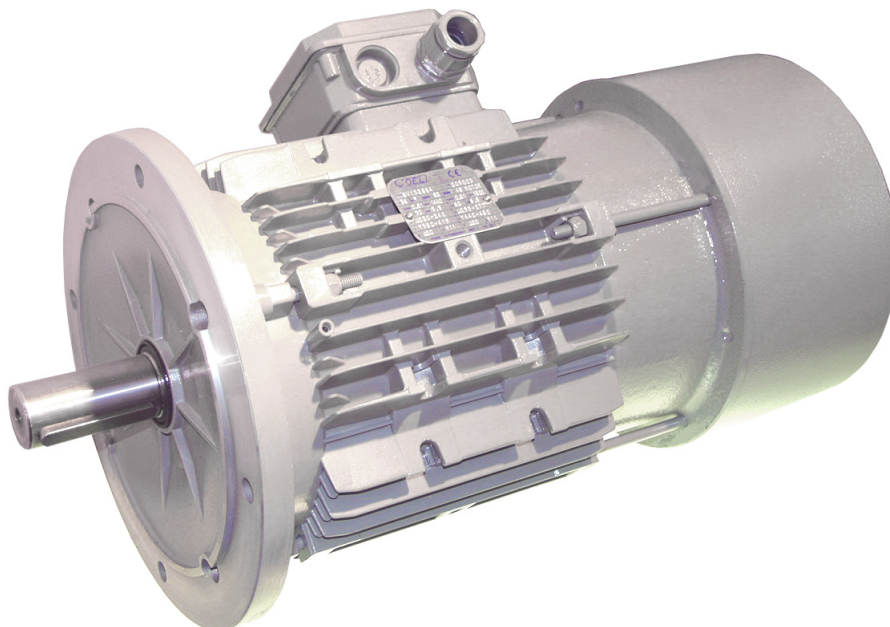


SW-SERIES

Asynchronous brake motors IP 56



SW series brake motors are not ventilated, suitable for S2 or S3 duty (depending on polarity), totally enclosed. This series has been designed for those kind of applications where the brake motor has often contacts with water such as marine applications or where you need to wash the motor to keep it clean. These motors are painted as standard with special painting for a total protection. The protection level of this series is IP56 as standard. All the motor cases are made in aluminium and are available in cast iron on request.

