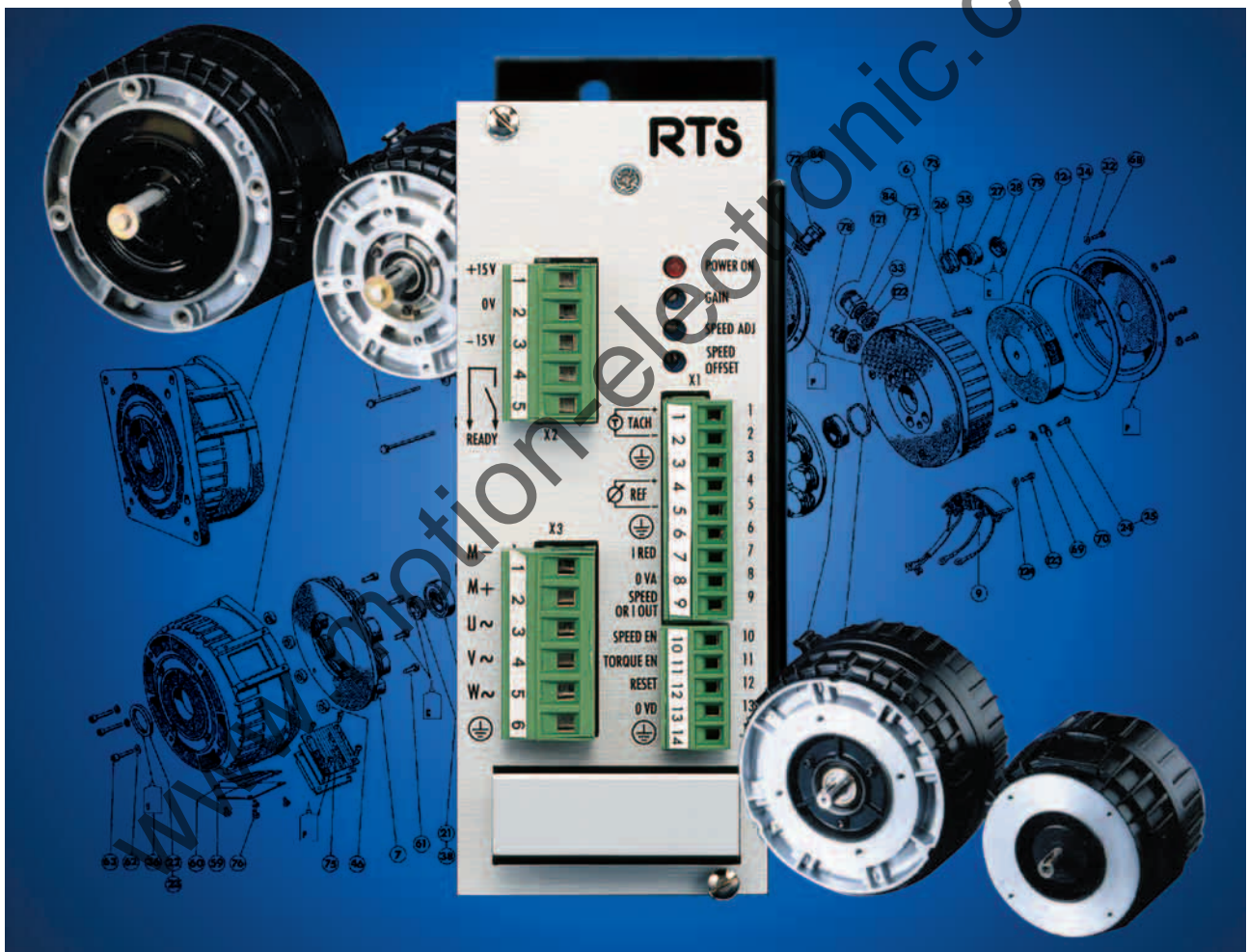


# AXEM Series

Direct current  
Disc-servomotor



PARVEX

➤ **Integrated tachogenerators.**

Mounted directly on the drive shaft, making them, therefore, very rigid, the PARVEX precision tachogenerators have outstanding qualities. There are two different technologies available:

- F disc tacho
- T B N coiled tacho.

Motor	Tacho	Volts per 1000 r.p.m.	Inertia	Mass
	-	Ke	kgm <sup>2</sup> .10 <sup>-5</sup>	kg
F9	F9T	3	3.5	1
F12 - MC	FC12T	6	15	1.5
F9 - F12	TBN 206	6	5	0.2
MC	TBN 420	20	14.5	0.71

Selection of an F 9 T or FC 12 T tacho on an F series motor does not allow for brake and/or encoder adaptation.

