

# XtraforsPrime AC Servomotors



## Features

- Compact size
- High torque
- High speed
- No cogging
- Modular construction

## Power

- Stall torque 0.25 to 75 Nm
- Size 34 to 192 mm

## Executions

- Wide range of standard models
- Customized versions
- CE certified, UL listed

# XtraforsPrime, AC Servomotors

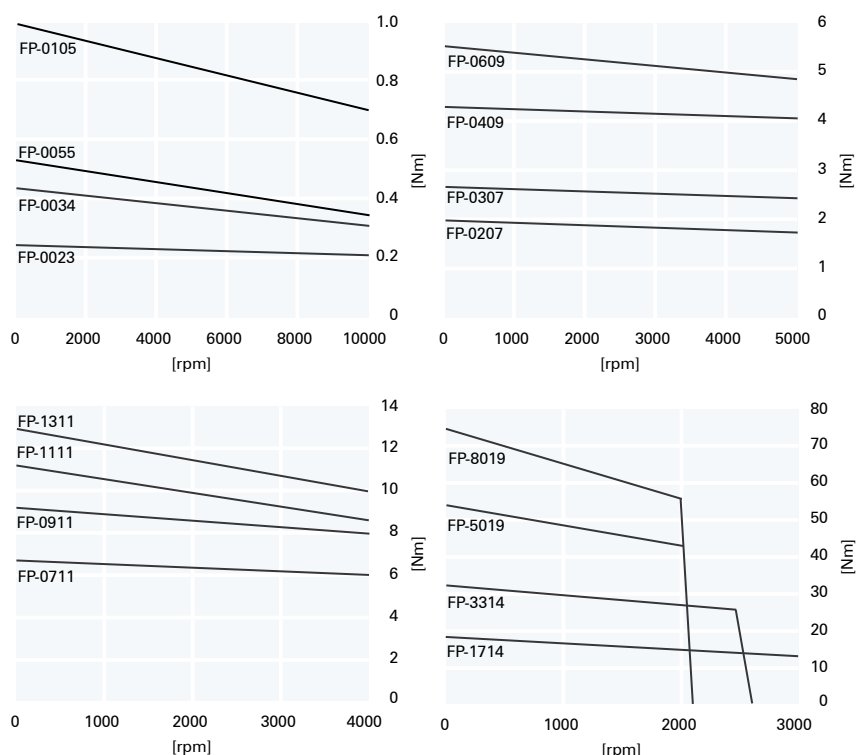
The modular construction concept is the basis for the wide range of standard models. The slotless stator design results in outstanding technical properties such as high speed, high torque, zero cogging, minimal torque ripple, high efficiency and high rigidity. Thus, these motors are perfectly suited for various demanding servo applications.

## Technical data

| Type    | Stall values   |                | Nominal values   |                  | Peak values      |                  |                  | Brake            | Length        |
|---------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------|
|         | Torque         | Current        | Torque           | Speed            | Torque           | Current          | Speed*           | Torque           | L             |
|         | M <sub>0</sub> | i <sub>0</sub> | M <sub>nom</sub> | n <sub>nom</sub> | M <sub>max</sub> | i <sub>max</sub> | n <sub>max</sub> | M <sub>nom</sub> | without brake |
|         | [Nm]           | [Arms]         | [Nm]             | [rpm]            | [Nm]             | [Arms]           | [rpm]            | [Nm]             | [mm]          |
| FP-0023 | 0.24           | 1.40           | 0.23             | 3000             | 1.44             | 8.40             | 36 000           | 0.4              | 145.0         |
| FP-0034 | 0.44           | 2.03           | 0.40             | 3000             | 2.64             | 12.2             | 30 000           | 0.4              | 140.5         |
| FP-0055 | 0.54           | 2.15           | 0.46             | 3000             | 3.24             | 12.9             | 22 000           | 1.0              | 90.00         |
| FP-0105 | 1.00           | 2.51           | 0.90             | 3000             | 6.00             | 15.0             | 15 000           | 1.0              | 110.0         |
| FP-0207 | 2.00           | 3.04           | 1.85             | 3000             | 12.0             | 18.2             | 9 500            | 2.0              | 116.5         |
| FP-0307 | 2.70           | 3.63           | 2.54             | 3000             | 16.2             | 21.8             | 8 500            | 4.5              | 137.5         |
| FP-0409 | 4.20           | 3.57           | 4.15             | 3000             | 25.2             | 21.4             | 5 300            | 4.5              | 147.5         |
| FP-0609 | 5.60           | 4.97           | 5.12             | 3000             | 33.6             | 29.8             | 5 500            | 9.0              | 165.5         |
| FP-0711 | 6.50           | 6.70           | 6.10             | 3000             | 39.0             | 40.2             | 6 300            | 9.0              | 149.0         |
| FP-0911 | 9.00           | 7.22           | 8.20             | 3000             | 54.0             | 43.3             | 5 000            | 9.0              | 173.0         |
| FP-1111 | 11.0           | 8.14           | 9.10             | 3000             | 66.0             | 48.9             | 4 600            | 18               | 197.0         |
| FP-1311 | 13.2           | 9.77           | 10.8             | 3000             | 79.2             | 58.6             | 4 600            | 18               | 221.0         |
| FP-1714 | 18.3           | 10.7           | 15.5             | 1500             | 110              | 64.0             | 3 500            | 18               | 215.0         |
| FP-3314 | 31.5           | 12.8           | 27.5             | 1500             | 189              | 76.8             | 2 500            | 36               | 317.0         |
| FP-5019 | 54.5           | 19.1           | 46.0             | 1500             | 327              | 114              | 2 000            | 72               | 307.0         |
| FP-8019 | 75.0           | 22.8           | 59.0             | 1500             | 450              | 137              | 2 000            | 72               | 362.0         |

