



Tetra and Tetra Compact Brushless Servomotors



Electropneumatics
Motor Power Company

Servomotors

Electropneumatics Motor Power Company

Electropneumatics and Hydraulics (I) Pvt. Ltd, India has partnered with Motor Power Company of Italy, an enterprise specialising in motion technology, to introduce sophisticated Motion Control systems for wide ranging industrial applications.

Motor Power Company, Italy leverages its vast know-how and experience to identify specific customer needs and implement solutions in Motion control that are best suited to meet the customer needs. Long-term investments in the study of motion have created deep resources of knowledge in all aspects of motion technology.

Electropneumatics in addition to being a leader in metal forming equipment in India, has also been in the motion control field for well over a decade with the introduction of its first indigenous servo drive as early as 1997. The Electropneumatics Motor Power Company joint venture now brings the vast knowlege of both companies together to provide its customers the best in motion control products with complete solutions and strong technical support.





Tetra / Tetra Compact Brushless Technology

The brushless servomotor is a product of tried-and-tested success that Electropneumatics Motor Power Company manufactures, thanks to incompany know-how acquired during years of practical experience with designing and building motors.

TETRA COMPACT belongs to the low power range and stands out for its constructional shape; TETRA is a brushless servomotor with excellent efficiency along with high torque ratings, thanks to the intrinsic technology that gets the most out of the magnetic material. The original construction of the rotor part (patented) permits two possible inertia executions on the same motor size by ensuring an optimum dynamic response even with different load masses.

These servomotors are particularly suitable for positioning tasks in industrial robots, machine tools, actuators and machine automation with demanding requirements in terms of dynamics and stability. Electropneumatics Motor Power Company proposes not just components but complete motion solutions, seamlessly integrating brushless servomotors with a series of drives with high flexibility and exceptional capabilities covering a wide range of applications.

Features and Benefits

- Synchronous brushless servomotor, permanently excited
- Rated output power from 60W to 8kW
- Maximum servomotor speed up to 5000rpm
- Insulation class F (155°C)
- IP 65 on motor body
- RAL 9005 black powder coating
- Temperature protection by KTY 84 (excluding TC 40)
- Shaft balancing class G 2.5 according to ISO 1940
- Smooth or keyed shaft
- Built-in feedback resolver 2 poles, TTL Encoder, Absolute Multiturn Encoder (Hiperface)
- Cable flange with connectors for TC 40
- 90° round circular turnable connectors (IP 67) for all other models
- Optional electromagnetic permanent-holding brake, zero backlash
- Optional shaft sealing