➤ **No current holding brakes.**

The brake jams the drive shaft at power-down: static use in order to avoid the tacho accumulating dust.

Voltage 24V CC ± 10%.

Motor	Holding torque		Power W	Inertia kgm <sup>2</sup> .10 <sup>-5</sup>	Mass kg
	Magnet brake Nm	Spring brake Nm			
F9 - F12	-	1.5	11	1	0.47
MC13	2	-	12	2.3	0.3
MC17 - MC19	5	-	16	6.5	0.6
MC23 - MC24	12	-	10	21.4	1.1
MC27	20	-	22	57	1.9
MC17	-	4	20	2.5	1.4
MC19	-	8	25	7	1.9
MC23 - 24 - 27	-	16	40	13.5	2.8

➤ **Incremental encoder.**

Very compact, the K9 encoder is mounted directly on the shaft, accordingly axial loads on the shaft are not permitted.

The excellent protection of the C6B means that it is particularly well-suited to a highly industrial environment.

Motor	Encoder	Connection	Standard revolution graduations	Optional revolution graduations	Inertia kgm <sup>2</sup> .10 <sup>-5</sup>	Mass kg
	-	-	-	-	-	-
F	K 9	1m cable	500	250	0.03	0.075
	C 4	1m cable	500	250 - 1000 2500	0.23	0.20
MC	C 6 B	connector	500	1000 2500 5000	0.3	0.45

➤ **Gear motor (please contact us).**

This range of gear motors, perfectly integrated into the servo-motor, results in a compact, high-performance unit.

- Low clearance
- Excellent performance
- Considerable stiffness
- Practically zero maintenance

➤ **Ventilation system.**

Some of the AXEM servo-motors in the MC range can be fitted with an independent ventilation system. The ventilation system drive unit is fitted in place of one of the casing side cover plates; the supplied exhaust nozzle can be mounted by removing the second plate.

Power supply: one or three-phase 230/400V - 50/60Hz.

Power rating: 20W

Mass: 2.25kg

Lead connection (L=250mm)

➤ **Smoothing choke coil.**

The very low inductance of the AXEM is beneficial to brush life, but makes it compulsory to use a coil in tandem with the servo-motor when the power supply for the servo-motor comes from a quench servo-amplifier.

Reference	Inductance mH	Rated current A	Terminal mm <sup>2</sup>	Dimensions			Mass kg
				Width mm	Depth mm	Height mm	
SF 02031	1	12	1.5	60	70	63	0.56
SF 02022	2.5	16	4	126	105	115	4.2
SF 02023	1.5	25	10	126	130	135	5.9
SF 02024	1	40	-	126	180	110	8.8

# AXEM SERVO-MOTOR TYPE F 9 - 12

## AXEM characteristics Type F9 - 12

Characteristics (1) at 40°C Form factor de $\leq 1,02$	Marking	Rated torque	Rated speed	Rated Power output	Rated voltage	Rated current	Rated torque S3 cycle / 50 ms. 1% ) E.M.F at 1000 rpm (C)	Torque constant (25°C)	Armature resistant (25°C)	Inertia	Mechanical time constant	Thermal constant (min)	Thermal constant (using)	Axial load	Radial load at half shaft length	Mass
Symbols	Mn	Nn	Pn	Un	Io	C imp.	Ke	Kt	R	J	t <sub>m</sub>	t <sub>thd</sub>	t <sub>thc</sub>	FA **	Fr **	M
Units	Nm	rpm	W	V	A	Nm	V	Nm/A	$\Omega$	$10^{-5} \text{ kg.m}^2$	ms	s	min	daN	daN	kg
<b>F 9 M 4 R</b>	CE 0,14	4800	70	22	6,4	1,15	3,1	0,030	1,1	3,5	39,6	52	25	2,5	14	1,1
<b>F 9 M 2</b>	CE 0,282	3000	88	14	11	1,73	3,1	0,030	0,43	2,9	13,2	21	16	2,5	14	2,3
<b>F 9 M 4</b>	CE 0,346	3000	108	26	6,7	3,45	6,2	0,059	1,1	3,5	10,2	21	16	2,5	14	2,3
<b>F 9 M 4 H</b>	CE 0,537	3000	168	35	6,5	4,9	9,2	0,088	1,1	3,4	4,5	21	16	2,5	14	2,8
<b>F 12 M 4 R</b>	CE 0,42	4800	210	37	8	2,9	6,2	0,059	0,93	15	37,6	37	22	2,5	14	2,9
<b>F 12 M 2</b>	CE 0,61	3000	190	24	11,7	4,3	6	0,057	0,47	10,5	14	30	24	2,5	14	3,85
<b>F 12 M 4</b>	CE 0,77	3000	240	43	7,7	8,6	12	0,115	0,93	15	10	30	24	2,5	14	3,85
<b>F 12 M 4 H</b>	CE 1,1	3000	345	61	7,2	13	18	0,172	0,93	16	4,7	30	24	2,5	14	5

