OptiSwitch 4G

Cam switches

OptiSwitch 4G switches are designed for connection, disconnection and transfer of loads in AC and DC circuits and for use in power distribution cabinets, including MDBs, in packaged transformer substations and other low-voltage power distribution and transmission equipment.

Designation

OptiSwitch 4G 25 - 10 M - U - S5- 2 - R114

(1) OptiSwitch (2) 4G (3) 25 (4) 10 (5) M (6) U (7) S5 (8) 2 (9) R114

1	Series	OptiSwitch					
2	Configuration	4G					
3	Rated operating current	10 — 10 A, 16 — 16 A, 25 — 25 A, 40 — 40 A, 63 — 63 A, 80 — 80 A, 63/100 — 100 A					
4	Switching program diagram number	See list of standard diagrams on page 281					
5	Standard circuitry modifications	M					
6	Design option	U — open		OU — open with back wall mounting		PK — closed	
7	A symbol of a special design option to be added to the type designation	S1, S5, S6, S7, S8, S18, S24, S25					
8	Locking position for design option S5 *	0 to 12					
9	Handle type (color and design option) **	R012 (red)	R014 (black)	R112 (red)	R114 (black)	R212 (red)	R214 (black)

* The default is locking in «0» position and is not indicated in the switch description.
** For design options S5, S6, S24 and S25, the handle type is not specified.

WARNING! This catalog is designed to facilitate the selection of switches. It contains the most popular schemes AND is continuously updated. If the necessary circuit switching scheme is not shown above, contact us to assist in selecting the appropriate switch.

Selection guide

Cam switches are classified in three groups by sizes. The switches of each group have the same handles, front panels and mounting hole locations and dimensions.

Group	A0	A1		A2			
Switch type	4G10	4G16	4G25	4G40	4G63	4G80	4G63/100
Rated operating current Ie, A	10	16	25	40	63	80	100

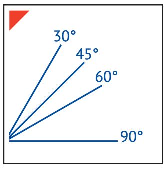
Parameter			
Design option	U	OU	PK
Description	Open design option	Open design option with back wall mounting	Closed design option (in enclosure)
Rated currents In, A	10, 16, 25, 40, 63, 80, 100		
Rated voltages Un, V	up to 690AC/440DC		
Dimension group	A0, A1, A2		
Maximum number of units	12 for A0, A1; 10 for A2		4
Number of switching positions	up to 12		
Switching angle increments, °C	30, 45, 60, 90 для A0, A1; 06, 90 for A2		
Front panel IP rating	IP44, IP65		IP65
Connection side IP rating	IP 20 (except for 100 A — IP00)		IP65
Mounting method	front flange mounting, installed behind a max. 6 mm panel	screwed base, panel-mounted inside a cabinet	mounting on enclosure
Handle color	R012 (red)	R112 (red)	R212 (red)
	R014 (black)	R114 (black)	R214 (black)

Series advantages

Silver-bearing solder provides high permeability and wear resistance of contacts.

The switch design can service up to 24 circuits.

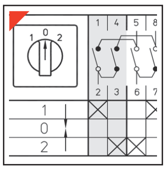
With IP65 protection rating OptiSwitch 4G switches can be used outdoors.



The switch handle rotation angles are 30°, 45°, 60°, 90°.

Using a key or padlock prevents unauthorized operation of the switch.

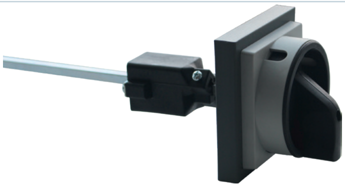
Metal shaft guarantees reliable switching.



The switches for non-standard circuits can be manufactured on request.

Convenient location of clamps (at 45°) and captive terminal screws facilitate installation.

Special design options

Special design option	Appearance	Special design option, specifications	Notes
S1		Sealed coupling Front panel protection rating: IP65 Group: A0, A1, A2 Design option: U, OU	The difference between the standard and special design options is that the special option S1 includes an O-ring on the drive rod and a front panel seal that ensure IP65 protection rating.
S5		Cylindrical lock Group: A0, A1 Design option: U, OU, PK	The key is used as a handle. Locking positions are according to the purchase order.
S6		Lock (lockable with a padlock). Lock hole diameter is 8 mm. Group: A0, A1, A2 Design option: U, OU, PK	With a padlock installed you can lock the switch in a certain position. The padlock is not included in the package.
S7		Door connection. Rod length is 360 mm Group: A2 Design option: OU	The switch is mounted on the back wall of the enclosure or on the cabinet door. The handle with the front panel is located on the enclosure or door. The drive rod can be extended and sealed.
S8		Door connection with lock. Rod length is 360 mm Lock hole diameter is 8 mm. Group: A2 Design option: OU	It combines specifications of design option S7 with an additionally capability to lock the switch in a certain position preventing the door from opening.
S18		Bus-mounted switch (din-rail) Group: A0, A1 Design option: OU, U	The switch can be mounted on a DIN rail (according to din En 50022)
S24		Emergency button Group: A0, A1, A2 Design option: U, OU	The option with a yellow index board and a red handle
S25		Main emergency switch. Lock hole diameter is 8 mm. Group: A0, A1, A2 Design option: U, OU, PK	The design option with a yellow front panel, a red handle and a padlock locking function.

Items

Rated current, A	Product name	Code
10	OptiSwitch 4G10-107-U-R014	138261
	OptiSwitch 4G10-10-PK-R014	138262
	OptiSwitch 4G10-10-U-R014	138249
	OptiSwitch 4G10-11-PK-R014	138263
	OptiSwitch 4G10-11-U-R014	138250
	OptiSwitch 4G10-51-U-R014	138252
	OptiSwitch 4G10-52-U-R014	138251
	OptiSwitch 4G10-53-PK-R014	138264
	OptiSwitch 4G10-53-U-R014	138253
	OptiSwitch 4G10-54-U-R014	138254
	OptiSwitch 4G10-56-U-R014	138255
	OptiSwitch 4G10-66-U-R014	138256
	OptiSwitch 4G10-69-U-R014	138257
	OptiSwitch 4G10-75-U-R014	138258
	OptiSwitch 4G10-91-PK-R014	138265
	OptiSwitch 4G10-91-U-R014	138259
	OptiSwitch 4G10-92-U-R014	138260
16	OptiSwitch 4G16-108-U-R114	138269
	OptiSwitch 4G16-10-PK-R114	138274
	OptiSwitch 4G16-10-U-R114	138266
	OptiSwitch 4G16-11-PK-R114	138275
	OptiSwitch 4G16-53-PK-R114	138276
	OptiSwitch 4G16-53-U-R114	138267
	OptiSwitch 4G16-83-U-R114	138268
	OptiSwitch 4G16-91-PK-R114	138277
25	OptiSwitch 4G25-108-U-R114	138273
	OptiSwitch 4G25-10-PK-R114	138278
	OptiSwitch 4G25-10-U-R114	138270
	OptiSwitch 4G25-11-PK-R114	138279
	OptiSwitch 4G25-53-PK-R114	138280

Rated current, A	Product name	Code
25	OptiSwitch 4G25-53-U-R114	138271
	OptiSwitch 4G25-83-U-R114	138272
	OptiSwitch 4G25-91-PK-R114	138281
40	OptiSwitch 4G40-10-PK-R214	138286
	OptiSwitch 4G40-10-U-R214	138282
	OptiSwitch 4G40-12-PK-R214	138287
	OptiSwitch 4G40-51-PK-R214	138288
	OptiSwitch 4G40-51-U-R214	138283
	OptiSwitch 4G40-53-PK-R214	138289
	OptiSwitch 4G40-53-U-R214	138284
	OptiSwitch 4G40-91-U-R214	138285
63	OptiSwitch 4G63-10-PK-R214	138294
	OptiSwitch 4G63-10-U-R214	138290
	OptiSwitch 4G63-12-PK-R214	138295
	OptiSwitch 4G63-51-PK-R214	138296
	OptiSwitch 4G63-51-U-R214	138291
	OptiSwitch 4G63-53-PK-R214	138297
	OptiSwitch 4G63-53-U-R214	138292
	OptiSwitch 4G63-91-U-R214	138293
80	OptiSwitch 4G80-10-PK-R214	138302
	OptiSwitch 4G80-10-U-R214	138298
	OptiSwitch 4G80-12-PK-R214	138303
	OptiSwitch 4G80-51-PK-R214	138304
	OptiSwitch 4G80-51-U-R214	138299
	OptiSwitch 4G80-53-PK-R214	138305
	OptiSwitch 4G80-53-U-R214	138300
	OptiSwitch 4G80-91-U-R214	138301
100	OptiSwitch 4G63/100-10-U-R214	138306
	OptiSwitch 4G63/100-53-U-R214	138307

The codes in the tables of this chapter can be changed. If you did not find the necessary codes on the website, please contact KEAZ customer service.

Technical specification

Parameters		Switch type						
		4G10	4G16	4G25	4G40	4G63	4G80	4G63/100
Rated insulation voltage Ui, V		690	690	690	690	690	690	690
Rated operating current Ie, A		10	16	25	40	63	80	100
Conventional free air thermal current Ith, A		16	20	25	50	63	80	125
Nominal conventional short-circuit current at rated current of the fuse, A	6 kA eff.	25	35	35	-	-	-	-
	15 kA eff.	-	-	-	63	63	80	125
Mechanical wear resistance (number of switching operations)		$3x10^6$	$3x10^6$	$3x10^6$	$3x10^6$	$3x10^6$	$3x10^6$	$3x10^6$
Connection bolts		M4	M4	M4	M5	M5	M5	M6
Max. size of connecting wires, mm^2		2x1,5	2x4	2x4	2x10	2x10	2x10	35
Rated short-time withstand current (for 1 second), A		350	500	500	800	800	800	1300
Peak value of the short-term withstand current, A		700	1100	1100	1600	1600	1600	2600
Rated short-circuit making capacity, A		250*	300	300	500	500	500	800
Three-phase switching power at 400...690 V, kW	AC-23A	7,5	12	15	22	30	30	45
	AC-3	5,5	8	13	22	30	30	37
	Switch AC-3 Y/Δ	7,5	12	15	22	30	30	-

*cosφ = 0,65

Using direct current switches

The switchable DC currents depend significantly on the switching speed. As the voltage increases, the number of contacts connected in series should be also increased.

				4G10	4G16	4G25	4G40	4G63	4G80	4G63/100
Rated operating current (Ie), A	DC-21 t=1 ms	24–48 DC	2 in series	10	16	25	40	63	63	-
		110 DC	3 in series	6	10	15,5	25	35	35	-
		220 DC	6 in series	5	8	12,5	20	32	32	-
	DC-23 t=1 ms	24–48 DC	2 in series	6	10	15,5	25	35	35	-
		110 DC	3 in series	5	8	12,5	20	25	25	-
		220 DC	6 in series	4	6	9,3	16	22	22	-
	DC-13 t=1 ms	24–48 DC	2 in series	5	8	12,5	-	-	-	-
		110 DC	3 in series	2,5	4	6,25	-	-	-	-
		220 DC	6 in series	1,2	2	3,1	-	-	-	-

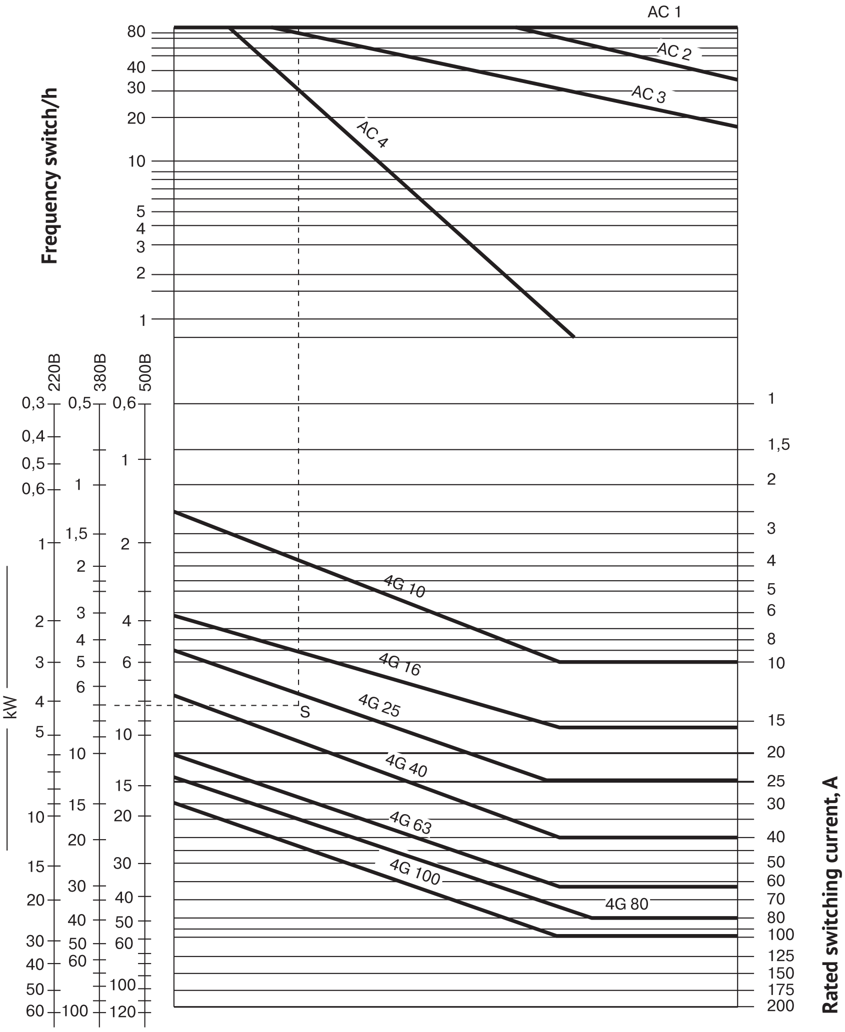
Weight (kg)

Design option		U, OU			PK		
Rated current		10 A	16–25 A	40–80 A	10 A	16–25 A	40–80 A
Number of packets	1	0,10	0,18	0,36	0,27	0,32	0,94
	2	0,13	0,21	0,44	0,29	0,34	1,02
	3	0,15	0,25	0,52	0,32	0,39	1,10
	4	0,18	0,28	0,60	0,33	0,41	1,18
	5	0,20	0,32	0,68	-	-	-
	6	0,22	0,36	0,76	-	-	-
	7	0,25	0,39	0,84	-	-	-
	8	0,28	0,42	0,92	-	-	-
	9	0,30	0,46	1,00	-	-	-
	10	0,33	0,50	1,08	-	-	-
	11	0,35	0,54	-	-	-	-
	12	0,38	0,58	-	-	-	-

Selecting switches for motors

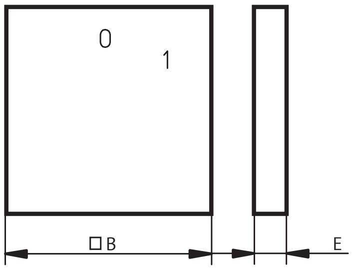
The switching capacity of contacts depends on load conditions, operating category AC 1 where the on and off currents are the same and are equal to the rated current. The switching durability for the switches up to 4G 63 is 1 million switching operations.
In more severe operating conditions, the switching capacity will deteriorate. The diagram below is intended to help in selection of switches for motors depending on voltage, motor power, number of switching operations per hour (switch/h) and operating conditions.

Example. Select a cam switch for direct switching on and braking by reverse current of a squirrel cage motor with a power of 7 kW, 380 V at 30 switching operations per hour:
1. Operation category AC 4;
2. Find the number of switching operations in the diagram: 30 switch/hour (in the top of the diagram);
3. From the point found, draw a horizontal line to its intersection with the line of the corresponding operation category (AC 4);
4. At the bottom of the diagram, on the scale for the corresponding voltage, find the engine power value (7 kW, 380 V) and draw a horizontal line;
5. From the point of intersection of the upper horizontal line with the line corresponding to operation category, draw a vertical line (down);
6. The intersection point of the lower horizontal and vertical lines will be in the area of the operation of the required switch (4G 40).