Features

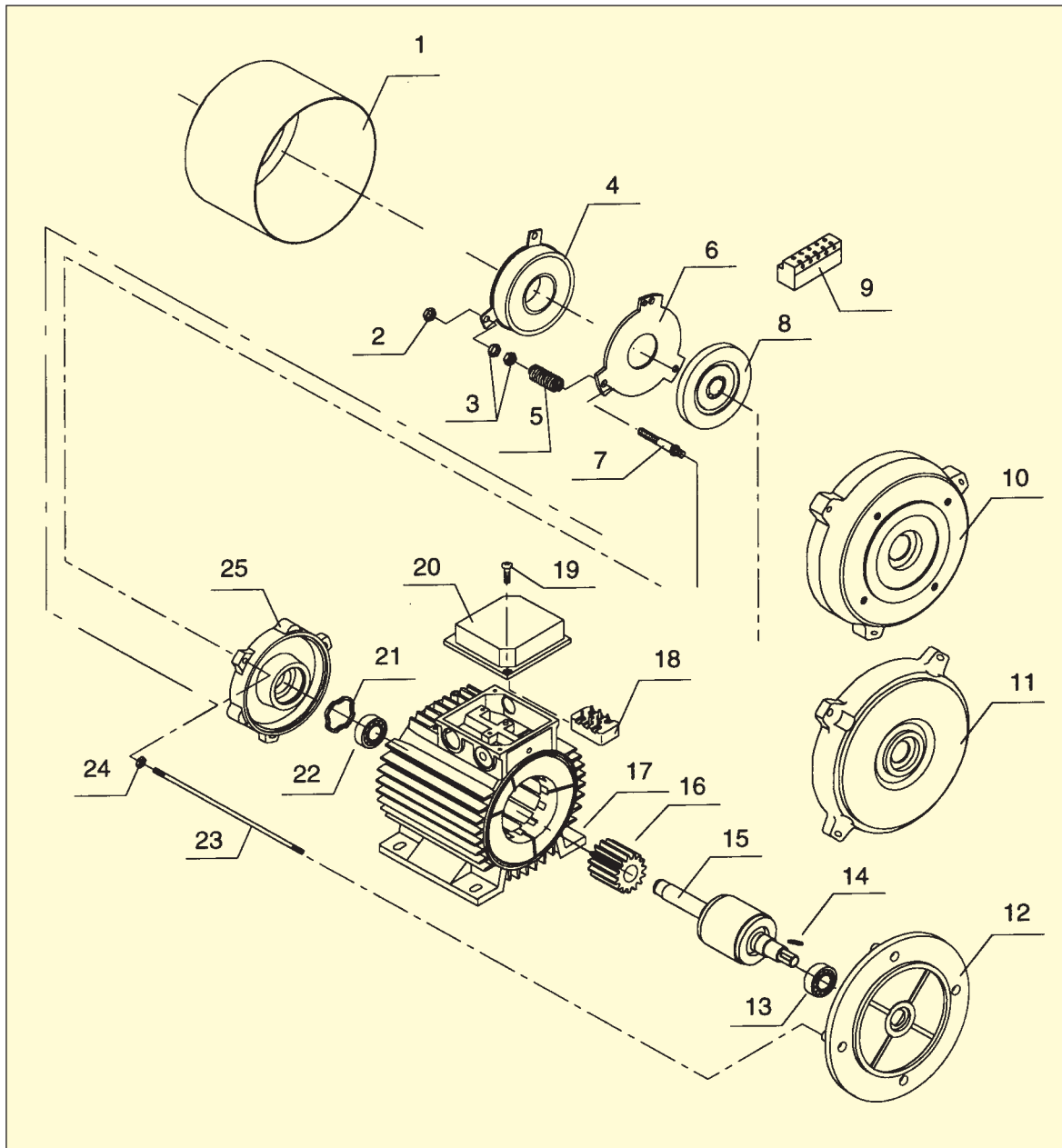
- Disk brake without axial sliding of the shaft.
- Adjustment of braking torque within very ample values.
- Brake operation within very low noise and amperage levels.
- SW motors are fitted with DC electromagnet as standard. The electromagnet three-phase can be fitted on request.
- On SW series the manual brake release is not suitable as standard feature due to ensure a real and complete protection of the brake part.
- Brakes mounted on SW series as standard are FK type for frame 90/100 and F type for 112/160; for further information about brake maintenance and characteristics, please see related pages to F (page16) or FK (page36) of this catalogue.

Possible product configurations

- Motors with feet (B3)
- Motors with feet and flange
- Motors with flange B5 or B14
- Motors with B5 reduced flange from frame 90 to 160
- Motors with B14 reduced flange from frame 90 to 100
- Reduced shafts
- Special shafts
- Motors B3 with terminal box on the side (up side on series)
- Special windings
- Separated brake supply
- AC brake
- Insulation in H class
- Special "P" rotor for start up torque increasing
- Special painting (also for marine ambient)
- Thermal protections
- Anti condense resistors
- R or S level equilibration of the rotor
- Custom executions

For other special requests, please contact COEL

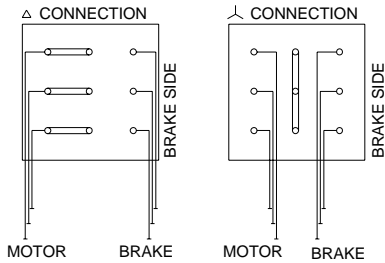
SW-Spare parts



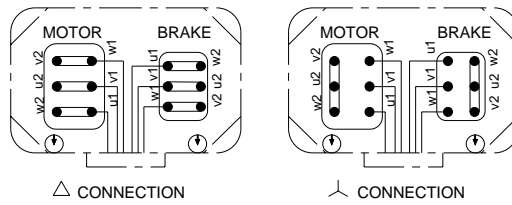
1 Brake cover	15 Rotor - shaft group
2 Electromagnet locking nuts	16 Brake gear
3 Adjustment nuts	17 Motor case and wined stator
4 Electromagnet	18 Terminal board
5 Brake spring	19 Terminal board base cover nuts
6 Mobil anchor	20 Terminal board base cover
7 Guide drawrods	21 Compensation ring
8 Brake disk	22 Back side bearing
9 Rectifier	23 Drawroads kit
10 B14 flange	24 Drawroad nuts
11 Front shield	25 Back side shield with frictional track
12 B5 flange	
13 Front bearing	
14 Key	