Product Lineup

Motor Type	Rated Power W	Rated Speed RPM	Rated Torque Nm	Rated Cur Arms	Rated Volts Vac	Peak Torque Nm	Max Speed RPM 230V/400V	Ke V const. Vrms / 1000 rpm	Kt T const. Nm / Arms	L mH	R Ohms	Inertia Kg-cm ² Low / High Low-Standard	Weight Kg No brake/brake
TC40-0.16-32	60	3000	0.19	3.96	24 Vdc	0.48	5000	3	0.05	0.7	1	0.027	0.4/0.54
TC40-0.16-01	60	3000	0.19	2.09	48 Vdc	0.48	5000	5.7	0.094	2.5	3.2	0.027	0.4/0.54
TC40-0.32-01	100	3000	0.32	3.48	48 Vdc	0.96	5000	5.7	0.094	1.42	1.1	0.047	0.54/0.68
TC40-0.32-21	100	3000	0.32	0.62	230	0.96	5000	31.8	0.526	44	36.2	0.047	0.54/0.68
TC60-0.65-21	200	3000	0.64	1.25	230	1.95	5000	31.8	0.526	26.5	12.9	0.13	1.1/1.5
TC60-1.3-21	370	3000	1.18	2.31	230	3.9	5000	31.8	0.526	14.9	4.2	0.24	1.5/1.9
TC60-1.3-15	370	3000	1.18	1.33	400	3.9	3900/5000	55	0.91	41.8	14.4	0.24	1.5/1.9
TC80-1.5-21	480	3000	1.53	2.99	230	4.5	5000	31.8	0.526	7.4	2.3	0.64	2.25/2.97
TC80-1.5-15	480	3000	1.53	1.73	400	4.5	3900/5000	55	0.91	22.2	6.5	0.64	2.25/2.97
TC80-2.8-21	800	3000	2.55	4.99	230	8.4	5000	31.8	0.526	4.4	0.99	1.16	3.05/3.77
TC80-2.8-15	800	3000	2.55	2.88	400	8.4	3900/5000	55	0.91	13.2	3	1.16	3.05/3.77
TC80-4-15	1068	3000	3.4	3.85	230	12	3900	55	0.91	8.9	1.9	1.58	4.1/4.82
TC80-4-17	1068	3000	3.4	2.19	400	12	3900	96	1.6	28.6	6.5	1.58	4.1/4.82
TC100-3.2-21	820	3000	2.61	5.11	230	11	5000	31.8	0.526	4.44	1.1	1.55	3.9/5.2
TC100-3.2-15	820	3000	2.61	2.96	400	11	3900/5000	55	0.91	13.28	2.9	1.55	3.9/5.2
TC100-5.6-15	1320	3000	4.2	4.76	400	22	3900/5000	55	0.91	6.33	1.17	2.91	5.6/6.9
TC100-8-15	1570	3000	5	5.66	400	33	3900/5000	55	0.91	4.22	0.69	4.1	7.3/8.6
T115-3-21	840	3000	2.7	5.3	230	9	5000	31.8	0.53	3	1.3	4.7/7.3	4.7/5.9
T115-3-15	840	3000	2.7	3.1	400	9	3900/5000	55	0.91	9	4	4.7/7.3	4.7/5.9
T115-5.2-14	1300	3000	4.1	7.3	230	15.6	5000	36	0.6	2.4	0.9	6.8/10.6	6.2/7.4
T115-5.2-15	1300	3000	4.1	4.8	400	15.6	3900/5000	55	0.91	6.1	2.1	6.8/10.6	6.2/7.4
T115-7-15	1650	3000	5.3	6.1	230	21	3900/4500	55	0.91	4.1	1.2	8.8/14.1	7.5/8.7
T115-7-17	1650	3000	5.3	3.4	400	21	2200/3900	97	1.6	12	3.7	8.8/14.1	7.5/8.7
T115-9.2-15	2000	3000	6.4	7.3	230	27.6	3900/4500	55	0.91	3.1	0.9	10.9/17.5	8.8/9.9
T115-9.2-17	2000	3000	6.4	4.2	400	27.6	2200/3900	97	1.6	10	2.8	10.9/17.5	8.8/9.9
T115-11-15	2300	3000	7.3	8.5	230	33	3900/4500	55	0.91	2.9	0.9	13/20.8	9.9/11.7
T115-11-17	2300	3000	7.3	4.8	400	33	2200/3900	97	1.6	8.6	2.8	13/20.8	9.9/11.7
T142-12-15	2700	3000	8.6	9.9	230	31	3900/4800	55	0.91	2.8	0.6	23/38.4	13.5/15.7
T142-12-17	2700	3000	8.6	5.6	400	31	2200/3900	97	1.6	7.9	1.6	23/38.4	13.5/15.7
T142-16.5-15	3500	3000	11.1	12.9	230	42	3900/4600	55	0.91	2.1	0.4	27/45.9	15.5/17.7
T142-16.5-17	3500	3000	11.1	7.3	400	42	2200/3900	97	1.6	6.9	1.3	27.45.9	15.5/17.7
T142-21-15	4100	3000	13.1	15.1	230	55	3900/4400	55	0.91	1.4	0.25	36.1/61.2	18.5/20.7
T142-21-17	4100	3000	13.1	8.5	400	55	2200/3900	97	1.6	4.5	0.8	36.1/61.2	18.5/20.7
T142-25.5-15	5000	3000	15.9	18.4	230	65	3900/4400	55	0.91	1.3	0.24	40.5/68.9	20.5/22.7
T142-25.5-17	5000	3000	15.9	10.4	400	65	2200/3900	97	1.6	4.2	0.8	40.5/68.9	20.5/22.7
T180-22.5-17	4700	3000	15	9.8	400	63	2200/3000	97	1.6	3	0.59	69.5/95	27.5/33.5
T180-35-17	6600	3000	21	13.7	400	95	2200/3000	97	1.6	1.9	0.29	102.5/141	36/42
T180-47-17	8380	2000	40	26.2	400	130	2200/3000	97	1.6	1.4	0.19	135.5/186.7	45/51



Motor Ordering Information

TETRA COMPACT 40



TC	40 0.16	32	0	R1	0	D0	XXX
Motor Type (from table)			Mechanical Arrangement	Feedback	Brake	Connection	Optional
1			2	3	4	5	6

