



One step ahead on the future

Brushless Servomotors

B05	B07	B10	B14	B20
B20F	B26	B26F		



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SERVOMOTORS

AutomationWare

General Features

Brushless or electronic switching servomotors are reliable high-performance machines that require only limited maintenance designed to provide the ideal solution for the drive of the latest manufacturing machines and satisfy ever-increasing needs in the field of industrial automation.

The new series **AWM-B** brushless servomotors features elevated dimension/torque and dimension/power ratios using permanent rare earth magnets and avant-garde technical solutions that guarantee:

- Remarkably low inertia;
- Elevated degree of protection with standard IP54/ IP65 protection rating;
- Sinusoidal C.E.M.F.;
- Elevated overload capacity;
- Low torque undulation.

The new series **AWM-B** brushless servomotors are available in 6 sizes, from the smallest **AWM-B05** to the largest **AWM-B26** with torque values from 0.48 Nm to over 400 Nm.

Windings for power supplies of up to 220/240V are available for size **AWM-B05**, 220/400V power supply for all sizes up to **AWM-B14**, for larger sizes, the standard windings are all for 380/400V power supplies.



Standard Specifications

- **Type:** low-inertia permanent magnet servomotor
- **Rotor:** permanent magnet type
- **Insulation:** for Winding: Class H; for Motor: Class F
- **Thermal protection:** PTC built-in (size 220/400V only)
- **Bearings:** ball bearings with life-long lubrication double shield
- **Balancing:** degree "R"
- **Axis/flange concentricity and verticality:** grade "N" (*normal*) – in according to IEC 72 – DIN 0530
- **Shaft:** with key, with threaded coaxial hole
- **Cooling:** natural convection IC 0041; for sizes B20–B26 also available fan-cooled version IC 0641
- **Shape:** flanged B5 or B14, mountable into V1 or V3 without modifications
- **Protection:** IP54/IP65
- **Position sensor:** 2-pole resolver
- **Power/resolver connection:** by connector

Available Options

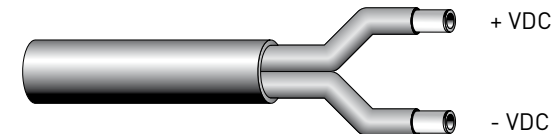
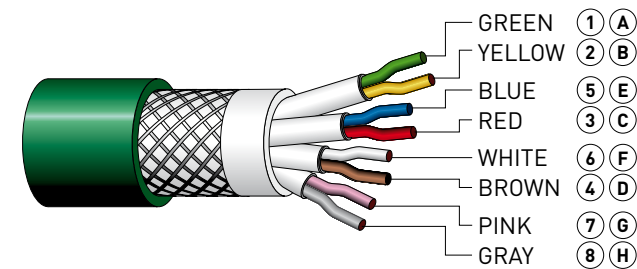
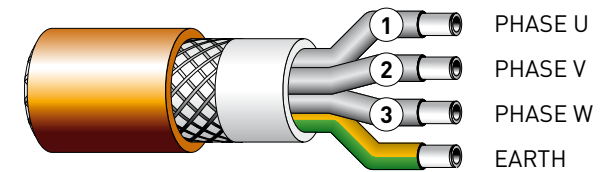
- **Protection:** sealing on shaft (*angus*) available for IP65
- **Sensors:** incremental encoder + Hall phases, sin-cos incremental encoder, absolute encoder
- **Parking brake:** with braking torque $\geq T_n$
- **Special shafts:** smooth without key and/or diameters other than standard

All performance data are subject to a tolerance $\pm 10\%$.

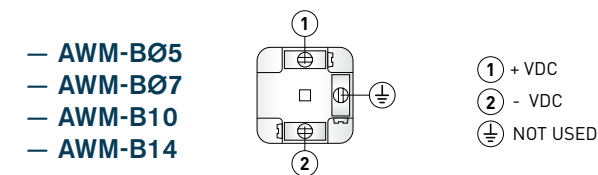
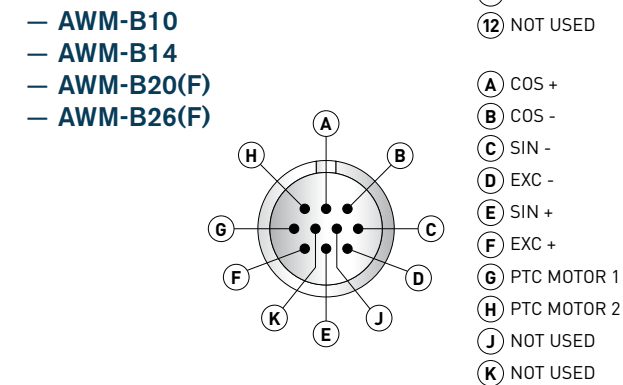
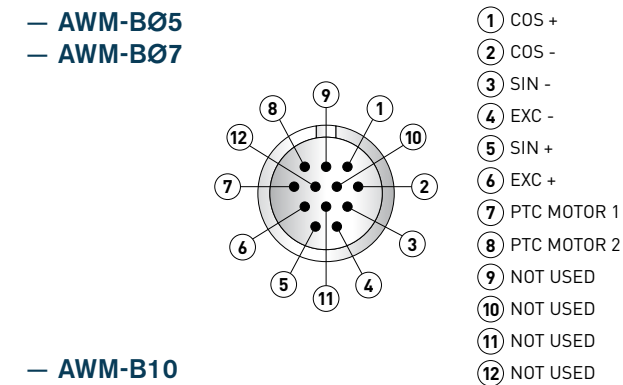
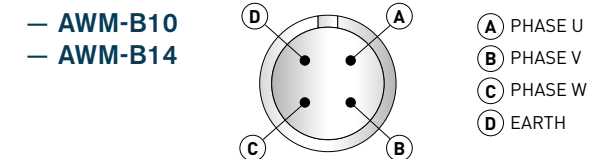
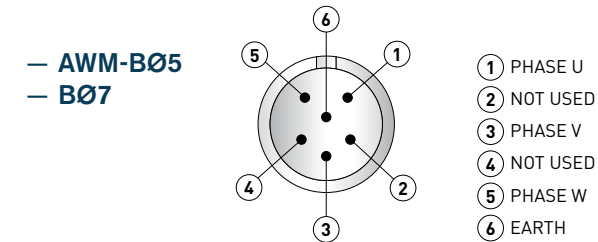
The information container in this specification is for guidance only and does not form part of any contract.

AutomationWare have an on going process of development and reserve the right to change the specification at any time and without notice.

