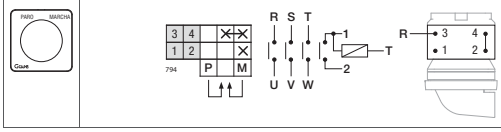


767 — Tree circuits (with transformers) — 3 cells



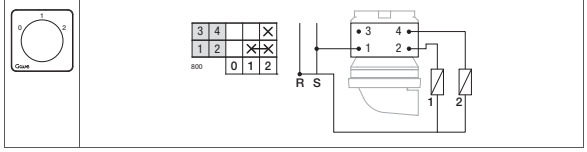
Manipulator changeover switches

794 — Star-stop — 1 cell



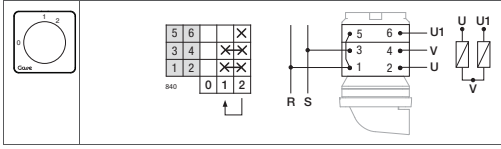
Group changeover switches

800 — Two unipolar selectors — 1 cell



Circuit breaker for motor starting

840 — Bipolar with start circuit and return to 1 — 2 cells



Special diagrams

Photocopy and complete the following form to request special diagrams.

Reference

Number of units

Customer

Outside connections																							
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47
2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48

Plate inscription	Inside connections																						

Legend

Inside connections

× close contact

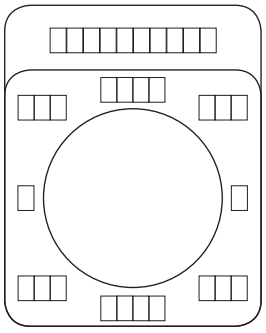
close contact in different positions with no interruption

return form the last position to the previous on

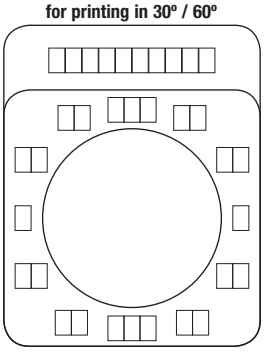
Outside connections

bridge

maximum number of characters for printing in 45º / 90º



maximum number of characters for printing in 30º / 60º



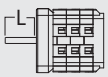
Operation rating Ie (A)

Size D0	☐ 12	*Size D2*	☐ 63
	☐ 16		☐ 100
	☐ 25		☐ 125
Size D1	☐ 25	*Size D3*	☐ 160
	☐ 32		☐ 200
	☐ 40		☐ 250

Prolonged shaft

☐ Special long shaft

Length (L): _____ mm



Comments

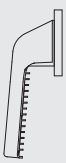
Handle type

short

☐ Black
☐ Red
☐ Grey

Lever

☐ Black
☐ Red
☐ Grey



NOTE: Contacts order and switching angle might change due to constructional reasons.

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Combilight switches

A full range of position or signal combilight switches.
Optical or audible signalling.
Three sizes from12A to 125A.

PATENTED
Gave Electro exclusive product

Discrepancy switches

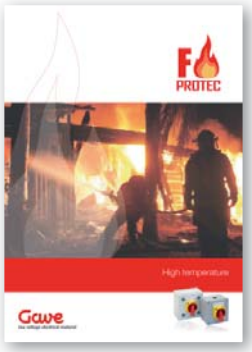
The most complete range on the market in discrepancy switches using LED technology. Compatibility with existing products and multicolored versions that allow new designs with increased functionalities and security.

LD Changeover switches

A range of on-load changeover switches in compact size and easy installation. Two sizes from 63A to 250A. High electrical endurance and integrated auxiliary contacts from origin. Versions with overlapping contacts and bypass.

Enclosed switch disconnectors

A complete range of safety switches from 12A to 250A.
Plastic, metal, aluminium, stainless steel and Fire rated enclosed range for all types of applications.



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A full range of fire rated disconnectors F300 / 1h - F400 / 2h - F600 / 1h.
A safe response to extreme conditions.

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