

Rotary switches

Type

ABG 10

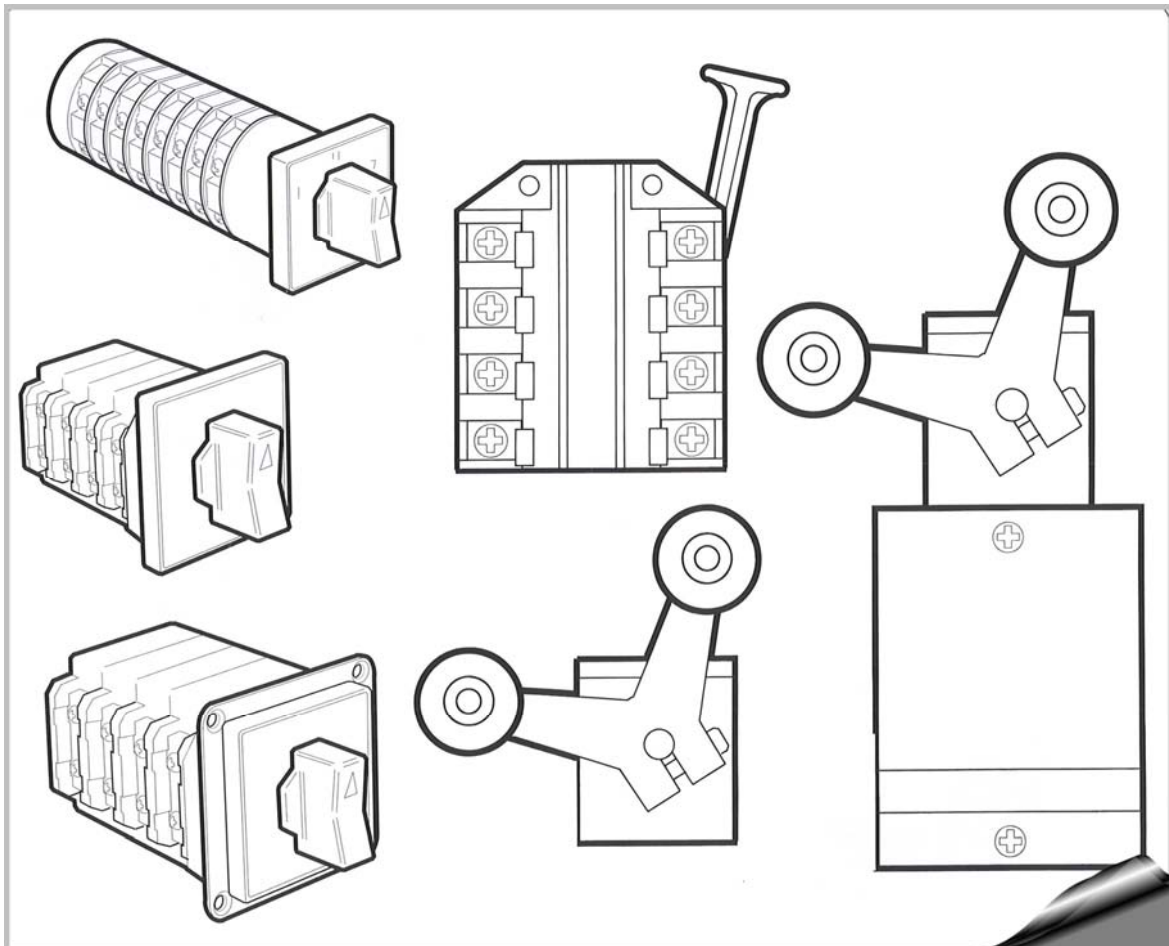
ABB 25, 63

Limit switches

Type

AGM, AGL

AGGL, AGVL



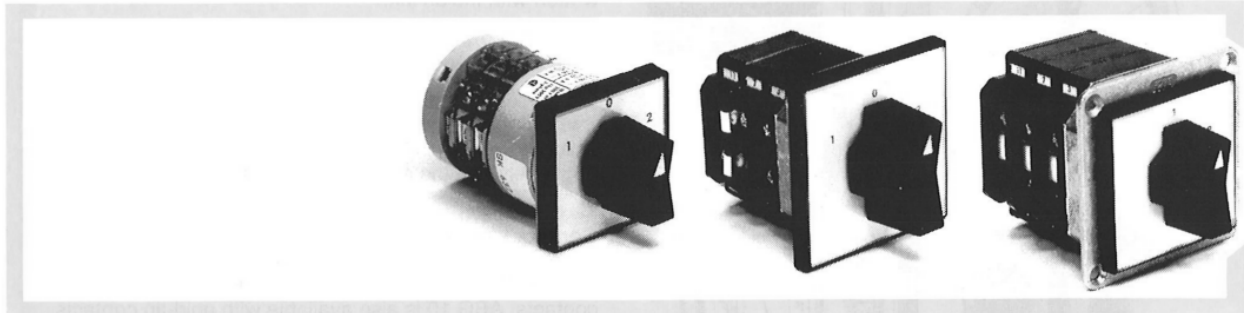
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1. Review

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Optional alternatives and accessories		Open-type rotary switches, type		
		ABG 10	ABB 25	ABB 63
Mounting,	Front mounting	●	●	●
	Rear mounting	○	○	○
Front trim plate,	48x48 mm	●	–	–
	72x72 mm	x	●	●
	96x96 mm	–	○	○
Actuating units,	small handle	●	–	–
	large handle	○ Only together with front trim plate 72x72 mm.	●	●
	pistol grip	○	○	○
	small handle, removeable	○	○	–
	large handle, removeable	○ Only together with front trim plate 72x72 mm.	○	–
Contacts	of silver	●	●	●
	of gold	x	–	–
Twin contacts	–	x	–	
Flat pin terminals	x	–	–	
Shaft seal	○	○	○	
Spring return, built-in (Return 30 °)	built-on (Return 30 ° – 150 °)	○	○	○
		○	○	–
Lock	○	–	–	
Tandem coupling	○	–	–	
Legend plate	○	○	○	
Enclosure	○	○	○	

● Standard version.

○ To be ordered by stating the supplementary Cat.No.

x To be ordered by using the ordering form for special rotary switches.

2. Description

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ABG 10

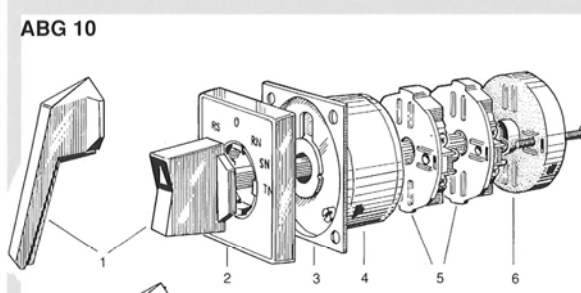
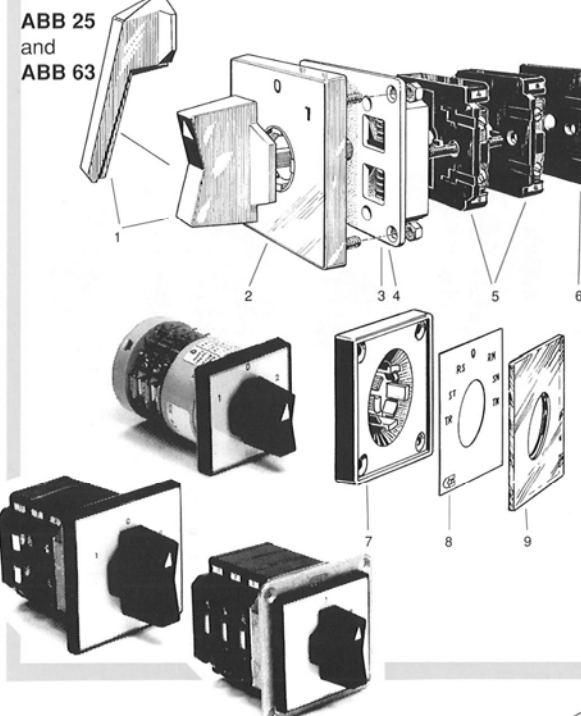


ABB 25 and ABB 63



The rotary switches:

- Are available in three sizes, for, 10 A, 25 A and 63 A.
- Can be obtained with up to 12 actuating positions and 24 separate contacts (48 for ABG 10 with the tandem coupling).
- Are operated with a knob or pistol grip.

The switches consist of:

- 1. Operating handle** of black dimensionally-stable plastics. The shaft hole of the handle is provided with spring-steel tongues which facilitate the fitting and removal of the handle without the use of tools.
- 2. Front plate**, which comprises a black plastics frame **7**, a text sheet of vinyl plastics **8** and a transparent plastics sheet **9**. The text sheet lies protected behind the plastics sheet **9**. The text sheet can also be supplied with text written with Indian ink.
- 3. Mounting plate** which, on ABG 10, can be moved to end plate **6** enabling the switch to be fixed to a rear mounting plane.
- 4. Switching stage mechanism**. This incorporates stops which prevent the overriding of the outer positions. The angle between the different positions can be either 30°, 60° or 90°.
- 5. Contact sections** which, for ABG are manufactured of transparent thermoplastics and, for ABB of thermosetting plastics. Each contact section has one or two silver contacts. ABG 10 is also available with gold-tip contacts and ABB 25 with twin contacts. Each contact has double break points.
- 6. End plate.**

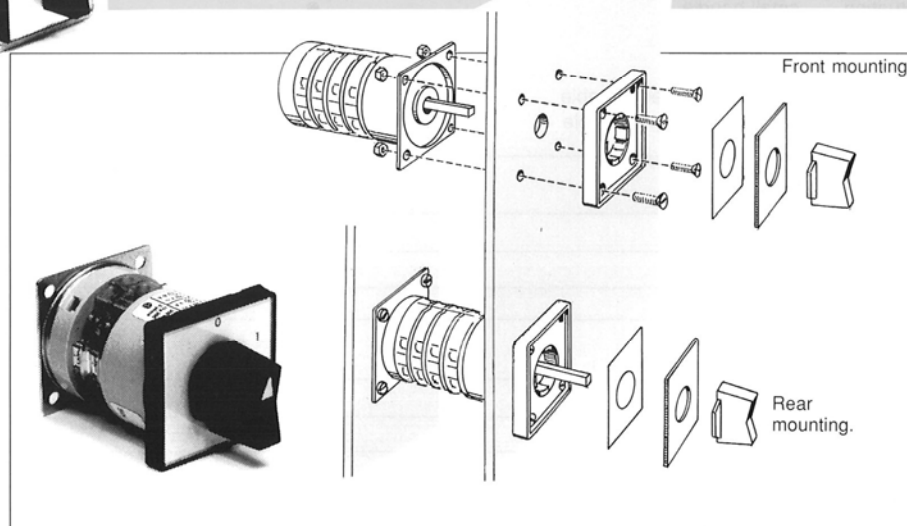
7, 8 and 9. Refer to item 2.