Cable



Flying connector welding side



*= Under development - contact AW for availability

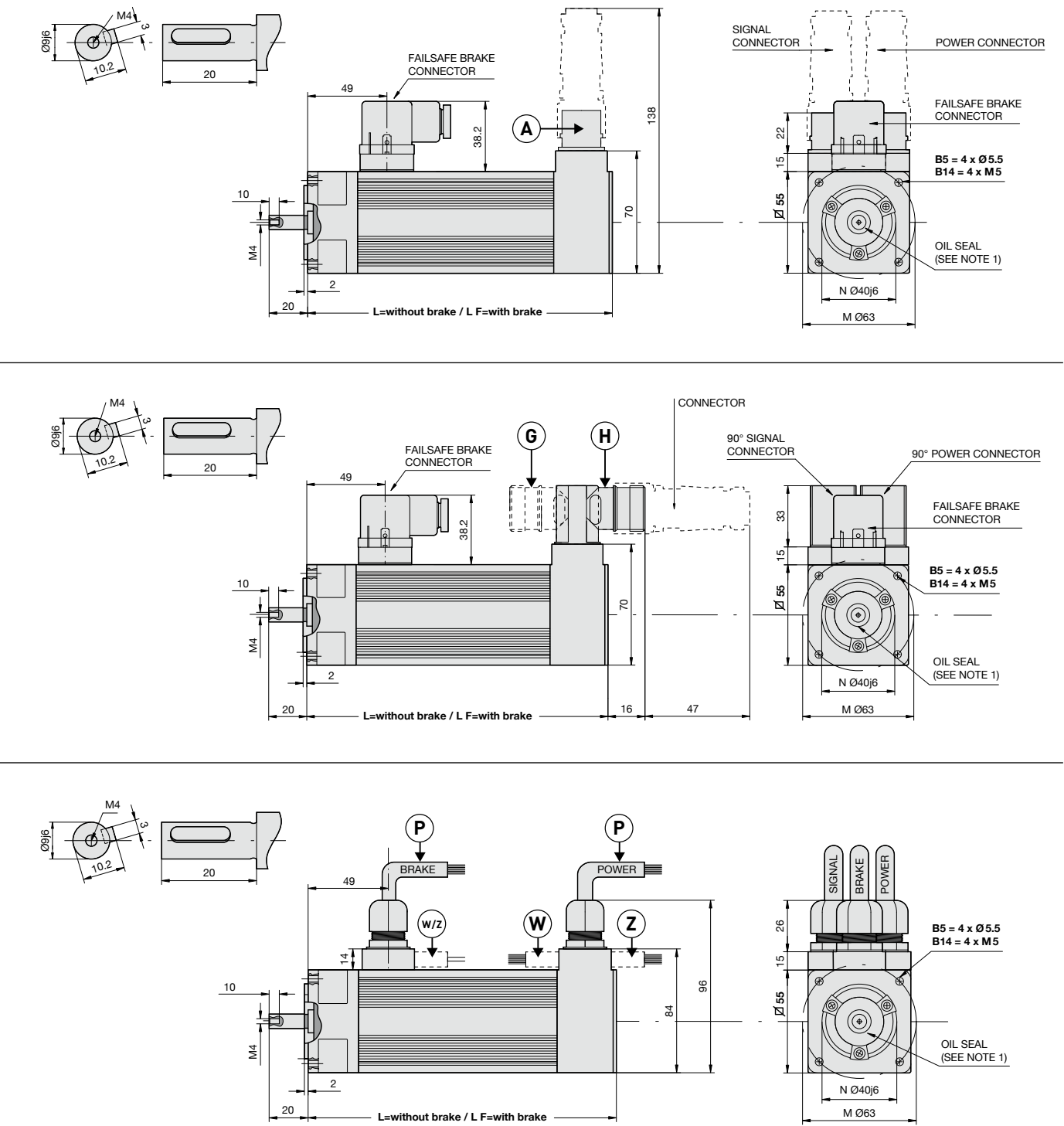
B05 SERVOMOTORS

Automationware

Technical Specifications

MOTOR TYPE	SYMBOL	UDM	AWM-B05S		AWM-B05M		AWM-B05L	
Drive operating voltage			60Vdc	230V	60Vdc	230V	60Vdc	230V
Continuous stall torque 100K Δt	To	Nm	0,48	0,48	0,81	0,81	1,10	1,10
Continuous stall torque 65K Δt	To	Nm	0,39	0,39	0,65	0,65	0,89	0,89
Rated Speed	n	RPM	3000	3000	3000	3000	3000	3000
Power at rated speed 100K Δt	Pn	W	153	153	266	266	367	367
Torque at rated speed 100K Δt	Tn	Nm	0,49	0,49	0,85	0,85	1,17	1,17
Peak torque with S.I.R. 10%	Tpk	Nm	1,04	1,30	1,76	2,19	2,39	2,97
Rotor Inertia	Jm	mkgm ²	0,0126	0,0126	0,0207	0,0207	0,0287	0,0287
Rotor Inertia (motor with brake)	Jmb	mkgm ²	0,0244	0,0244	0,0324	0,0324	0,0404	0,0404
Acceleration at peak torque	apk	rad/s ²	82696	102572	85311	105816	83426	103412
Acceleration at peak torque (motor with brake)	apkb	rad/s ²	42908	53221	54445	67531	59267	73511
Weight	M	kg	1,272	1,272	1,693	1,693	2,050	2,050
Weight with brake	Mb	kg	1,422	1,422	1,843	1,843	2,200	2,200
Insulation			WINDING: CLASS H - MOTOR: CLASS F					
Cooling (Convection)			NATURAL AIR (IC0041)					
Standard Protection			IP65	IP65	IP65	IP65	IP65	IP65
PTC trigger threshold	PTCt	°C	n.a.	130	n.a.	130	n.a.	130
Numbers of poles	PN		6	6	6	6	6	6
E.M.F. constant, 20°	Ke	Vs	0,12	0,55	0,12	0,55	0,12	0,54
Torque constant	Kt	Nm/Arms	0,21	0,95	0,21	0,94	0,21	0,93
Phase/phase winding resistance, 20°C	Rw	Ohm	2,16	145,53	0,89	51,80	0,59	27,07
Phase/phase inductance 50Hz	Lw	mH	2,22	51,80	1,01	60,00	0,71	33,50
Rated voltage, 100°C	Vn	V	42	210	42	210	42	210
Continuous stall current 100K Δt	Io	A	2,3	0,50	3,9	0,90	5,2	1,2
Current at rated speed 100K Δt	In	A	2,3	0,50	4,1	0,90	5,6	1,2
Peak current	Ipk	A	7,58	1,36	11,62	2,31	15,50	3,19
Demagnetising current	Idm	Apk	34,49	4,72	66,12	9,00	93,04	13,43
BRAKE PARAMETERS								
Brake type			03	03	03	03	03	03
Static braking torque 100°C	Tb	Nm	2,0	2,0	2,0	2,0	2,0	2,0
Brake power at 20°C	Pb	W	11,0	11,0	11,0	11,0	11,0	11,0

Dimensions



REFERENCE FOR ORDER CODING

MOTOR TYPE	L	LF	NOTES
AWM-B05S	144	174	1) The oil seal is assembled only if oil bath coupling is foreseen.
AWM-B05M	174	204	
AWM-B05L	204	233	

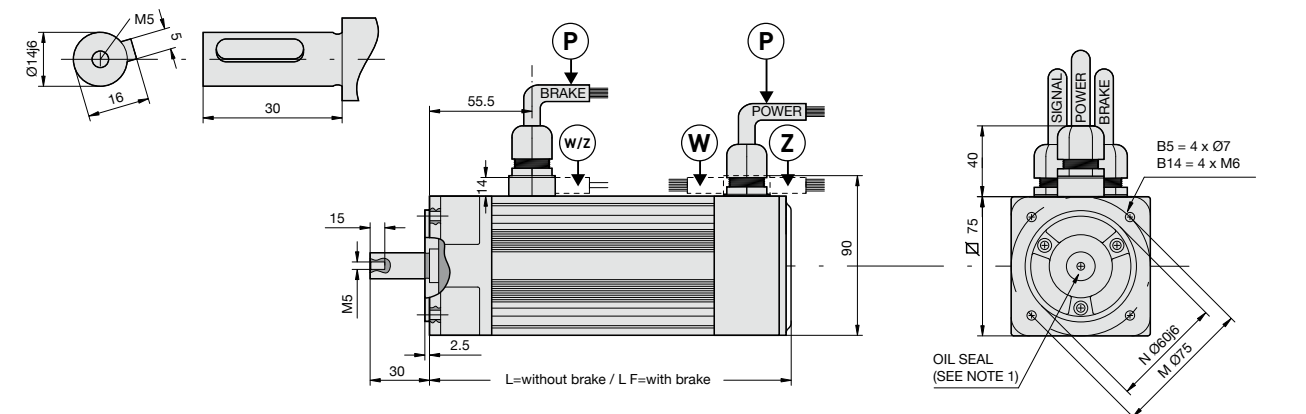
The cable connecting receptacles for signal and power are not included in the motor price.

POSITION	DESCRIPTION
A	Vertical connection IP65
H	Horizontal connection (not drive-end) IP65
W	Connection by horizontal cable (drive-end) IP55
G	Horizontal connection (drive-end) IP65
P	Connection by vertical cable IP65
Z	Connection by horizontal cable (not drive-end) IP55

Technical Specifications

[illegible]

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The cable connecting receptacles for signal and power are not included in the motor price.

POSITION	DESCRIPTION
A	Vertical connection IP65
H	Horizontal connection (<i>not drive-end</i>) IP65
W	Connection by horizontal cable (<i>drive-end</i>) IP55
G	Horizontal connection (<i>drive-end</i>) IP65
P	Connection by vertical cable IP65
Z	Connection by horizontal cable (<i>not drive-end</i>) IP55