Connections

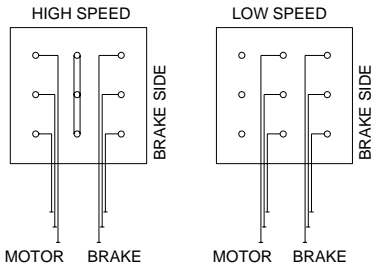
SEPARATE POWER SUPPLY three-phase motor and brake



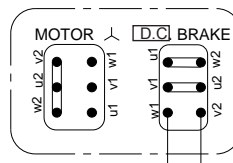
SEPARATE POWER SUPPLY three-phase motor and brake



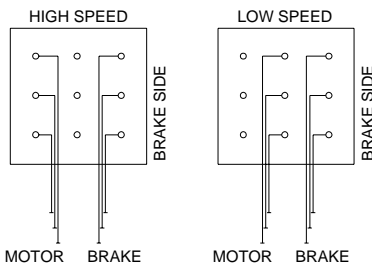
TWO SPEEDS SINGLE WINDING



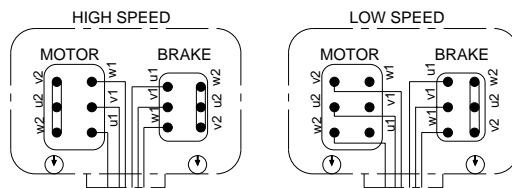
SEPARATE POWER SUPPLY D.C. BRAKE



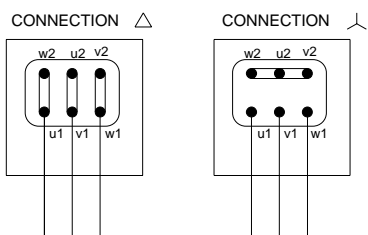
TWO SPEEDS DUAL WINDING



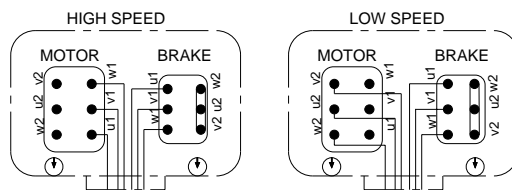
TWO SPEEDS SINGLE WINDING



SINGLE SPEED



TWO SPEEDS DUAL WINDING



The three-phase brake can be connected both at Δ and at Y
Always connect the ground wire

Three phase 2 poles - 3000 r.p.m.

Type	Kw S2 25min.	r.p.m.	Cos. ϕ	I n V.400	Ma/Mn	I.A/I.N	Inertia moment Jx Kgm ²	Braking Torque MAX Nm.	Starts C/h	A.V.400 Brake A.C. (m A)	A. V.230AC brake D.C. (m A)	Weight KG.
SW90SA2	1,50	2780	0,86	3,50	2,5	6,8	0,00189	20	4000	180	300	17
SW90SB2	1,84	2780	0,86	4,30	2,5	6,8	0,00200	20	3500	180	300	18
SW90LA2	2,20	2800	0,88	4,70	2,5	6,8	0,00232	20	3000	180	300	20
SW100LA2	3,00	2800	0,88	6,50	2,9	8,0	0,00572	40	1200	250	350	25
SW112MB2	4,00	2820	0,87	8,20	2,4	7,4	0,00720	80	900	500	550	45
SW132SA2	5,50	2880	0,85	11,0	2,3	7,5	0,03100	150	500	800	600	78,5
SW132SB2	7,50	2880	0,85	15,0	2,3	7,5	0,03320	150	500	800	600	84,5
SW132MA2*	9,20	2870	0,88	18,0	2,3	7,5	0,03980	150	500	800	600	87
SW160MA2	11,00	2890	0,88	20,8	3,0	9,0	0,06020	175	300	800	600	148
SW160MB2	15,00	2900	0,87	29,0	3,0	8,0	0,06260	175	300	800	600	150
SW160LA2	18,50	2900	0,90	33,0	3,0	8,0	0,08960	175	290	800	600	167

Three phase 4 poles - 1500 r.p.m.