2	Mechanical Arrangement	0 - Shaft with key / without oil seal (front flange side IP 42) 1 - Shaft with key / with oil seal (front flange side IP 65) 2 - Shaft without key / without oil seal (front flange side IP 42) 3 - Shaft without key / with oil seal (front flange side IP 65) 4* - High inertia, shaft with key / without oil seal (front flange side IP 42) 5* - High inertia, shaft with key / with oil seal (front flange side IP 65) 6* - High inertia, shaft without key / without oil seal (front flange side IP 42) 7* - High inertia, shaft without key / with oil seal (front flange side IP 65) * Available only for model T115, T142, T180. High rotor inertia is an option N.B.: All motor body are IP 65
3	Feedback	E1 - Encoder TTL 2000ppr R1 - Resolver 2 poles A1 - Absolute Multiturn Encoder
4	Brake	0 - Without brake 1 - With brake
5	Connection	D0 - 300mm cable lenght with AMP connectors C2 - 90° M23 turnable connectors - KTY 84 on power connector



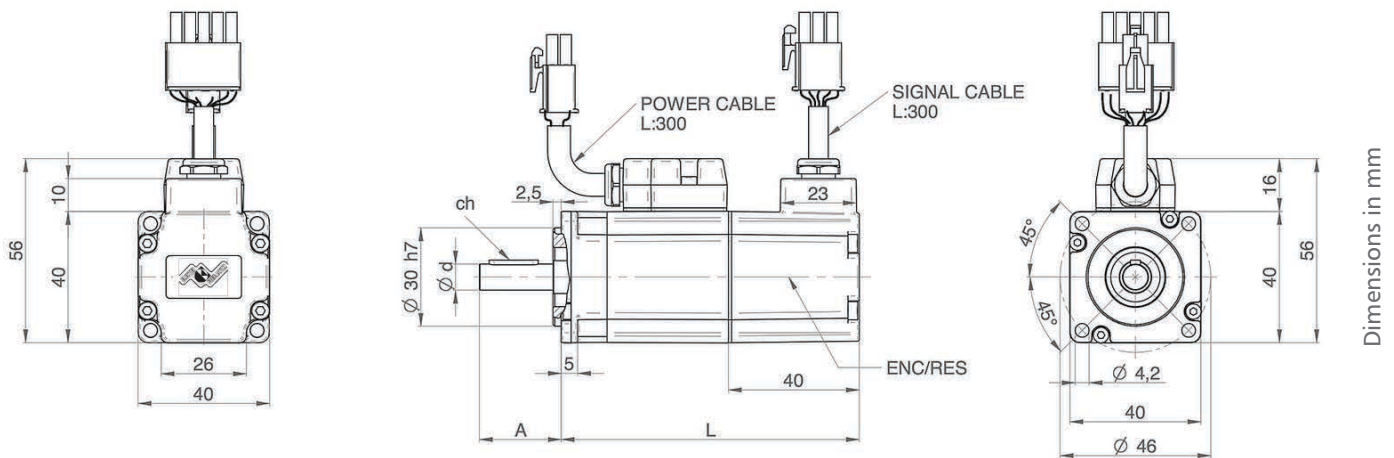
Motor Dimensions

Tetra Compact 40

	TC 40 0,16 32	TC 40 0,16 01	TC 40 0,32 01	TC 40 0,32 21
L *(Without Brake)	91	91	109	109
L * (With Brake)	122	122	140	140
A	25	25	25	25
d	8 (h6)	8 (h6)	8 (h6)	8 (h6)
ch	3x3x15	3x3x15	3x3x15	3x3x15