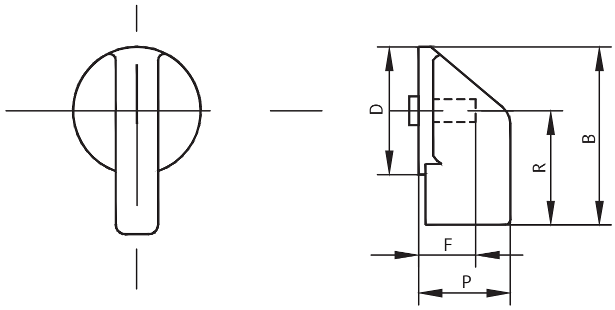


Overall dimensions (mm)

Standard front panel



Handle

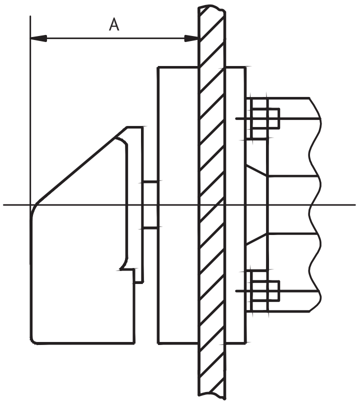


Group	B	E	Front panel		
			A0	A1	A2
A0, A1	48	7,5	+	+	+
A2	88	9,5	-	-	+

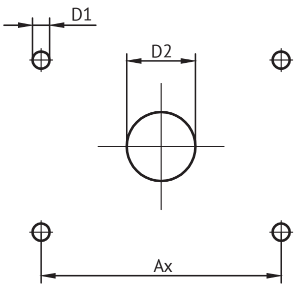
Group	D	P	R	B	F	Handle		
	Ø					A0	A1	A2
A0, A1	25	20	16,5	36	17	+	+	+
A2	35	29	28,5	53	25	-	-	+

Group	A0	A1		A2			
Switch type	4G 10	4G 16	4G 25	4G 40	4G 63	4G 80	4G 63/100
Rated operating current (Ie), A	10	16	25	40	63	80	100

Switches mounted behind the panel



Mounting location

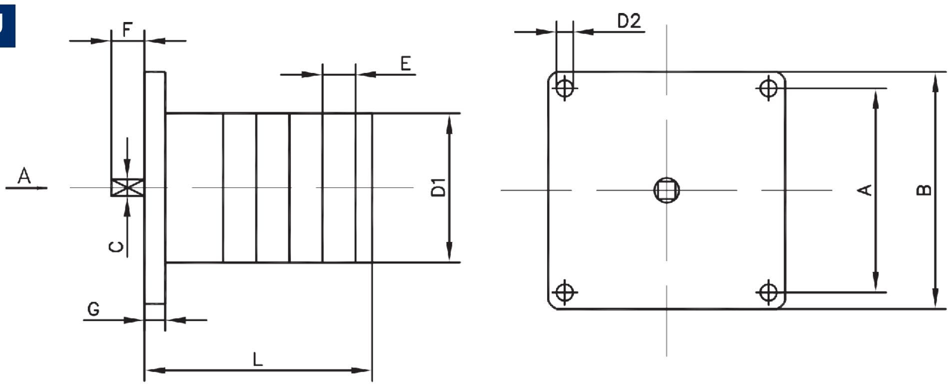


Group	D1	D2	Front panel Ax		
	Ø	Ø	A0	A1	A2
A0, A1	4	8	36	36	36
A2	5	10	-	-	72

Group	A
A0, A1	30
A2	39

Standard design options
Built-in switch

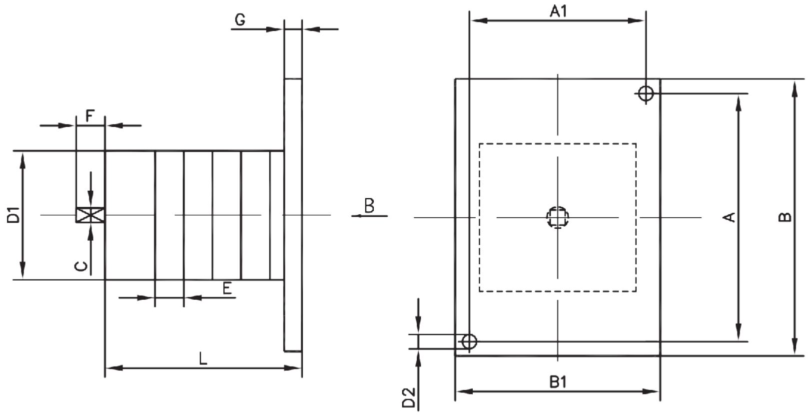
U



Group	Switch type	D1	D2	A	B	C	E	F	G	L (depending on the number of connecting elements)											
			Ø							1	2	3	4	5	6	7	8	9	10	11	12
A0	4G10	44	3,5	36	48	5	13,5	23	4	42	55,6	69	82,6	96	109	123	136	150	163	177	190
A1	4G16 4G25	48	3,5	36	48	5	16	26	4	48	64	80	96	112	128	144	160	176	192	208	224
A2	4G40 4G63 4G80	68	4,5	60	76	6	17	37,5	5	53	70	87	104	121	138	155	172	189	206	-	-
	4G63/100	6	4,5	60	76x112	6	17	37,5	5	70	104	138	172	206	-	-	-	-	-	-	-

Switch for back wall mounting

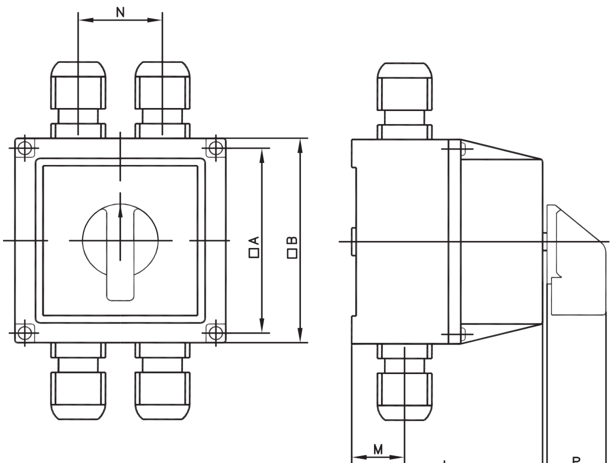
OU



Group	Switch type	D1	D2	A	A1	B	B1	C	E	F	G	L (depending on the number of connecting elements)											
			Ø									1	2	3	4	5	6	7	8	9	10	11	12
A0	4C10	45	3,5	52	35	60	44	5	13,5	23	4	50,6	64	76,5	90	104	117	131	144	158	171	186	198
A1	4C16	48	4,5	56	39	64	48	5	16	26	4	55	71	87	103	119	135	151	167	183	199	215	231
	4C25	48	4,5	56	39	64	48	5	16	26	4	55	71	87	103	119	135	151	167	183	199	215	231
A2	4C40	68	4,5	60	60	76	76	6	17	37,5	5	53	70	87	104	121	138	155	172	189	206	-	-
	4C63 4C80	68	4,5	60	60	76	76	6	17	37,5	5	53	70	87	104	121	138	155	172	189	206	-	-
	4C63/100	68	4,5	60	60	76	76	6	17	37,5	5	70	104	138	172	206	-	-	-	-	-	-	-

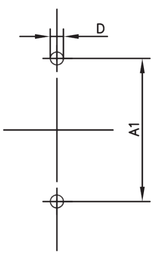
Plastic enclosure switch

PK



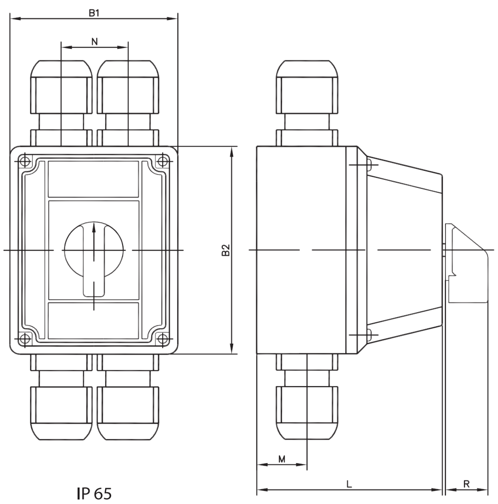
IP 65

Distance between mounting holes



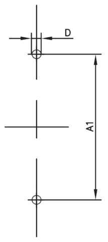
Design option includes:
self-tapping screw – 2 pcs;
dowel — 2 pcs.

Group	Switch type	D1	A	A1	B	M	N	R	L (depending on the number of connecting elements)			
		Ø							1	2	3	4
A0	4C10	4,5	80	62	88	22	33	24	74	74	95	95
A1	4C16	4,5	91	72	100	26	39	24	86	86	114	114
	4C25	4,5	91	72	100	26	39	24	86	86	114	114



IP 65

Distance between mounting holes



Design option includes:
self-tapping screw – 2 pcs;
dowel — 2 pcs.

Group	Switch type	D	A1	B1	B2	M	N	R	L (depending on the number of connecting elements)			
		Ø							1	2	3	4
A2	4C40	5,5	130	126	162	27	50	29	102	102	136	136
	4C63 4C80	5,5	130	126	162	27	50	29	102	102	136	136
	4C63/100	5,5	130	126	162	27	50	29	102	102	136	136

Switching program scheme guide

Switching program		Diagram number	Page
Switches with 0 position (0-1)			
1-pole		90	300
2-pole		91	
3-pole		10	
4-pole		92	
5-pole		99	
6-pole		100	
Fast switches (0-1)			
30° early make contact 1-pole		270	300
30° early make contact 2-pole		271	
30° early make contact 3-pole		63	
3 x 30° early make contacts 1 x 60° early make contact 4-pole		272	
3 x 30° early make contacts 2 x 60° early make contacts 5-pole		273	
30° early make contact 6-pole		274	
Switches with 0 position (0-1-2)			
1-pole		51	301
2-pole		52	
3-pole		53	
4-pole		75	
5-pole		76	
6-pole		77	
7-pole		78	
8-pole		79	
9-pole		80	
10-pole		81	
Current transformer switches (1-2)			
		57	301
Switches without 0 position (1-2)			
1-pole		54	302
2-pole		55	
3-pole		56	
4-pole		69	
5-pole		70	
6-pole		71	
7-pole		72	
8-pole		73	
9-pole		74	
10-pole		62	
Multi-position switches with 0 position (0-1-2...)			
1-pole	2 positions	107	302-303
	3 positions	108	
	4 positions	109	
	5 positions	110	
	6 positions	111	
	7 positions	112	
	8 positions	113	
	9 positions	114	
	10 positions	115	
	11 positions	116	

Switching program		Diagram number	Page
2-pole	2 positions	123	303-304
	3 positions	124	
	4 positions	125	
	5 positions	126	
	6 positions	127	
	7 positions	128	
	8 positions	129	
	9 positions	130	
	10 positions	131	
	11 positions	132	
3-pole	2 positions	135	304-305
	3 positions	136	
	4 positions	137	
	5 positions	138	
	6 positions	139	
	7 positions	140	
4-pole	2 positions	145	
	3 positions	146	
	4 positions	147	
	5 positions	148	
5-pole	2 positions	151	305-306
	3 positions	152	
	4 positions	153	
6-pole	2 positions	156	
	3 positions	157	
	4 positions	158	
7-pole	2 positions	160	
	3 positions	161	
8-pole	2 positions	163	
	3 positions	164	
Multi-position switches without 0 position			
1-pole	3 positions	82	307
	4 positions	83	
	5 positions	84	
	6 positions	85	
	7 positions	101	
	8 positions	102	
	9 positions	103	
	10 positions	104	
	11 positions	105	
	12 positions	106	
2-pole	3 positions	86	308
	4 positions	87	
	5 positions	88	
	6 positions	89	
	7 positions	117	
	8 positions	118	
	9 positions	119	
	10 positions	120	
	11 positions	121	
	12 positions	122	
3-pole	3 positions	93	309
	4 positions	94	
	5 positions	95	
	6 positions	96	
	7 positions	133	
	8 positions	134	

Switching program		Diagram number	Page
4-pole	3 positions	141	309
	4 positions	142	
	5 positions	143	
	6 positions	144	
5-pole	3 positions	149	309-310
	4 positions	150	
6-pole	3 positions	154	
	4 positions	155	
7-pole	3 positions	159	
8-pole	3 positions	162	
Group switches with 0 position			
1-pole	2-group	251	311
	3-group	254	
2-pole	2-group	252	
	3-group	255	
3-pole	2-group	253	
	3-group	256	
Ganged group switches			
1-pole 2-group		257	311
2-pole 2-group		258	
3-pole 2-group		259	
Parallel ganged group switches 2-pole 2-group		260	
Voltmeter and ammeter switches			
Ammeter switches			311-312
2-pole L1-L2-L3		58	
2-pole 0-1-2-3		97	
1-pole 0-1-2-3		98	
Voltmeter switches without 0 position			312
3 line voltages + 1 phase voltage		60	
Voltmeter switches without 0 position			312
3 phase voltages		68	
3 line voltages		67	
3 line voltages + 3 phase voltages		66	
Toggle switch (with automatic reset)			
Switches with 0 position (1-0-2)			313
Reset to 0 on both sides			
1-pole		201	
2-pole		202	
3-pole		203	
Toggle switch with left and right switching		210	
Toggle switch (with automatic reset) Switches without 0 position (1-2)			
1 NC + 1 NO		204	313
2 NC + 2 NO		205	
3 NC + 3 NO		206	
To contactor control, 1-pole		207	
1 ON + 1 OFF for right and left switching		208	
2 ON + 2 OFF for right and left switching		209	

Switching program	Diagram number	Page
Motor switches		
Star/delta switches		314
Basic design	12	
Y/Δ switch with reset from Y to 0	28	
with countercurrent braking, with reset from Y to 0	29	
as a voltage switch	30	
contactor-controlled	31	
with two rotation directions	21	
Dahlander system switches		
Two-speed Δ-0-YY	13	315
Two-speed 0-Δ-YY	19	
Two-speed bidirectional YY-Δ-0-Δ-YY	7620	
Two-speed contactor-controlled	32	
Double-winding motor switches		
1-0-2	53	315
0-1-2	22	
two-directional	23	
contactor-controlled	33	
Three-speed motor switches		
2 windings 0-Δ-YY-Y ((with 3- poles in Dahlander system)	34	316
2 windings 0-Δ-YY-Y (with 1 and 2 speeds in Dahlander system)	35	
2 windings 0-Δ-YY-Y (with 2 and 3 speeds in Dahlander system)	36	
Motor reversing switches		
2-pole	24	316
2-pole, reset to 0 position	25	
3-pole	11	
3-pole, reset to 0 position	26	
3-pole contactor-controlled	27	
Single-phase motor starting switches	15	
Additional switching program schemes		317

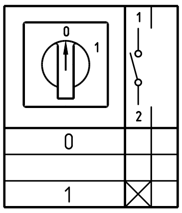
WARNINC! This catalog is designed to facilitate the selection of switches. It includes the most demanded schemes and is continuously updated. If the necessary circuit switching scheme is not shown above, contact us to assist in selecting the appropriate switch.