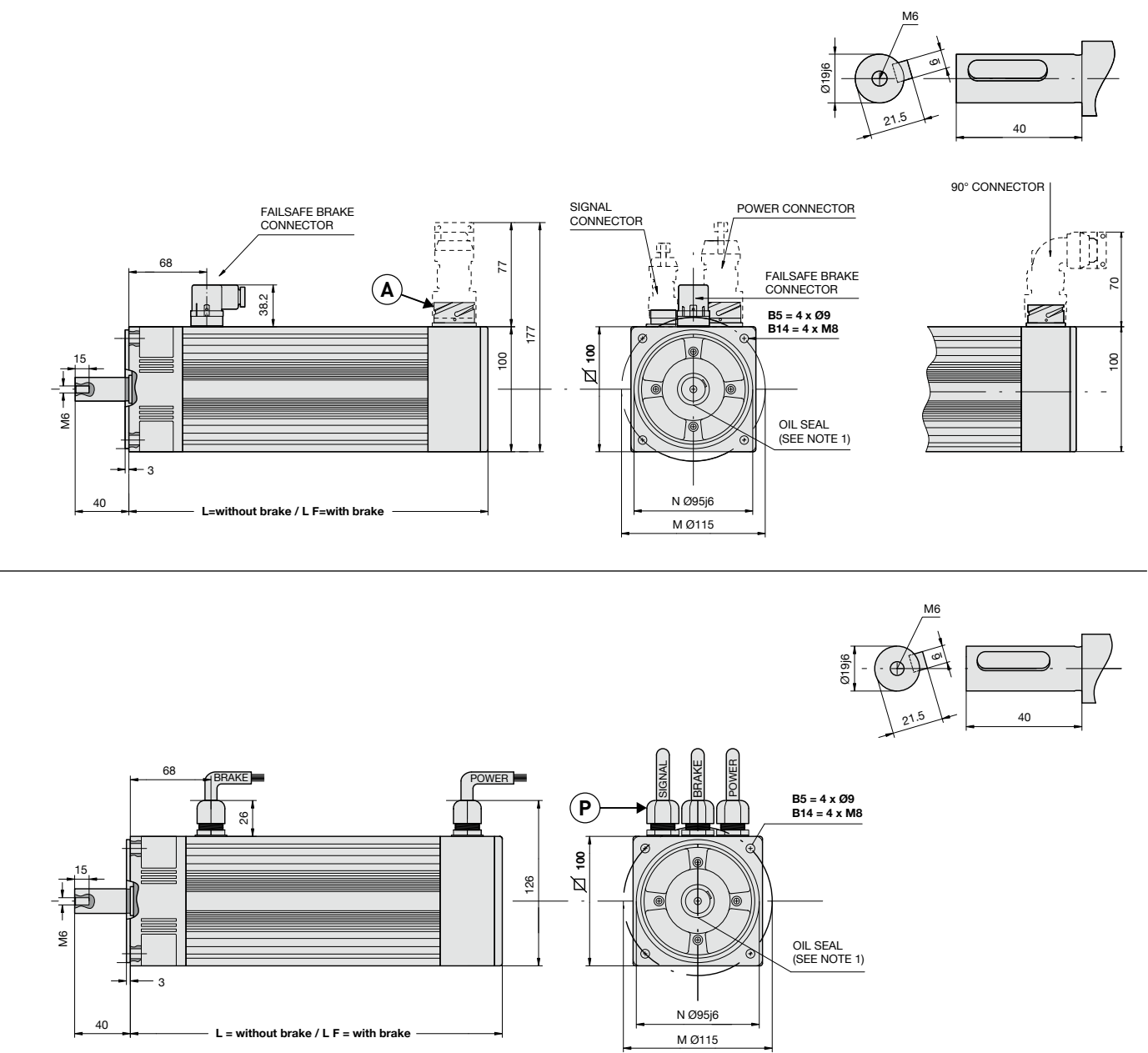
B10 SERVOMOTORS

Automationware

Technical Specifications

MOTOR TYPE	SYMBOL	UDM	AWM-B10S		AWM-B10N		AWM-B10M		AWM-B10L		AWM-B10G	
Drive operating voltage			230V	400V	230V	400V	230V	400V	230V	400V	230V	400V
Continuous stall torque 100K Δt	To	Nm	3,28	3,28	4,00	4,00	5,60	5,60	7,60	7,60	9,05	9,05
Continuous stall torque 65K Δt	To	Nm	2,64	2,64	3,22	3,22	4,51	4,51	6,13	6,13	7,30	7,30
Rated Speed	n	RPM	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Power at rated speed 100K Δt	Pn	W	1234	1234	1476	1476	2054	2054	2553	2553	2958	2958
Torque at rated speed 100K Δt	Tn	Nm	3,93	3,93	4,70	4,70	6,54	6,54	8,13	8,13	9,42	9,42
Peak torque with S.I.R. 10%	Tpk	Nm	8,86	8,86	10,80	10,80	15,12	15,12	20,52	20,52	24,44	24,44
Rotor Inertia	Jm	mkgm²	0,1953	0,1953	0,2597	0,2597	0,3237	0,3237	0,4516	0,4516	0,5796	0,5796
Rotor Inertia (motor with brake)	Jmb	mkgm²	0,3089	0,3089	0,3634	0,3634	0,4274	0,4274	0,5652	0,5652	0,6940	0,6940
Acceleration at peak torque	apk	rad/s²	45337	45337	41591	41591	46717	46717	45437	45437	42160	42160
Acceleration at peak torque (motor with brake)	apkb	rad/s²	28670	28670	29718	29718	35377	35377	36303	36303	35211	35211
Weight	M	kg	5,300	5,300	6,000	6,000	7,400	7,400	9,500	9,500	11,700	11,700
Weight with brake	Mb	kg	5,760	5,760	6,460	6,460	7,860	7,860	9,960	9,960	12,160	12,160
Insulation			WINDING: CLASS H - MOTOR: CLASS F									
Cooling (Convection)			NATURAL AIR (IC0041)									
Standard Protection			IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
PTC trigger threshold	PTCt	°C	130	130	130	130	130	130	130	130	130	130
Numbers of poles	PN		6	6	6	6	6	6	6	6	6	6
E.M.F. constant, 20°	Ke	Vs	0,54	0,92	0,54	0,92	0,54	0,91	0,53	0,91	0,53	0,92
Torque constant	Kt	Nm/ Arms	0,93	1,60	0,93	1,59	0,94	1,57	0,92	1,57	0,92	1,59
Phase/phase winding resistance, 20°C	Rw	Ohm	5,96	17,00	2,40	8,70	2,10	5,86	1,17	3,42	0,98	2,25
Phase/phase inductance 50Hz	Lw	mH	19,30	51,40	9,30	31,60	7,89	22,00	4,70	14,40	3,60	10,90
Rated voltage, 100°C	Vn	V	210	320	210	320	210	320	210	320	210	320
Continuous stall current 100K Δt	Io	A	3,5	2,1	4,3	2,5	6	3,5	8,1	4,8	9,7	5,7
Current at rated speed 100K Δt	In	A	4,2	2,5	5	2,9	7	4,1	8,7	5,1	10	5,9
Peak current	lpk	A	9,49	5,54	11,00	6,36	16,16	9,64	22,21	13,08	26,53	15,35
Demagnetising current	Idm	Apk	18,28	10,70	30,69	16,53	35,43	20,74	52,55	31,14	69,67	41,80
BRAKE PARAMETERS												
Brake type			06	06	06	06	06	06	06	06	06	06
Static braking torque 100°C	Tb	Nm	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
Brake power at 20°C	Pb	W	18,0	18,0	18,0	18,0	18,0	18,0	18,0	18,0	18,0	18,0

Dimensions



MOTOR TYPE	L	LF	NOTES
AWM-B10S	182	223	1) The oil seal is assembled only if oil bath coupling is foreseen.
AWM-B10N	203	242	
AWM-B10M	223	263	
AWM-B10L	263	303	
AWM-B10G	303	343	

The cable connecting receptacles for signal and power are not included in the motor price.

REFERENCE FOR ORDER CODING

POSITION	DESCRIPTION
A	Vertical connection IP65
P	Connection by vertical cable IP65

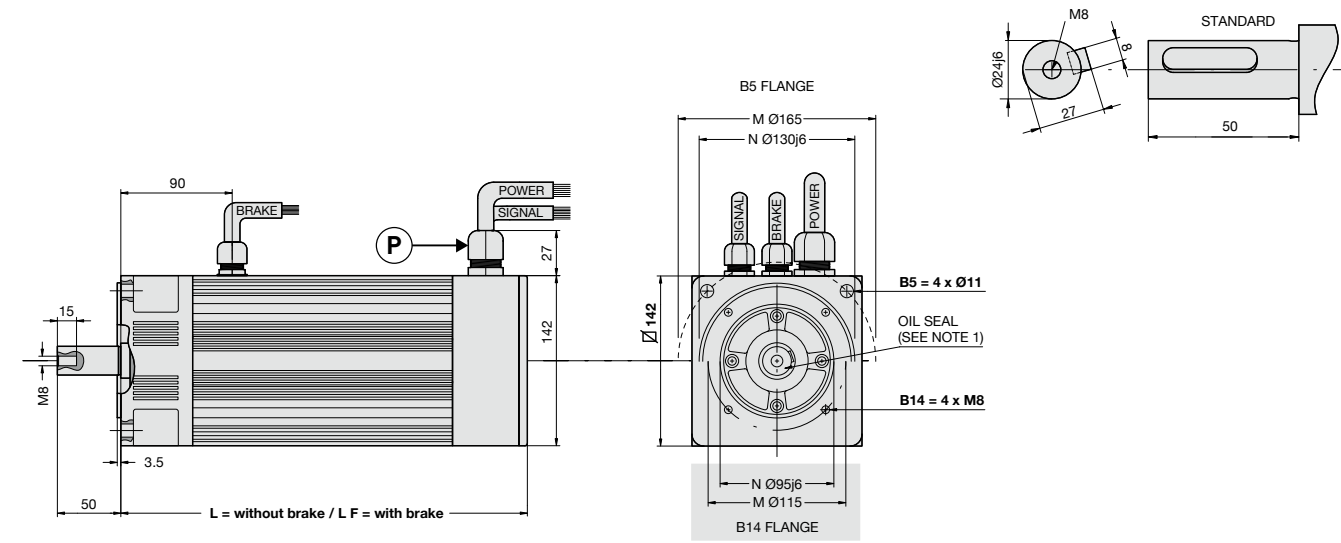
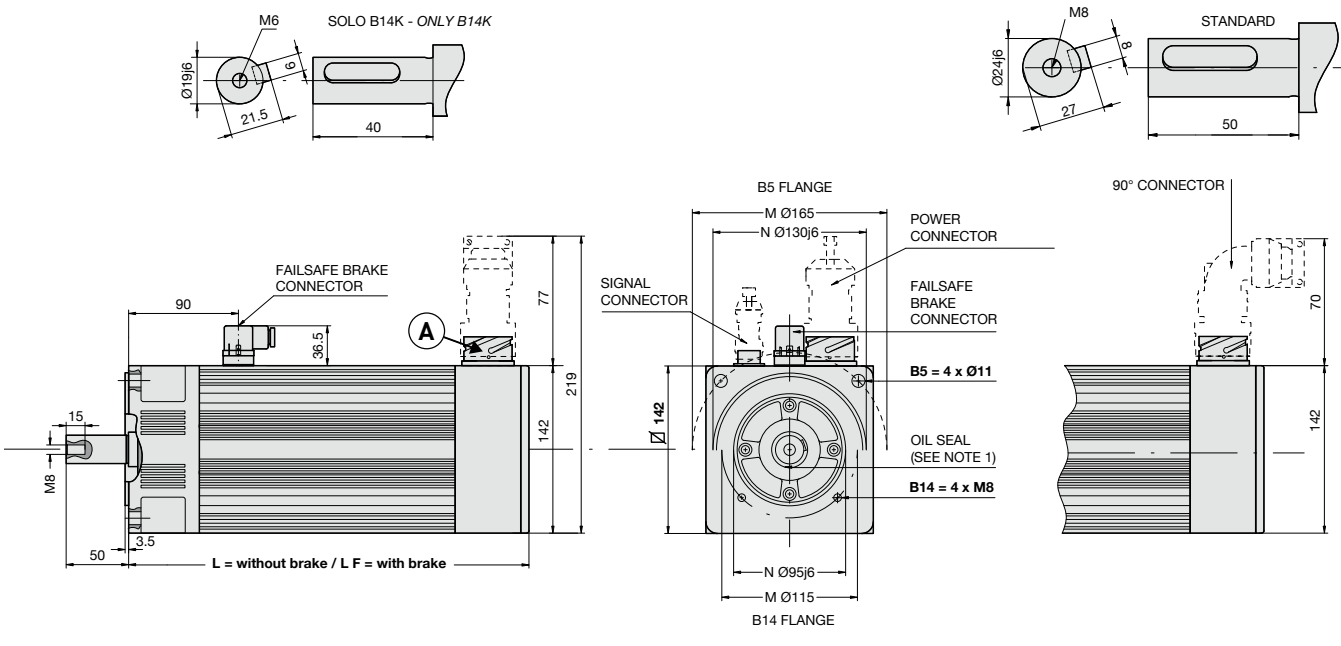
B14 SERVOMOTORS