* Motor's length increases by 10 mm with absolute encoder feedback

Dimensions in mm

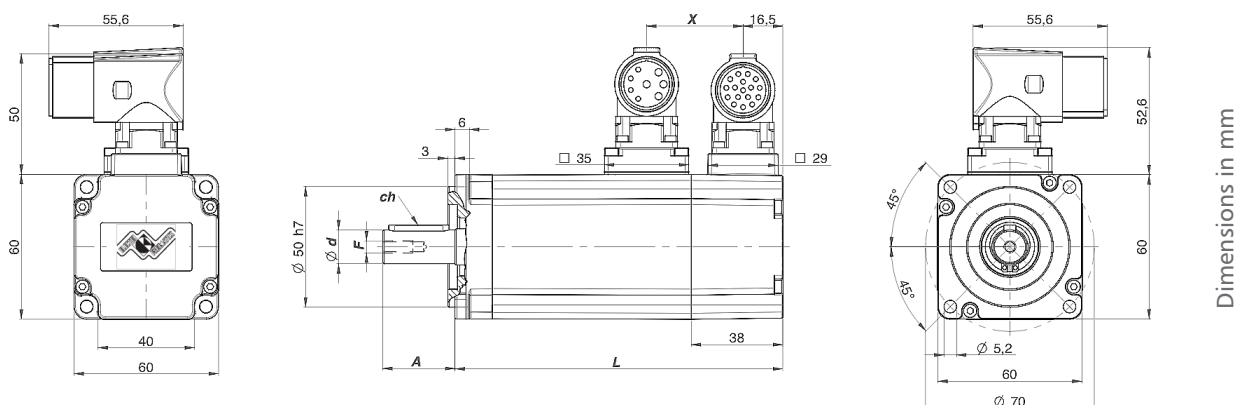


Power connector 6 PIN AMP 172168 - Signal connector 15 PIN AMP 172171

Tetra Compact 60

	TC 60 0,65 21	TC 60 1,3 21	TC 60 1,3 15
L (Without Brake)	111	136	136
L (With Brake)	148	173	173
A	23	30	30
d	11 (h6)	14 (h6)	14 (h6)
ch	4x4x18	5x5x25	5x5x25
F	M4x10	M5x12.5	M5x12.5
X (Without Brake)	40	40	40
X (With Brake)	77	77	77

Dimensions in mm



Power connector 4+4 PIN M23 turnable BEDC 110 - Signal connector 17 PIN M23 turnable AEDC 139

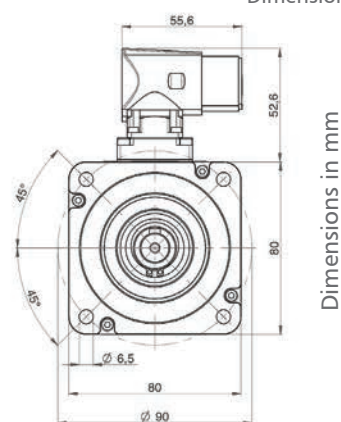
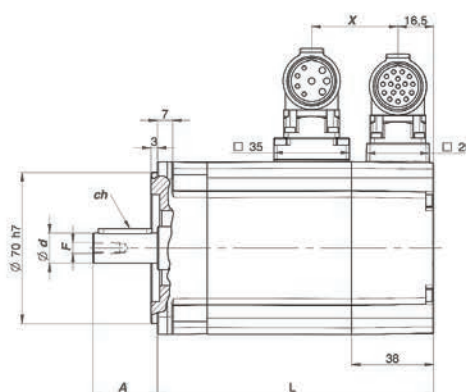
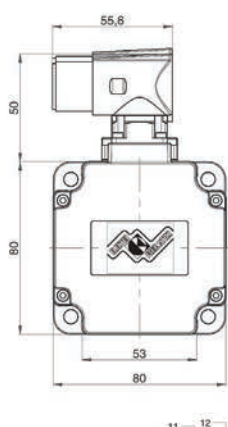


Motor Dimensions

Tetra Compact 80

	TC 80 1,5 21	TC 80 1,5 15	TC 80 2,8 21	TC 80 2,8 15	TC 80 4 15	TC 80 4 17
L (Without Brake)	128	128	153	153	178	178
L (With Brake)	170	170	195	195	220	220
A	30	30	40	40	40	40
d	14 (h6)	14 (h6)	19 (h6)	19 (h6)	19 (h6)	19 (h6)
ch	5x5x25	5x5x25	6x6x30	6x6x30	6x6x30	6x6x30
F	M5x12.5	M5x12.5	M6x16	M6x16	M6x16	M6x16
X (Without Brake)	40	40	40	40	50	50
X (With Brake)	82	82	82	82	92	92