Switching program schemes

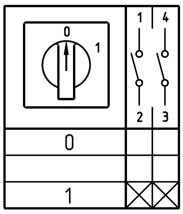
Switches with 0 position 0-1

Switching program	Diagram number
1-pole	90
2-pole	91
3-pole	10
4-pole	92
5-pole	99
6-pole	100

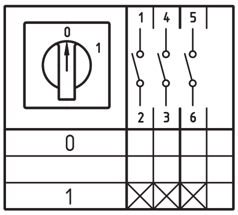
1-pole
Scheme 90



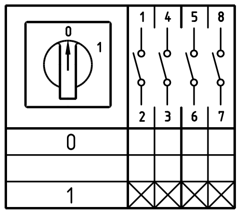
2-pole
Scheme 91



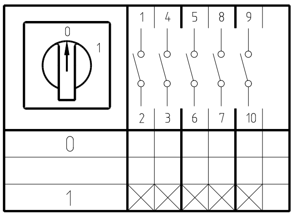
3-pole
Scheme 10



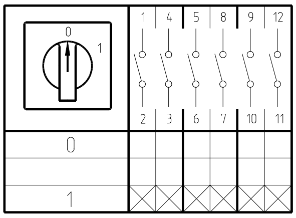
4-pole
Scheme 92



5-pole
Scheme 99



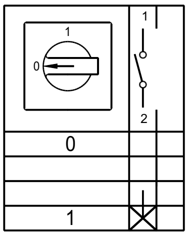
6-pole
Scheme 100



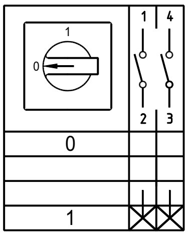
Fast switches (0-1)

Switching program	Diagram number
30° early make contacts 1-pole	270
30° early make contacts 2-pole	271
30° early make contacts 3-pole	63
3 x 30° early make contacts 1 x 60° early make contact 4-pole	272
3 x 30° early make contacts 2 x 60° early make contacts 5-pole	273
30° early make contacts 6-pole	274

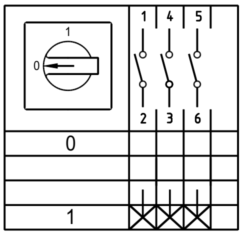
30° early make contacts
1-pole
Scheme 270



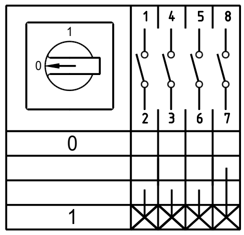
30° early make contacts
2-pole
Scheme 271



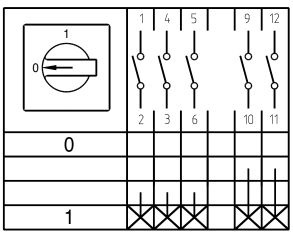
30° early make contacts
3-pole
Scheme 63



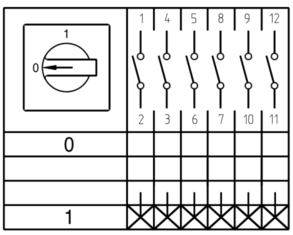
3 x 30° early make contacts
1 x 60° early make contact
4-pole
Scheme 272



3 x 30° early make contacts
2 x 60° early make contacts
5-pole
Scheme 273



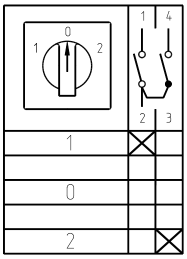
30° early make contacts
4-pole
Scheme 274



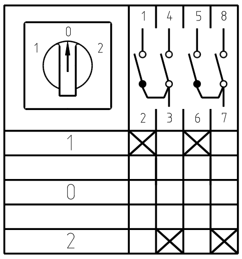
Switches with 0 position (0-1-2)

Switching program	Diagram number
1-pole	51
2-pole	52
3-pole	53
4-pole	75
5-pole	76
6-pole	77
7-pole	78
8-pole	79
9-pole	80
10-pole	81

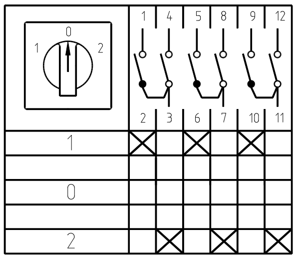
1-pole
Scheme 51



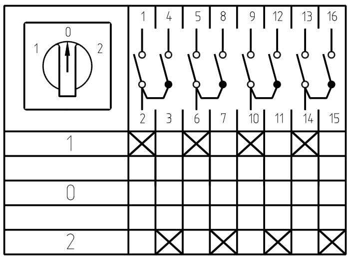
2-pole
Scheme 52



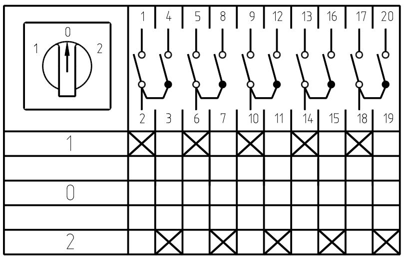
3-pole
Scheme 53



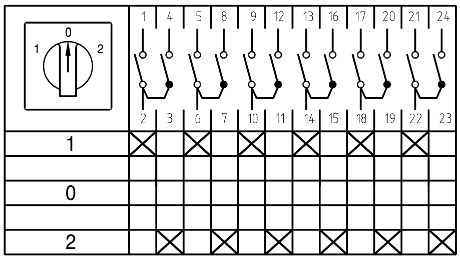
4-pole
Scheme 75



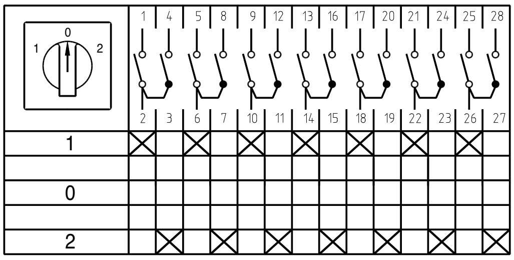
5-pole
Scheme 76



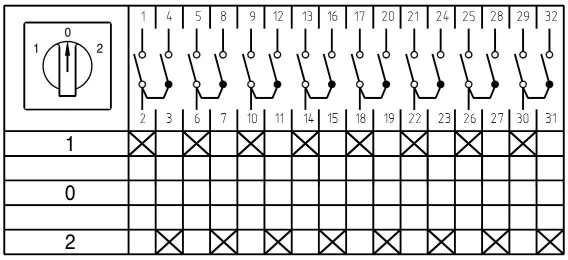
6-pole
Scheme 77



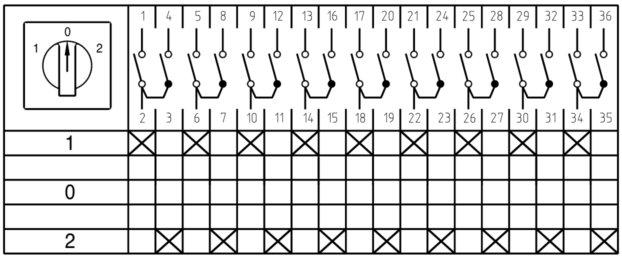
7-pole
Scheme 78



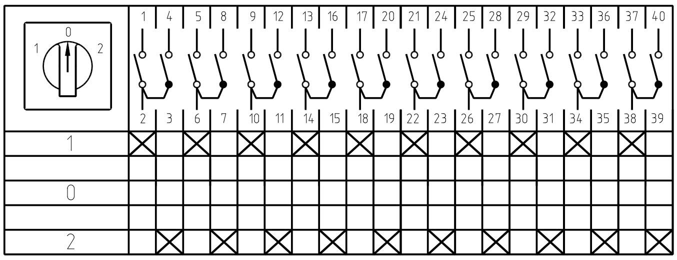
8-pole
Scheme 79



9-pole
Scheme 80

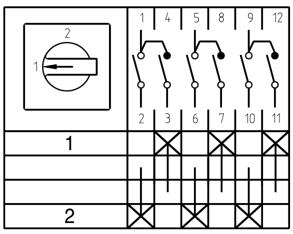


10-pole
Scheme 81



Current transformer switches (1-2)

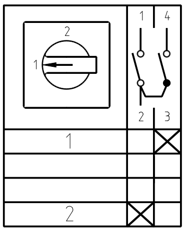
Scheme 57



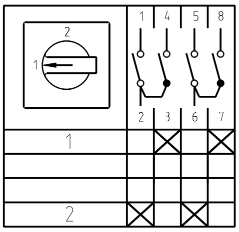
Switches without 0 position (1-2)

Switching program	Diagram number
1-pole	54
2-pole	55
3-pole	56
4-pole	69
5-pole	70
6-pole	71
7-pole	72
8-pole	73
9-pole	74
10-pole	62

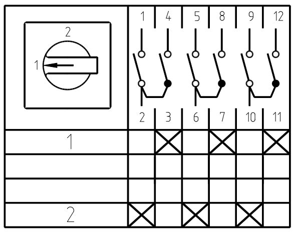
1-pole
Scheme 54



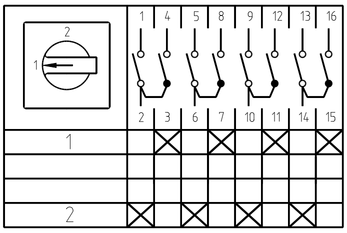
2-pole
Scheme 55



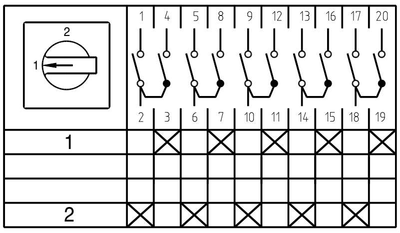
3-pole
Scheme 56



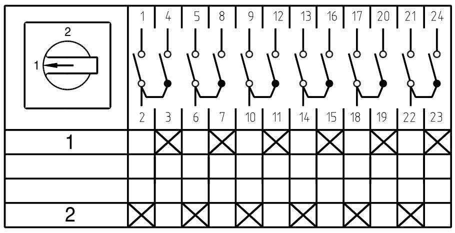
4-pole
Scheme 69



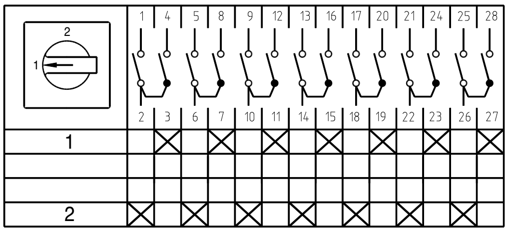
5-pole
Scheme 70



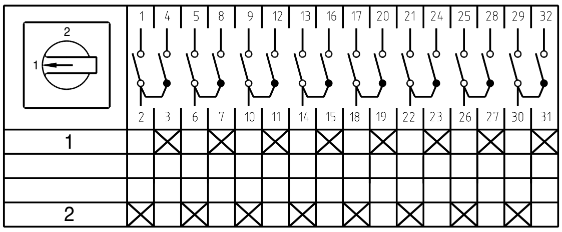
6-pole
Scheme 71



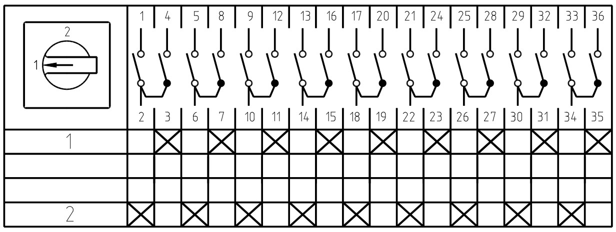
7-pole
Scheme 72



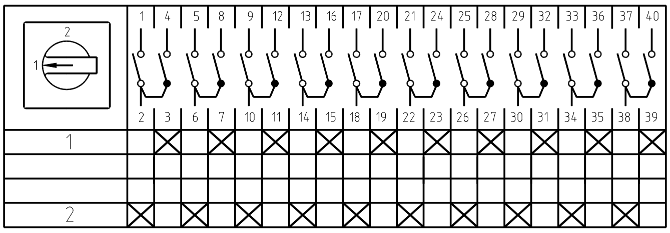
8-pole
Scheme 73



9-pole
Scheme 74

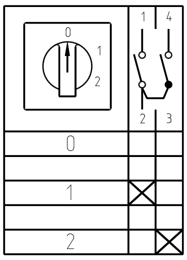


10-pole
Scheme 62

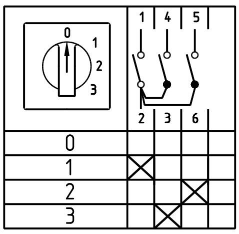


Multi-position switches with 0 position (0-1-2...)

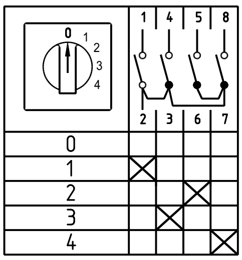
1-pole
2 positions
Scheme 107



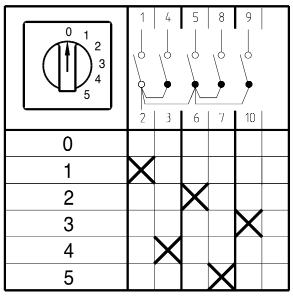
1-pole
3 positions
Scheme 108



1-pole
4 positions
Scheme 109



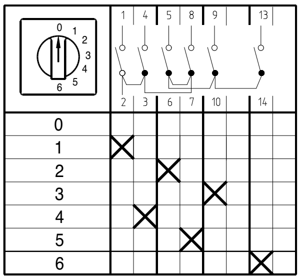
1-pole
5 positions
Scheme 110



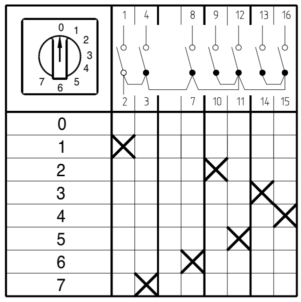
Multi-position switches with 0 position (0-1-2...)

Switching program		Diagram number
1-pole	2 positions	107
	3 positions	108
	4 positions	109
	5 positions	110
	6 positions	111
	7 positions	112
	8 positions	113
	9 positions	114
	10 positions	115
	11 positions	116
2-pole	2 positions	123
	3 positions	124
	4 positions	125
	5 positions	126
	6 positions	127
	7 positions	128
	8 positions	129
	9 positions	130
	10 positions	131
	11 positions	132
3-pole	2 positions	135
	3 positions	136
	4 positions	137
	5 positions	138
	6 positions	139
	7 positions	140
4-pole	2 positions	145
	3 positions	146
	4 positions	147
	5 positions	148
5-pole	2 positions	151
	3 positions	152
	4 positions	153
6-pole	2 positions	156
	3 positions	157
	4 positions	158
7-pole	2 positions	160
	3 positions	161
8-pole	2 positions	163
	3 positions	164

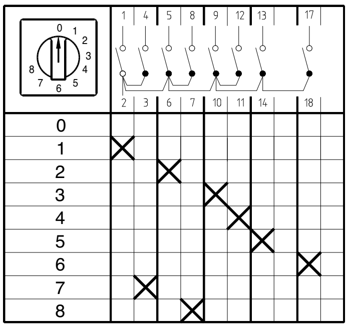
1-pole
6 positions
Scheme 111



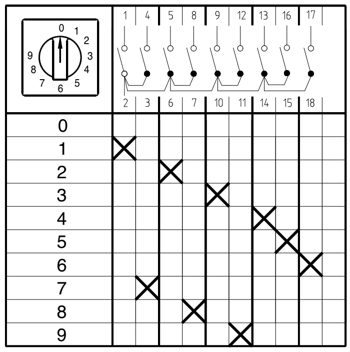
1-pole
7 positions
Scheme 112



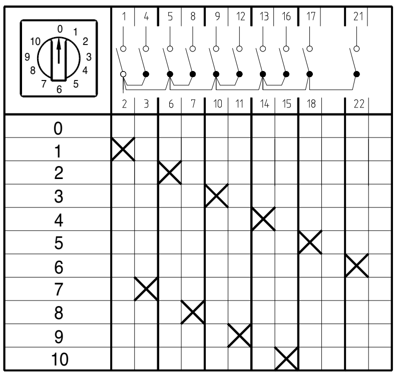
1-pole
8 positions
Scheme 113



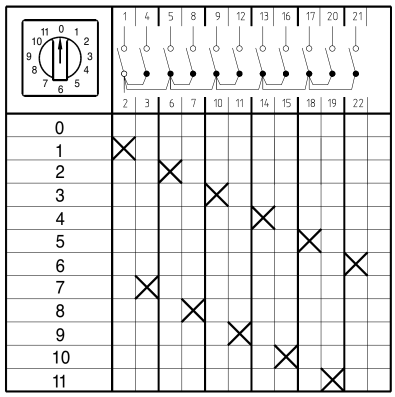
1-pole
9 positions
Scheme 114



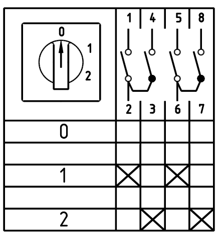
1-pole
10 positions
Scheme 115



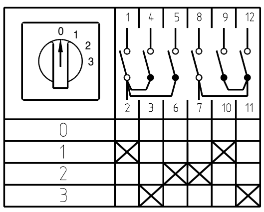
1-pole
11 positions
Scheme 116



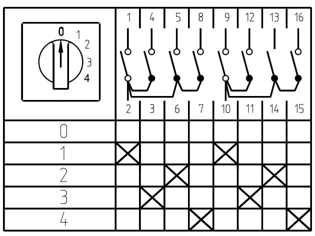
2-pole
2 positions
Scheme 123



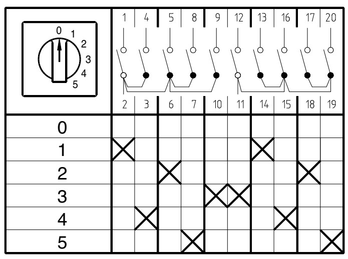
2-pole
3 positions
Scheme 124



2-pole
4 positions
Scheme 125

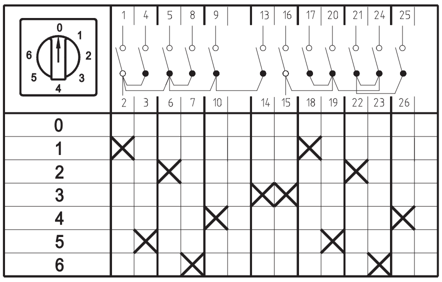


2-pole
5 positions
Scheme 126

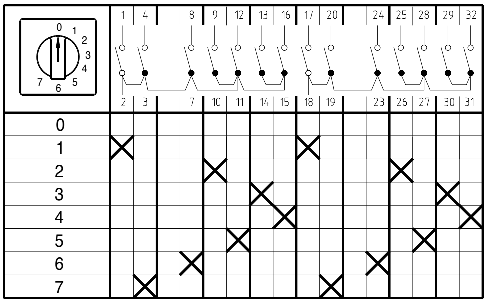


Multi-position switches with 0 position (0-1-2...)