Automationware

Technical Specifications

MOTOR TYPE	SYMBOL	UDM	AWM-B14K		AWM-B14S		AWM-B14N	AWM-B14M	AWM-B14L	AWM-B14G	AWM-B14X
Drive operating voltage			230V	400V	230V	400V	400V	400V	400V	400V	400V
Continuous stall torque 100K Δt	To	Nm	4,50	4,50	9,00	9,00	13,60	16,27	22,00	28,83	34,00
Continuous stall torque 65K Δt	To	Nm	3,63	3,63	7,26	7,26	10,96	13,12	17,74	23,24	27,41
Rated Speed	n	RPM	3000	3000	3000	3000	3000	3000	3000	3000	3000
Power at rated speed 100K Δt	Pn	W	1570	1570	3127	3127	4459	5065	6139	6516	9891
Torque at rated speed 100K Δt	Tn	Nm	5,00	5,00	9,96	9,96	14,20	16,13	19,55	20,75	31,50
Peak torque with S.I.R. 10%	Tpk	Nm	12,15	12,15	24,30	24,30	36,72	43,93	59,40	77,84	91,80
Rotor Inertia	Jm	mkgm²	0,64	0,64	1,07	1,07	1,5	1,93	2,79	3,65	4,51
Rotor Inertia (motor with brake)	Jmb	mkgm²	0,82	0,82	1,25	1,25	1,68	2,11	3,36	4,22	5,08
Acceleration at peak torque	apk	rad/s²	30587	30587	43171	43171	50446	49076	48397	49901	48525
Acceleration at peak torque (motor with brake)	apkb	rad/s²	17667	17667	28475	28475	33326	37072	27419	31150	32428
Weight	M	kg	9,300	9,300	12,000	12,000	15,000	17,100	21,900	27,100	33,000
Weight with brake	Mb	kg	10,200	10,200	12,900	12,900	15,900	18,000	23,500	28,700	34,600
Insulation			WINDING: CLASS H - MOTOR: CLASS F								
Cooling (Convection)			NATURAL AIR (IC0041)								
Standard Protection			IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
PTC trigger threshold	PTCt	°C	130	130	130	130	130	130	130	130	130
Numbers of poles	PN		6	6	6	6	6	6	6	6	6
E.M.F. constant, 20°	Ke	Vs	0,54	0,92	0,54	0,90	0,92	0,91	0,92	0,93	0,93
Torque constant	Kt	Nm/Arms	0,93	1,59	0,93	1,57	1,59	1,58	1,59	1,61	1,59
Phase/phase winding resistance, 20°C	Rw	Ohm	3,00	8,60	0,97	2,90	1,57	0,97	0,77	0,58	0,30
Phase/phase inductance 50Hz	Lw	mH	16,00	48,00	5,10	18,75	9,89	6,40	4,80	3,55	3,20
Rated voltage, 100°C	Vn	V	210	320	210	320	320	320	320	320	320
Continuous stall current 100K Δt	Io	A	4,8	2,8	9,6	5,6	8,5	10,2	13,8	18,0	21,3
Current at rated speed 100K Δt	In	A	5,3	3,1	10,6	6,2	8,9	10,1	12,2	13,0	19,7
Peak current	Ipk	A	11,72	6,97	26,22	15,51	21,34	27,75	37,26	48,33	52,33
Demagnetising current	Idm	Apk	17,00	9,97	32,93	19,37	26,93	38,11	54,64	71,67	92,75
BRAKE PARAMETERS											
Brake type			07	07	07	07	07	07	08	08	08
Static braking torque 100°C	Tb	Nm	18,0	18,0	18,0	18,0	18,0	18,0	36,0	36,0	36,0
Brake power at 20°C	Pb	W	24,0	24,0	24,0	24,0	24,0	24,0	26,0	26,0	26,0

Dimensions



MOTOR TYPE	L	LF	NOTES
AWM-B14K	212,5	261,5	1) The oil seal is assembled only if oil bath coupling is foreseen.
AWM-B14S	237,5	281,5	
AWM-B14N	261,5	305,5	
AWM-B14M	288,5	332,5	
AWM-B14L	339,5	391,5	
AWM-B14G	391,5	443,5	
AWM-B14X	443,5	493,5	

REFERENCE FOR ORDER CODING

POSITION	DESCRIPTION
A	Vertical connection IP65
P	Connection by vertical cable IP65

The cable connecting receptacles for signal and power are not included in the motor price.