Mounting

Rotary switches which have Cat.Nos. according to the table, are designed for **front mounting** and the mounting plate is therefore located in the front behind the front trim plate.

If the switch is to be installed on a rear mounting plane, the mounting plate must be located at the rear. Rotary switches for **rear mounting** are ordered by using the supplementary Cat.Nos. given in the ordering table.

The switches are mounted as shown in the adjacent figures which show ABG 10.

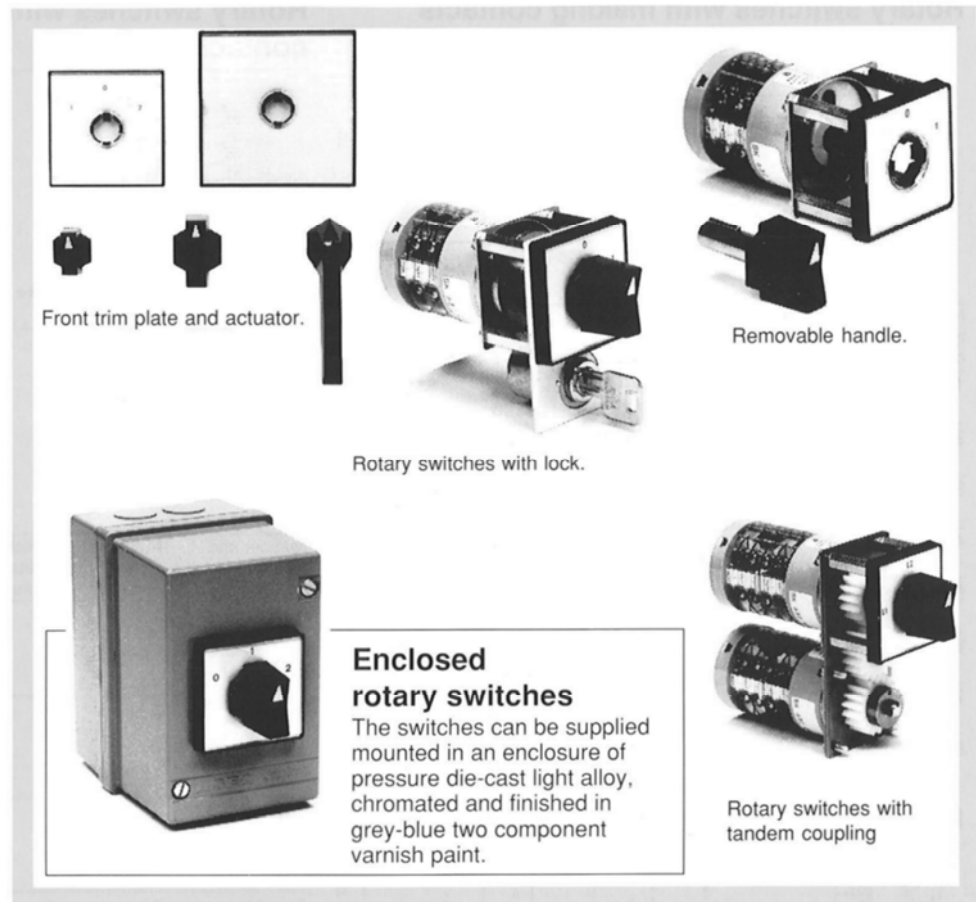


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Accessories

- Front trim plate larger than standard.
- Operating handles (knobs, pistol grips or removable handles).
- Seals for operating shaft. Ring seal of rubber for front mounting.
- Return spring. Either built-in the position marking device or as a built-on return spring mechanism.
- Locks for securing the operating handle in different positions.
- Tandem coupling with which two switches can be operated with **one** handle.
- Legend plates which state the function of a switch.
- Enclosures. On special request.
- Gold contacts (ABG 10).
- Twin contacts (ABB 25).
- Flat pin terminals (ABG 10).



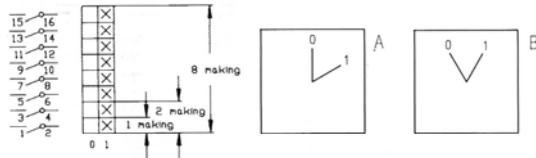
Reinforced corrosion protection

The rotary switches are as a standard adapted to heavy industrial applications. In addition, they can be given extra protection against corrosion, which implies that visible galvanized parts are treated with anti-rust agent and that the terminal screws on ABG 10 are replaced with stainless steel screws.

3. Ordering table, rotary switches

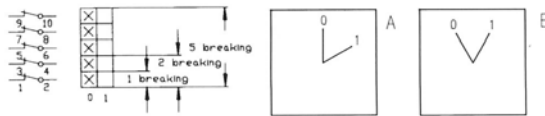
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Rotary switches with making contacts



Number and type of contacts	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63
			Cat.No. SK 632		
1 making	1	A	0101	3101	6101
		B	0103	3103	6103
2 making	1	A	0105	0501	6105
		B	0107	3107	6107
3 making	2	A	0109	3109	6109
		B	0111	3111	6111
4 making	2	A	0113	3503	6113
		B	0115	3115	6115
5 making	3	A	0289	3289	6289
		B	0293	3293	6293
6 making	3	A	0117	3117	6117
		B	0119	3119	6119
7 making	4	A	0317	3317	6317
		B	0321	3321	6321
8 making	4	A	0333	3333	6333
		B	0337	3337	6337

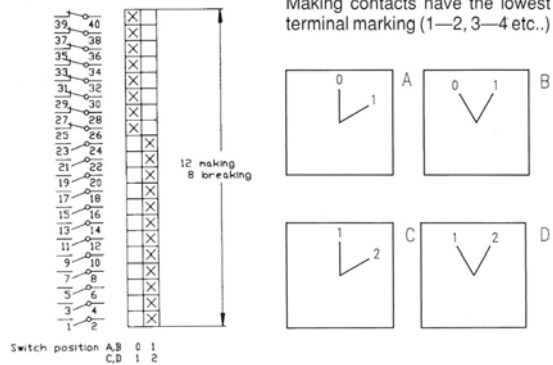
Rotary switches with breaking contacts



Number and type of contacts	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63
			Cat.No. SK 632		
1 breaking	1	A	0619	3619	6619
		B	0623	3623	6623
2 breaking	1	A	0635	3635	6635
		B	0639	3639	6639
3 breaking	2	A	0651	3551	6651
		B	0655	3655	6655
4 breaking	2	A	0667	3667	6667
		B	0671	3671	6671
5 breaking	3	A	0683	3683	6683
		B	0687	3687	6687

If the rotary switch is to have rear mounting, another type of actuating device or another type of front trim plate, these can be ordered as given on p. 15.

Rotary switches with making and breaking contacts



Making contacts have the lowest terminal marking (1—2, 3—4 etc..)

Number and type of contacts	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63
			Cat.No. SK 632		
1 making 1 breaking	1	A	0811	3811	6811
		B	0815	3815	6815
		C	0991	3991	6991
		D	0993	3993	6993
2 making 1 breaking	2	A	0823	3823	6823
		B	0827	3827	6827
		C	0831	3831	6831
		D	0835	3835	6835
2 making 2 breaking	2	A	0839	3839	6839
		B	0843	3843	6843
		C	0995	3995	6995
		D	0997	3997	6997
3 making 1 breaking	2	A	0851	3851	6851
		B	0855	3855	6855
		C	0859	3859	6859
		D	0863	3863	6863
3 making 2 breaking	3	A	0867	3867	6867
		B	0871	3871	6871
		C	0875	3875	6875
		D	0879	3879	6879
3 making 3 breaking	3	A	0885	3885	6885
		B	0889	3889	6889
		C	0999	3999	6999
		D	1001	4001	7001
4 making 1 breaking	3	A	0901	3901	6901
		B	0905	3905	6905
		C	0909	3909	6909
		D	0913	3913	6913
4 making 2 breaking	3	A	0917	3917	6917
		B	0921	3921	6921
		C	0925	3925	6925
		D	0929	3929	6929
4 making 3 breaking	4	A	0933	3933	6933
		B	0937	3937	6937
		C	0941	3941	6941
		D	0945	3945	6945
5 making 1 breaking	3	A	0949	3949	6949
		B	0953	3953	6953
		C	0957	3957	6957
		D	0961	3961	6961
5 making 2 breaking	4	A	0965	3965	6965
		B	0969	3969	6969
		C	0973	3973	6973
		D	0977	3977	6977
5 making 3 breaking	4	A	0981	3981	6981
		B	0985	3985	6985
		C	0989	3989	6989
		D	1013	4013	7013

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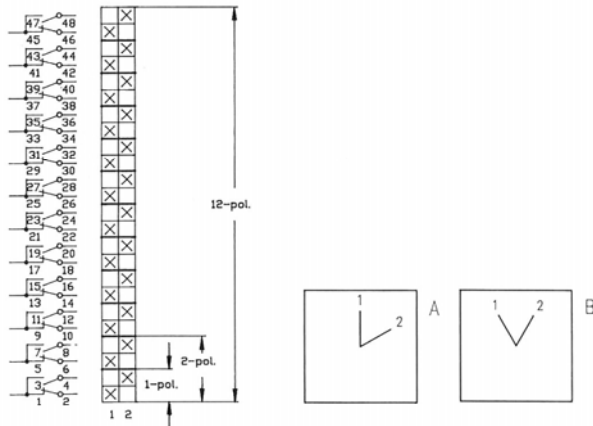
cont. Rotary switches with making and breaking contacts