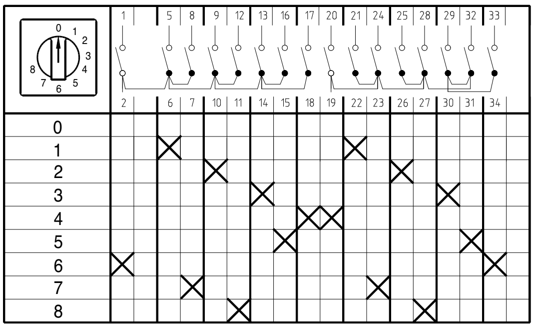
2-pole
6 positions
Scheme 127



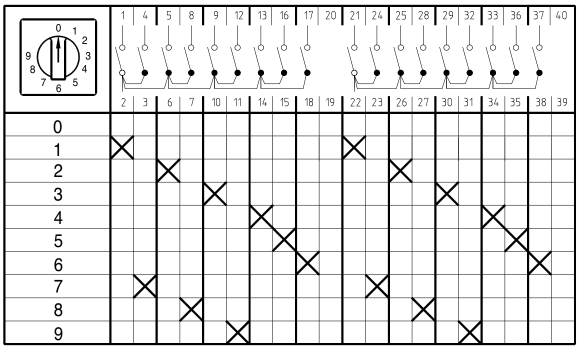
2-pole
7 positions
Scheme 128



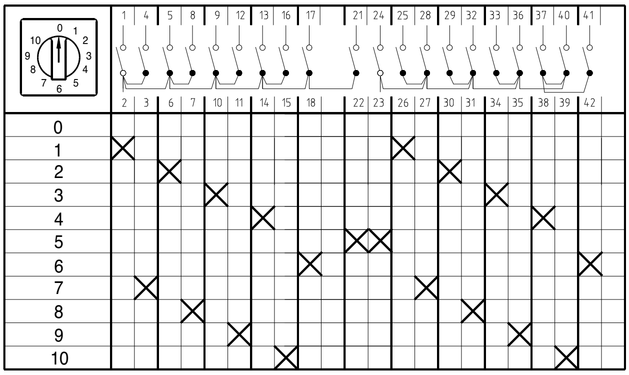
2-pole
8 positions
Scheme 129



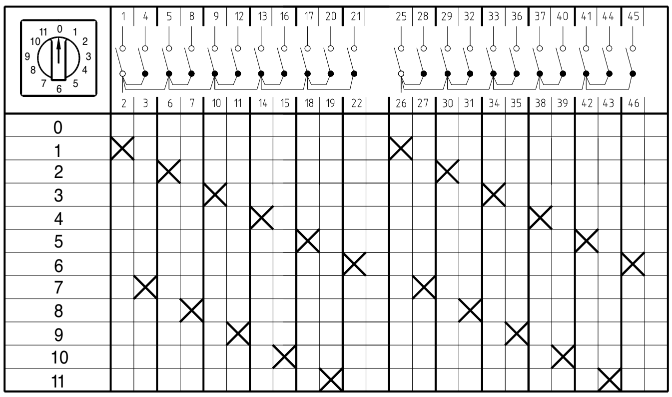
2-pole
9 positions
Scheme 130



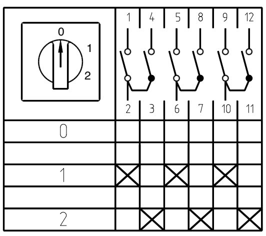
2-pole
10 positions
Scheme 131



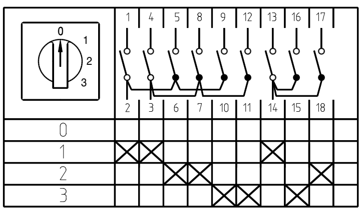
2-pole
11 positions
Scheme 132



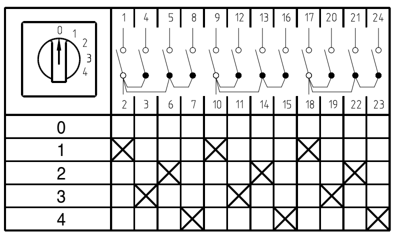
3-pole
2 positions
Scheme 135



3-pole
3 positions
Scheme 136

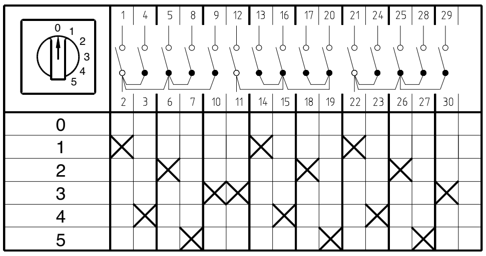


3-pole
4 positions
Scheme 137

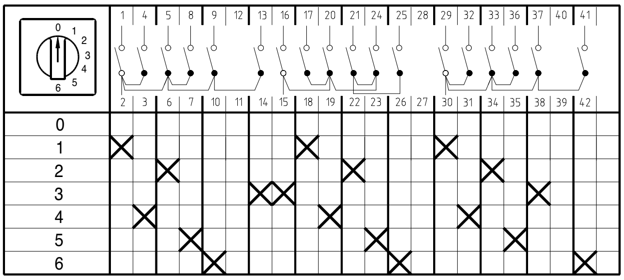


Multi-position switches with 0 position (0-1-2...)

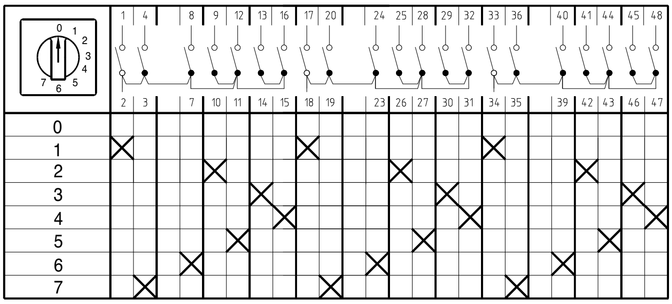
3-pole
5 positions
Scheme 138



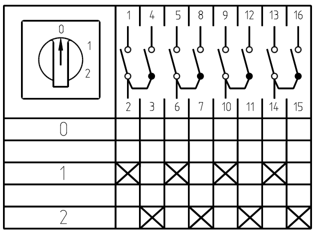
3-pole
6 positions
Scheme 139



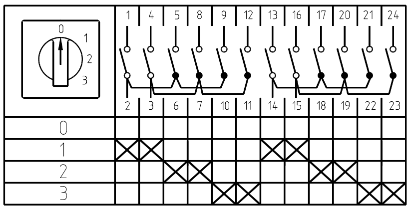
3-pole
7 positions
Scheme 140



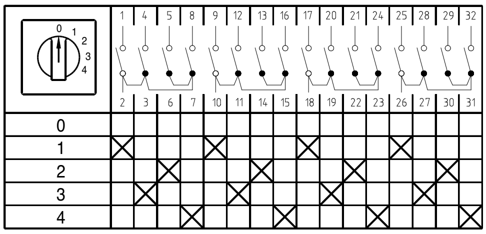
4-pole
2 positions
Scheme 145



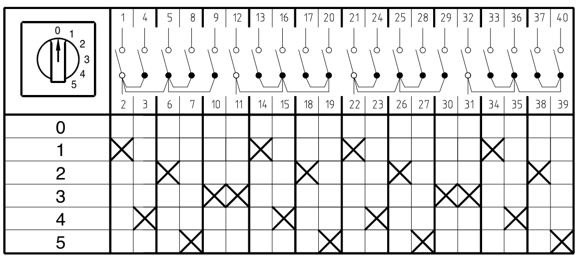
4-pole
3 positions
Scheme 146



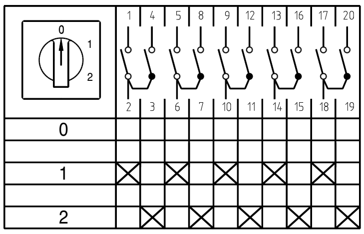
4-pole
4 positions
Scheme 147



4-pole
5 positions
Scheme 148

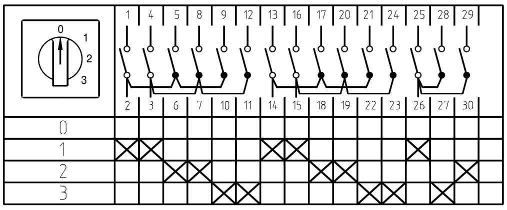


5-pole
2 positions
Scheme 151

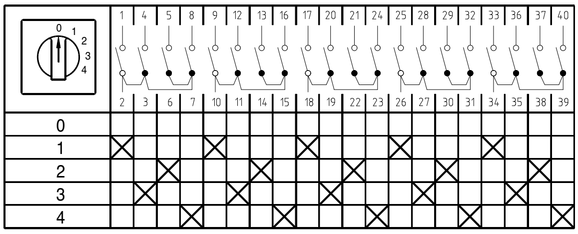


Multi-position switches with 0 position (0-1-2...)

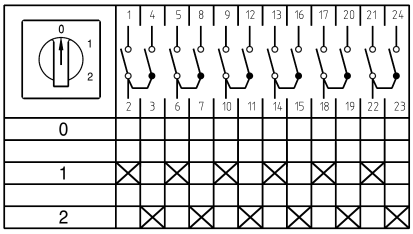
5-pole
3 positions
Scheme 152



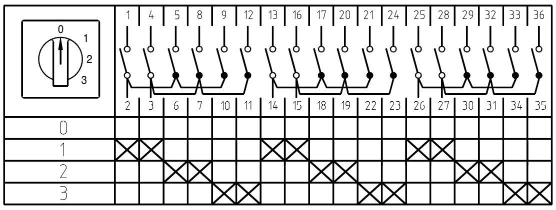
5-pole
4 positions
Scheme 153



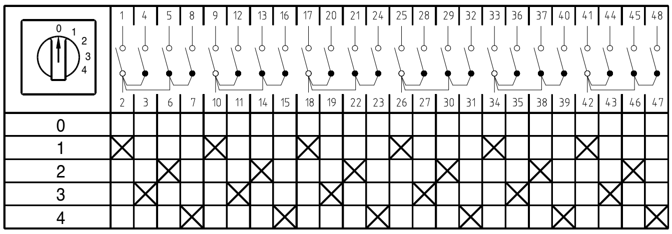
6-pole
2 positions
Scheme 156



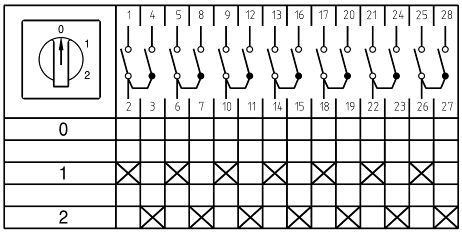
6-pole
3 positions
Scheme 157



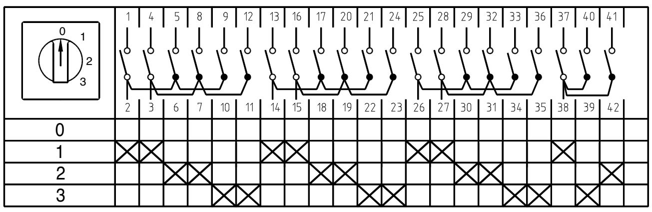
6-pole
4 positions
Scheme 158



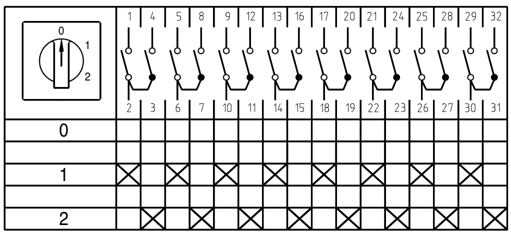
7-pole
2 positions
Scheme 160



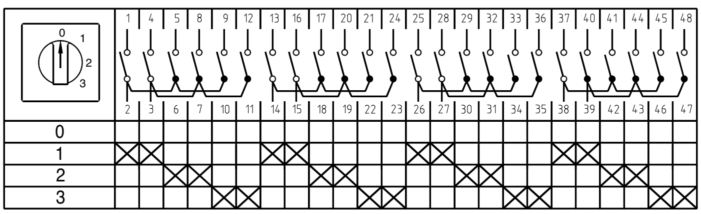
7-pole
3 positions
Scheme 161



8-pole
2 positions
Scheme 163



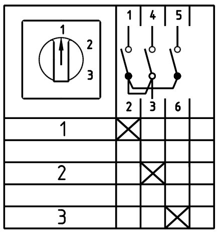
8-pole
3 positions
Scheme 164



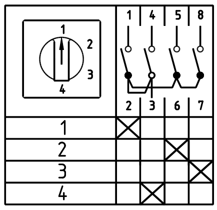
Multi-position switches without 0 position

Switching program		Diagram number
1-pole	3 positions	82
	4 positions	83
	5 positions	84
	6 positions	85
	7 positions	101
	8 positions	102
	9 positions	103
	10 positions	104
	11 positions	105
	12 positions	106
2-pole	3 positions	86
	4 positions	87
	5 positions	88
	6 positions	89
	7 positions	117
	8 positions	118
	9 positions	119
	10 positions	120
	11 positions	121
	12 positions	122
3-pole	3 positions	93
	4 positions	94
	5 positions	95
	6 positions	96
	7 positions	133
	8 positions	134
4-pole	3 positions	141
	4 positions	142
	5 positions	143
	6 positions	144
5-pole	3 positions	149
	4 positions	150
6-pole	3 positions	154
	4 positions	155
7-pole	3 positions	159
8-pole	3 positions	162