Type	Kw S2 25min.	r.p.m.	Cos. ϕ	I n V.400	Ma/Mn	I.A/I.N	Inertia moment Jx Kgm ²	Braking Torque MAX Nm.	Starts C/h	A.V.400 Brake A.C. (m A)	A. V.230AC brake D.C. (m A)	Weight KG.
SW90SA4	1,10	1400	0,77	2,7	2,30	4,6	0,00284	20	10000	180	300	20
SW90LA4	1,50	1400	0,75	3,7	3,00	4,9	0,00305	20	10000	180	300	22
SW90LB4*	1,85	1400	0,77	4,3	3,00	4,6	0,00388	20	9000	180	300	24
SW90LC4*	2,20	1400	0,78	5,4	2,90	4,3	0,00430	20	8000	250	300	26
SW100LA4	2,20	1410	0,78	5,0	2,70	5,5	0,00572	40	7500	250	350	36.3
SW100LB4	3,00	1410	0,82	6,4	2,70	5,0	0,00612	40	7000	250	350	39.7
SW100LC4*	3,30	1410	0,80	7,5	2,60	4,7	0,00750	40	7000	250	350	41
SW112MB4	4,00	1430	0,85	8,2	2,70	5,8	0,01180	80	3300	500	550	47
SW132SB4	5,50	1440	0,81	11,3	2,60	5,8	0,03320	150	1200	800	600	84,5
SW132MA4	7,50	1430	0,85	14,6	2,30	5,8	0,03900	150	1000	800	600	94,5
SW132MB4*	9,00	1430	0,84	17,9	2,30	5,8	0,04620	150	900	800	600	100
SW160MB4	11,00	1460	0,80	22,0	2,80	5,9	0,06260	175	600	800	600	148
SW160LA4	15,00	1460	0,82	29,0	2,30	5,9	0,08960	175	600	800	600	167
SW160LB4*	18,50	1450	0,83	37,0	2,20	5,8	0,09480	175	600	800	600	190

* Non unified powers

Three phase 6 poles - 1000 r.p.m.

Type	Kw S2 20min.	r.p.m.	Cos. φ	I n V.400	Ma/Mn	I.A/I.N	Inertia moment Jx Kgm ²	Braking Torque MAX Nm.	Starts C/h	A.V.400 Brake A.C. (m A)	A. V.230AC brake D.C. (m A)	Weight KG.
SW90SA6	0,75	910	0,68	2,3	2,2	3,3	0,00356	20	18000	250	300	16
SW90LA6	1,10	910	0,68	3,3	2,3	3,7	0,00472	20	14000	250	300	19
SW100LA6	1,50	930	0,71	3,9	2,4	4,3	0,00874	40	9000	250	350	27
SW100LB6*	1,85	920	0,68	5,0	2,6	4,3	0,00996	40	8500	250	350	30
SW112MB6	2,20	940	0,78	5,2	2,3	5,3	0,01680	80	4500	500	550	47
SW132SB6	3,00	960	0,76	7,0	2,1	5,6	0,03100	150	3000	800	600	84,5
SW132MA6	4,00	960	0,76	9,1	2,7	5,6	0,04250	150	3000	800	600	94,5
SW132MB6	5,50	960	0,78	12	2,1	5,5	0,05150	150	2800	800	600	100
SW160MB6	7,50	950	0,79	18	2,1	5,6	0,09700	175	900	800	600	148
SW160LA6*	9,50	950	0,80	22	2,0	5,5	0,1230	175	900	800	600	170
SW160LB6	11,00	960	0,80	26	2,0	5,5	0,1433	175	900	800	600	175

Three phase 8 poles - 750 r.p.m.

Type	Kw S2 25min.	r.p.m.	Cos. φ	I n V.400	Ma/Mn	I.A/I.N	Inertia moment Jx Kgm ²	Braking Torque MAX Nm.	Starts C/h	A.V.400 Brake A.C. (m A)	A. V.230AC brake D.C. (m A)	Weight KG.
SW90SA8	0,37	690	0,56	1,6	2,2	2,8	0,00356	20	20000	250	300	16
SW90LA8	0,55	690	0,57	2,3	2,2	2,9	0,00472	20	18000	250	300	19
SW100LA8	0,75	700	0,59	2,8	2,3	3,2	0,00874	40	12000	250	350	27
SW100LB8	1,10	700	0,60	3,6	2,1	3,5	0,00996	40	10000	250	350	30
SW112MB8	1,50	710	0,65	4,5	1,9	4,0	0,01680	80	5000	500	550	46
SW132SB8	2,20	715	0,72	5,3	1,7	4,8	0,03100	150	3200	800	600	85
SW132MA8	3,00	720	0,69	8,5	1,8	4,8	0,04250	150	3000	800	600	93,5
SW160MA8	4,00	710	0,71	11	2,0	5,0	0,09500	175	1200	800	600	135
SW160MB8	5,50	710	0,73	13	2,0	5,0	0,12300	175	1100	800	600	150
SW160LA8	7,50	710	0,71	18	2,2	5,0	0,11800	175	1000	800	600	175

* Non unified powers



Three phase 2/4 poles - 3000/1500 r.p.m.