\*Valid for operation with servo drive using 400VAC supply

## Torque curves



## Standard version

- Resolver feedback
- Shaft with keyway
- Protection IP-65
- Rotatable angled connectors
- PTC thermal sensor
- RoHS conform
- UL conform (UL-listed pending)

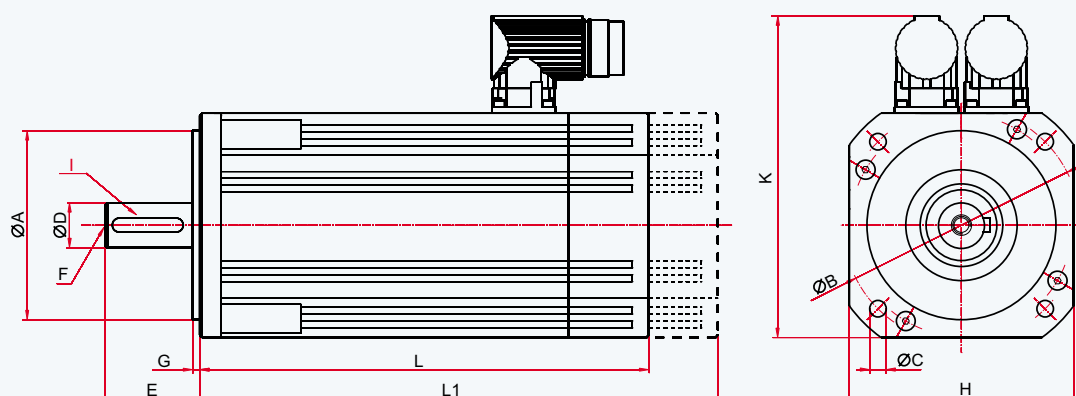
## Options

- Various types of incremental encoders, SinCos encoders, Hiperface, EnDat
- Shaft without keyway
- Protection IP-67
- Shaft seal
- Straight connectors
- Direct cable output
- NTC thermal sensor

## Customized versions

- Shafts (i.e. hollow shafts)
- Flanges, housings
- Windings
- Connections
- Executions according to customer's specification