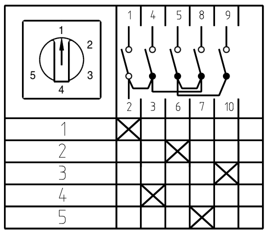
1-pole, 3 positions
Scheme 82



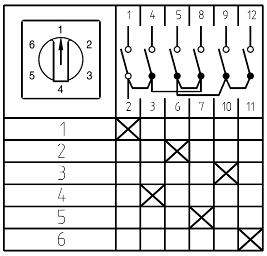
1-pole, 4 positions
Scheme 83



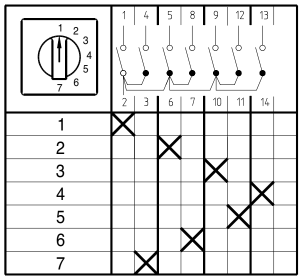
1-pole, 5 positions
Scheme 84



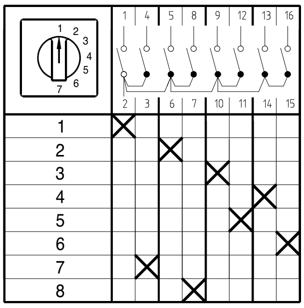
1-pole, 6 positions
Scheme 85



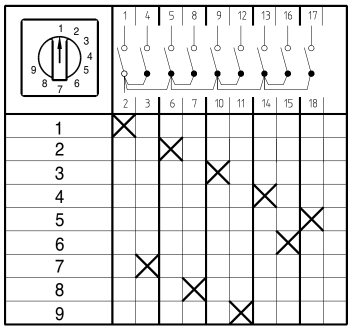
1-pole, 7 positions
Scheme 101



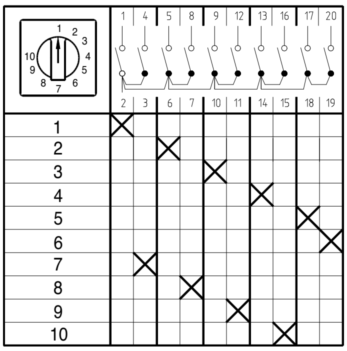
1-pole, 8 positions
Scheme 102



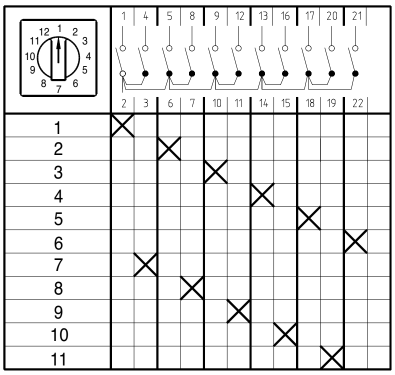
1-pole, 9 positions
Scheme 103



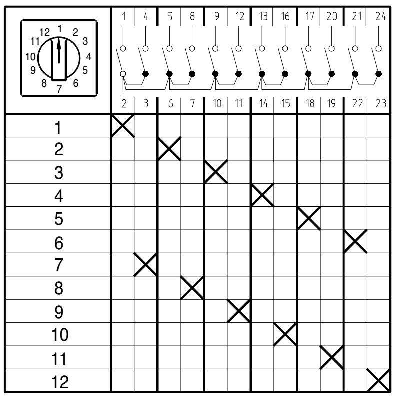
1-pole, 10 positions
Scheme 104



1-pole, 11 positions
Scheme 105

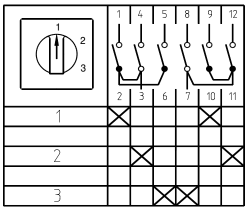


1-pole, 12 positions
Scheme 106

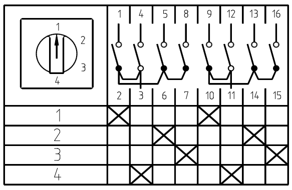


Multi-position switches without 0 position

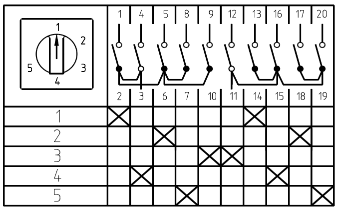
2-pole, 3 positions
Scheme 86



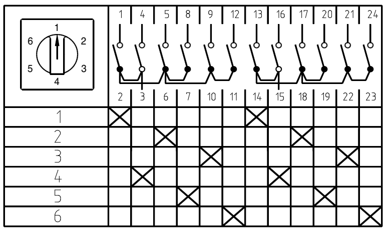
2-pole, 4 positions
Scheme 87



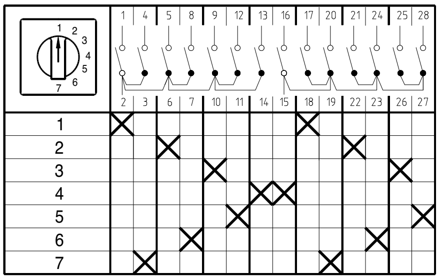
2-pole, 5 positions
Scheme 88



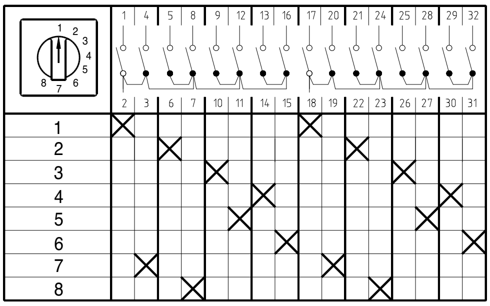
2-pole, 6 positions
Scheme 89



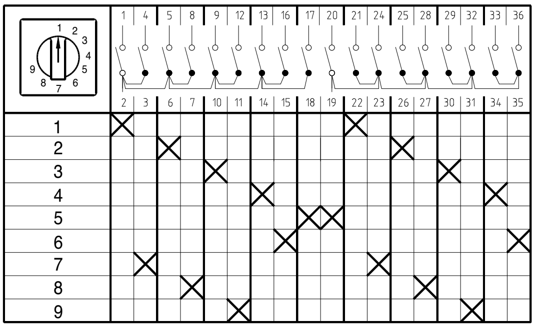
2-pole, 7 positions
Scheme 117



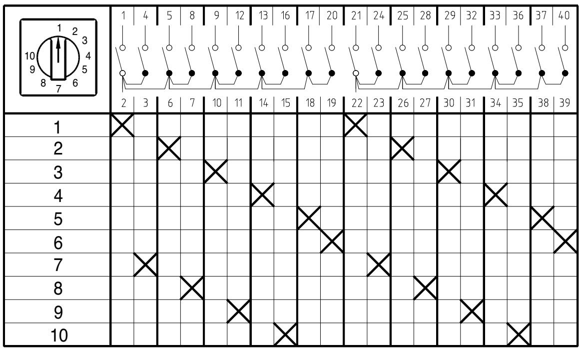
2-pole, 8 positions
Scheme 118



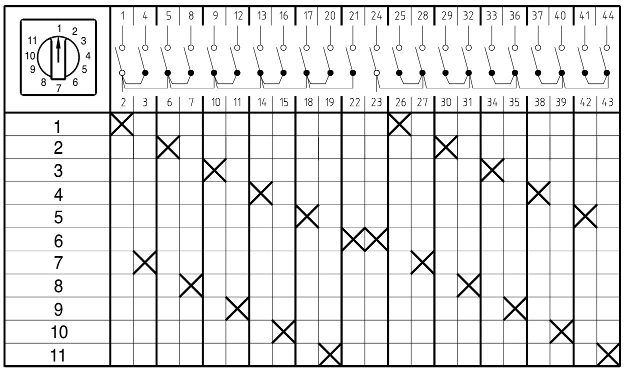
2-pole, 9 positions
Scheme 119



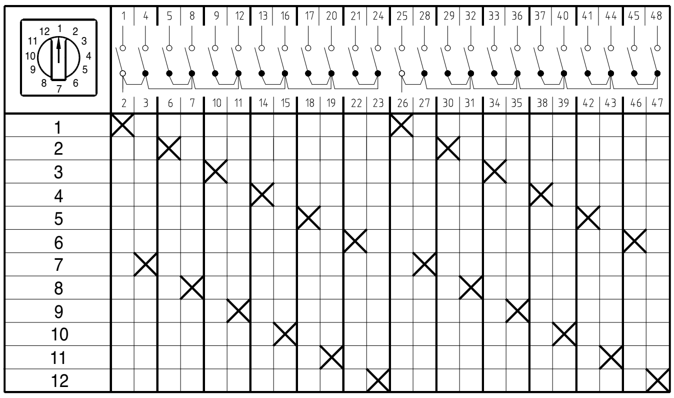
2-pole, 10 positions
Scheme 120



2-pole, 11 positions
Scheme 121

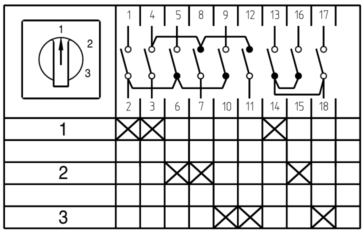


2-pole, 12 positions
Scheme 122

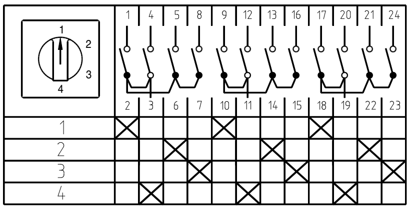


Multi-position switches without 0 position

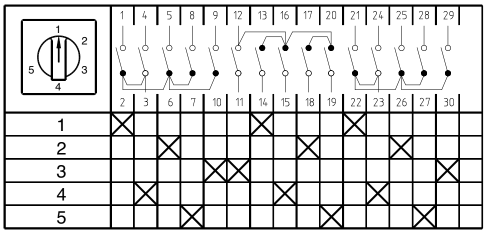
3-pole, 3 positions
Scheme 93



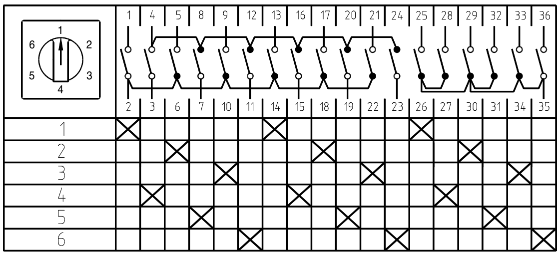
3-pole, 4 positions
Scheme 94



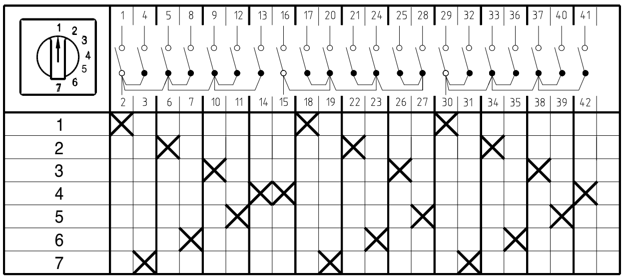
3-pole, 5 positions
Scheme 95



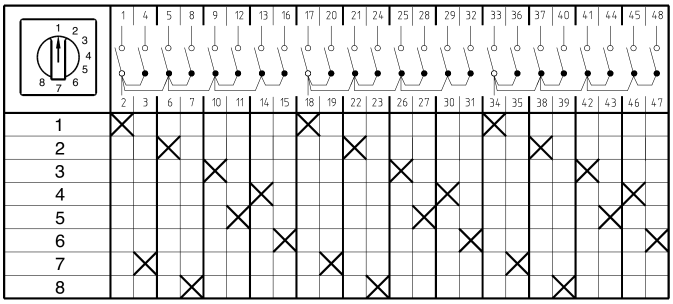
3-pole, 6 positions
Scheme 96



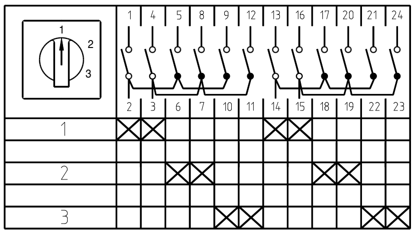
3-pole, 7 positions
Scheme 133



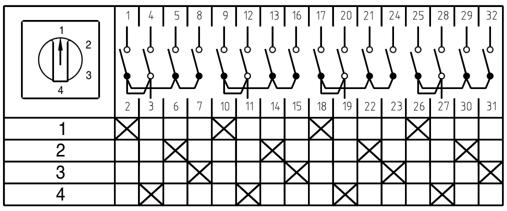
3-pole, 8 positions
Scheme 134



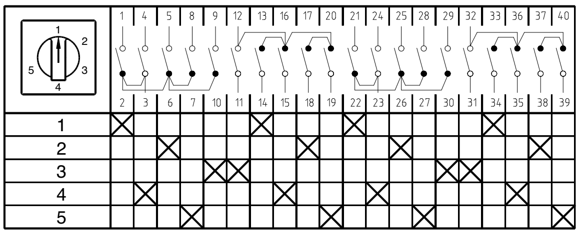
4-pole, 3 positions
Scheme 141



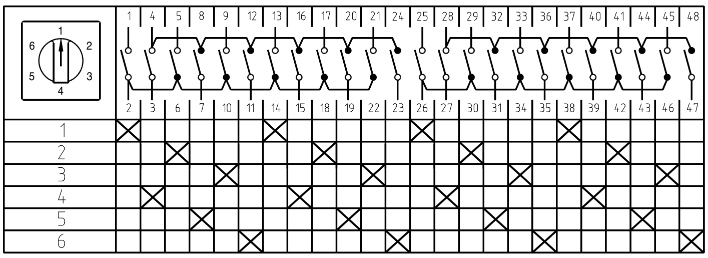
4-pole, 4 positions
Scheme 142



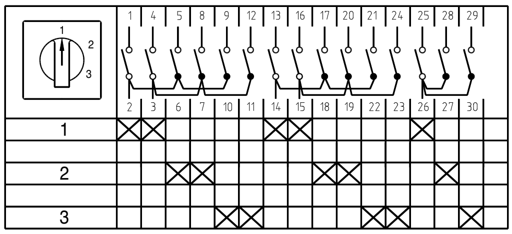
4-pole, 5 positions
Scheme 143



4-pole, 6 positions
Scheme 144

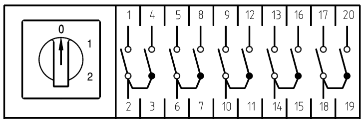


5-pole, 3 positions
Scheme 149



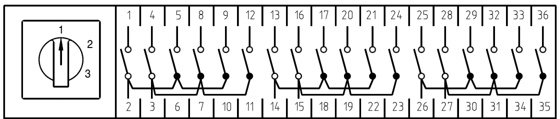
Multi-position switches without 0 position

5-pole, 4 positions
Scheme 150



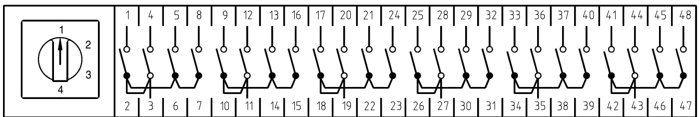
	1	4	5	8	9	12	13	16	17	20
	2	3	6	7	10	11	14	15	18	19
0										
1	X		X		X		X		X	
2		X		X		X		X		X

6-pole, 3 positions
Scheme 154



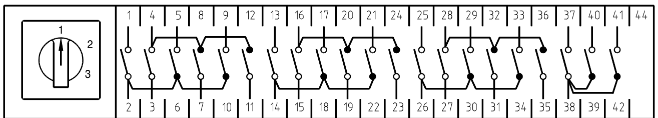
	1	4	5	8	9	12	13	16	17	20	21	24	25	28	29	32	33	36
	2	3	6	7	10	11	14	15	18	19	22	23	26	27	30	31	34	35
1	X	X					X	X					X	X				
2			X	X					X	X					X	X		
3					X	X					X	X					X	X

6-pole, 4 positions
Scheme 155



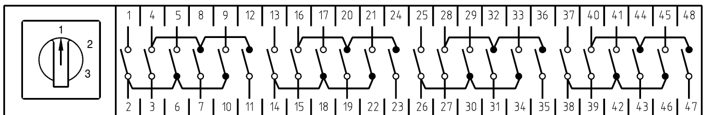
	1	4	5	8	9	12	13	16	17	20	21	24	25	28	29	32	33	36	37	40	41	44	45	48
	2	3	6	7	10	11	14	15	18	19	22	23	26	27	30	31	34	35	38	39	42	43	46	47
1	X				X				X				X				X				X			
2			X				X				X				X				X				X	
3				X				X				X				X				X				X
4		X				X				X				X				X				X		

7-pole, 3 positions
Scheme 159



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

8-pole, 3 positions
Scheme 162

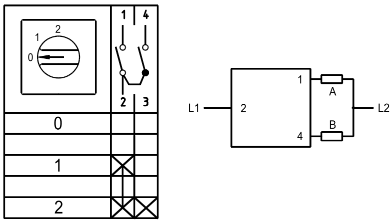


	1	4	5	8	9	12	13	16	17	20	21	24	25	28	29	32	33	36	37	40	41	44	45	48
	2	3	6	7	10	11	14	15	18	19	22	23	26	27	30	31	34	35	38	39	42	43	46	47
1	X	X					X	X					X	X					X	X				
2			X	X					X	X					X	X					X	X		
3					X	X					X	X					X	X					X	X

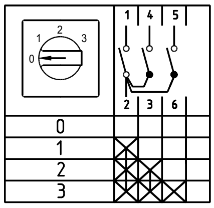
Group switches with 0 position

Switching program		Diagram number
1-pole	2-group	251
	3-group	254
2-pole	2-group	252
	3-group	255
3-pole	2-group	253
	3-group	256

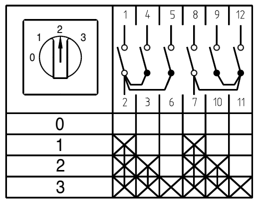
1-pole, 2-group
Scheme 251



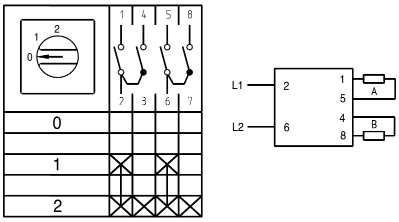
1-pole, 3-group
Scheme 254



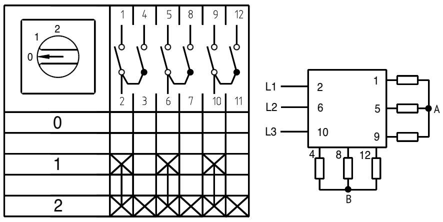
2-pole, 3-group
Scheme 255



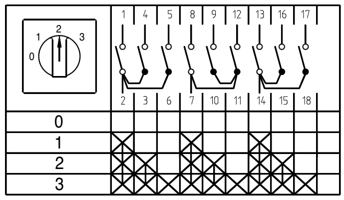
2-pole, 2-group
Scheme 252



3-pole, 2-group
Scheme 253



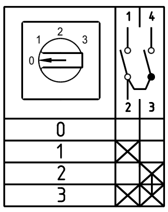
3-pole, 3-group
Scheme 256



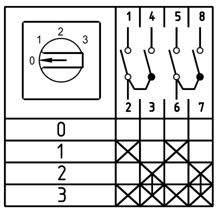
Ganged group switches

Switching program	Diagram number
1-pole 2-group	257
2-pole 2-group	258
3-pole 2-group	259