Type	kW S2 20min.	r.p.m.	Cos. φ	I n V.400	M.A/ M.N	I.A/ I.N	Inertia moment Jx Kgm ²	Braking Torque MAX Nm.	Starts C/h	A.V.400 Brake A.C. (m A)	A. V.400AC brake D.C. (m A)	Weight KG.
SWD90SB2/4	1,3 0,9	2800 1420	0,85 0,73	3,3 2,4	2,3 2,3	4,7 4,5	0,00305	20	2000 7500	250	180	20
SWD90LA2/4	1,8 1,2	2800 1420	0,81 0,71	4,5 3,2	2,7 2,9	4,9 4,8	0,00388	20	2000 7000	250	180	22
SWD90LB2/4	2,2 1,5	2800 1400	0,80 0,74	5,5 3,9	2,7 3,0	4,9 4,6	0,00572	20	1800 7000	250	180	24
SWD100LA2/4	2,5 1,9	2860 1420	0,85 0,82	5,2 3,9	2,6 2,4	6,2 5,4	0,00612	40	1000 5500	250	200	36.3
SWD100LB2/4	3,3 2,4	2870 1420	0,85 0,77	7,0 5,3	2,8 2,5	7,0 6,3	0,01180	40	1000 5000	250	200	39.7
SWD112MB2/4	4,5 3,3	2880 1410	0,87 0,86	9,3 6,9	2,4 2,3	7,0 6,3	0,03120	80	500 2000	500	550	48
SWD132SB2/4	5,1 4,5	2810 1400	0,91 0,81	11 10	2,7 2,5	5,1 5,8	0,04000	150	450 1500	800	600	84.5
SWD132MA2/4	6,0 5,0	2810 1400	0,93 0,80	12,5 12,0	3,0 2,8	5,2 5,8	0,05900	150	400 1000	800	600	94.5
SWD160MA2/4	9,50 8,0	2800 1410	0,86 0,85	17 15	2,8 2,3	8,5 5,8	0,06260	175	200 400	800	600	142
SWD160MB2/4	11 9,0	2830 1410	0,86 0,86	24 20	2,4 2,3	8,5 5,6	0,08960	175	200 350	800	600	150
SWD160LA2/4	13 11	2830 1450	0,86 0,84	27 22	2,5 2,2	8,8 5,5	0,16700	175	150 300	800	600	170

Three phase 2/6 poles - 3000/1000 r.p.m.

Type	kW S3 40%.	r.p.m.	Cos. φ	I n V.400	M.A/ M.N	I.A/ I.N	Inertia moment Jx Kgm ²	Braking Torque MAX Nm.	Starts C/h	A.V.400 Brake A.C. (m A)	A. V.400AC brake D.C. (m A)	Weight KG.
SWDA90SA2/6	0,90 0,30	2870 940	0,84 0,64	2,1 1,2	2,6 2,2	6,5 2,5	0,00284	20	1900 9000	250	180	20
SWDA90LA2/6	1,20 0,40	2870 950	0,81 0,66	2,9 1,7	2,3 2,0	6,3 3,5	0,00305	20	1800 8000	250	180	22
SWDA100LB2/6	2,20 0,80	2800 910	0,85 0,64	4,9 2,6	2,7 2,2	6,7 3,5	0,00612	40	900 6000	250	200	39
SWDA112MB2/6	3,00 1,00	2880 930	0,85 0,62	6,60 3,50	2,9 2,3	7,1 4,0	0,01180	80	500 4000	500	550	48
SWDA132SB2/6	4,00 1,50	2860 920	0,84 0,58	9,5 4,3	2,6 2,1	8,6 5,1	0,03120	150	350 1600	800	600	85
SWDA132MB2/6	6,45 2,20	2860 910	0,82 0,60	15,0 7,5	2,7 2,1	8,3 5,5	0,04620	150	350 1600	800	600	102
SWDA160LA2/6	11,00 3,40	2860 960	0,84 0,58	20,0 12,0	2,7 2,2	7,1 4,2	0,08960	175	250 900	800	600	170

Three phase 2/8 poles - 3000/750 r.p.m.