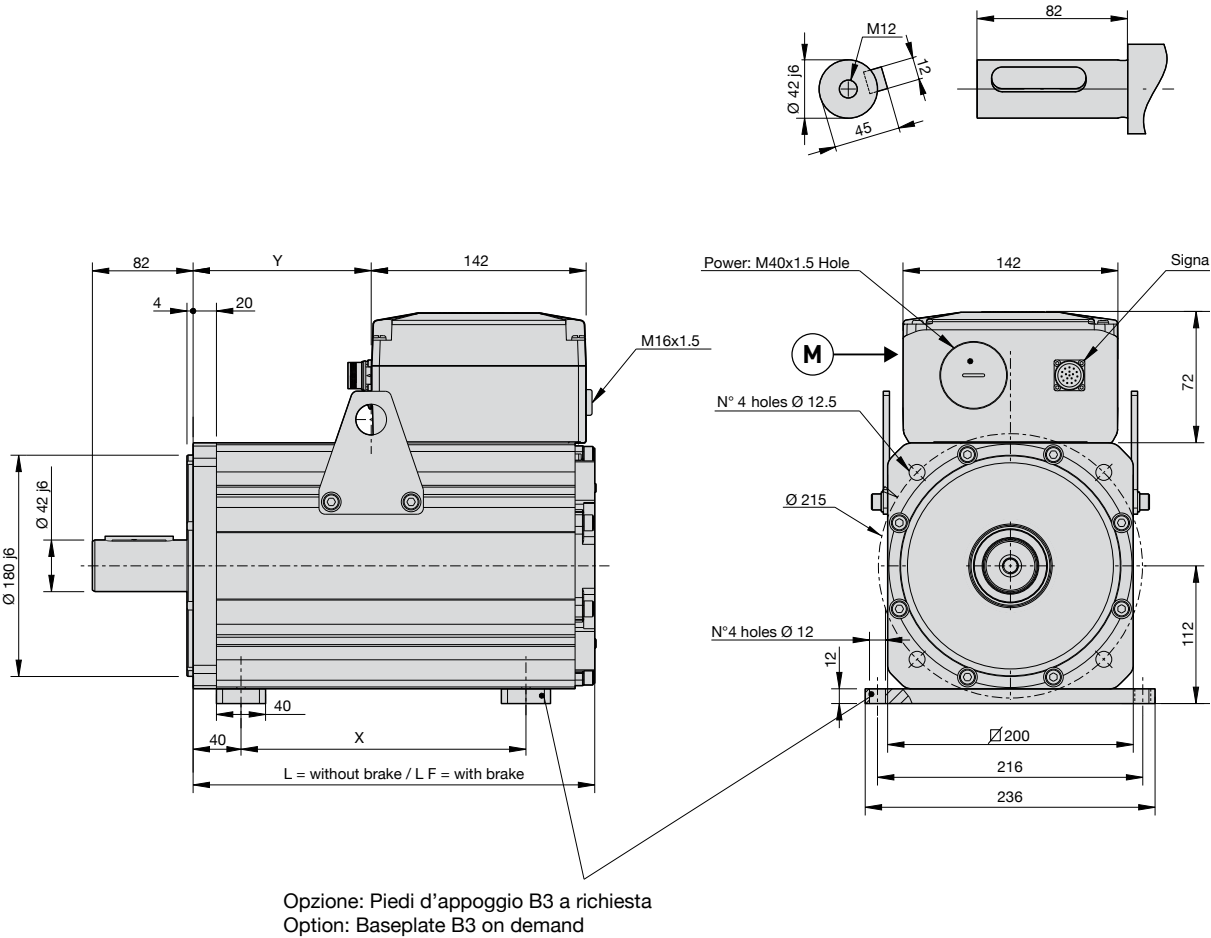
B20 SERVOMOTORS

Automationware

Technical Specifications

MOTOR TYPE	SYMBOL	UDM	AWM-B20S			AWM-B20M			AWM-B20L		AWM-B20G	
Drive operating voltage			400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
Continuous stall torque 100K Δt	To	Nm	30	30	30	57	57	57	82	80	106	105
Continuous stall torque 65K Δt	To	Nm	24	25	25	46	46	46	66	64	85	85
Rated Speed	n	RPM	1000	2000	3000	1000	2000	3000	1000	2000	1000	2000
Power at rated speed 100K Δt	Pn	W	3150	6270	9420	5985	11662	15637	8610	15675	11130	19855
Torque at rated speed 100K Δt	Tn	Nm	30	30	30	57	56	50	82	75	106	95
Peak torque with S.I.R. 10%	Tpk	Nm	88	88	88	165	165	165	239	239	290	290
Rotor Inertia	Jm	mkgm ²	6	6	6	9	9	9	12	12	15	15
Rotor Inertia (motor with brake)	Jmb	mkgm ²	10,5	10,5	10,5	13,5	13,5	13,5	16,5	16,5	19,5	19,5
Acceleration at peak torque	apk	rad/s ²	14705	14705	14705	18328	18328	18328	19946	19946	19323	19323
Acceleration at peak torque (motor with brake)	apkb	rad/s ²	8400	8400	8400	12240	12240	12240	14503	14503	14900	14900
Weight	M	kg	35	35	35	46	46	46	57	57	68	68
Weight with brake	Mb	kg	52	52	52	63	63	63	74	74	85	85
Insulation			WINDING: CLASS H - MOTOR: CLASS F									
Cooling (Convection)			NATURAL AIR (IC0041)									
Standard Protection			IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54
PTC trigger threshold	PTCt	°C	130	130	130	130	130	130	130	130	130	130
Numbers of poles	PN		8	8	8	8	8	8	8	8	8	8
E.M.F. constant, 20°	Ke	Vs	3,02	1,37	1,01	2,74	1,46	0,91	3,02	1,37	2,73	1,37
Torque constant	Kt	Nm/ Arms	4,97	2,26	1,66	4,51	2,41	1,50	4,96	2,26	4,50	2,25
Phase/phase wnding resistance, 20°C	Rw	Ohm	4,86	0,95	0,49	1,34	0,39	0,15	0,90	0,19	0,62	0,16
Phase/phase inductance 50Hz	Lw	mH	47,80	9,90	5,30	19,8	5,60	2,19	15,90	3,30	11,20	2,81
Rated voltage, 100°C	Vn	V	358	312	340	316	327	302	343	303	315	304
Continuous stall current 100K Δt	Io	A	6,04	13,29	18,12	12,63	23,67	37,88	16,52	35,46	23,57	46,70
Current at rated speed 100K Δt	In	A	6,04	13,29	18,12	12,63	23,18	33,09	16,52	33,25	23,57	42,25
Peak current	Ipk	A	18	39	53	37	69	110	48	105	64	129
Demagnetising current	Idm	Apk	73	161	220	161	302	483	220	483	302	604
BRAKE PARAMETERS												
Brake type			09	09	09	09	09	09	09	09	09	09
Static braking torque 100°C	Tb	Nm	160	160	160	160	160	160	160	160	160	160
Brake power at 20°C	Pb	W	55	55	55	55	55	55	55	55	55	55

Dimensions



MOTOR TYPE	L	LF	X	Y	NOTES
AWM-B20S	259	379	156	110	1) The oil seal is assembled only if oil bath coupling is foreseen.
AWM-B20M	333	453	231	185	
AWM-B20L	408	528	306	260	
AWM-B20G	483	603	380	334	

REFERENCE FOR ORDER CODING

The cable connecting receptacles for signal and power are not included in the motor price.

POSITION	DESCRIPTION
M	Terminal board IP54

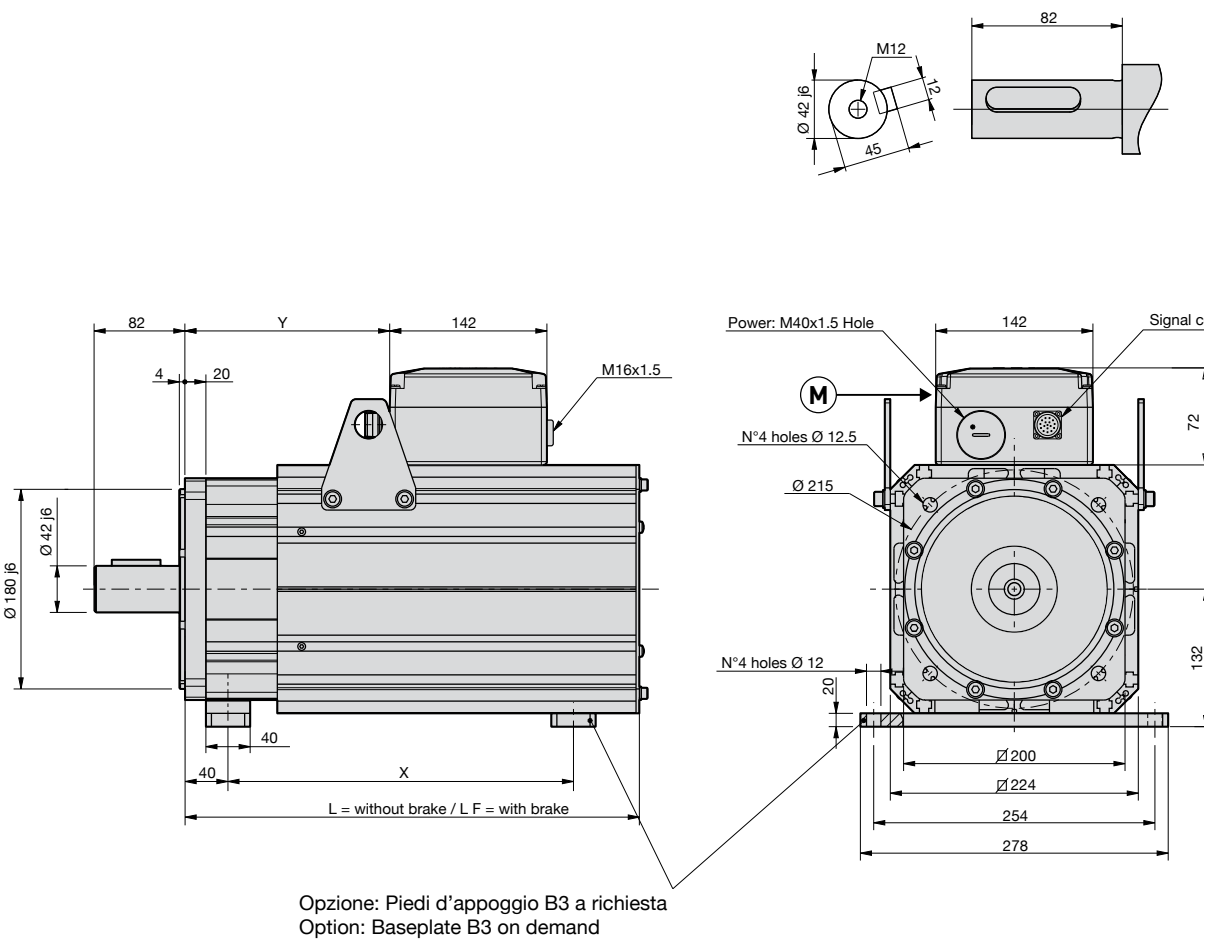
B20F SERVOMOTORS

Automationware

Technical Specifications

MOTOR TYPE	SYMBOL	UDM	AWM-B20S			AWM-B20M			AWM-B20L			AWM-B20G		
Drive operating voltage			400V	400V	400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
Continuous stall torque 100K Δt	To	Nm	47	48	48	85	85	85	118	115	118	149	147	160
Continuous stall torque 65K Δt	To	Nm	38	38	38	69	69	69	95	93	95	120	118	129
Rated Speed	n	RPM	1000	2000	3000	1000	2000	3000	1000	2000	3000	1000	2000	3000
Power at rated speed 100K Δt	Pn	W	4830	9614	14130	8715	16866	24052	12023	22363	32088	15015	28006	41762
Torque at rated speed 100K Δt	Tn	Nm	46	46	45	83	81	77	115	107	102	143	134	133
Peak torque with S.I.R. 10%	Tpk	Nm	138	138	138	250	250	250	347	347	347	408	408	408
Rotor Inertia	Jm	mkgm²	6	6	6	9	9	9	12	12	12	15	15	15
Rotor Inertia (motor with brake)	Jmb	mkgm²	10,5	10,5	10,5	13,5	13,5	13,5	16,5	16,5	16,5	19,5	19,5	19,5
Acceleration at peak torque	apk	rad/s²	22977	22977	22977	27770	27770	27770	28907	28924	28924	27216	27232	27232
Acceleration at peak torque (motor with brake)	apkb	rad/s²	13100	13100	13100	18545	18545	18545	21000	21000	21000	20940	20940	20940
Weight	M	kg	38	38	38	50	50	50	62	62	62	74	74	74
Weight with brake	Mb	kg	55	55	55	67	67	67	79	79	79	91	91	91
Insulation			WINDING: CLASS H - MOTOR: CLASS F											
Cooling (Convection)			NATURAL AIR (IC0041)											
Standard Protection			IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54
PTC trigger threshold	PTCt	°C	130	130	130	130	130	130	130	130	130	130	130	130
Numbers of poles	PN		8	8	8	8	8	8	8	8	8	8	8	8
E.M.F. constant, 20°	Ke	Vs	3,02	1,37	1,01	2,74	1,46	0,91	3,02	1,37	1,10	2,73	1,37	1,02
Torque constant	Kt	Nm/ Arms	4,97	2,26	1,66	4,51	2,41	1,50	4,96	2,26	1,81	4,50	2,25	1,69
Phase/phase wnding resistance, 20°C	Rw	Ohm	4,86	0,95	0,49	1,34	0,39	0,15	0,90	0,19	0,13	0,62	0,16	0,09
Phase/phase inductance 50Hz	Lw	mH	47,80	9,90	5,30	19,80	5,60	2,19	15,90	3,30	2,11	11,20	2,81	1,49
Rated voltage, 100°C	Vn	V	390	337	363	336	345	318	360	316	374	330	318	352
Continuous stall current 100K Δt	Io	A	9,50	21,30	29,00	18,80	35,30	56,50	23,80	50,90	65,30	33,10	65,30	94,80
Current at rated speed 100K Δt	In	A	9,30	20,40	27,20	19,40	33,50	50,90	23,10	47,40	56,50	31,80	59,60	78,80
Peak current	Ipk	A	28	61	83	55	104	166	70	154	192	91	182	242
Demagnetising current	Idm	Apk	73	161	220	161	302	483	220	483	604	302	604	805
BRAKE PARAMETERS														
Brake type			09	09	09	09	09	09	09	09	09	09	09	09
Static braking torque 100°C	Tb	Nm	160	160	160	160	160	160	160	160	160	160	160	160
Brake power at 20°C	Pb	W	55	55	55	55	55	55	55	55	55	55	55	55

Dimensions



FAN SUPPLY	UDM	
Fan voltage	VAC	230V
Fan current	A	0,37÷0,33
Fan current	Hz	50/60
Temperature treshold	°C	70

MOTOR TYPE	L	LF	X	Y	NOTES
AWM-B20S	353	473	205	110	1) The oil seal is assembled only if oil bath coupling is foreseen.
AWM-B20M	428	548	280	185	
AWM-B20L	502	622	354	260	
AWM-B20G	577	697	354	334	

REFERENCE FOR ORDER CODING

The cable connecting receptacles for signal and power are not included in the motor price.