Number and type of contacts	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63	Number and type of contacts	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63
			Cat.No. SK 632						Cat.No. SK 632		
6 making 1 breaking	4	A	1017	4017	7017	8 making 5 breaking	7	A	1265	4265	7265
		B	1021	4021	7021			B	1269	4269	7269
		C	1025	4025	7025			C	1273	4273	7273
		D	1029	4029	7029			D	1277	4277	7277
6 making 2 breaking	4	A	1033	4033	7033	9 making 1 breaking	5	A	1281	4281	7281
		B	1037	4037	7037			B	1285	4285	7285
		C	1041	4041	7041			C	1289	4289	7289
		D	1045	4045	7045			D	1293	4293	7293
6 making 3 breaking	5	A	1049	4049	7049	9 making 2 breaking	6	A	1297	4297	7297
		B	1073	4073	7073			B	1301	4301	7301
		C	1077	4077	7077			C	1305	4305	7305
		D	1091	4091	7091			D	1309	4309	7309
6 making 4 breaking	5	A	1095	4095	7095	9 making 3 breaking	6	A	1313	4313	7313
		B	1099	4099	7099			B	1317	4317	7317
		C	1113	4113	7113			C	1321	4321	7321
		D	1117	4117	7117			D	1325	4325	7325
7 making 1 breaking	4	A	1121	4121	7121	9 making 4 breaking	7	A	1329	4329	7329
		B	1125	4125	7125			B	1333	4333	7333
		C	1129	4129	7129			C	1337	4337	7337
		D	1133	4133	7133			D	1341	4341	7341
7 making 2 breaking	5	A	1137	4137	7137	9 making 5 breaking	7	A	1345	4345	7345
		B	1141	4141	7141			B	1349	4349	7349
		C	1145	4145	7145			C	1353	4353	7353
		D	1149	4149	7149			D	1357	4357	7357
7 making 3 breaking	5	A	1153	4153	7153	9 making 8 breaking	9	A	1361	4361	
		B	1157	4157	7157			B	1365	4365	
		C	1161	4161	7161			C	1369	4369	
		D	1165	4165	7165			D	1373	4373	
7 making 4 breaking	6	A	1169	4169	7169	12 making 1 breaking	7	A	1377	4377	
		B	1173	4173	7173			B	1381	4381	
		C	1177	4177	7177			C	1385	4385	
		D	1181	4181	7181			D	1389	4389	
7 making 5 breaking	6	A	1185	4185	7185	12 making 2 breaking	7	A	1393	4393	
		B	1189	4189	7189			B	1397	4397	
		C	1193	4193	7193			C	1401	4401	
		D	1197	4197	7197			D	1405	4405	
8 making 1 breaking	5	A	1201	4201	7201	12 making 3 breaking	8	A	1409	4409	
		B	1205	4205	7205			B	1413	4413	
		C	1209	4209	7209			C	1417	4417	
		D	1213	4213	7213			D	1421	4421	
8 making 2 breaking	5	A	1217	4217	7217	12 making 5 breaking	9	A	1425	4425	
		B	1221	4221	7221			B	1429	4429	
		C	1225	4225	7225			C	1433	4433	
		D	1229	4229	7229			D	1437	4437	
8 making 3 breaking	6	A	1233	4233	7233	12 making 8 breaking	10	A	1441	4441	
		B	1237	4237	7237			B	1445	4445	
		C	1241	4241	7241			C	1449	4449	
		D	1245	4245	7245			D	1453	4453	
8 making 4 breaking	6	A	1249	4249	7249	16 making 1 breaking	9	A	1457	4457	
		B	1253	4253	7253			B	1461	4461	
		C	1257	4257	7257			C	1465	4465	
		D	1261	4261	7261			D	1469	4469	
16 making 3 breaking	10	A	1473	4473		16 making 3 breaking	10	A	1473	4473	
		B	1477	4477				B	1477	4477	
		C	1481	4481				C	1481	4481	
		D	1485	4485				D	1485	4485	

If the rotary switch is to have rear mounting, another type of actuating device or another type of front trim plate, these can be ordered as given on p. 15.

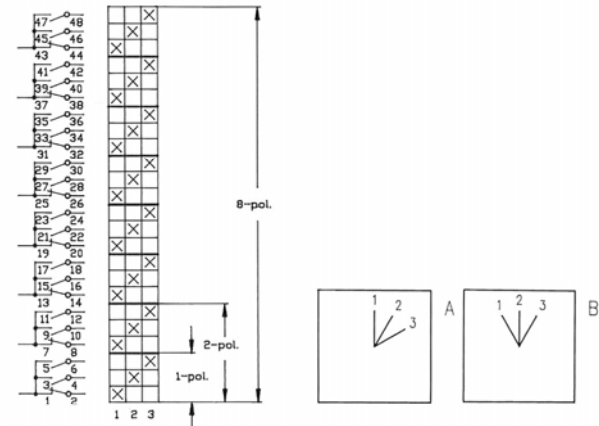
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2-way switches without 0-position



	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63
			Cat.No. SK 632		
1-pole	1	A	1601	4601	7601
		B	1605	4605	7605
2-pole	2	A	1609	4609	7609
		B	1613	4613	7613
3-pole	3	A	1617	4617	7617
		B	1621	4621	7621
4-pole	4	A	1625	4625	7625
		B	1629	4629	7629
5-pole	5	A	1633	4633	7633
		B	1637	4637	7637
6-pole	6	A	1641	4641	7641
		B	1645	4645	7645
7-pole	7	A	1649	4649	7649
		B	1653	4653	7653
8-pole	8	A	1657	4657	7657
		B	1661	4661	7661
9-pole	9	A	1665	4665	7665
		B	1669	4669	7669
10-pole	10	A	1673	4673	7673
		B	1677	4677	7677
11-pole	11	A	1681	4681	7681
		B	1685	4685	7685
12-pole	12	A	1689	4689	7689
		B	1693	4693	7693

3-way switches without 0-position

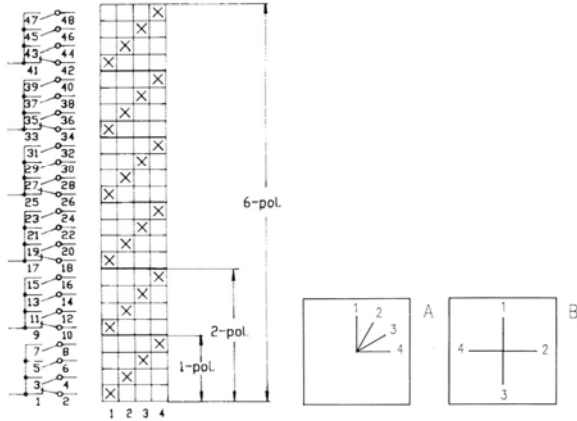


	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63
			Cat.No. SK 632		
1-pole	2	A	1701	4701	7701
		B	1705	4705	7705
2-pole	3	A	1709	4709	7709
		B	1713	4713	7713
3-pole	5	A	1717	4717	7717
		B	1721	4721	7721
4-pole	6	A	1725	4725	7725
		B	1729	4729	7729
5-pole	8	A	1733	4733	7733
		B	1737	4737	7737
6-pole	9	A	1741	4741	7741
		B	1745	4745	7745
7-pole	11	A	1749	4749	7749
		B	1753	4753	7753
8-pole	12	A	1757	4757	7757
		B	1761	4761	7761

If the rotary switch is to have rear mounting, another type of actuating device or another type of front trim plate, these can be ordered as given on p. 15.

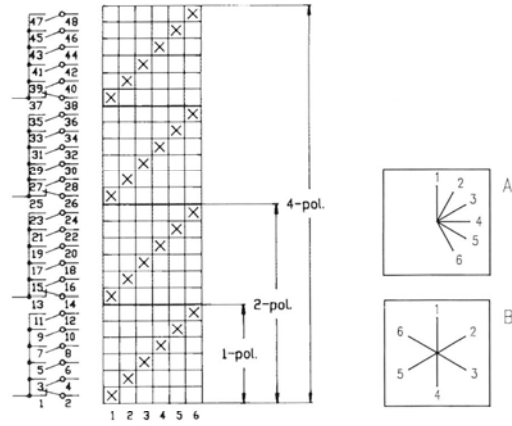
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4-way switches without 0-position



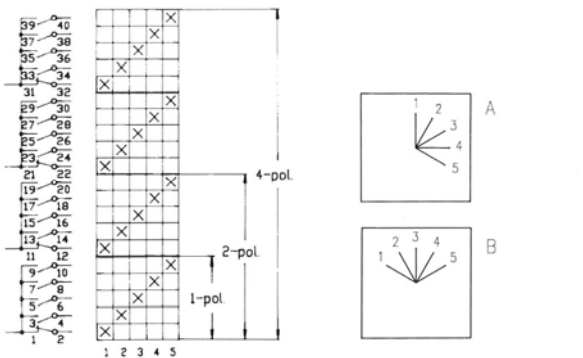
	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63
			Cat.No. SK 632		
1-pole	2	A	1765	4765	7765
		B	1769	4769	7769
2-pole	4	A	1773	4773	7773
		B	1777	4777	7777
3-pole	6	A	1781	4781	7781
		B	1785	4785	7785
4-pole	8	A	1789	4789	7789
		B	1793	4793	7793
5-pole	10	A	1797	4797	7797
		B	1801	4801	7801
6-pole	12	A	1805	4805	7805
		B	1809	4809	7809

6-way switches without 0-position



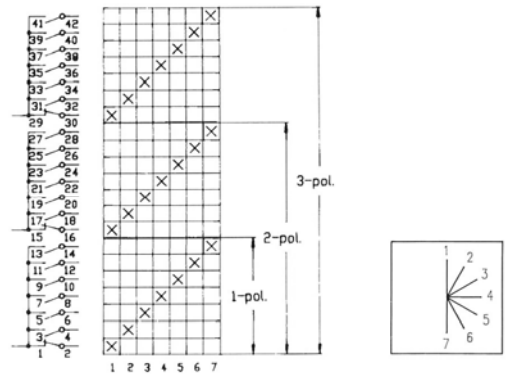
	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63
			Cat.No. SK 632		
1-pole	3	A	1845	4845	7845
		B	1849	4849	7849
2-pole	6	A	1853	4853	7853
		B	1857	4857	7857
3-pole	9	A	1861	4861	7861
		B	1865	4865	7865
4-pole	12	A	1869	4869	7869
		B	1873	4873	7873

5-way switches without 0-position



	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63
			Cat.No. SK 632		
1-pole	3	A	1813	4813	7813
		B	1817	4817	7817
2-pole	5	A	1821	4821	7821
		B	1825	4825	7825
3-pole	8	A	1829	4829	7829
		B	1833	4833	7833
4-pole	10	A	1837	4837	7837
		B	1841	4841	7841

7-way switches without 0-position

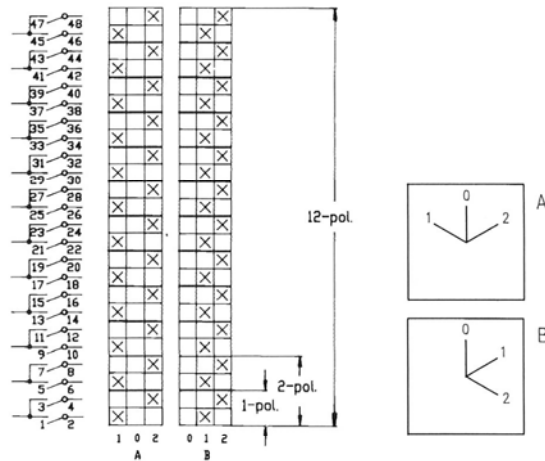


	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63
			Cat.No. SK 632		
1-pole	4	A	1877	4877	7877
2-pole	7	A	1881	4881	7881
3-pole	11	A	1885	4885	7885

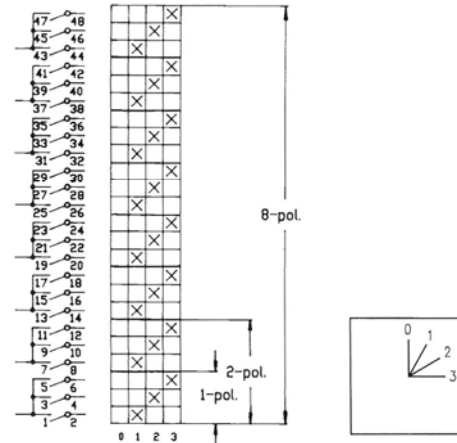
If the rotary switch is to have rear mounting, another type of actuating device or another type of front trim plate, these can be ordered as given on p. 15.