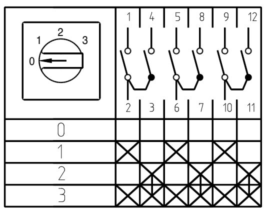
1-pole, 2-group
Scheme 257



2-pole, 2-group
Scheme 258



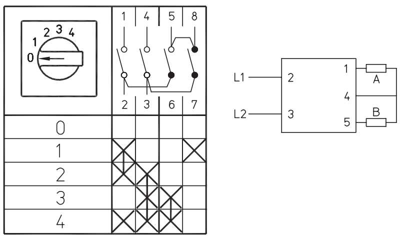
3-pole, 2-group
Scheme 259



Parallel ganged group switches

Switching program	Diagram number
2-pole 2-group	260

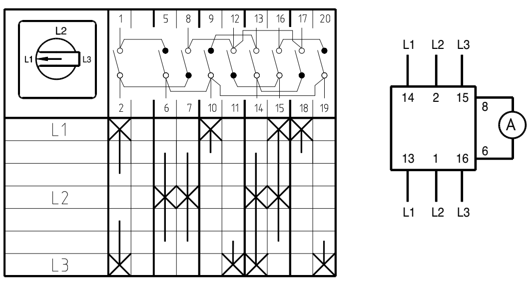
2-pole, 2-group
Scheme 260



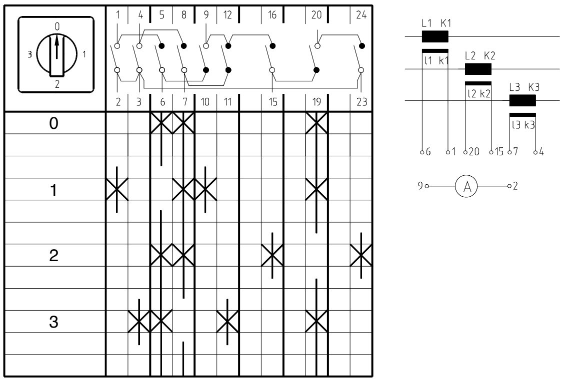
Ammeter switches

Switching program	Diagram number
2-pole L1-L2-L3	58
2-pole 0-1-2-3	97
1-pole 0-1-2-3	98

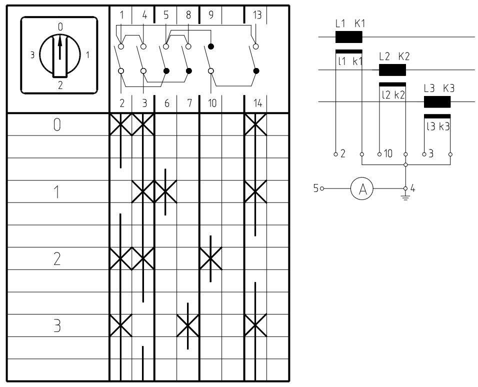
2-pole L1-L2-L3
Scheme 58



2-pole 0-1-2-3
Scheme 97



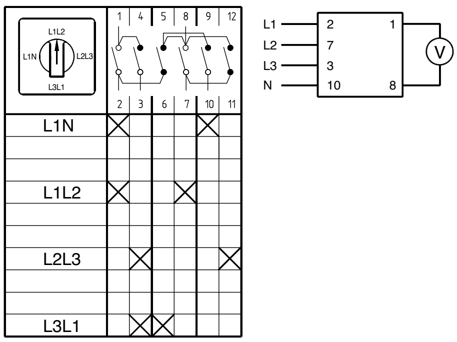
1-pole 0-1-2-3
Scheme 98



Voltmeter switches without 0 position

Switching program	Diagram number
3 line voltages + 1 phase voltage	60

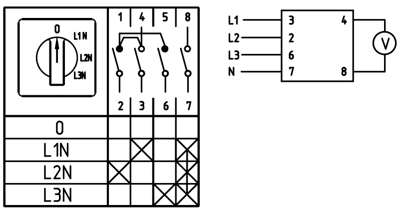
3 line voltages + 1 phase
Scheme 60



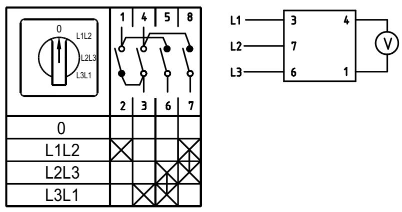
Voltmeter switches without 0 position

Switching program	Diagram number
3 phase voltages	68
3 line voltages	67
3 line voltages + 3 phase	66

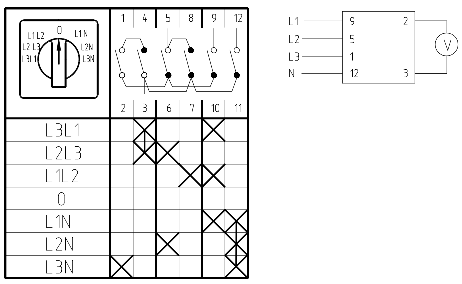
3 phase voltages
Scheme 68



3 line voltages
Scheme 67



3 line voltages + 3 phase
Scheme 66

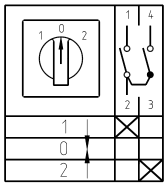


Toggle switch (with automatic reset)

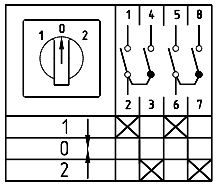
Switches with 0 position (1-0-2)
Reset to 0 on both sides

Switching program	Diagram number
1-pole	201
2-pole	202
3-pole	203
Toggle switch with left and right switching	210

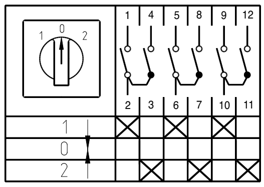
1-pole
Scheme 201



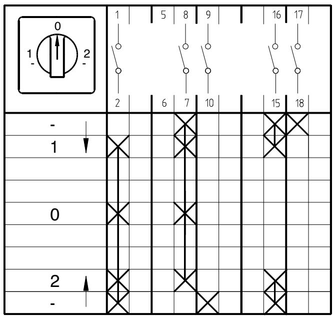
2-pole
Scheme 202



3-pole
Scheme 203



Toggle switch with left and right switching
Scheme 210

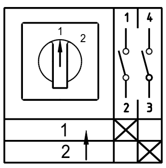


Toggle switch (with automatic reset)

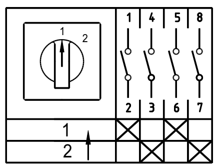
Switching program	Diagram number
Switches without 0 position (1-2)	
1 NC + 1 NO	204
2 NC + 2 NO	205
3 NC + 3 NO	206
To contactor control	
1-pole	207
1 ON + 1 OFF For right and left switching	208
2 ON + 2 OFF for right and left switching	209

Switches without 0 position (1-2)

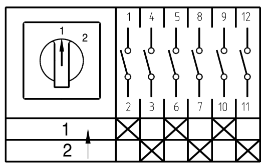
1 NC + 1 NO
Scheme 204



2 NC + 2 NO
Scheme 205

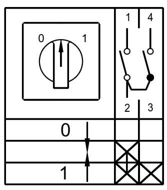


3 NC + 3 NO
Scheme 206

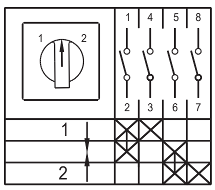


To contactor control

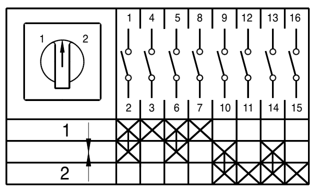
1-pole
Scheme 207



1 ON + 1 OFF For right and left switching
Scheme 208



2 ON + 2 OFF for right and left switching
Scheme 209

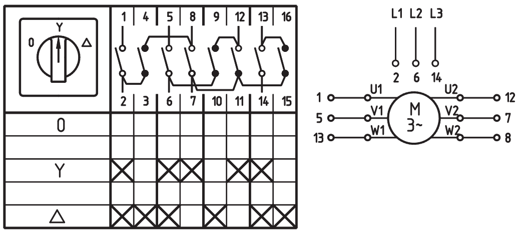


Motor switches

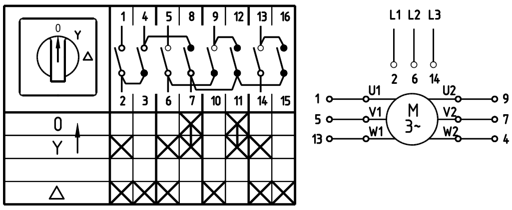
Star/delta switches

Switching program	Diagram number
Basic design	12
Y/Δ switch with reset from Y to 0	28
With countercurrent braking, with reset from Y to 0	29
As a voltage switch	30
With contactor control	31
With two rotation directions	21

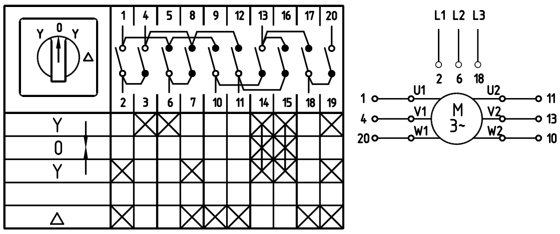
Basic design
Scheme 12



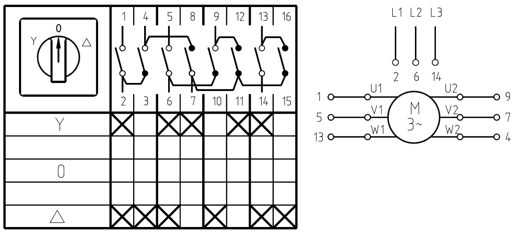
Y/Δ switch with reset from Y to 0
Scheme 28



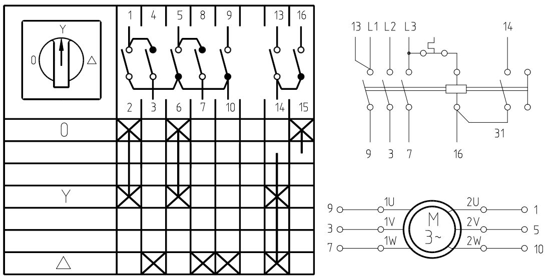
With countercurrent braking, with reset from Y to 0
Scheme 29



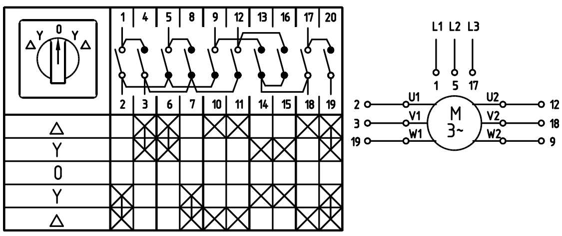
As a voltage switch
Scheme 30



With contactor control
Scheme 31



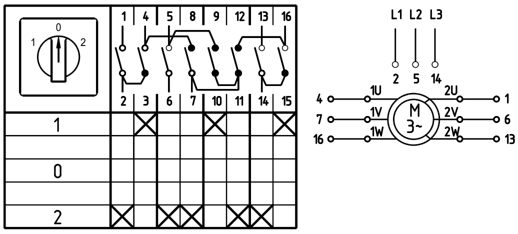
With two rotation directions
Scheme 21



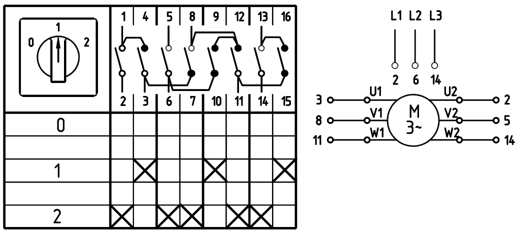
Dahlander system switches

Switching program	Diagram number
Two-speed Δ-0-YY	13
Two-speed 0-Δ-YY	19
Two-speed bidirectional YY-Δ-0-Δ-YY	20
Two-speed contactor-controlled	32

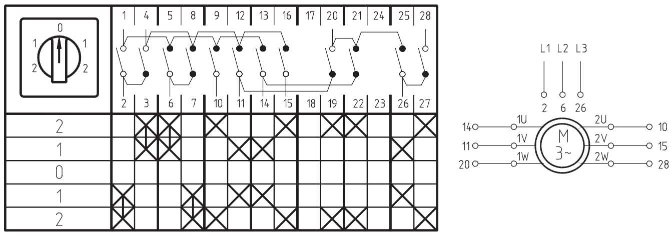
Two-speed Δ-0-YY
Scheme 13



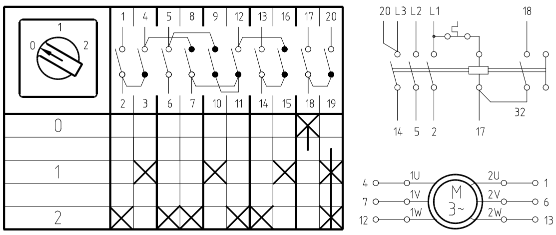
Two-speed 0-Δ-YY
Scheme 19



Two-speed bidirectional YY-Δ-0-Δ-YY
Scheme 7620



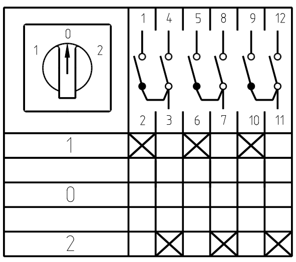
Two-speed contactor-controlled
Scheme 32



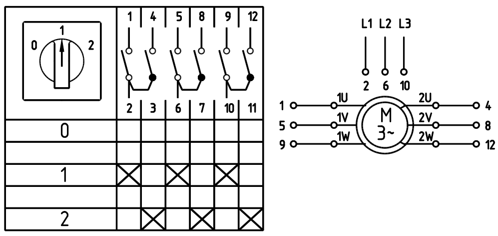
Double-winding motor switches

Switching program	Diagram number
1-0-2	53
0-1-2	22
two-directional	23
contactor-controlled	33

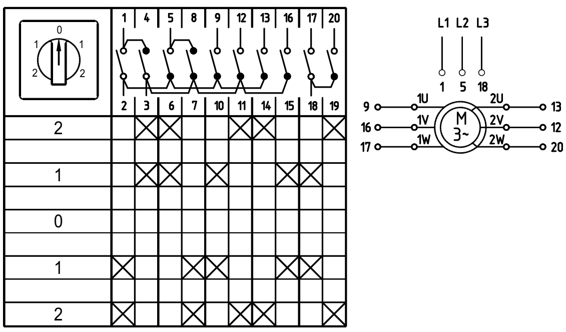
1-0-2
Scheme 53



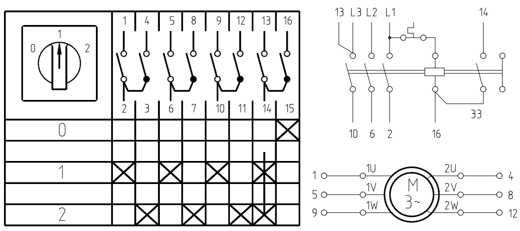
0-1-2
Scheme 22



Two-directional
Scheme 23



Contactor-controlled
Scheme 33

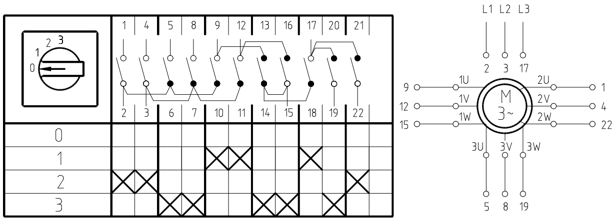


Motor switches

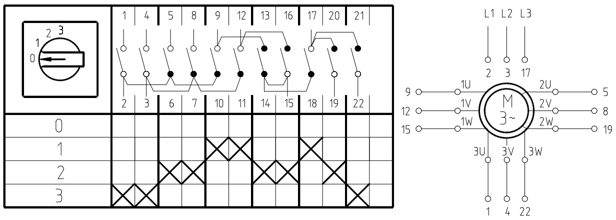
Three-speed motor switches

Switching program	Diagram number
2 windings 0-Δ-YY-Y (3- poles in Dahlander system)	34
2 windings 0-Δ-YY-Y (1 and 2 speeds in Dahlander system)	35
2 windings 0-Δ-YY-Y (2 and 3 speeds in Dahlander system)	36