Type	kW S3 40%	r.p.m.	Cos. φ	I n V.400	M.A/ M.N	I.A/ I.N	Inertia moment Jx Kgm ²	Braking Torque MAX Nm.	Starts C/h	A.V.400 Brake A.C. (m A)	A. V.400AC brake D.C. (m A)	Weight KG.
SWDA90SB2/8	0,75 0,18	2820 700	0,70 0,54	2,1 1,1	2,6 1,9	5,5 2,3	0,00295	20	1900 10000	250	180	17
SWDA90LA2/8	1,10 0,30	2820 700	0,75 0,55	2,7 1,5	2,5 1,9	5,6 2,4	0,00305	20	1800 10000	250	180	20
SWDA90LB2/8	1,30 0,30	2820 700	0,78 0,58	3,1 1,8	2,4 2	5,8 2,3	0,00388	20	1800 9000	250	180	21
SWDA100LA2/8	1,50 0,37	2820 700	0,78 0,56	3,9 2,2	2,6 1,8	5,6 2,8	0,00572	40	1000 7000	250	200	20
SWDA100LB2/8	2,20 0,50	2840 700	0,87 0,58	4,9 2,8	2,5 1,8	5,1 2,9	0,00612	40	900 3000	250	200	30
SWDA112MA2/8	2,50 0,60	2840 705	0,74 0,57	5,8 3,2	2,4 1,9	5,5 3,0	0,00950	80	500 2500	500	550	47
SWDA112MB2/8	3,00 0,80	2850 705	0,74 0,59	6,7 3,6	2,5 2	6,0 3,0	0,01180	80	500 2500	500	550	48
SWDA132SB2/8	4,00 1,10	2860 700	0,74 0,60	10,0 4,0	2,6 1,9	6,5 2,9	0,03120	150	300 1500	800	600	84,5
SWDA132MA2/8	5,50 1,50	2870 700	0,75 0,61	12,0 5,6	2,5 2,1	6,6 3,0	0,04000	150	300 1300	800	600	94,5
SWDA132MB2/8	6,20 1,80	2860 690	0,82 0,67	13,7 6,8	2,5 2,1	6,6 3,0	0,04620	150	300 1300	800	600	100
SWDA160LA2/8	11,00 3,00	2900 720	0,90 0,63	24,0 14,0	2,4 2,2	6,8 3,4	0,08960	175	300 1300	800	600	170



Three phase 4/6 poles 1500/1000 r.p.m.

Type	kW S3 40%.	r.p.m.	Cos. φ	I n V.400	M.A/ M.N	I.A/ I.N	Inertia moment Jx Kgm ²	Braking Torque MAX Nm.	Starts C/h	A.V.400 Brake A.C. (m A)	A. V.400AC brake D.C. (m A)	Weight KG.
SWDA90SA4/6	0,55 0,37	1410 945	0,77 0,70	1,8 1,6	2,4 2,1	5,5 3,6	0,00356	20	6000 8000	250	180	17
SWDA90LA4/6	0,75 0,55	1410 945	0,79 0,60	2,4 2	2,3 2,2	5,6 3,3	0,00472	20	9500 8000	250	180	20
SWDA100LB4/6	1,50 1,10	1420 945	0,79 0,70	3,9 3,2	2,6 2,3	5,6 3,5	0,00996	40	4000 6000	250	200	28
SWDA112MB4/6	2,00 1,30	1430 950	0,86 0,71	4,5 3,6	2,4 2,0	5,3 4,5	0,01680	80	2000 3000	500	550	48
SWDA132SB4/6	2,20 1,50	1430 930	0,84 0,71	5,0 3,7	2,3 1,9	6 3,4	0,03100	150	600 1000	800	600	84,5
SWDA132MA4/6	3,00 2,20	1430 930	0,84 0,72	6,0 5,2	2,4 2,2	6,0 3,6	0,04250	150	800 1200	800	600	94,5
SWDA132MB4/6	3,70 2,60	1440 930	0,84 0,72	8,3 6,2	2,3 2,2	6,1 3,8	0,04950	150	700 1000	800	600	100
SWDA160MB4/6	5,50 3,70	1450 930	0,85 0,75	12 8,5	2,2 2,0	7 4	0,10700	175	500 700	800	600	148
SWDA160LB4/6	7,50 5,50	1450 930	0,84 0,76	17,5 13,5	2,3 2,0	7 4	0,14350	175	400 700	800	600	180

Three phase 4/8 poles - 1500/750 r.p.m.