POSITION	DESCRIPTION
M	Terminal board IP54

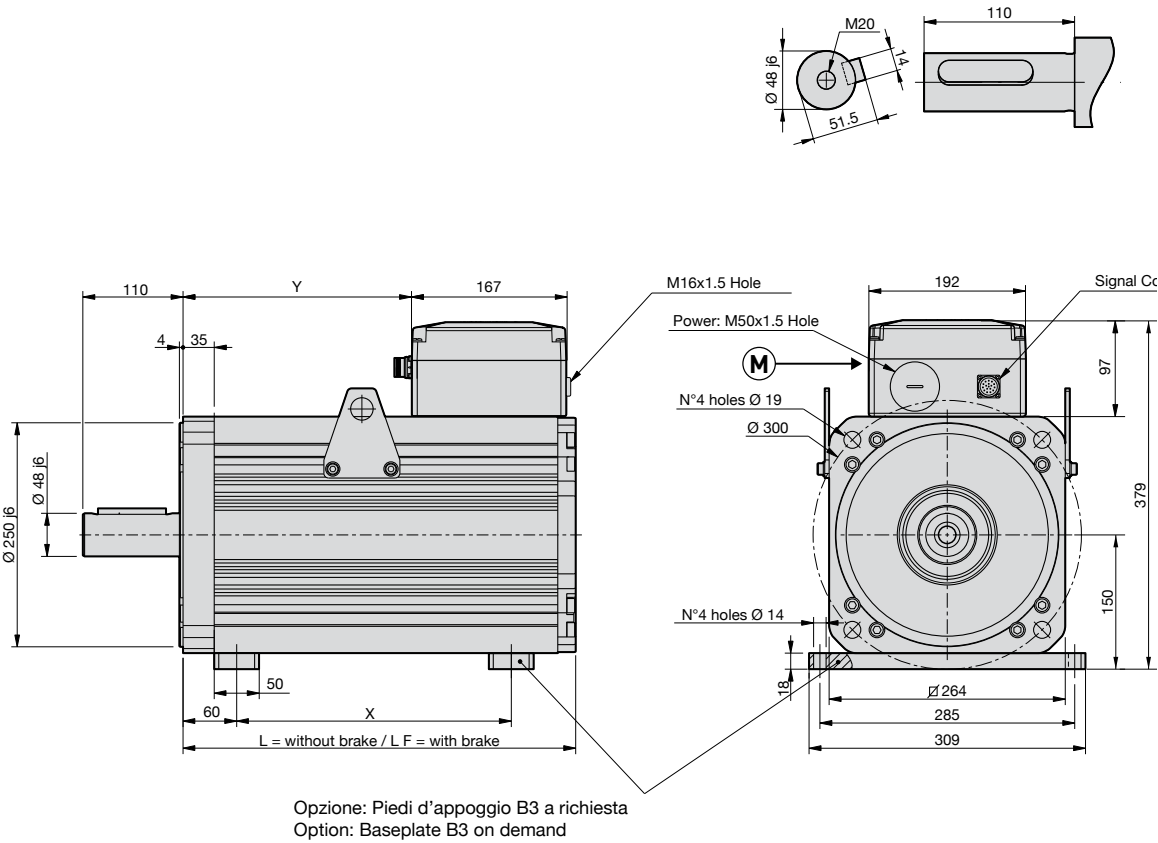
B26 SERVOMOTORS

Automationware

Technical Specifications

MOTOR TYPE	SYMBOL	UDM	AWM-B26S		AWM-B26M		AWM-B26L		AWM-B26G	
Drive operating voltage			400V	400V	400V	400V	400V	400V	400V	400V
Continuous stall torque 100K Δt	To	Nm	94	92	176	179	255	255	332	332
Continuous stall torque 65K Δt	To	Nm	75	74	142	144	206	206	267	267
Rated Speed	n	RPM	1000	2000	1000	2000	1000	2000	1000	2000
Power at rated speed 100K Δt	Pn	W	9870	19228	18480	35530	26670	48279	34125	60192
Torque at rated speed 100K Δt	Tn	Nm	94	92	176	170	254	231	325	288
Peak torque with S.I.R. 10%	Tpk	Nm	253	253	485	485	708	708	923	923
Rotor Inertia	Jm	mkgm²	22,0	22,0	36,0	36,0	49,0	49,0	63,0	63,0
Rotor Inertia (motor with brake)	Jmb	mkgm²	30,1	30,1	44,1	44,1	62,0	62,0	76,0	76,0
Acceleration at peak torque	apk	rad/s²	11513	11513	13477	13477	14445	14445	14646	14646
Acceleration at peak torque (motor with brake)	apkb	rad/s²	8400	8400	11000	11000	11400	11400	12150	12150
Weight	M	kg	49	49	78	78	106	106	135	135
Weight with brake	Mb	kg	79	79	108	108	141	141	170	170
Insulation			WINDING: CLASS H · MOTOR: CLASS F							
Cooling (Convection)			NATURAL AIR (IC0041)							
Standard Protection			IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54
PTC trigger threshold	PTCt	°C	130	130	130	130	130	130	130	130
Numbers of poles	PN		8	8	8	8	8	8	8	8
E.M.F. constant, 20°	Ke	Vs	3,08	1,54	3,08	1,37	3,08	1,54	2,74	1,37
Torque constant	Kt	Nm/ Arms	5,07	2,53	5,07	2,25	5,07	2,53	4,50	2,25
Phase/phase wnding resistance, 20°C	Rw	Ohm	1,06	0,29	0,36	0,07	0,20	0,05	0,12	0,03
Phase/phase inductance 50Hz	Lw	mH	21,56	5,39	10,78	2,13	7,19	1,80	4,26	1,06
Rated voltage, 100°C	Vn	V	370	360	361	313	357	346	315	305
Continuous stall current 100K Δt	Io	A	19	36	35	79	50	101	74	147
Current at rated speed 100K Δt	In	A	19	36	35	75	50	91	72	128
Peak current	Ipk	A	50	100	96	215	140	279	205	410
Demagnetising current	Idm	Apk	134	268	268	604	403	805	604	1208
BRAKE PARAMETERS										
Brake type			12	12	12	12	13	13	13	13
Static braking torque 100°C	Tb	Nm	225	225	225	225	450	450	450	450
Brake power at 20°C	Pb	W	70	70	70	70	70	70	70	70

Dimensions



MOTOR TYPE	L	LF	X	Y	NOTES
AWM-B26S	340	475	200	172	1) The oil seal is assembled only if oil bath coupling is foreseen.
AWM-B26M	447	582	307	279	
AWM-B26L	554	689	414	386	
AWM-B26G	661	796	521	493	