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2-way switches with 0-position



3-way switches with 0-position



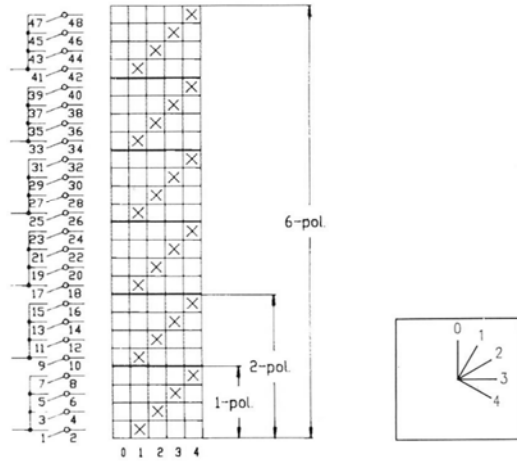
	Number of contact sections	Switch position figure	ABG 10	ABB 25	ABB 63
			Cat.No. SK 632		
1-pole	1	A	0201	0521	6201
		B	1953	4953	7953
2-pole	2	A	0203	3203	6203
		B	1959	4959	7959
3-pole	3	A	0205	3205	6205
		B	1965	4965	7965
4-pole	4	A	0207	3207	6207
		B	1971	4971	7971
5-pole	5	A	1975	4975	7975
		B	1979	4979	7979
6-pole	6	A	1983	4983	7983
		B	1987	4987	7987
7-pole	7	A	1991	4991	7991
		B	1995	4995	7995
8-pole	8	A	1999	4999	7999
		B	2003	5003	8003
9-pole	9	A	2007	5007	8007
		B	2011	5011	8011
10-pole	10	A	0219	0523	6219
		B	2017	5017	8017
11-pole	11	A	2021	5021	8021
		B	2025	5025	8025
12-pole	12	A	2029	5029	8029
		B	2033	5033	8033

	Number of contact sections	ABG 10	ABB 25	ABB 63
		Cat.No. SK 632		
1-pole	2	2037	5037	8037
2-pole	3	2041	5041	8041
3-pole	5	2045	5045	8045
4-pole	6	2049	5049	8049
5-pole	8	2053	5053	8053
6-pole	9	2057	5057	8057
7-pole	11	2061	5061	8061
8-pole	12	2065	5065	8065

If the rotary switch is to have rear mounting, another type of actuating device or another type of front trim plate, these can be ordered as given on p. 15.

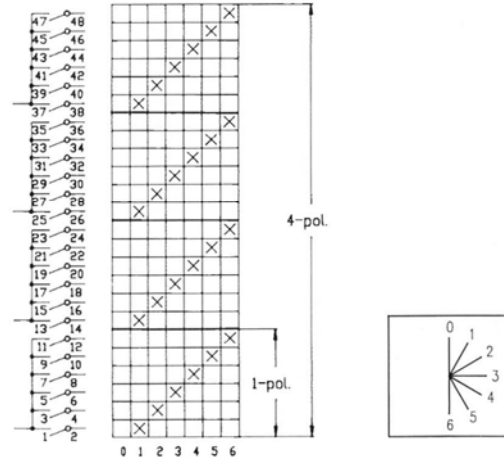
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4-way switches with 0-position



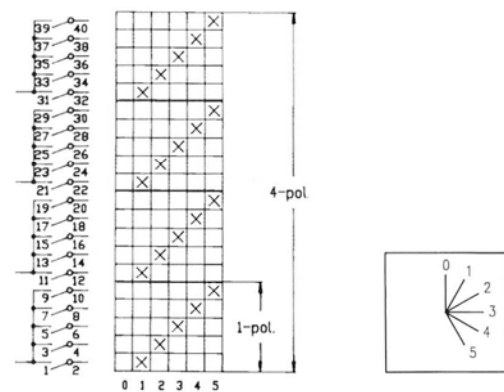
		ABG 10	ABB 25	ABB 63
	Number of contact sections	Cat.No. SK 632		
1-pole	2	2069	5069	8069
2-pole	4	2073	5073	8073
3-pole	6	2077	5077	8077
4-pole	8	2081	5081	8081
5-pole	10	2085	5085	8085
6-pole	12	2089	5089	8089

6-way switches with 0-position



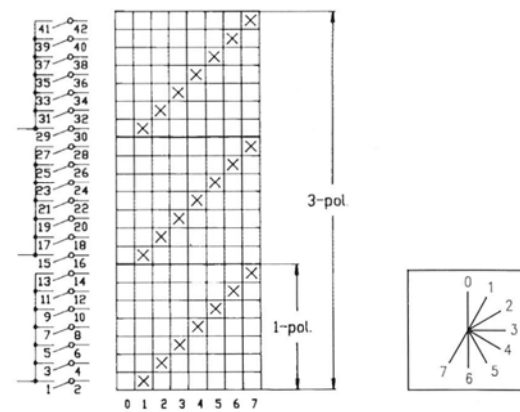
		ABG 10	ABB 25	ABB 63
	Number of contact sections	Cat.No. SK 632		
1-pole	3	2109	5109	8109
2-pole	6	2113	5113	8113
3-pole	9	2117	5117	8117
4-pole	12	2121	5121	8121

5-way switches with 0-position



		ABG 10	ABB 25	ABB 63
	Number of contact sections	Cat.No. SK 632		
1-pole	3	2093	5093	8093
2-pole	5	2097	5097	8097
3-pole	8	2101	5101	8101
4-pole	10	2105	5105	8105

7-way switches with 0-position



		ABG 10	ABB 25	ABB 63
	Number of contact sections	Cat.No. SK 632		
1-pole	4	2125	5125	8125
2-pole	7	2129	5129	8129
3-pole	11	2133	5133	8133

If the rotary switch is to have rear mounting, another type of actuating device or another type of front trim plate, these can be ordered as given on p. 15.

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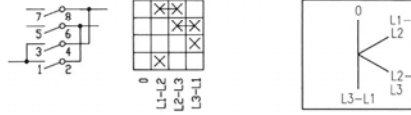
Ammeter switches

Number of contact sections	ABG 10	ABB 25	ABB 63	Connection example
5	0177	3177	6177	See page 24

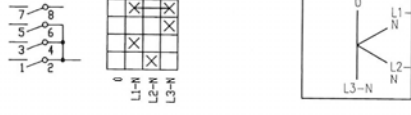
Cat.No. SK 632

Voltmeter switches

For measurement between phases
2 **0185** - - See page 24



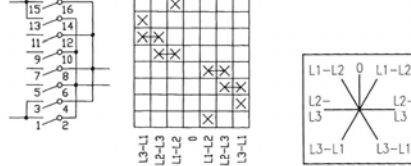
For measurement between phase and neutral
2 **0187** - - See page 24



For measurement between phases and between phases and neutral
3 **0189** - - See page 24

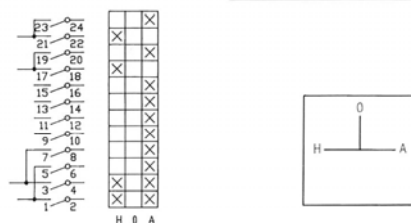


For measurement between phases in two three-phase systems
4 **004-B** - - See page 24



Phase switches

Provided with removable operating handle
6 **0195** - -



If the rotary switch is to have rear mounting, another type of actuating device or another type of front trim plate, these can be ordered as given on p. 15.

Test switches

Number of contact sections	ABG 10	ABB 25	ABB 63
Swedish text	1 0197	-	-
English text	1 0209	-	-
Optional	1 0213	-	-
Max. number of characters possible given on page 17.	State desired text	-	-

Cat.No. SK 632

Impulse switches

Number of contact sections	ABG 10	ABB 25	ABB 63
Swedish text	1 0151	-	-
Optional	1 0051	-	-
Max. number of characters possible given on page 17.	State desired text	-	-

Number of contact sections	ABG 10	ABB 25	ABB 63
Swedish text	1 0153	-	-
English text	1 0031	-	-
Optional	1 0053	-	-
Max. number of characters possible given on page 17. Connection example, see page 24.	State desired text	-	-

Number of contact sections	ABG 10	ABB 25	ABB 63
Swedish text	1 0155	-	-
Optional	1 0055	-	-
Max. number of characters possible given on page 17. Connection example, see page 24.	State desired text	-	-

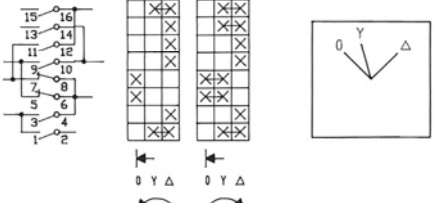
Number of contact sections	ABG 10	ABB 25	ABB 63
1	0161	-	-

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Star-delta starter switches

The star-delta starter switches are delivered with pistol grips

Number of contact sections	ABG 10	ABB 25	ABB 63	Connection example
4	Cat.No. SK 632			
		0583	1083	See page 25

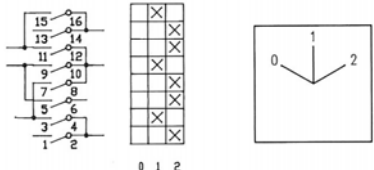


Pole changing starter switches

Number of contact sections	ABG 10	ABB 25	ABB 63	Connection example
	Cat.No. SK 632			

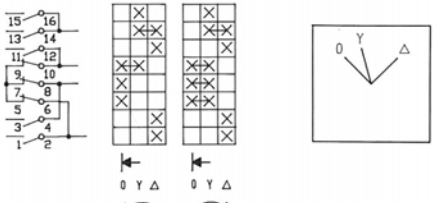
For two-speed motors

4	0555	0563	1063	See page 26
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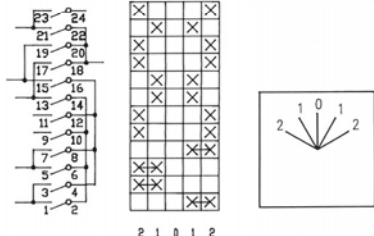
To be combined with d.o.l. starters

4	0603	1103	See page 25
---	-------------	-------------	-------------



For reversing two-speed motors

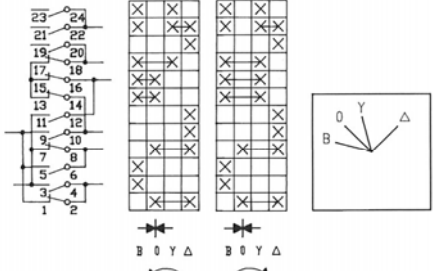
6	0585	0565	1065	See page 26
---	-------------	-------------	-------------	-------------



With brake position

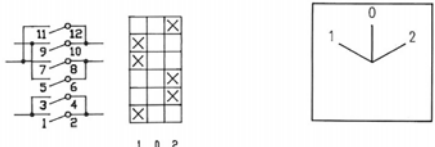
To be combined with d.o.l. starters

6	0605	1105	See page 25
---	-------------	-------------	-------------



Reversing starter switches

3	0509	0551	1051	See page 26
---	-------------	-------------	-------------	-------------



If the rotary switch is to have rear mounting, another type of actuating device or another type of front trim plate, these can be ordered as given on p. 15.