Dimensions in mm



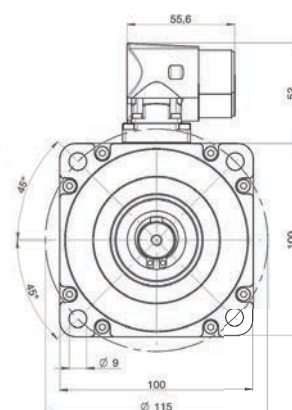
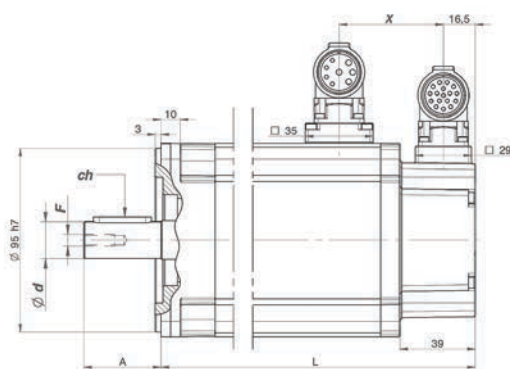
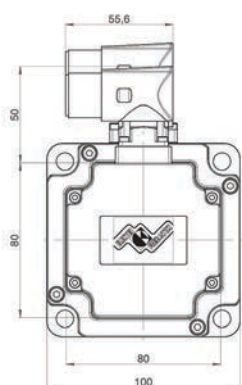
Dimensions in mm

Power connector 4+4 PIN M23 turnable BEDC 110 - Signal connector 17 PIN M23 turnable AEDC 139

Tetra Compact 100

	TC 100 3,2 21	TC 100 3,2 15	TC 100 5,6 15	TC 100 8 15
L (Without Brake)	145	145	175	205
L (With Brake)	195	195	225	255
A	40	40	40	40
d	19 (h6)	19 (h6)	19 (h6)	19 (h6)
C	6x6x30	6x6x30	6x6x30	6x6x30
F	M6x16	M6x16	M6x16	M6x16
X (Without Brake)	54	54	54	54
X (With Brake)	104	104	104	104

Dimensions in mm



Dimensions in mm

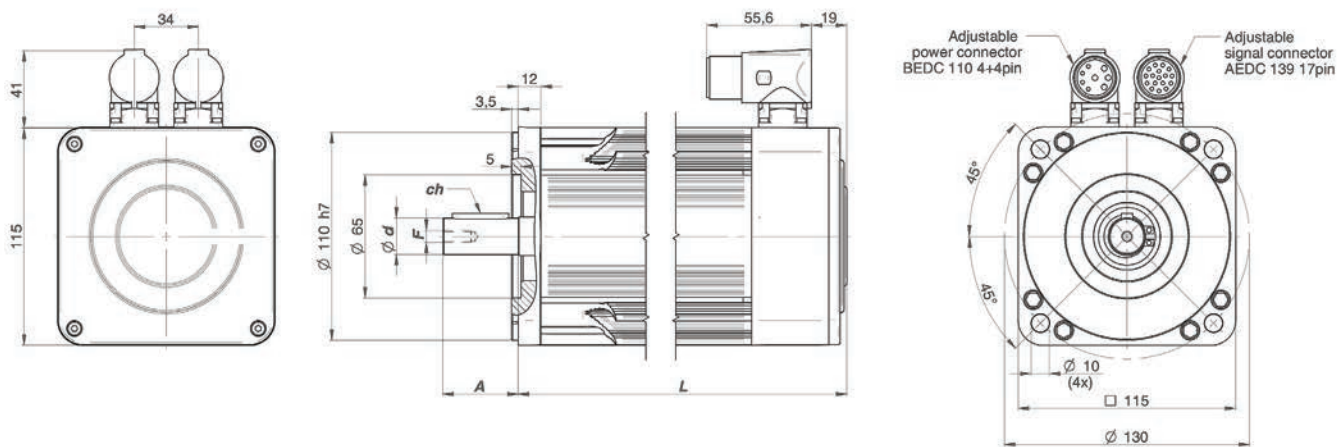
Power connector 4+4 PIN M23 turnable BEDC 110 - Signal connector 17 PIN M23 turnable AEDC 139



Tetra 115

[illegible]