Type	kW S3 40%.	r.p.m.	Cos. φ	I n V.400	M.A/ M.N	I.A/ I.N	Inertia moment Jx Kgm ²	Braking Torque MAX Nm.	Starts C/h	A.V.400 Brake A.C. (m A)	A. V.400AC brake D.C. (m A)	Weight KG.
SWD90SA4/8	0,75 0,37	1400 700	0,85 0,60	2,1 1,9	1,9 2,2	4,0 3,0	0,00356	40	6500 12000	250	180	20
SWD90LB4/8	1,10 0,60	1400 700	0,85 0,58	2,7 3,0	2,0 2,2	4,0 3,0	0,00510	40	6000 10000	250	180	24
SWD100LB4/8	1,60 0,90	1440 700	0,85 0,61	3,7 3,5	2,2 2,2	4,6 3,2	0,00996	48	4000 8000	250	200	39,7
SWD112MB4/8	2,20 1,20	1440 710	0,89 0,59	4,6 4,8	2,2 3,0	5,6 4,0	0,01680	80	2000 4000	500	550	48
SWD132SB4/8	3,00 2,00	1430 715	0,88 0,59	6,1 6,9	2,7 2,5	5,5 3,5	0,03100	150	700 2000	800	600	84,5
SWD132MA4/8	4,00 2,60	1445 720	0,87 0,63	8,0 8,5	3,0 2,9	5,6 5,5	0,04250	150	500 1500	800	600	98
SWD160MA4/8	5,50 3,70	1430 720	0,86 0,64	11,5 12,5	2,5 2,1	5,8 5,3	0,09500	175	600 1200	800	600	139
SWD160MB4/8	6,60 4,50	1430 720	0,88 0,65	14,5 13,8	2,3 2,2	5,9 5,3	0,09700	175	600 1200	800	600	148
SWD160LA4/8	9,60 6,00	1430 720	0,86 0,66	21 19	2,6 2,1	6,0 5,1	0,12300	175	550 1100	800	600	170

*Three phase 4-12 poles - 1500/500 r.p.m.
hoisting application*

Type	kW S4 40%-25%	In V.400
SWDA71C4/12	0,20 0,08	1,2 0,8
SWDA80C4/12	0,55 0,18	1,7 1,2
SWDA90LB4/12	0,80 0,30	2,5 2,2
SWDA100LB4/12	1,70 0,60	3,4 2,9
SWDA112MB4/12	3,20 1,10	7,9 5,5
SWDA112MC4/12	4,50 1,50	11 6,5
SWFDA132MB4/12	7,50 2,50	16 8
SWDA160LB4/12	9,50 3,20	22 21

*Three phase 4-16 poles - 1500/375 r.p.m.
hoisting application*

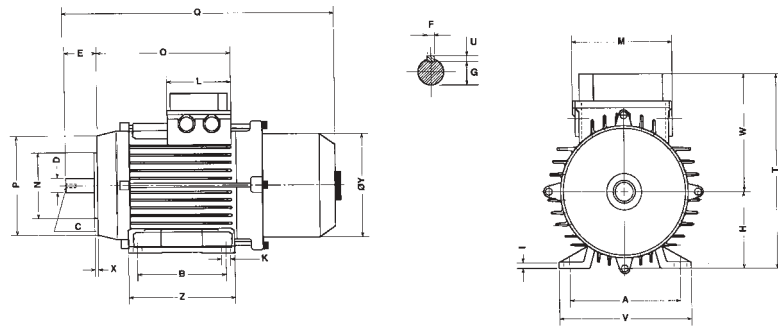
Type	kW S4 40%--20%	In V.400
SWDA112MB4/16	1,60 0,40	4,6 3,8
SWDA132SA4/16	3,00 0,75	7,2 5,6
SWDA132MA4/16	4,00 1,00	9,5 7,5
SWDA132MB4/16	5,20 1,30	13,8 12,0
SWDA160MB4/16	6,80 1,70	18,0 15,0
SWDA160LA4/16	9,00 2,20	23,0 21,0
SWDA160LB4/16	10,5 2,60	24,0 22,0
SWDA180LB4/16	13,0 3,20	32,5 17,8
SWDA200LB4/16	16,0 4,00	40,0 22,0

3) The braking torque values can be reduced of about 10% if the electromagnet is DC.

5) We suggest to use dual metal or ptc protections for 4-12 and 4-16 poles motors.