3.1 Fill-in example – contact diagram

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Rotary switches with special contact arrangements

Contact sections

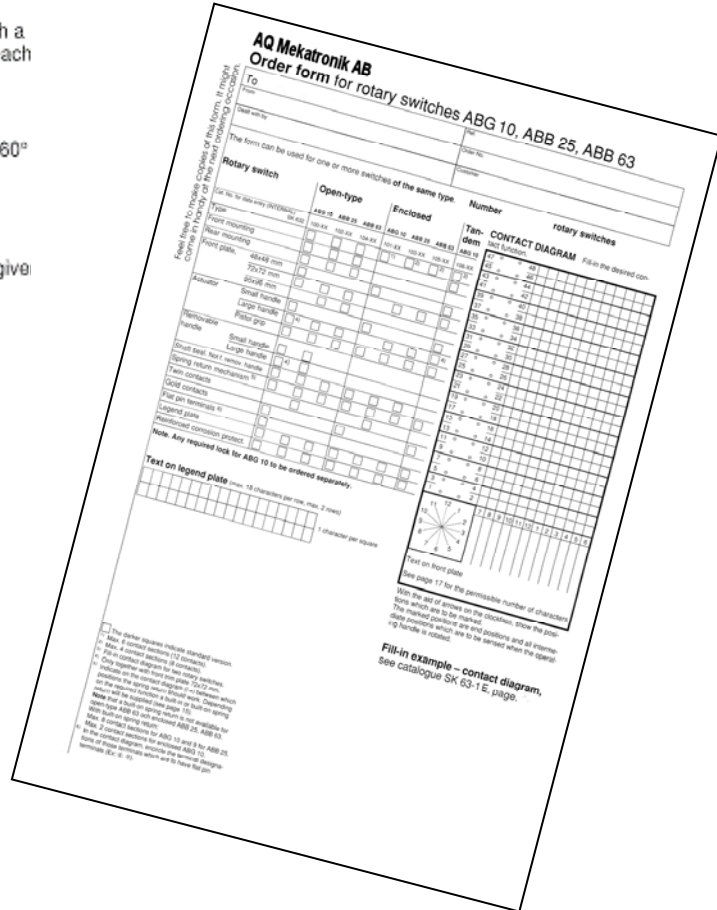
ABG 10, 25 and 63 are available with a maximum of 12 contact sections. ABG 10 with tandem coupling and with a maximum of 24 contact sections (two rotary switches, each with a maximum of 12 contact sections).

Operating positions

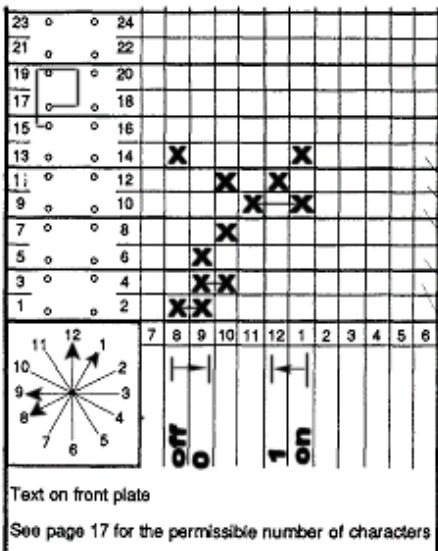
The angle between the operating positions can be 30°, 60° 90°.

Ordering

Use the ordering form on page 17. The desired version should be stated and the symbols given as in example below.



Example



Connection between terminals 17–19 and 15–19.

Connections with jumper links available between 1–3, 2–4, 5–7 etc. and between 1–5, 2–6, 3–7, 4–8 etc. (see page 14).

Contact 13–14 closed 8 and 1 o'clock.

Contact 11–12 closed 10 and 12 o'clock.

Contact 9–10 closed 11, 12 and 1 o'clock.

Contact 5–6 opens before contact 7–8 closes.

Contact 3–4 closes before contact 1–2 opens.

Spring return from 8 o'clock to 9 o'clock and from 10 o'clock to 12 o'clock.


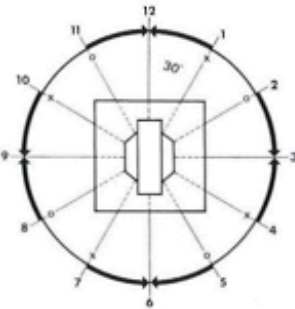
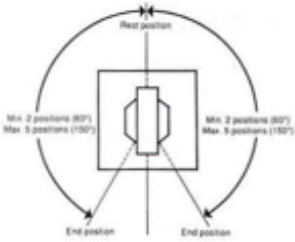
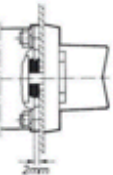
Text on front plate:
 8 o'clock: Off 12 o'clock: 1
 9 o'clock: 0 1 o'clock: On

With the aid of arrows on the clockface, show the positions which are to be marked. The marked positions are end positions and all intermediate positions which are to be sensed when the operating handle is rotated.


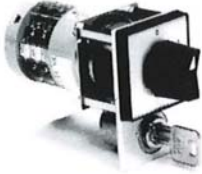

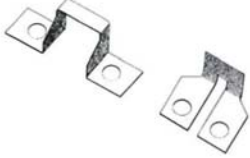
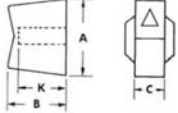
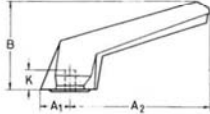
If certain interruption between two positions is desired the angle between them must be at least 60°.

4. Ordering table, accessories

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		For type	Cat.No.
Rotary switches for rear mounting 	Supplementary Cat.Nos. of mounting plates, fitted for rear mounting.	ABG 10	SK 632 9007
		ABB 25	9008
		ABB 63	9009
Spring return Built-in return spring 	Allows resetting to a maximum of 30° from one or both end positions. o only positions 2, 5, 8 or 11 can be used as anti-clockwise end positions. x only positions 1, 4, 7 or 10 can be used as clockwise end positions. Positions 12, 3, 6 and 9 o'clock are always provided but only as positions of rest if they are between end positions. E.g. if spring return is required from 8 o'clock to 9 o'clock and from 4 o'clock to 3 o'clock, the positions of rest are always provided at 9, 12 and 3 o'clock. In order to ensure satisfactory spring return, a maximum of two contacts should break when rotating from end position to position of rest.	For open and enclosed	
		ABG 10	SK 632 9037
		ABB 25	9038
		ABB 63	9039
Built-on return spring 	Fits to the rear of a rotary switch and occupies the space of four contact sections. This implies that the maximum number of contact sections is reduced to 8 on open-type versions and to 2 on enclosed type ABG 10. In enclosed type ABB 25 space is not available for this. The built-on return spring allows only one position of rest. The mechanism allows a min. of 30° and a max. of 150° from each direction. When rotating between pos. of rest and end positions, the intermediate pos. can be felt quite distinctly.	ABG 10	SK 632 9028
		ABB 25	9029
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> Return-spring mech. are only supplied fitted to simultaneously ordered rotary switches. </div>			
Shaft seals 	For front mounted rotary switches. The Cat.No. refers to a rubber ring seal and a spacer. Fitting instructions are provided.	ABG 10	SK 632 9020
		ABB 25	9022
		ABB 63	9024

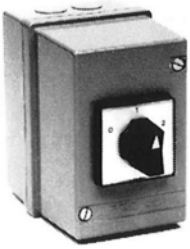
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		For type	Cat.No.	
Removable operating handles				
	Removable handles which, via a coupling, transmit the rotary force to the switch shaft. The handle can only be removed when the switch is in position 12. The extension of the switch shaft is inaccessible for unauthorised operation when the handle has been removed. When installed from the front, the switch is mounted on spacers. Fixing details and mounting instructions are provided.	ABG 10	SK 632 9221	
		ABB 25	9223	
Locks				
For ABG 10 only				
	For locking the operating handle in different positions. Locks for open-type ABG 10 are ordered in accordance with the adjacent table.	No. of locking pos.	Key can be removed in position	
		One	3, 6, 9 or 12	Locked and unlocked
				Locked
		Six	2, 4, 6, 8, 10 and 12	Locked and unlocked
			or	
			1, 3, 5, 7, 9 and 11	Locked
	¹⁾ The desired position is obtained by rotating the locking plate on the shaft.			
Tandem coupling				
	With a tandem coupling, two front mounted rotary switches can be operated with one handle. The Cat.No. refers to base plate, toothed wheels, spacers and screws. Mounting instructions are included.	ABG 10	SK 632 9026	
Jumper links				
	For connecting terminals: 1-3, 2-4, 5-7 and so forth.	ABG 10 ABB 25 ABB 63	SK 632 9203 9204 9205	
	For connecting terminals: 1-5, 2-6, 3-7, 4-8 and so forth.	ABG 10 ABB 25 ABB 63	SK 632 9206 9207 9208	
Handles				
	Suitable for	For square shaft, mm	Dimensions, mm	
	ABG 10	6x6	A B C K	
	ABG 10, ABB 25	6x6	44 28 14 22	
ABB 63	8x8	44 28 14 22		
			A ₁ A ₂ B K	
	ABG 10, ABB 25	6x6	17 77 48 25	
	ABB 63	8x8	17 77 48 25	

Flat pin terminals for open-type ABG 10

Ordered on the form referring to special rotary switches, see page 29.