REFERENCE FOR ORDER CODING

POSITION	DESCRIPTION
M	Terminal board IP54

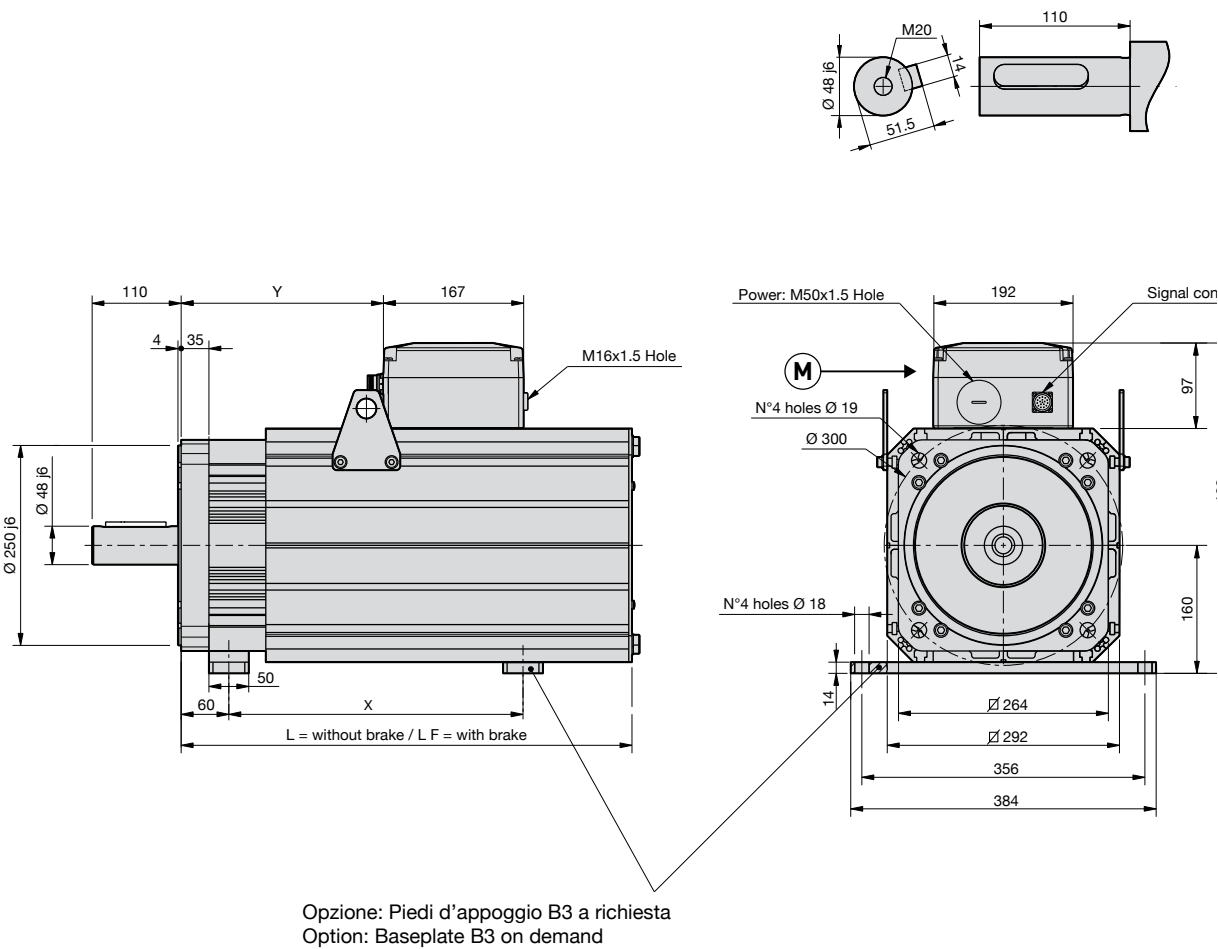
B26F SERVOMOTORS

Automationware

Technical Specifications

MOTOR TYPE	SYMBOL	UDM	AWM-B26S			AWM-B26M			AWM-B26L			AWM-B26G		
Drive operating voltage			400V	400V	400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
Continuous stall torque 100K Δt	To	Nm	122	120	121	232	236	231	338	338	337	442	442	445
Continuous stall torque 65K Δt	To	Nm	99	97	97	187	190	186	273	273	272	356	356	359
Rated Speed	n	RPM	1000	2000	3000	1000	2000	3000	1000	2000	3000	1000	2000	3000
Power at rated speed 100K Δt	Pn	W	12810	24453	35168	23835	46189	62800	34230	64372	86350	44205	82137	108330
Torque at rated speed 100K Δt	Tn	Nm	122	117	112	227	221	200	326	308	275	411	393	345
Peak torque with S.I.R. 10%	Tpk	Nm	333	333	333	638	638	638	931	931	931	1241	1214	1214
Rotor Inertia	Jm	mkgm ²	22,0	22,0	22,0	36,0	36,0	36,0	49,0	49,0	49,0	63,0	63,0	63,0
Rotor Inertia (motor with brake)	Jmb	mkgm ²	30,1	30,1	30,1	44,1	44,1	44,1	62,0	62,0	62,0	76,0	76,0	76,0
Acceleration at peak torque	apk	rad/s ²	15149	15149	15149	17733	17733	17733	19007	19007	19007	19271	19271	19271
Acceleration at peak torque (motor with brake)	apkb	rad/s ²	11000	11000	11000	14400	14400	14400	15000	15000	15000	16000	16000	16000
Weight	M	kg	55	55	55	85	85	85	116	116	116	146	146	146
Weight with brake	Mb	kg	85	85	85	115	115	115	151	151	151	181	181	181
Insulation			WINDING: CLASS H - MOTOR: CLASS F											
Cooling (Convection)			NATURAL AIR (IC0041)											
Standard Protection			IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54
PTC trigger threshold	PTCt	°C	130	130	130	130	130	130	130	130	130	130	130	130
Numbers of poles	PN		8	8	8	8	8	8	8	8	8	8	8	8
E.M.F. constant, 20°	Ke	Vs	3,08	1,54	1,03	3,08	1,37	1,03	3,08	1,54	1,03	2,74	1,37	1,03
Torque constant	Kt	Nm/ Arms	5,07	2,53	1,69	5,07	2,25	1,69	5,07	2,53	1,69	4,50	2,25	1,69
Phase/phase wnding resistance, 20°C	Rw	Ohm	1,06	0,28	0,12	0,36	0,07	0,04	0,20	0,05	0,02	0,12	0,03	0,01
Phase/phase inductance 50Hz	Lw	mH	21,60	5,39	2,40	10,80	2,13	1,20	7,19	1,80	0,80	4,26	1,06	0,60
Rated voltage, 100°C	Vn	V	394	378	372	380	329	361	374	363	355	330	320	351
Continuous stall current 100K Δt	Io	A	24	47	72	46	105	137	67	133	200	98	196	263
Current at rated speed 100K Δt	In	A	24	46	66	45	98	118	64	112	163	93	174	204
Peak current	Ipk	A	66	132	197	126	283	378	184	368	551	270	539	719
Demagnetising current	Idm	Apk	134	268	403	268	604	805	403	805	1208	604	1208	1610
BRAKE PARAMETERS														
Brake type			12	12	12	12	12	12	13	13	13	13	13	13
Static braking torque 100°C	Tb	Nm	225	225	225	225	225	225	450	450	450	450	450	450
Brake power at 20°C	Pb	W	70	70	70	70	70	70	70	70	70	70	70	70

Dimensions



FAN SUPPLY	UDM	
Fan voltage	VAC	230V
Fan current	A	0,66÷0,94
Fan current	Hz	50/60
Temperature treshold	°C	70

MOTOR TYPE	L	LF	X	Y	NOTES
AWM-B26S	470	605	300	172	1) The oil seal is assembled only if oil bath coupling is foreseen.
AWM-B26M	577	712	407	279	
AWM-B26L	684	819	514	386	
AWM-B26G	791	926	621	493	

REFERENCE FOR ORDER CODING

The cable connecting receptacles for signal and power are not included in the motor price.
--

POSITION	DESCRIPTION
M	Terminal board IP54

SERVOMOTORS

AutomationWare

Servoactuators

The linear servoactuators are Brushless motors with hollow shaft for DIN 69051 ballscrew to be inserted in. The nut is fitted in the rotor and rotates with it, and the screw goes through the rotor (*screw ball system not included with the product*).

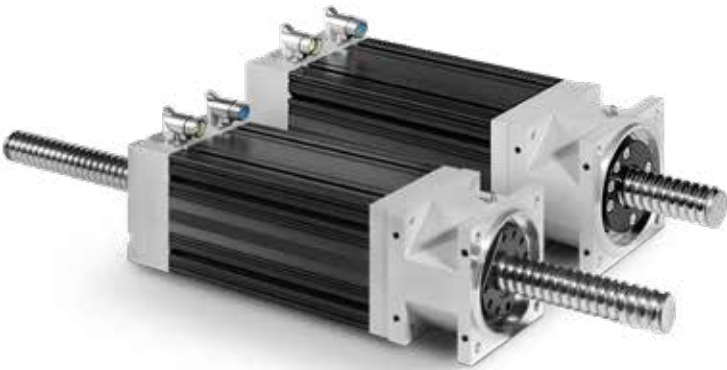
Two versions available:

- **AWM-BSD** type with hollow shaft closed on one side, used as a jack. It can receive screws with strokes from 220mm to 300mm depending on motor size.
- **AWM-BSP** type with hollow (*through hole*) shaft suitable for receiving screws of any lengths. Usable both as a jack, with the motor fixed and the screw sliding and as a linear motor with the screw fixed on both sides and the motor sliding on a linear guideway. The motor has holes for the mounting of the linear guideways.

Both models have a hole for greasing the nut and they are equipped with a double row angular contact ball bearing (*angle of 60°*).

Three sizes of square-shaped motor are available: 85, 110 and 145mm. These motors are designed for Ø16, Ø25, Ø32, Ø40 screwballs.

The servomotors with integrated ballscrew offer high axial thrust from 1800N to 36000N, high dynamics and small dimensions.

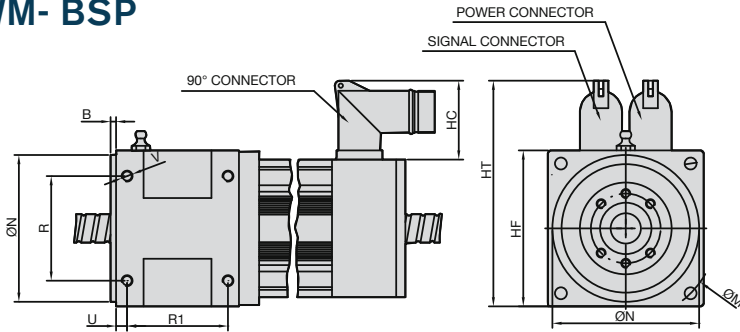


MOTOR TYPE			AWM-BSD										AWM-BSP											
SIZE	Symbol	UDM	AWM-BSD10G		AWM-BSD14L				AWM-BSD14G				AWM-BSP07G		AWM-BSP10G		AWM-BSP14L				AWM-BSP14G			
Drive operating voltage		Vac	400V		400V				400V				400V		400V		400V				400V			
Continuous stall torque 100KΔt	To	Nm	9,05		22,00				28,83				3,20		9,05		22,00				28,83			
Peak torque 100KΔt	Tk	Nm	24,44		59,4				77,84				8,64		24,44		59,4				77,84			
Continuous stall current 100KΔt	Io	A	5,69		13,8				17,94				2,2		5,69		13,8				17,94			
Peak current 100KΔt	IpK	A	15,35		37,26				48,33				5,93		15,35		37,26				48,33			
Power	Pn	W	2910		6105				6520				1077		2910		6105				6520			
Rated speed	n	RPM											3000											
Number of poles	PN		6		6				6				6		6		6				6			
Feedback type			Resolver										Resolver		Resolver		vite/screw ø 32 = Resolver ø 40 = Incremental Encoder, Sin-Cos, Endat 2.2							
Standard protection			IP65																					
Standard screw (Ø x lead) **		mm	25x5	25x10	32x5	40x5	32x10	40x10	32x5	40x5	32x10	40x10	16x5	16x10	25x5	25x10	32x5	40x5	32x10	40x10	32x5	40x5	32x10	40x10
Force (theoretical)	F	kN	11,3	5,6	27,6	27,6	13,8	13,8	35,6	35,6	17,7	17,7	4	2	11,3	5,6	27,6	27,6	13,8	13,8	35,6	35,6	17,7	17,7
Screw stroke*		mm	260		330				330															
Rotor Inertia	Jm	mkgm²	1,090075		4,731267				5,55064				0,309856		1,164289		5,053735				5,873112			
Rotor Inertia with brake	Jmb	mkgm²	1,188069		5,656727				6,476100				0,34200		1,262283		5,979195				6,798572			
Screw Max Speed	v	mm/sec	250	500	250	250	500	500	250	250	500	500	250	500	250	500	250	250	500	500	250	250	500	500