Dimensions in mm

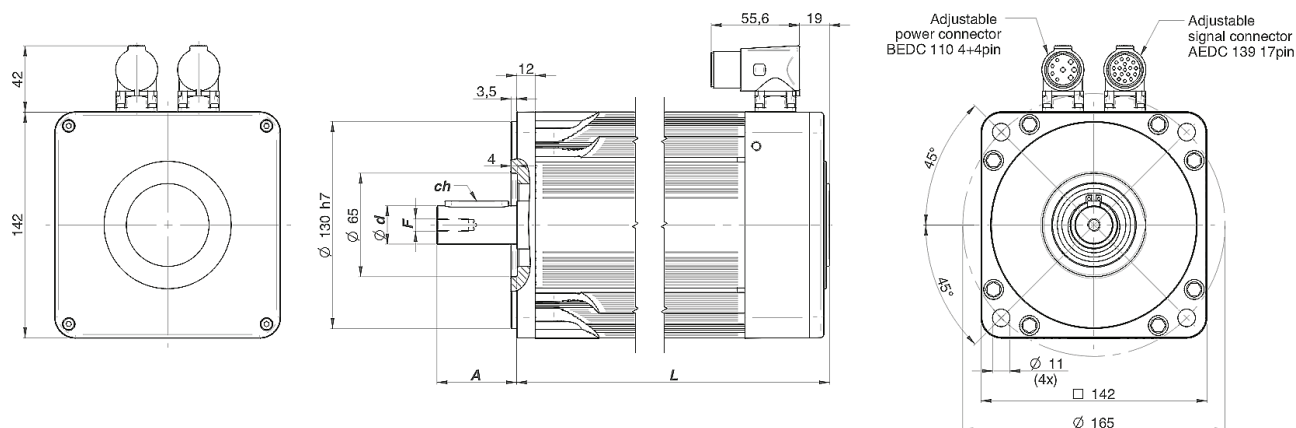


Power connector 4+4 PIN M23 turnable BEDC 110 - Signal connector 17 PIN M23 turnable AEDC 139

Tetra 142

[illegible]

Dimensions in mm



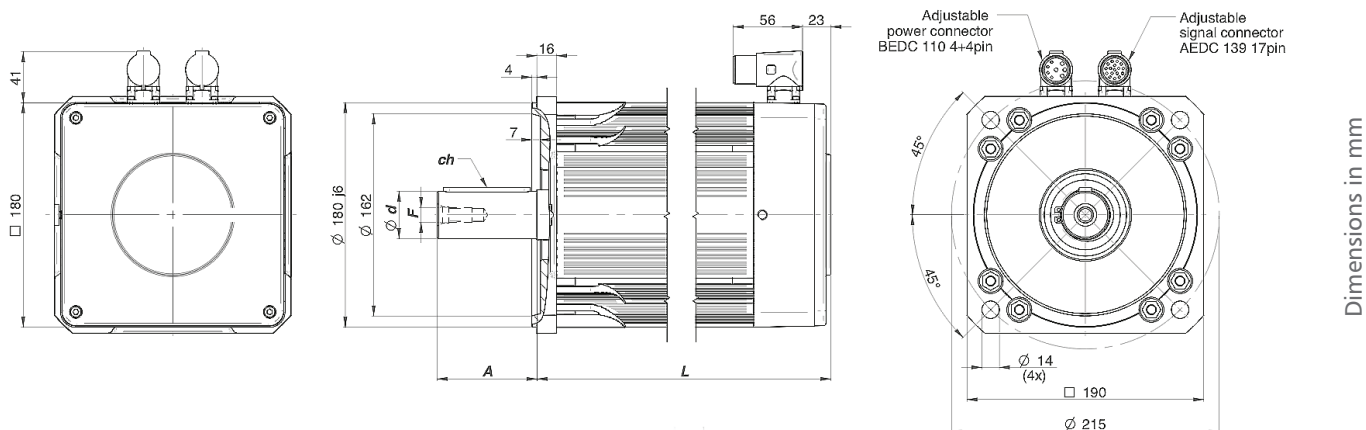
Power connector 4+4 PIN M23 turnable BEDC 110 - Signal connector 17 PIN M23 turnable AEDC 139



Tetra 180

	T180 22,5 17	T180 35 17	T180 47 17
L (Without Brake)	290	350	410
L (With Brake)	350	410	470
A	60	80	80
d	28 (j6)	38 (k6)	38 (k6)
ch	8x7x50	10x8x70	10x8x70
F	M10x22	M12x28	M12x28

Dimensions in mm



Power connector 4+4 PIN M23 turnable BEDC 110 - Signal connector 17 PIN M23 turnable AEDC 139

Digital Servo Drives

A complete range of servo drives in single and dual axes configuration with all the common interfaces.



For more information, please ask for our complete brochure on Servo Drives.



Electropneumatics Motor Power Company (India) Pvt. Ltd.

Gat No. 257, Kharabe Wadi, Chakan-Talegaon Road, Chakan, Pune 410 501, India.

Tel.: +91 (0)2135 667500 | Fax.: +91 (0)2135 667502

Email: empcsales@electropneumatics.com

www.electropneumatics.com