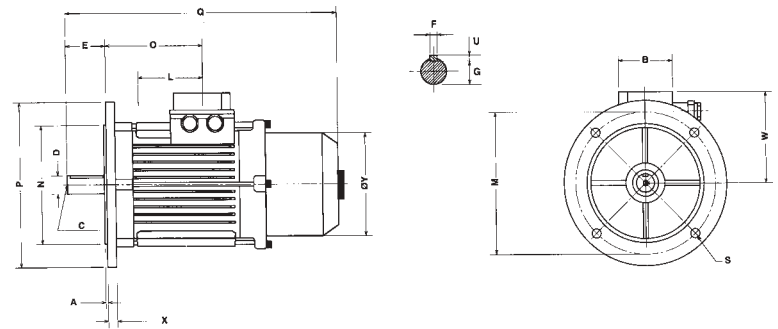
Overall Dimensions

B3



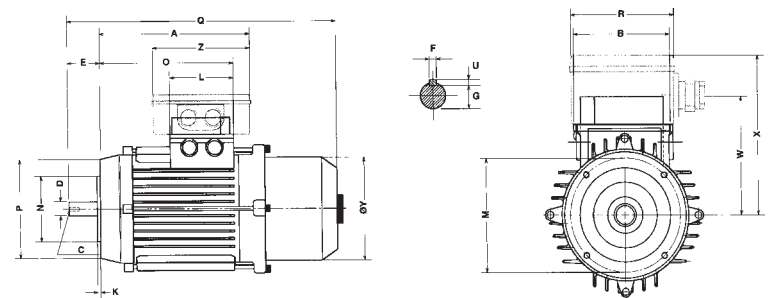
Type	A	B	C	D	E	F	G	H	K	L	M	Q	T	O	W	Y	U	X	V	Z
SW90 S	140	100	56	24	50	8	20	90	9	98	99	330	218	174	128	179	7	M8	176	128
SW90 L	140	125	56	24	50	8	20	90	9	98	99	355	218	196	128	179	7	M8	176	151
SW100	160	140	63	28	60	8	24	100	9	98	99	400	241	218	141	179	7	M8	196	166
SW112	190	140	70	28	60	8	24	112	12	98	99	520	263	226	151	220	7	M8	230	166
SW132S	216	140	89	38	80	10	33,5	132	12	120	110	612	329	257	197	255	8	M10	262	166
SW132M	216	178	89	38	80	10	33,5	132	12	120	110	650	329	297	197	255	8	M10	262	205
SW160M	254	210	108	42	110	12	37,5	160	14	180	140	700	386	331	226	314	8	M12	306	240
SW160L	254	254	108	42	110	12	37,5	160	14	180	140	740	386	371	226	314	8	M12	306	284

B5



Type	N	B	C	D	E	F	G	H	P	I	L	M	O	Q	S	U	A	X	W	Y
SW90 S	130	99	M8	24	50	8	20	-	200	-	98	165	182	330	11,5	7	3,5	12	128	179
SW90 L	130	99	M8	24	50	8	20	-	200	-	98	165	207	355	11,5	7	3,5	12	128	179
SW100	180	99	M8	28	60	8	24	-	250	-	98	215	218	400	14	7	3,5	14	141	179
SW112	180	99	M8	28	60	8	24	-	250	-	98	215	229	520	14	7	3,5	14	151	222
SW132S	230	110	M10	38	80	10	33,5	-	300	-	120	265	260	612	14	8	3,5	14	197	255
SW132M	230	110	M10	38	80	10	33,5	-	300	-	120	265	300	650	14	8	3,5	14	197	255
SW160M	250	140	M12	42	110	12	37,5	-	350	-	140	300	330	700	18	8	4	16	250	314
SW160L	250	140	M12	42	110	12	37,5	-	350	-	140	300	330	740	18	8	4	16	250	314

B14



Type	N	B	C	D	E	F	G	H	P	I	L	M	O	Q	S	U	X	Z	W	Y	T	R	V	K
SW90S	95	99	M8	24	50	8	20	-	140	-	98	115	171	330	M8	7	3,5	-	128	179	202	160	107	131
SW90L	95	99	M8	24	50	8	20	-	140	-	98	115	196	355	M8	7	3,5	-	128	179	227	160	107	131
SW100	110	99	M8	28	60	8	24	-	160	-	98	130	218	400	M8	7	3,5	-	141	180	249	160	107	141
SW112	110	99	M8	28	60	8	24	-	160	-	98	130	226	520	M8	7	3,5	-	151	222	257	160	107	151
SW132S	130	110	M10	38	80	10	33,5	-	200	-	120	165	260	612	M10	8	3,5	-	197	263	---	---	---	---
SW132M	130	110	M10	38	80	10	33,5	-	200	-	120	165	300	650	M10	8	3,5	-	197	263	---	---	---	---