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	For type	Number of contact sections	Cat.No.
Enclosed rotary switches			
	Supplementary Cat.Nos. for ordering enclosed rotary switches.	ABG 10	1 – 3
		ABG 10	4 – 6
	Off pressure die-cast light alloy, chromated and finished with grey-blue two-component varnish paint.	ABB 25	1 – 4
	Provided on inside with earthing terminal. Fixing holes sealed against apparatus space. Knock-out openings at the top and bottom. Rubber grommets for sealing cable entries are included with each enclosure.	ABB 63	1 – 4
Reinforced corrosion protection			
Gives so called tropic protection.	ABG 10		SK 632 0001
	ABG 25		0002
	ABG 63		0003

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		Cat.No.
Legend plate		
	Of silver-grey anodized aluminium. These are clipped onto the rear of the front trim plate. The same legend plate is used for all sizes of rotary switches.	Legend plate without text SK 782 9161
	No. of characters that can be engraved: 18 per row. Max. 2 rows. Height of characters 3 mm. Cat.No. SK 782 9999, the desired text and number of rows must be stated.	Engraving 9999
Transparent plastic plate for front trim plate		
	For spare. The plate is normally included in rotary switches. Engraving can be ordered as given on page. 19.	For front plate
		48x48 mm SK 632 9297
		72x72 mm 9298
		96x96 mm 9299
Sheets with text		
	These labels with the following wording are available ex-stock (when other wording is required order engraving as given on page. 19.	The material of the labels allows wording to be printed in Indian ink.
48 x 48 mm		
Cat.No. SK 632	9300	9307
	0312	9309
	9303	9313
	9308	9314
	9301	
Cat.No. SK 632	9302	9315
	9316	9311
	9317	9310¹⁾
	9305	2948 2489-2
		2948 2489-1¹⁾
Cat.No. SK 632	9318	9319
	9321	9322
	9323	9324
	SK 782 9155	
		Without text
72 x 72 mm		
Cat.No. SK 632	9350	9351
	9352	9353
	9354	9355
	9356	
Cat.No. SK 632 9357	SK 782 9156	
	Without text	
		Cat.No. SK 782 9157
		Without text

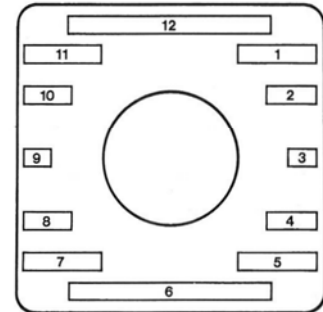
¹⁾ Text with the symbols R, S, T on back side.

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Engraving of position marks

Position as on clock face	For switches with			
	48x48 mm	72x72 mm		96x96 mm
	Small handle or pistol grip	Small handle or pistol grip	Large handle	Large handle or pistol grip
Max. number of characters per row				
1	5	9 ¹⁾	8	12 ¹⁾
2	3 ¹⁾	7 ¹⁾	4 ¹⁾	9 ¹⁾
3	2 ¹⁾	6 ¹⁾	4 ¹⁾	8 ¹⁾
4	3 ¹⁾	7 ¹⁾	4 ¹⁾	9 ¹⁾
5	5	9 ¹⁾	8	12 ¹⁾
6	7	15	15	15 ¹⁾
7	5	9 ¹⁾	8	12 ¹⁾
8	3 ¹⁾	7 ¹⁾	4 ¹⁾	9 ¹⁾
9	2 ¹⁾	6 ¹⁾	4 ¹⁾	8 ¹⁾
10	3 ¹⁾	7 ¹⁾	4 ¹⁾	9 ¹⁾
11	5	9 ¹⁾	8	12 ¹⁾
12	7	15	15	15 ¹⁾

¹⁾ Two rows can be accommodated.



Cat. No.

ABG 10	SK 632 999-1
ABB 25	SK 632 999-2
ABB 63	SK 632 999-3

State when ordering:

Cat. No.
Desired wording.
Position of text

5. Technical data, approvals

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Electrical data		ABG 10					ABB 25					ABB 63					
Rated insulation voltage, U_i	V	500					500					500					
Rated thermal current, I_{th}	A	10					25					63					
Making capacity	A	150					300					800					
Rated control voltage, U_c	V	110	220	380	440	500	110	220	380	440	500	110	220	380	440	500	
Breaking capacity at AC, IEC 408																	
$\cos \varphi \geq 0,35$	1 phase	A	70	45	35	–	15	150	100	70	–	50	–	–	–	–	–
	3 phases	A	–	75	50	–	40	–	275	200	–	140	–	350	250	–	150
Start of three-phase motor Utilisation category AC-3, IEC 408																	
at d.o.l. start																	
Rated current	A	10	8	6	–	5	25	25	25	–	18	63	43	31	–	19	
Rated motor output	kW	1,3	2,1	2,8	–	3	3,6	7,2	12,3	–	11,7	9,4	12,8	15,9	–	12,8	
at star-delta start																	
Rated current	A	–	–	–	–	–	25	25	25	–	25	63	63	50	–	40	
Rated motor output	kW	–	–	–	–	–	3,6	7,2	12,3	–	16,3	9,4	18,7	25,7	–	27	
Breaking capacity at DC, IEC 337-1 $L/R \leq 40$ ms																	
Number of contacts in series																	
1	A	3	0,75	–	0,25	–	6	0,9	–	0,3	–	6	0,9	–	0,3	–	
2	A	10	3	–	0,5	–	50	10	–	1,5	–	50	10	–	1,5	–	
3	A	15	6	–	2	–	50	20	–	5	–	–	–	–	–	–	
4	A	20	8	–	4	–	50	50	–	10	–	50	50	–	10	–	
Connectible cable areas																	
Contact terminals	mm ²	2x2,5					4					10 ¹⁾					
Earth terminals	mm ²	–					4					10					
In enclosure																	
Contact terminals	mm ²	2x2,5					4					10 ¹⁾					
Earth terminals	mm ²	2x4					2x6					2x10					
Degrees of protection acc. to IEC 529																	
Without sealing		IP 42					IP 42					IP 42					
With sealing		IP 54					IP 54					IP 54					

¹⁾ 16 mm² cable can be connected with cable lugs of max. width 13 mm for M5 or M6 screws.

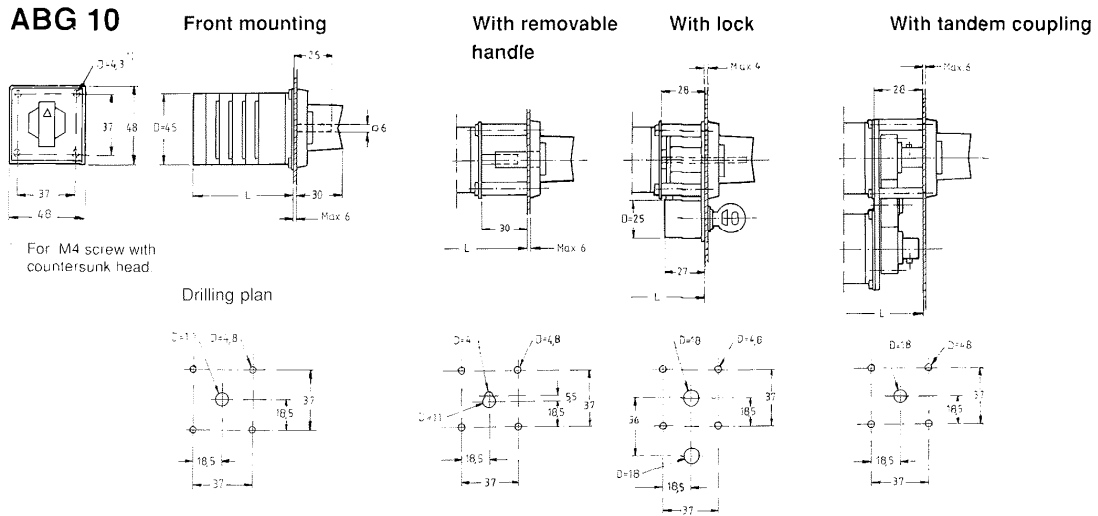
Approvals

Approvals available for:

Open-type ABG 10	DEMKO, NEMKO, CSA, and USSR.
Enclosed ABG 10	NEMKO
Open-type and enclosed ABB 25 and ABB 63	SEMKO, NEMKO, CSA

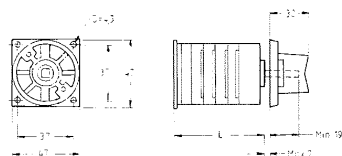
6. Dimensions

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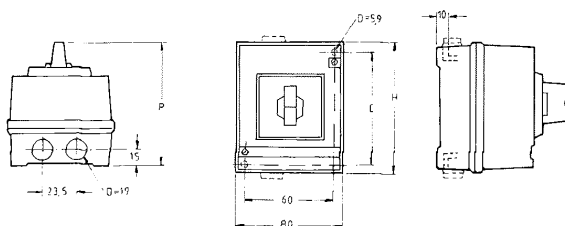
Rotary switches	Number of contact sections											
	1	2	3	4	5	6	7	8	9	10	11	12
without accessories	41	50	58	67	75	84	92	101	109	118	126	135
with built-on spring return mechanism	77	86	94	103	111	120	128	137	-	-	-	-
with removable handle	71	80	88	97	105	114	122	131	139	148	156	165
with lock	69	78	86	95	103	112	120	129	137	146	154	163
with tandem coupling	69	78	86	95	103	112	120	129	137	146	154	163
with shaft sealing	43	52	60	69	77	86	94	103	111	120	128	137
with protective covers only	46	50	63	67	81	84	108	108	109	118	126	135

ABG 10 Rear mounting



Rotary switches	Number of contact sections											
	1	2	3	4	5	6	7	8	9	10	11	12
without accessories	44	53	61	70	78	87	95	104	112	121	129	138
with built-on spring return mechanism	80	89	97	106	114	123	131	140	-	-	-	-

ABG 10 Enclosed



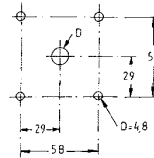
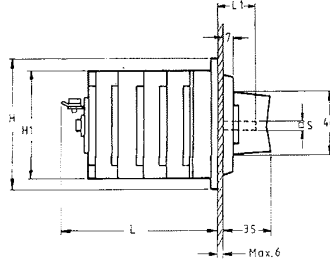
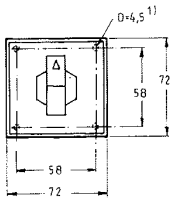
Number of contact sections	C	H	P
	1-3	71	90
4-6	100	120	133

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ABB 25, ABB 63

Front mounting

Drilling plan



¹⁾ For M4 screw with countersunk head.