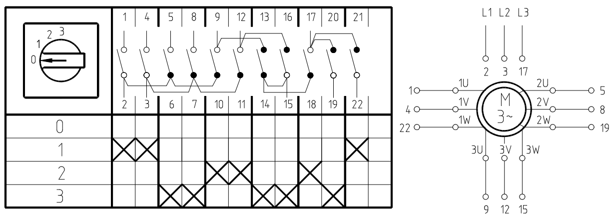
2 windings 0-Δ-YY-Y (3- poles in Dahlander system)
Scheme 34



2 windings 0-Δ-YY-Y (1 and 2 speeds in Dahlander system)
Scheme 35



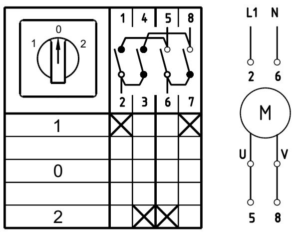
2 windings 0-Δ-YY-Y (2 and 3 speeds in Dahlander system)
Scheme 36



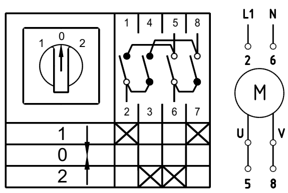
Motor reversing switches

Switching program	Diagram number
2-pole	24
2-pole, reset to 0 position	25
3-pole	11
3-pole, reset to 0 position	26
3-pole contactor-controlled	27
Single-phase motor starting switches	15