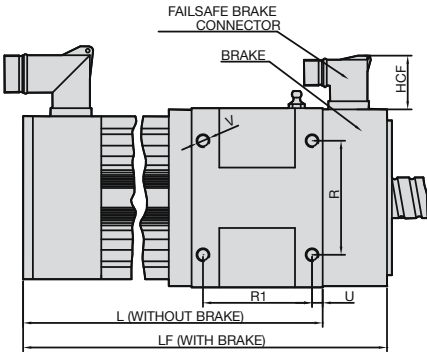
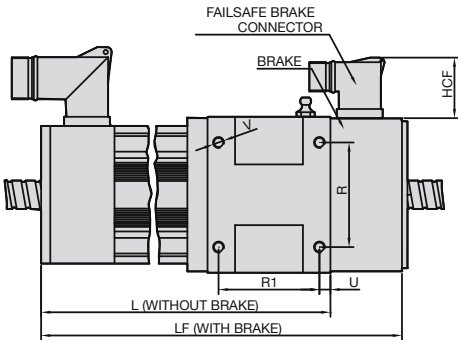
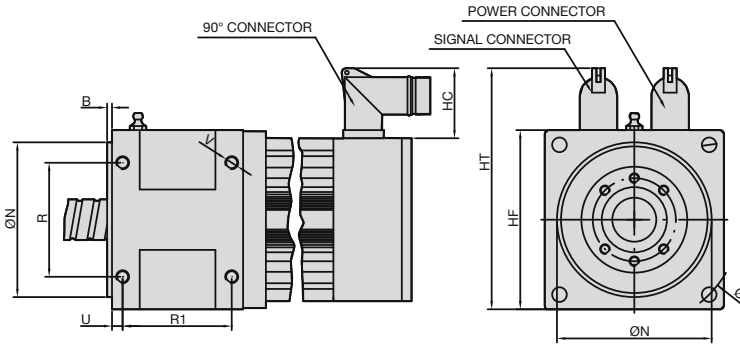
*Depending on screw-nut lenght ** Screw-nut not supplied with the product

Type

AWM- BSP



AWM- BSD



With Brake

MOTOR TYPE			AWM-BSD			AWM-BSP			
SIZE	symbol	UDM	AWM-BSD10G	AWM-BSD14L	AWM-BSD14G	AWM-BSP07G	AWM-BSP10G	AWM-BSP14L	AWM-BSP14G
MECHANICAL DATA	L	mm	426	558	558	293	379	411	463
	LF	mm	466	602	602	332	419	455	507
	HF	mm	110	145	145	85	110	145	145
	M	mm	130	165	165	100	130	165	165
	N	mm	95	130	130	80	95	130	130
	HT	mm	146	186	186	123	146	186	186
	HC	mm	36	36	36	36	36	36	36
	HCF	mm	33	33	33	33	33	33	33
	B	mm	3	3,5	3,5	3	3	3,5	3,5
	R1	mm	65	80	80	55	65	80	80
	U	mm	7,5	12,55	12,55	6	7,5	12,55	12,55
	R	mm	70	90	90	57	70	90	90
	V	mm	M8	M10	M10	M6	M8	M10	M10
	Weight (without screwball)	M	kg	13,7	33,2	34,2	6,4	13,7	26,2
Weight with brake (without screwball)	Mb	kg	14,6	34,1	35,1	6,9	14,6	28,4	32,3

SERVOMOTORS

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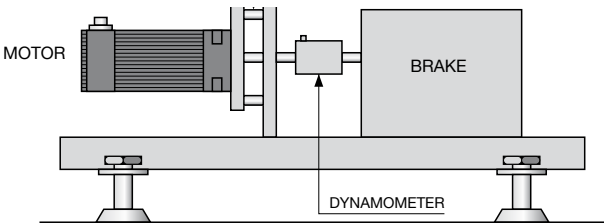
Test Conditions

The operative performance data for the brushless motors were obtained in test conducted under the following conditions: the motor was positioned horizontally on an aluminium stand of different sizes depending on the size of the motor being tested.

- For Sizes B05 and B07, the stand measured 250x250x15 mm
- For Sizes B10 and B14, the stand measured 350x350x20 mm
- For Sizes B20 and B26, the stand measured 500x500x20 mm

The motor was run in order to bring the temperature of the windings to the following values:

- “Δt” of 100 °C with 20 °C room temperature
- “Δt” of 65 °C with 20 °C room temperature



Parking Brake

When installed, the parking brake is usually 24 V DC with permanent magnets and determined polarity.

In order to release the brake, the winding must be connected to power supply. Without current, the rotor is attracted by the force of the magnetic field generated by the permanent magnets towards the friction surface.

This allows locking through friction without backlash to be obtained.

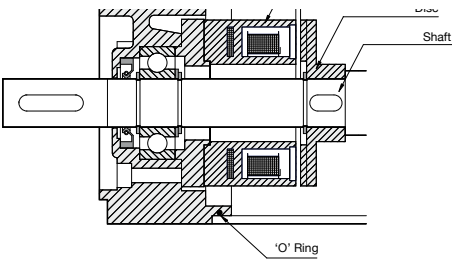
When the brakes are new and operate at high speed, the torque may be lower than the value declared.

The brake installed is a parking brake and can therefore guarantee only a limited number of emergency brakings, and must absolutely not be used for continuing dynamic braking.

Due to the power dissipated by the brake, we recommend declassifying the motor's stall torque by 5%.

MOTOR TYPE	UDM	AWM-B05	AWM-B07	AWM-B10	AWM-B14	AWM-B20	AWM-B26
Brake Type		03	05	06	07/08	09	12/13
Braking Torque (100°C)*	Nm	2	4,5	9	18/36	160	225/450
Power absorbed	W	11	12	18	24/26	55	70
Coupling Time	ms	2	2	2	3	13	180
Release Time	ms	25	35	40	50/90	140	60
Operating voltage ± 5%	VDC	24	24	24	24	24	24
Backlash	Arcmin	0	0	0	0	8	5

* Torque obtained after run-in.



Order Coding

PARKING AND/OR EMERGENCY BRAKE:

- 1 = motor without brake
- 3 = motor B05 with brake*
- 5 = motor B07 with brake*
- 6 = motor B10 with brake*
- 7 = motor B14 K/S/N/M with brake*
- 8 = motor B14 L/G with brake*
- 9 = motor B20(F) with brake*
- 12 = motor B26(F) S/M with brake*
- 13 = motor B26(F) L/G with brake*

SHAFT:

- C = with key
- L = without key**

SIGNAL CONNECTION:

- A = vertical connector
- G = horizontal connector shaft side*
- H = horizontal connector opposite side*
- P = vertical cable output
- M = terminal board
- W = horizontal cable output shaft side*
- Z = horizontal cable output opposite side*

ANGUS OIL SEAL:

- 5 = without sealing ring
- 7 = with sealing ring

RPM (standard):

- 15 = 1500
- 30 = 3000
- 45 = 4500
- 60 = 6000

SPECIAL WORKINGS

DRIVE POWER SUPPLY VOLTAGE:

- R = 400V
- S = 230V
- T = 100V
- W = 60V
- V = 48V

SERIES

B 07 M 2 R 5 C 7 H 1 H 30 N XXX

MOTOR TYPE:

05 - 07 - 10 - 14 - 20 - 26

MOTOR SIZE:

K - S - N - M - L - G - X

MECHANICAL CONFIGURATION:

- 1 = B5
- 2 = B14
- 3 = B3
- 4 = B5+B3*
- 5 = B14+B3*

POWER CONNECTION:

- A = vertical connector
- G = horizontal connector shaft side *
- H = horizontal connector opposite side *
- P = vertical cable output
- M = terminal board, only for B20(F) and B26(F)
- W = horiz. cable output shaft side*
- Z = horiz. cable output opposite side*

TRANSDUCER UTILISED:

- 1 = 2 poles resolver
- 2 = incremental encoder + Hall effect phases*
- 280 = magnetic inc. enc. + Hall effect phases*
- 500 = multiturn enc. abs. SSI

COOLING:

- N = not ventilated
- F = fan cooled

*option with surcharge

**not available at the moment

EXAMPLE:

B 07 M 1 S 01 C 5 H 1 H 30 N XXX

B07 series and type; M motor size 1,9Nm; 1 mech. configuration flange B5; S drive power supply 230V; 1 without parking brake; C shaft with key; 5 without sealing ring; H horizontal power connector on side opposite shaft; 1 2 poles resolver; H horizontal signal connector on side opposite shaft; 30 3000RPM speed; N not ventilated; XXX no special working.

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