Rotary switches

Type	Dimensions, mm				
ABB	D	H	H1	L1	S

Number of contact sections

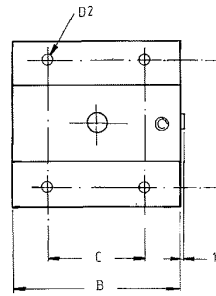
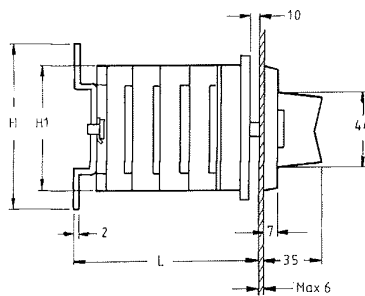
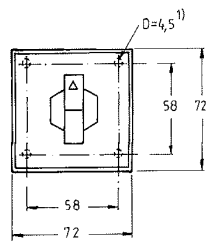
1	2	3	4	5	6	7	8	9	10	11	12
---	---	---	---	---	---	---	---	---	----	----	----

Dimension L, mm

without accessories	25	10	69	58	29,5	6	47	61	75	89	103	117	131	145	159	173	187	201
	63	13	90	78	29,5	8	58	76	94	112	130	148	166	184	202	220	238	256
with built-on spring return mechanism	25	10	69	58	29,5	6	82	96	110	124	138	152	166	180	194	-	-	-
with removable handle	25	10	69	58	29,5	6	77	91	105	119	133	147	161	175	189	203	217	231
with shaft sealing	25	10	69	58	29,5	6	50	64	78	92	106	120	134	148	162	176	190	204
	63	13	90	78	29,5	8	62	80	98	116	134	152	170	188	206	224	242	260

ABB 25, ABB 63

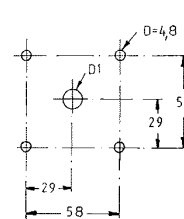
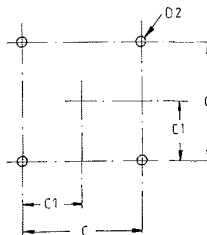
Rear mounting



¹⁾ For M4 screw with countersunk head.

Drilling plan in front

Drilling plan in rear plane



Rotary switches

Type	Dimensions, mm						
ABB	B	C	C1	D1	D2	H	H1

Number of contact sections

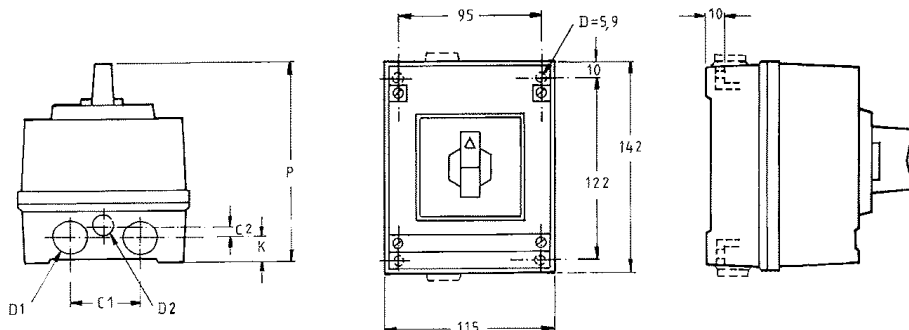
1	2	3	4	5	6	7	8	9	10	11	12
---	---	---	---	---	---	---	---	---	----	----	----

Dimension L, mm

without accessories	25	77	58	29	10	4,8	69	58	53	67	81	95	109	123	137	151	165	179	193	207
	63	101	75	37,5	13	5,8	89	78	63	81	99	117	135	153	171	189	207	225	243	261

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ABB 25, ABB 63 Enclosed



Rotary switches type	Dimensions, mm					
	C1	C2	D1	D2	K	P
ABB 25	46	7	23		18	139
ABB 63	38	26	29	19	24,5	187

Front design ABG 10

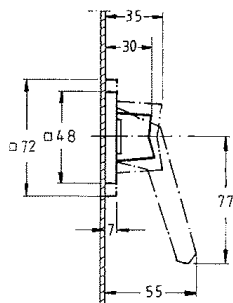
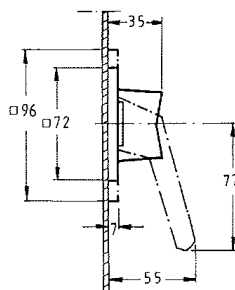


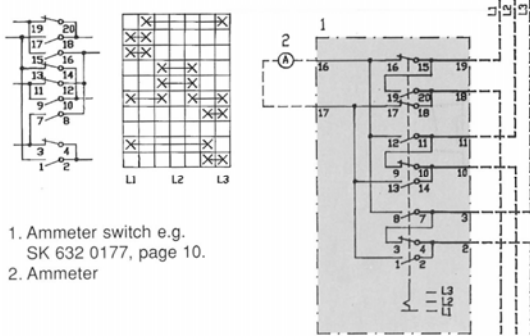
ABB 25, ABB 63



7. Application examples and diagrams

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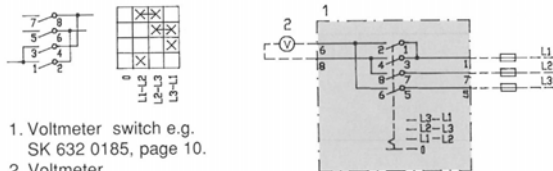
Ammeter switches



1. Ammeter switch e.g. SK 632 0177, page 10.
2. Ammeter

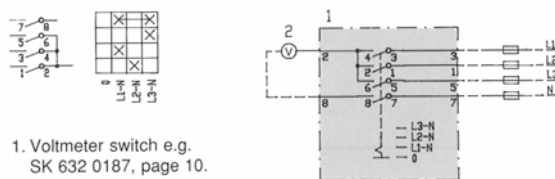
Voltmeter switches

For measurement between phases



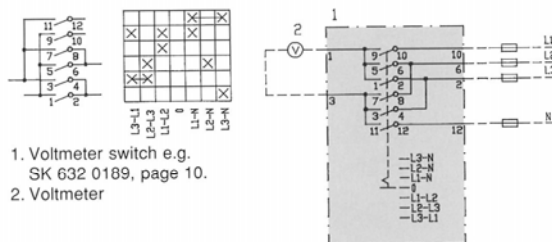
1. Voltmeter switch e.g. SK 632 0185, page 10.
2. Voltmeter

For measurement between phases and neutral



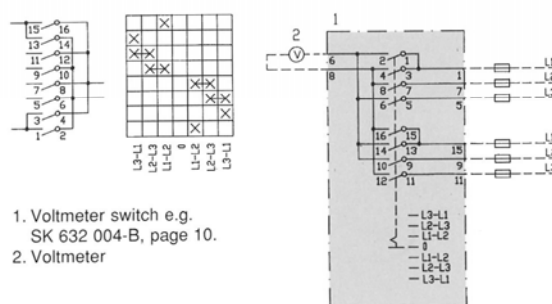
1. Voltmeter switch e.g. SK 632 0187, page 10.
2. Voltmeter

For measurement between phases and between phases and neutral



1. Voltmeter switch e.g. SK 632 0189, page 10.
2. Voltmeter

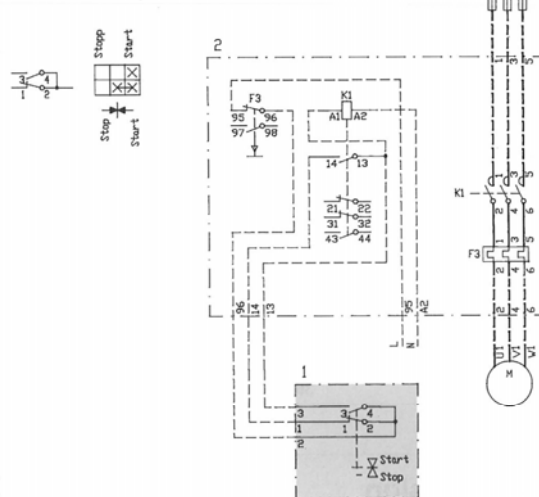
For measurement between phases in two three-phase systems



1. Voltmeter switch e.g. SK 632 004-B, page 10.
2. Voltmeter

Rotary impulse switches

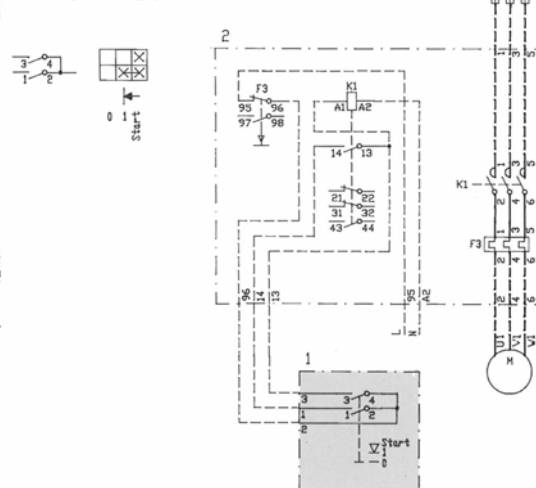
For controlling d.o.l. starters



1. Rotary switch with spring return from start and stop position e.g. SK 632 0153, page 10.
2. D.o.l. starter

K1 Contactor
F3 Thermal overload relay
L-N Control voltage

For controlling d.o.l. starters.
With operating position



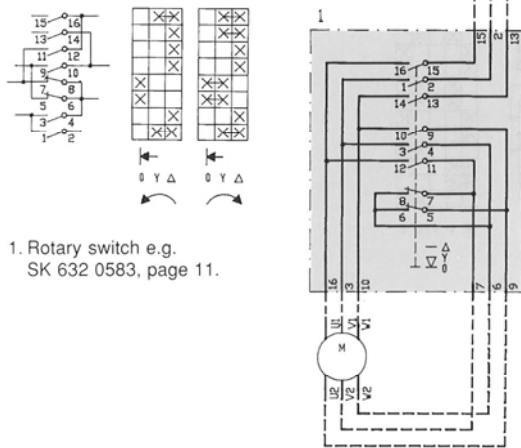
1. Rotary switch with spring return from start positions e.g. SK 632 0155, page 10.
0= stop; 1= running
2. D.o.l. starter

K1 Contactor
F3 Thermal overload relay
L-N Control voltage

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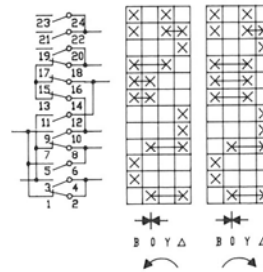
Star-delta connection