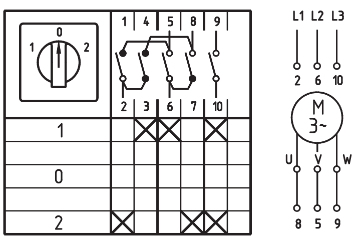
2-pole
Scheme 24



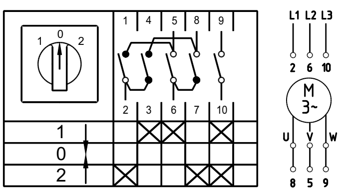
2-pole, reset to 0 position
Scheme 25



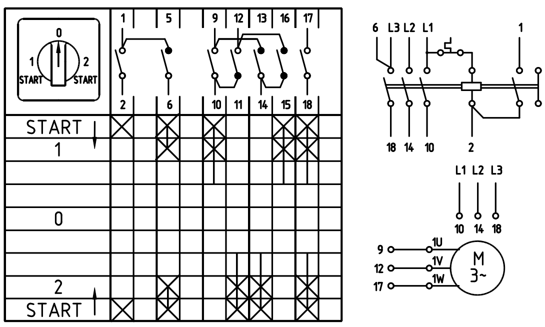
3-pole
Scheme 11



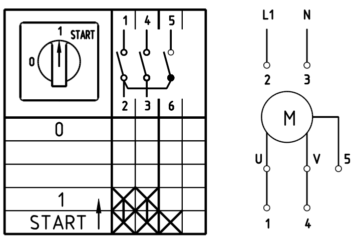
3-pole, reset to 0 position
Scheme 26



3-pole contactor-controlled
Scheme 27

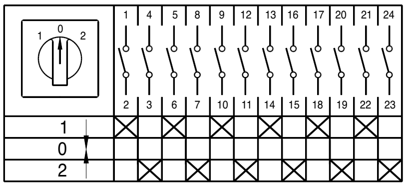


Single-phase motor
starting switches
Scheme 15

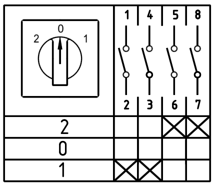


Additional switching program schemes

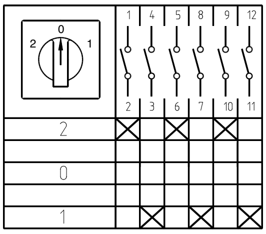
Scheme 385



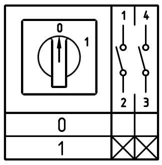
Scheme 462



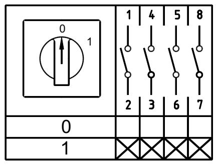
Scheme 463



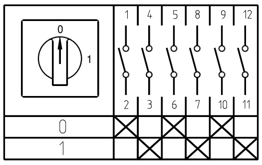
Scheme 467



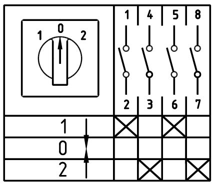
Scheme 468



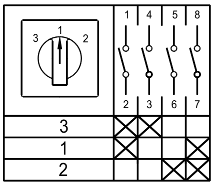
Scheme 498



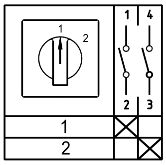
Scheme 500



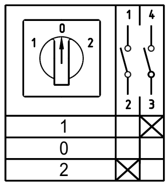
Scheme 512



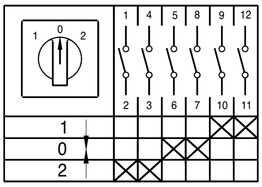
Scheme 516



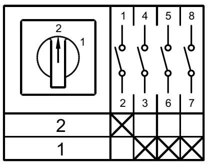
Scheme 519



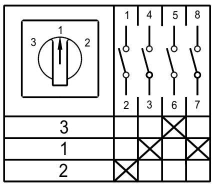
Scheme 520



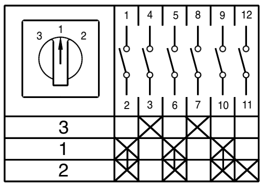
Scheme 521



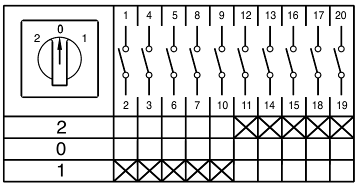
Scheme 525



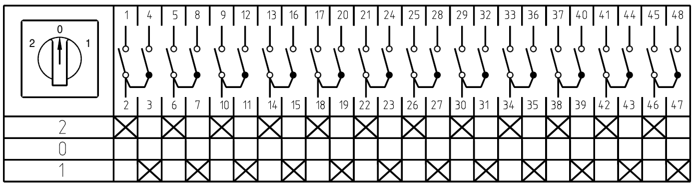
Scheme 526



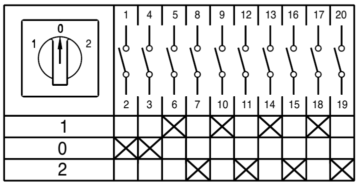
Scheme 529



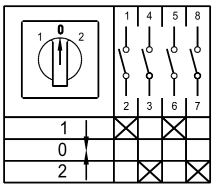
Scheme 534



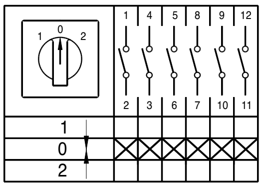
Scheme 543



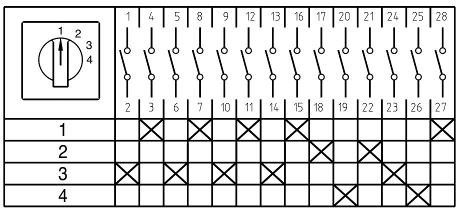
Scheme 544



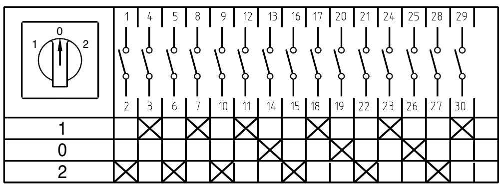
Scheme 545



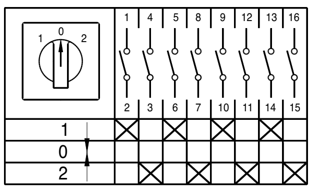
Scheme 572



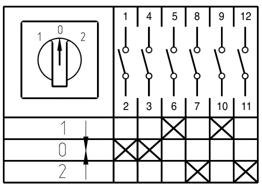
Scheme 573



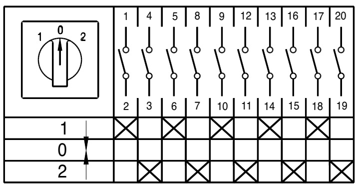
Scheme 583



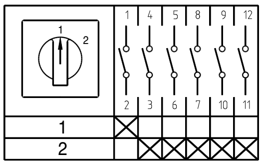
Scheme 584



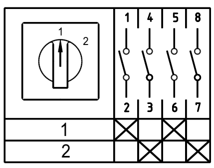
Scheme 587



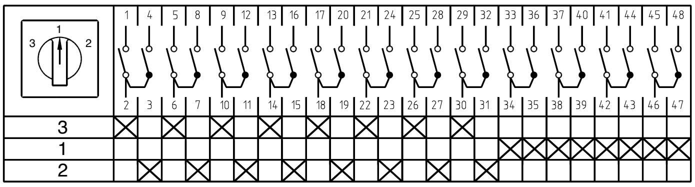
Scheme 588



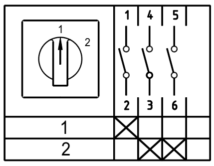
Scheme 596



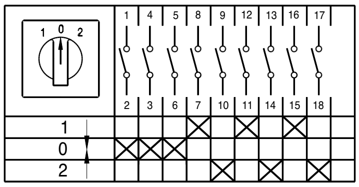
Scheme 620



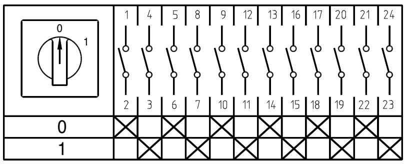
Scheme 622



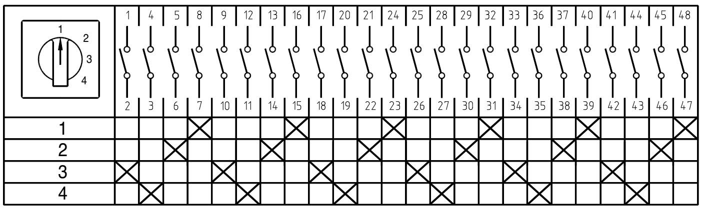
Scheme 632



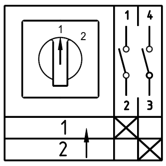
Scheme 633



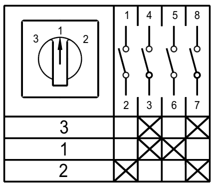
Scheme 635



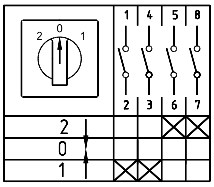
Scheme 637



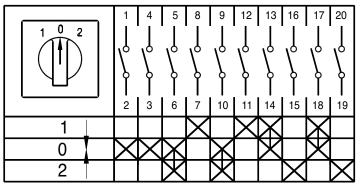
Scheme 648



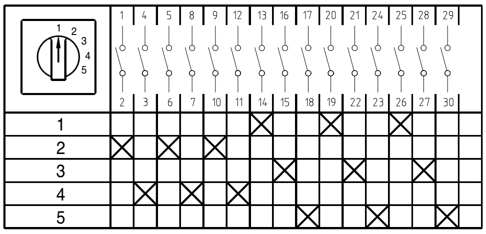
Scheme 649



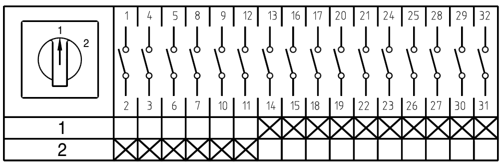
Scheme 650



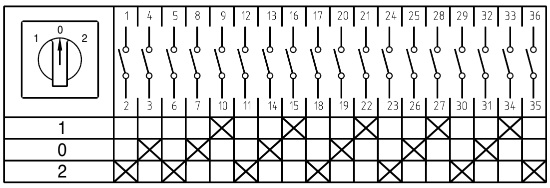
Scheme 657



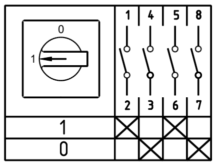
Scheme 659



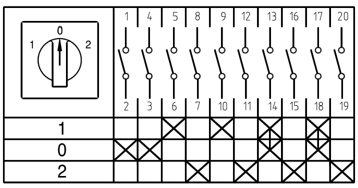
Scheme 660



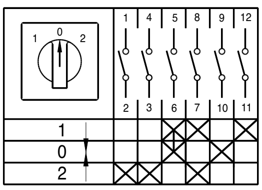
Scheme 662



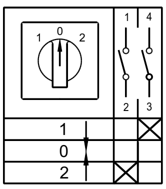
Scheme 663



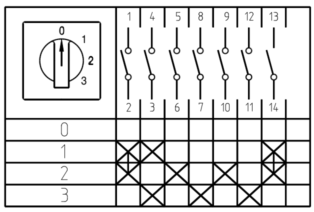
Scheme 664



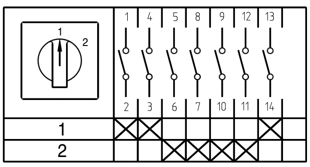
Scheme 665



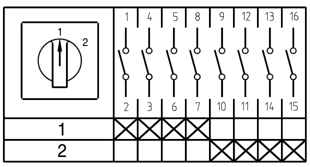
Scheme 678



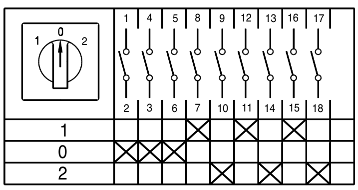
Scheme 692



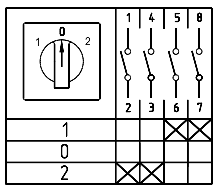
Scheme 693



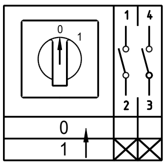
Scheme 701



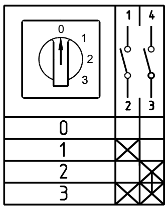
Scheme 713



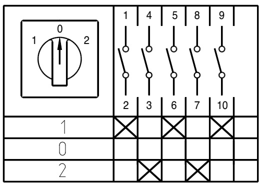
Scheme 737



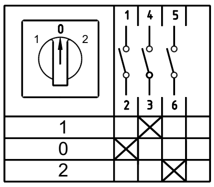
Scheme 765



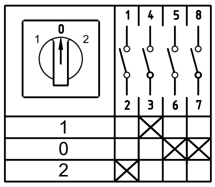
Scheme 768



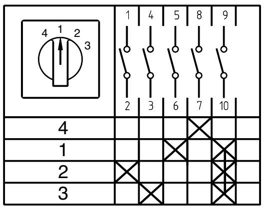
Scheme 770



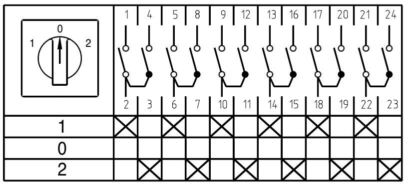
Scheme 771



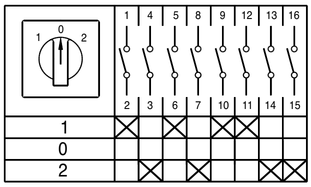
Scheme 800



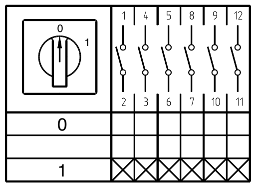
Scheme 812



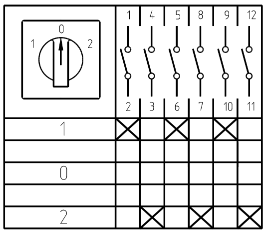
Scheme 824



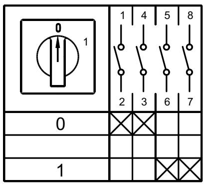
Scheme 854



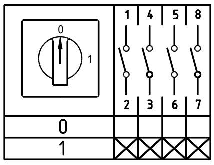
Scheme 884



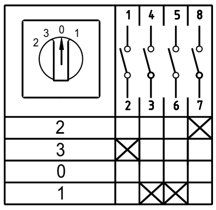
Scheme 888



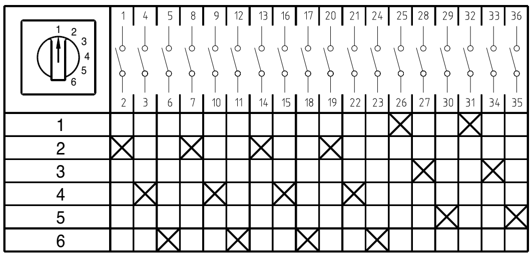
Scheme 916



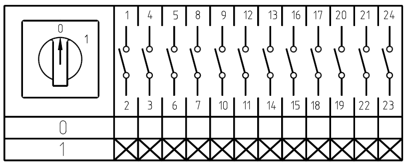
Scheme 926



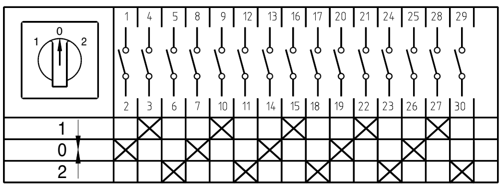
Scheme 930



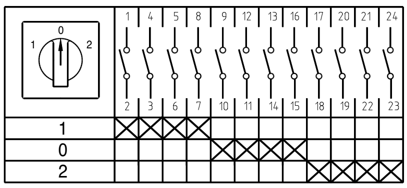
Scheme 991



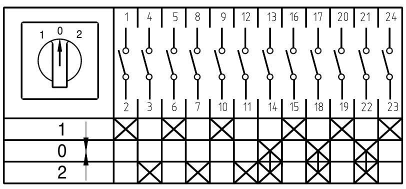
Scheme 1083



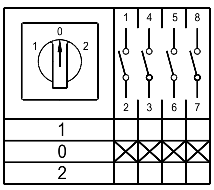
Scheme 1086



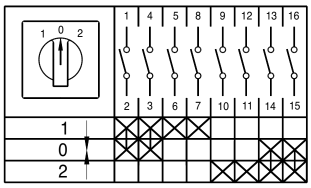
Scheme 1102



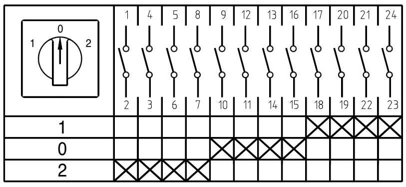
Scheme 1106



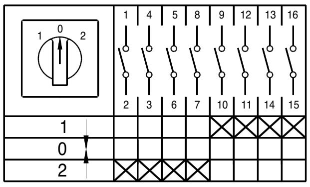
Scheme 1129



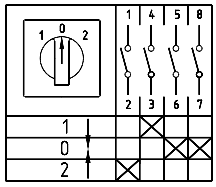
Scheme 1152



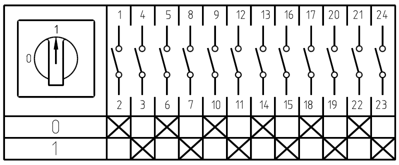
Scheme 1236



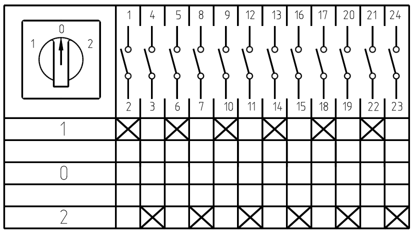
Scheme 1241



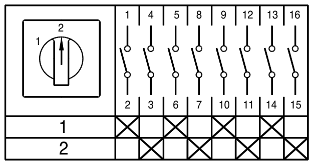
Scheme 3001



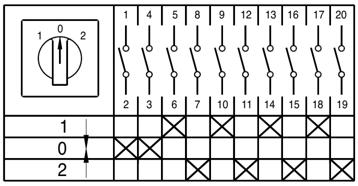
Scheme 3004



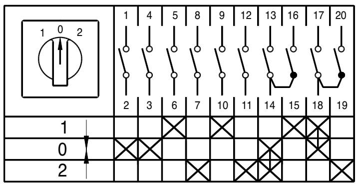
Scheme 4006



Scheme 8004



Scheme 8005



Scheme 9005

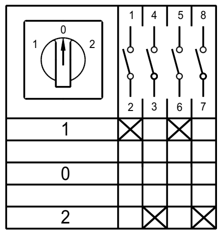


Table of equivalent schemes

WARNING!!! The «equivalent switches» of 4G series have a switching program that exactly repeats the program of the switch to be replaced. The dimensions, specifications and other parameters of the «equivalent switches» correspond to the values related to the specifications of the standard 4G series.

IMPORTANT: If there is no equivalent scheme in this catalog, request an additional equivalent scheme and it will be developed.

Number	4G	Number	4G	Number	4G	Number	4G	Number	4G
ПК, ПКУЗ		A2006	2005	A2036	2036	2072	2072	2109	2109
Б0101	637	2006	2006	2036	616	2073	2073	2110	2110
0101	516	A2008	2007	Б2037	2037	2074	2074	2111	2111
A0102	665	2008	2008	2037	92	2075	2075	2112	2112
0102	519	2009	2009	A2038	2041	2076	2076	2113	2113
Б0103	737	2010	2010	2038	2038	2079	2079	2114	2114
0103	91	2012	2012	2039	2039	2080	622	2115	2115
A1005	2088	2013	2013	2040	2040	2081	1084	2116	2116
0105	524	Б2014	2014	2044	2044	2082	2082	2117	2117
0106	2099	2014	596	A2047	2042	2083	2083	A2118	2118
0109	522	A2015	2015	2047	2047	2084	2084	2119	2119
0115	90	2015	525	2048	940	2085	2085	2120	2120
0116	2139	A2016	2011	2049	2049	2086	2086	2121	2121
0117	2140	2016	2016	2051	2051	2087	2087	2122	2122
A0118	2141	A2017	2017	2052	2052	2089	2089	2123	2123
0118	2142	2017	512	2054	2054	2090	2090	2124	2124
0119	2143	A2018	2018	2055	2055	2091	2091	2125	2125
0120	2148	2020	2020	2056	2056	2092	2092	2126	2126
0121	765	A2024	2024	2057	2057	2093	2093	2127	2127
A0122	2149	2024	672	2058	2058	A2094	2050	2128	2128
0123	2150	2026	2026	2059	521	2094	2094	2129	2129
0124	2151	A2027	2027	2060	754	2095	2095	2130	2130
0125	2152	2027	787	2061	2061	2096	2096	A2132	2077
A0126	2153	A2028	2028	2062	2062	2098	2098	2132	2132
0127	2154	2028	698	2063	2063	2100	2100	A2133	2133
0128	2155	A2029	2019	2064	2064	A2101	2101	2134	2134
0129	2156	2029	2029	2065	531	2101	2101	2135	2135
0131	2157	A2030	2030	2066	2066	2102	2102	2136	2136
A2001	649	2030	785	2067	2067	2103	2103	2137	2137
2001	462	2031	2031	2068	908	2104	2104	2138	2138
A2002	766	A2032	2034	2069	2069	2105	2105	A2144	2146
2002	589	2032	2032	A2071	2071	2106	2106	2144	2144
2003	2003	2034	648	2071	905	2107	2107	A2145	2147
2004	699	2035	926	A2072	2033	2108	2108	2145	2145

Number	4G
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3001	2159
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3004	2160
3005	3005
3006	3006
3007	3007
A3008	2161
3008	3008
A3010	3009
3010	3010
A3011	2162
3011	3011
3013	3013
3014	854
3015	3015
A3023	2163
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A3030	2164
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Number	4G
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3185	3185
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3190	3190
3191	3191
3192	3192
A3193	3184
3193	3193
3194	3194
3195	3195

Number	4G
4011	4011
4012	4012
4013	4013
4015	4015
4017	4017
A4018	4018
4018	913
4019	4019
Б4020	3067
4020	4020
A4021	4021

Number	4G
4021	952
4022	931
4024	4024
A4025	4022
4025	4025
A4027	4027
4027	955
A4028	3068
4028	4028
4030	4030
4031	694
A4032	4029
4032	4032
4034	4034
A4036	4036
4036	527
A4037	691
4037	1043
4038	4038
4040	4040
4041	4041
A4042	4039
4042	4042
4043	532
4044	4044
4045	4045
4046	4046
4047	4047
A4048	4048
4048	850
4049	4049
4050	4050
4051	927
4052	4052
4052	861
4054	4054
4055	845
4056	4056
4057	4057
4058	4058
4059	4059
4060	4060
4061	956
4063	4063
4064	4064
4065	4065
4067	4067
4068	4068
A4069	4061
4069	4069
4071	4071
A4072	4033
4072	4072
4074	4074
4076	692
4078	4078
4079	4079
4080	4080
4081	1050
4082	4082
4083	4083

Number	4G
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4086	4086
4087	4087
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4089	4089
4090	4090
4091	4091
4092	4092
4093	958
4094	4094
4095	882
4096	530
4097	780
4098	715
4099	4099
4100	4100
4101	629
4102	4102
4103	4103
4104	4104
4105	4105
4106	4106
4108	693
4109	4109
4110	4110
4111	592
4112	4112
4113	4113
4114	678
4115	4115
4116	4116
4117	4117
4118	4118
4120	4120
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4123	4123
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4149	4149
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4151	4151
4152	4153
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4155	4155

Number	4G
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4163	4163
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4166	4166
4168	4168
4169	4169
4170	4170
4171	4171
4172	4172
4174	4174
A4177	4075
4177	4177

Number	4G
5001	5001
5002	5002
5003	5003
5004	5004
5005	5005
5006	528
5007	5007
5008	667
5009	5009
5010	5010
5013	5013
5014	987
5015	752
5016	5016
5017	5017
5018	5018
5019	5019
5020	5020
5022	5022
5023	5023
5024	5024
5028	529
5030	5030
5031	5031
5032	5032
5035	5035
5036	5036
5037	5037
5038	781
5039	5039
5041	671
5042	5042
5045	5045
5046	5046
5048	5048
5049	5049
5060	5060
5061	5061
5062	5062
5063	5063

Number	4G
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5067	5067
5068	5068
5069	5069
5071	5071
5073	5073
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A5075	3069
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5079	5079
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5083	5083
5085	5085
5086	5086
A5087	5087
5088	5088
5091	5091
5093	5093
5094	5094
5095	5095
5096	5096
5097	5097
5098	5098
5100	5100
5101	5101
5102	5102
5103	5103
5104	5104

Number	4G
6003	6003
6004	941
6005	944
6006	609
6008	6008
6009	6009
A6010	3084
6010	6010
6011	876
6013	1971
6014	923
6016	700
6017	904
6019	6019
6020	907
6022	6022
6023	6023
6024	975
6025	6025
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6027	6027
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6030	6030
6031	6031
6032	6032

Number	4G
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6039	991
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6063	6063
6064	6064
6066	6066
6067	6067
A6068	3092
6068	6068
6069	6069
6070	6070
A6071	6071
A6072	6072
6073	6073
6074	6074
6075	6075
6076	6076
6077	6077
6079	6079
6081	6081
6082	6082
6083	6083
6084	6084
6087	6087
6088	6088
6089	6089
A6091	3094
6091	77
A6092	3095
6092	6092
6093	6093
6094	6094

Number	4G
7006	2802

Number	4G
8012	658
8016	1781

Number	4G
УП	
3	888
6	929
9	828
16	835
A23	665
23	519
26	92
A29	1236
29	713
36	2790
39	2478
43	2789
A44	1131
44	1652
A45	1241
45	771
70	1118
85	2697
105	951
106	827
128	2778
A142	1132
142	2698
143	2776
150	1144
151	2822
186	1660
A202	1141
202	2699
225	2791
227	1584
254	959
278	1194
314	1407
322	812
327	924
330	2777
332	830
343	825
367	1740
398	1134
A426	1233
428	1058
440	1000
470	1106
474	1109
556	1801

Number	4G
МКФ	
11	662
22	9005
44	1434
1111	4006
1122	594
2222	590
111111	3001
112222	543
222222	3004
126a6a	1418
1266a6a	1296

Number	4G
ПКУ 2	
1	90
4	91
7	516
8	1199
10	55
12	10
17	2673
29	92
31	815
43	99
57	946
58	100
75	2969
95	1051
116	53
137	2824
150	1523

Number	4G
МКВ	
22	544
26	1419
1122	584
1266	1297
2222	583
112222	8004
222222	361
2266a	1298
22226a6a	965

Number	4G
ПВП	
101	90
102	91
201	10
215	92
220	3453
222	909
229	910
231	3379
302	588
303	1967
317	100
327	3448
328	53
331	3449
413	911
504	3304

Number	4G
SEZ s 10	
1102	91
1103	10
1104	92
1105	99
1106	100
2203	53
2253	56
2254	69
2352	86
2353	93
2401	109
2452	2897
9151	2898
JVL1106	2683

Number	4G
ПМОВ	
22	544
222	884
2222	591
2227	499
22222	587
111111	545
111222	632
112222	8004
112233	8004
112256	8005
113333	8004
115566	650
222222	385
222266	1868
222555	1102
125566д63	3469
777777 д65	1902
1210з10з10з10з	1083

Number	4G
GANZ KK	
4036	66
4489	83
6001	91
6002	10
6005	52
6005	53
6008	11
6042	92
6044	92
6054	90
6094	51
6096	92
6099	75
6122	75
6169	51
6426	51
6432	75
9001	91
9002	10
9003	55
9004	56
9417	69
9432	75

Number	4G
ПМОФ	
111111	3001
111225	634
111888	686
112222	543
112244	802
112266	803
112277	604
112556	654
222222	3004
222444	658
222777Д15	573
223344	930
224466	801
225566	655
233317	572
333333	3004
444777	914
555666	798
778888	1335
111144Д43	606
111222Д86	1332
222888Д16	3467
227777Д133	3285
237777Д87	1216
334466Д26	794
444444Д46	660
555577Д84	3468
777777Д50	1901
888888Д39	635

Number	4G
MOELLER	
8007	66
8210	51
8211	52
8212	53
8214	201
8216	203
15431	51
15511	2980
15679	2830
15683	2829
15907	2828
8342	100
8223	69
15920	67

Number	4G
ABB	
0_A01_	90
0_A02_	91
0_A03_	10
0_A04_	92
0_A1_	90
0_A2_	91
0_A3_	10
0_S021_	107
0_S031_	108
0_S041_	109
0_ST31_	82
0_ST41_	83
0_U2_	52
0_U3_	53
0_U4_	75
0_URR1_	201
0_URR2_	202
0_V30_	66
0_WC1_	2807
Q_A6_	3406
Q_ST33_	3407

Number	4G
OBZOR	
1102	91
1103	10
1104	92
1105	99
1107	3374
1108	3376
2252	55
2253	56
2255	70
2351	3470
2451	83
2551	84
2202A8	3377
2205A8	3375

Number	4G
Schneider	
K.B-004T	3370
K.E-503W	3349
K_F-013NL	733
K_F-024NL	788
K10D-012QCH	123
K11-023NCH	2823
K1A-001ACH9	0
K1B-001S	3364
K1B-001UCH	51
K1 B-002ACH9	1
K1 B-002NCH	516
K1B-003TCH	3284
K1B-006TCH	201
K1B-006TLH	201
K1B-011UCH	2964
K2B-1002HLH	91
K1C-003NCH	2963
K1 D-002U	52
K1D-002ULH	52
K1 D-004ALH	92
K1D-012NCH	3437
K1D-012U	55
K1D-012UCH	55
K1D-024MLH	67
K2D-004HLH	92
K2D-012ULH	795
K1 F-003U	53
K1F-003ULH	53
K1F-006ALH	100
K1F-006N	85
K1F-006N	3434
K1F-013NCH	3436
K1F-013QLH	2986
K1F-013U	56
K1 F-027MLH	66
K1H-014NLH	2931
K1H-026MLH	3439
K2H-014ULH	796
K1 K-005U	76
K1K-015	70
K1M-016N	3435
K2M-033NL	3440
K21-023QCH	3438

Number	4G
Kraus&Naimer	
A004	67
A005	68
A007	66
A176	207
A200	90
A201	91
A202	10
A203	92
A210	51
A211	52
A212	53
A213	75
A214	201
A215	202
A216	203
A220	54
A221	55
A222	56
A223	69
A230	82
A231	83
A240	107
A251	87
A252	88
A271	94
A290	270
A291	271
A292	63
A293	272
A341	99
A342	100
A543	3378

Number	4G
LOVATO	

Numbers of standard LOVATO schemes match the 4G numbers. Example: 7GN20-91P corresponds to 4G 91 scheme.

WARNING!!!
The nomenclature database of 4G switches currently contains more than 3,000 items. Therefore, we considered it right to place only the most used schemes in this catalog. If necessary information about the item you are interested in is not available, please refer to the website www.keaz.ru or contact our personnel.