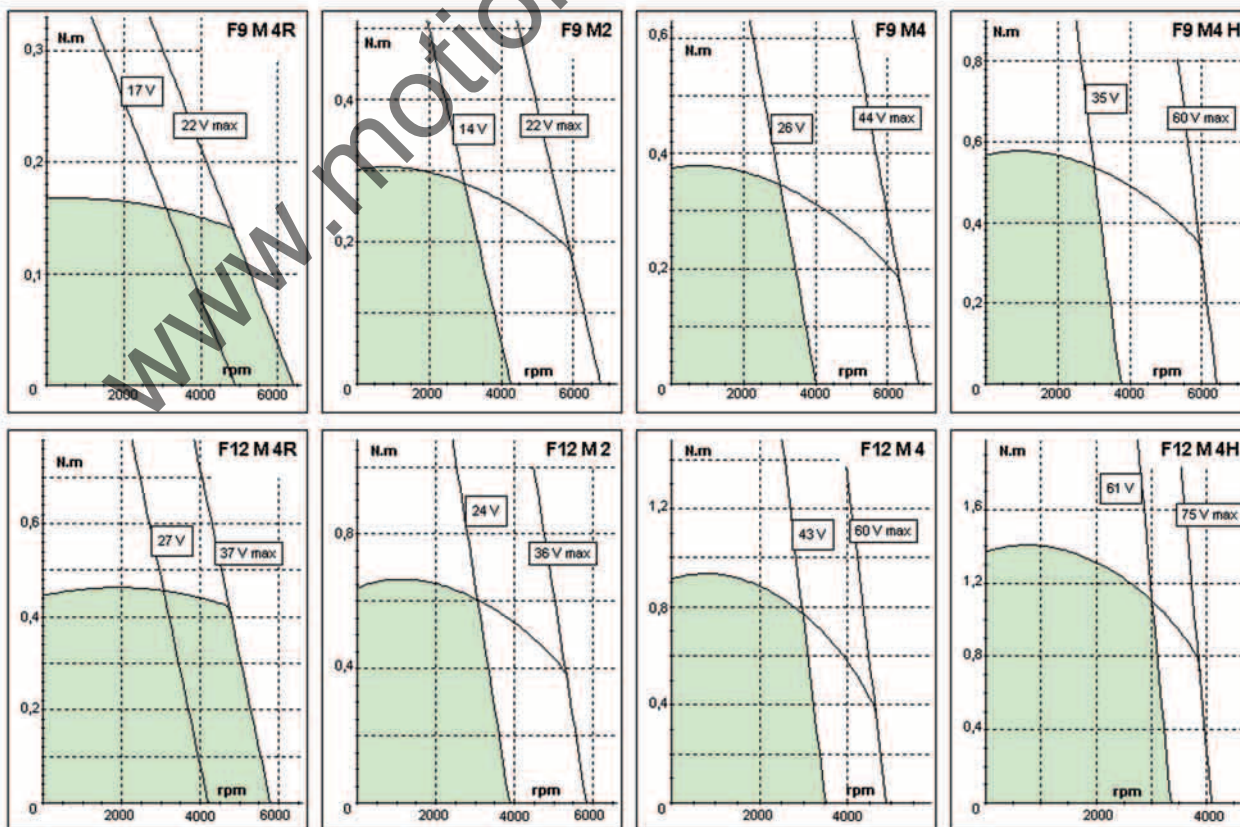
(1) Characteristics given for non insulated servomotor