With rotary switch



1. Rotary switch e.g.
SK 632 0583, page 11.

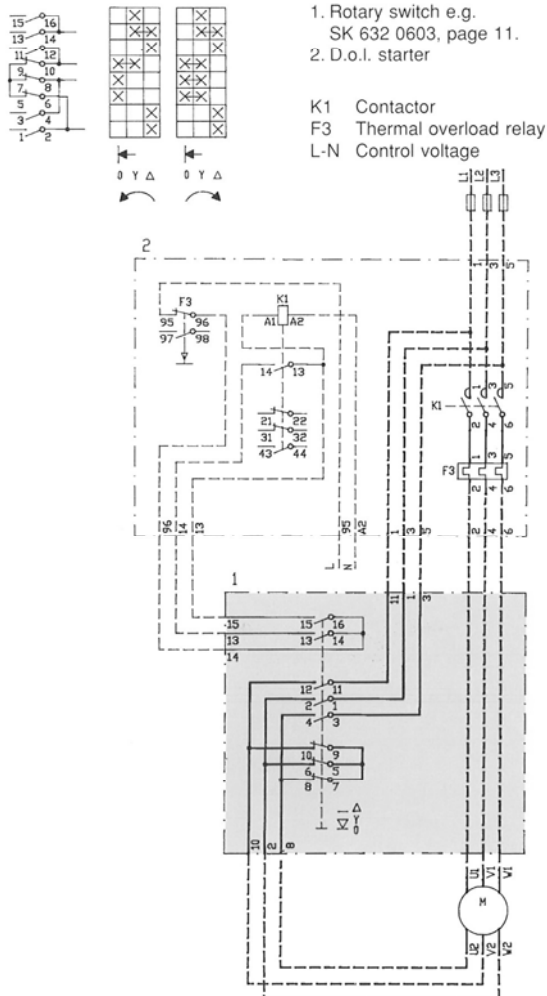
With rotary switch and d.o.l. starter.
With braking position



1. Rotary switch e.g.
SK 632 0605, page 11.
2. D.o.l. starter

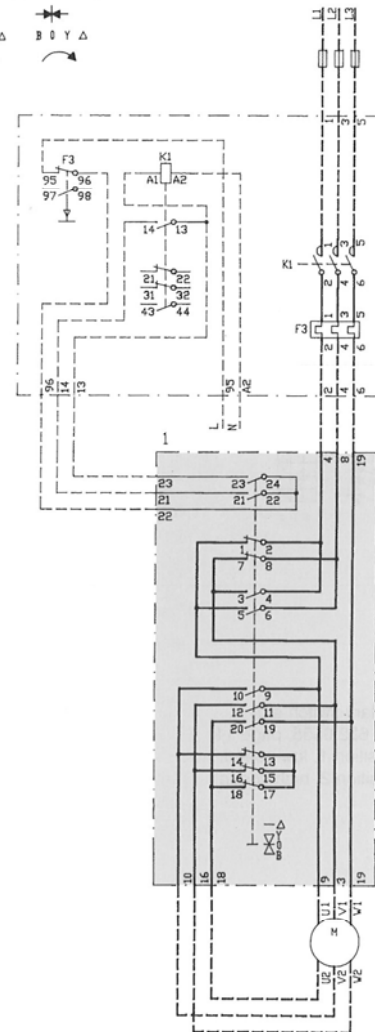
K1 Contactor
F3 Thermal overload relay
L-N Control voltage

With rotary switch and d.o.l. starter



1. Rotary switch e.g.
SK 632 0603, page 11.
2. D.o.l. starter

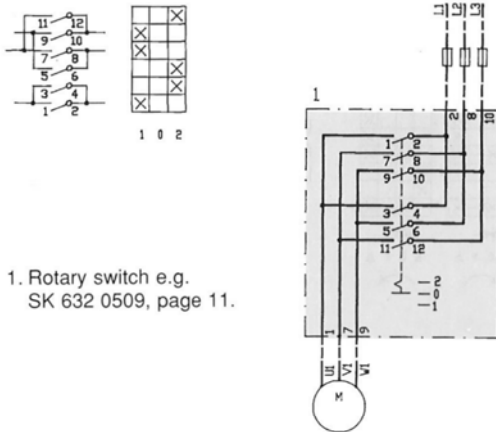
K1 Contactor
F3 Thermal overload relay
L-N Control voltage



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Reversing

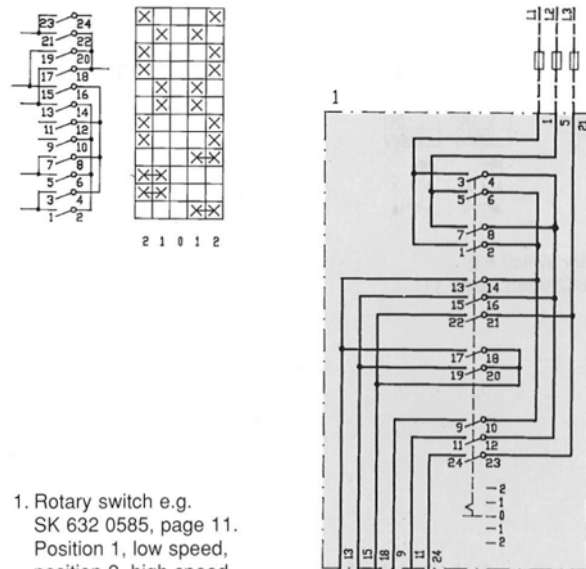
Rotary switch for reversing



1. Rotary switch e.g.
SK 632 0509, page 11.

Pole-changing and reversing

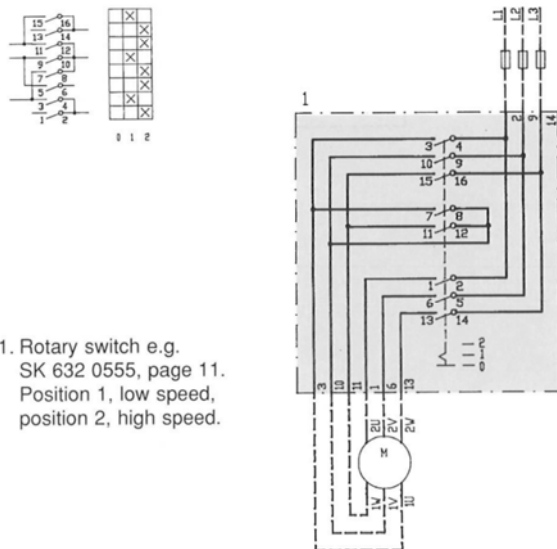
Rotary switch for pole-changing and reversing two-speed motors with one winding.



1. Rotary switch e.g.
SK 632 0585, page 11.
Position 1, low speed,
position 2, high speed.

Pole-changing

Rotary switch for pole-changing two-speed motors with one winding



1. Rotary switch e.g.
SK 632 0555, page 11.
Position 1, low speed,
position 2, high speed.

8. Weights

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Rotary switches

without actuator and front trim plate.

	Number of contact sections											
	1	2	3	4	5	6	7	8	9	10	11	12
	Weight, g											
ABG 10	85	105	124	143	162	181	200	219	238	257	276	295
ABB 25	234	292	350	408	466	524	582	640	698	756	814	872
	For rear mounted ABB 25 add 60 g.											
ABB 63	630	730	830	930	1030	1130	1230	1330	1430	1530	1630	1730
	For rear mounted ABB 63 add 100 g.											

	Weight, g
Actuator	
Small handle	6
Large handle	12
Pistol grip	21
Small handle with coupling	64
Large handle with coupling	76
Front trim plate	
Size 48x48 mm	14
Size 72x72 mm	26
Size 96x96 mm	85
Spring return mechanism	
Incorporated	85
Built-on	128
Lock	205
Tandem coupling	230
Shaft sealing	2
Legend plate	6
Jumper links	
for connection between 1-3, 2-4, 5-7 etc.	
for ABG 10	1
for ABB 25	1
for ABB 63	2
for connection between 1-5, 3-7, 2-6 etc.	
for ABG 10	1
for ABB 25	2
for ABB 63	3
Transparent plastics plate for front trim plate	
size 48x48 mm	5
size 72x72 mm	12
size 96x96 mm	23
Enclosures	
for ABG 10	
max. 3 contact sections	300
max. 6 contact sections	470
for ABB 25	
max. 4 contact sections	650
for ABB 63	
max. 4 contact sections	750

9. Ordering form

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Feel free to make copies of this form. It might come in handy at the next ordering occasion.

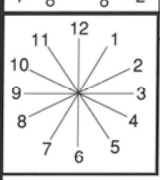
To	Ref.
From	Order No.
Dealt with by	Customer

The form can be used for one or more switches of the same type. Number _____ rotary switches

Rotary switch	Open-type			Enclosed			Tan-dem
	ABG 10	ABB 25	ABB 63	ABG 10	ABB 25	ABB 63	
Cat. No. for data entry (INTERNAL) SK 632	100-XX	102-XX	104-XX	101-XX	103-XX	105-XX	106-XX
Type	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ¹⁾	<input type="checkbox"/> ²⁾	<input type="checkbox"/> ²⁾	<input type="checkbox"/> ³⁾
Front mounting	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Rear mounting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Front plate, 48x48 mm	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Actuator	Small handle	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
	Large handle	<input type="checkbox"/> ⁴⁾	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> ⁴⁾
	Pistol grip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Removable handle	Small handle	<input type="checkbox"/>	<input type="checkbox"/>				
	Large handle	<input type="checkbox"/> ⁴⁾	<input type="checkbox"/>				
Shaft seal. Not f. remov. handle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spring return mechanism ⁵⁾	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Twin contacts		<input type="checkbox"/>			<input type="checkbox"/>		
Gold contacts	<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
Flat pin terminals ⁶⁾	<input type="checkbox"/>						
Legend plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reinforced corrosion protect.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CONTACT DIAGRAM Fill-in the desired contact function.

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



7	8	9	10	11	12	1	2	3	4	5	6
---	---	---	----	----	----	---	---	---	---	---	---

Text on front plate
See page 17 for the permissible number of characters

Note. Any required lock for ABG 10 to be ordered separately.

Text on legend plate (max. 18 characters per row, max. 2 rows)

1 character per square

The darker squares indicate standard version.
¹⁾ Max. 6 contact sections (12 contacts).
²⁾ Max. 4 contact sections (8 contacts).
³⁾ Fill-in contact diagram for two rotary switches.
⁴⁾ Only together with front trim plate 72x72 mm.
⁵⁾ Indicate on the contact diagram (↔) between which positions the spring return should work. Depending on the required function a built-in or built-on spring return will be supplied (see page 15).
Note that a built-on spring return is not available for open-type ABB 63 och enclosed ABB 25, ABB 63.
 With built-on spring return:
 Max. 8 contact sections for ABG 10 and 9 for ABB 25.
 Max. 2 contact sections for enclosed ABG 10.
⁶⁾ In the contact diagram, encircle the terminal designations of those terminals which are to have flat pin terminals (Ex: Ⓞ, Ⓢ).

Fill in example – contact diagram,
See page 14

With the aid of arrows on the clockface, show the positions which are to be marked. The marked positions are end positions and all intermediate positions which are to be sensed when the operating handle is rotated.

10. Index of Cat.Nos.

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009	17	4953...5065	11
013	15	6101...6119	6
014	17	5069...5133	11
0101...0115	6	6177	12
0285...0293	6	6201...6207	10
0317...0337	6	6289...7013	6
0151...0197	12	7017...7357	7
0201...0207	10	7601...7761	8
0209, 0213	12	7765...7885	9
0219	10	7953...8065	10
0312	18	8069...8133	11
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2069...2133	11		
3101...3119	6		
3177	12		
3203...3207	10		
3289...3503	6		
3619...4013	6		