\*\* FA et Fr not cumulative

### Performance curves

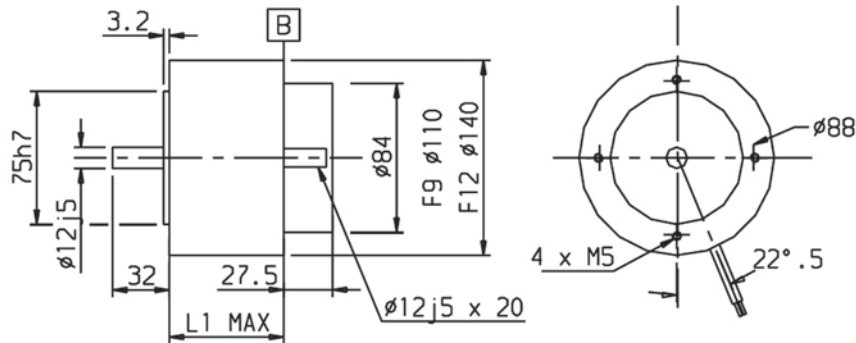
thermal continuous duty

F 9-12

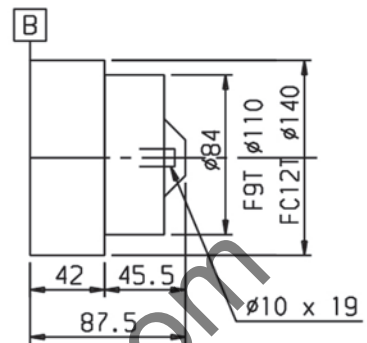


# AXEM SERVO-MOTOR TYPE F 9 - 12

F SERVOMOTOR AND AXEM TACHO



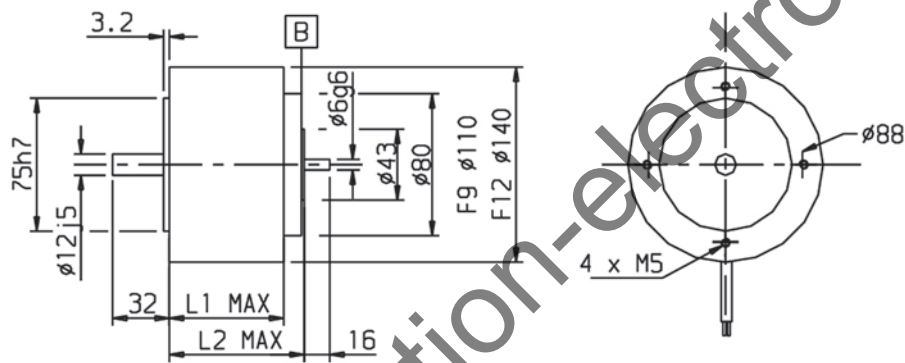
F9T, FC12T TACHO



	L1 MAX		L1 MAX
F9M4R	37	F12M4R	37.7
F9M2/M4	55.5	F12M2/M4	64.5
F9M4H	67	F12M4H	77

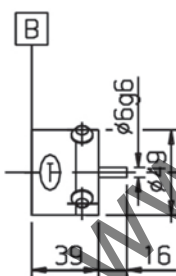
CABLE L=1.5m ONLY FOR MOTORS WITH TACHO

F SERVOMOTOR AND WOUND TACHO

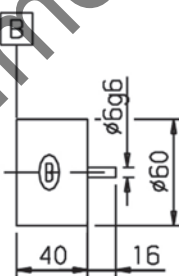


	L1 MAX	L2 MAX
F9M4R	34	46.5
F9M2/M4	52.5	65
F9M4H	64	76.5
F12M4R	37.5	51
F12M2/M4	61.5	71.5
F12M4H	74	84

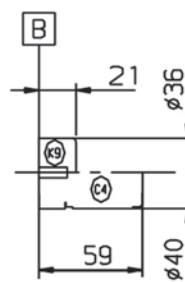
TBN206 TACHO



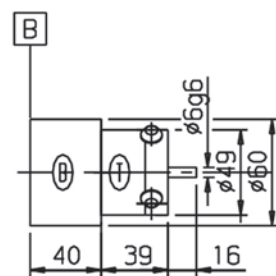
BRAKE



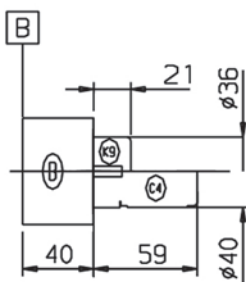
ENCODER



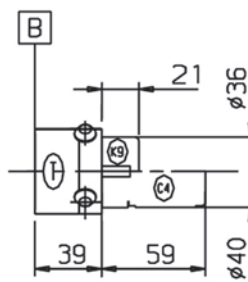
BRAKE+TACHO



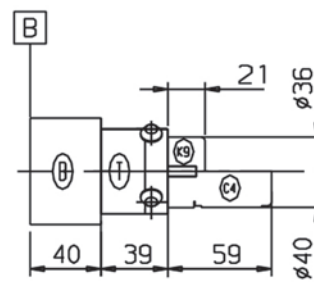
BRAKE+ENCODER



TACHO+ENCODER



BRAKE+TACHO+ENCODER



FOR MOTORS WITH TACHO+BRAKE+ENCODER OUTPUT CABLE LENGTH = 1m