## Mechanical dimensions



Dimensions for motor with resolver feedback

| Dimensions     |       |     |     |       |    |     |     |          |        |     | without brake | with brake |
|----------------|-------|-----|-----|-------|----|-----|-----|----------|--------|-----|---------------|------------|
| [mm]           | ØA j6 | ØB  | ØC  | ØD k6 | E  | G   | H   | I        | F      | K   | L             | L1         |
| <b>FP-0023</b> | 25    | 36  | 3.4 | 6 h5  | 20 | 2.5 | 34  | –        | –      | 62  | 145.0         | 176.0      |
| <b>FP-0034</b> | 32    | 45  | 4.5 | 8 j5  | 25 | 2.5 | 42  | –        | –      | 70  | 140.5         | 171.5      |
| <b>FP-0055</b> | 40    | 65  | 5.5 | 9     | 20 | 2.5 | 57  | A3x3x12  | M3x9   | 107 | 90.0          | 129.0      |
| <b>FP-0105</b> | 40    | 65  | 5.5 | 9     | 20 | 2.5 | 57  | A3x3x12  | M3x9   | 107 | 110.0         | 149.0      |
| <b>FP-0207</b> | 60    | 75  | 5.5 | 11    | 23 | 2.5 | 70  | A4x4x14  | M4x10  | 112 | 116.5         | 142.0      |
| <b>FP-0307</b> | 60    | 75  | 5.5 | 11    | 23 | 2.5 | 70  | A4x4x14  | M4x10  | 112 | 137.5         | 165.5      |
| <b>FP-0409</b> | 80    | 100 | 6.6 | 19    | 40 | 3   | 90  | A6x6x30  | M6x16  | 132 | 147.5         | 177.0      |
| <b>FP-0609</b> | 80    | 100 | 6.6 | 19    | 40 | 3   | 90  | A6x6x30  | M6x16  | 132 | 165.5         | 207.0      |
| <b>FP-0711</b> | 95    | 115 | 9   | 19    | 40 | 3   | 110 | A6x6x30  | M6x16  | 152 | 149.0         | 189.0      |
| <b>FP-0911</b> | 95    | 115 | 9   | 19    | 40 | 3   | 110 | A6x6x30  | M6x16  | 152 | 173.0         | 213.0      |
| <b>FP-1111</b> | 95    | 115 | 9   | 19    | 40 | 3   | 110 | A6x6x30  | M6x16  | 152 | 197.0         | 242.0      |
| <b>FP-1311</b> | 95    | 115 | 9   | 19    | 40 | 3   | 110 | A6x6x30  | M6x16  | 152 | 221.0         | 266.0      |
| <b>FP-1714</b> | 130   | 165 | 11  | 24    | 50 | 3.5 | 140 | A8x7x32  | M8x19  | 182 | 215.0         | 258.0      |
| <b>FP-3314</b> | 130   | 165 | 11  | 24    | 50 | 3.5 | 140 | A8x7x32  | M8x19  | 182 | 317.0         | 370.0      |
| <b>FP-5019</b> | 180   | 215 | 16  | 32    | 58 | 4   | 192 | A10x8x50 | M12x28 | 234 | 307.0         | 365.0      |
| <b>FP-8019</b> | 180   | 215 | 16  | 32    | 58 | 4   | 192 | A10x8x50 | M12x28 | 234 | 362.0         | 420.0      |

Lengths of executions with different encoder models

| Type FP | 0023 | 0034 | 0055 | 0105 | 0207 | 0307 | 0409 | 0609 | 0711 | 0911 | 1111 | 1311 | 1714 | 3314 | 5019 | 8019 |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

L (without brake)

|             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Incremental | 137.0 | 132.5 | 106.5 | 126.5 | 126.0 | 147.0 | 147.5 | 165.5 | 162.0 | 187.0 | 210.0 | 234.0 | 215.0 | 317.0 | 320.0 | 375.0 |
| Endat 2.1   | –     | –     | 123.0 | 143.0 | 159.0 | 180.0 | 177.0 | 195.0 | 189.0 | 213.0 | 237.0 | 261.0 | 260.0 | 365.0 | 327.0 | 382.0 |
| Hiperface   | –     | –     | 123.0 | 143.0 | 142.0 | 163.0 | 165.0 | 180.5 | 162.0 | 186.0 | 210.0 | 234.0 | 235.0 | 340.0 | 327.0 | 382.0 |
| SinCos      | –     | –     | 137.0 | 157.0 | 159.0 | 180.0 | 177.0 | 195.0 | 189.0 | 213.0 | 237.0 | 261.0 | 250.0 | 355.0 | 332.0 | 387.0 |

L1 (with brake)

|             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Incremental | 176.0 | 171.5 | 145.0 | 165.0 | 157.0 | 184.0 | 192.0 | 215.0 | 195.0 | 219.0 | 252.0 | 276.0 | 260.0 | 410.0 | 375.0 | 430.0 |
| Endat 2.1   | –     | –     | 167.0 | 187.0 | 190.0 | 217.0 | 209.5 | 232.5 | 208.0 | 232.0 | 265.0 | 289.0 | 300.0 | 430.0 | 382.0 | 435.0 |
| Hiperface   | –     | –     | 156.0 | 176.0 | 173.0 | 200.0 | 209.5 | 232.5 | 208.0 | 232.0 | 265.0 | 289.0 | 300.0 | 430.0 | 382.0 | 435.0 |
| SinCos      | –     | –     | 172.0 | 192.0 | 190.0 | 217.0 | 214.0 | 244.5 | 217.0 | 241.0 | 283.0 | 307.0 | 310.0 | 440.0 | 385.0 | 440.0 |

## DISTRIBUTORS

### ARGENTINE

TEKMATIC, S.A.  
Pasaje Cuba 751  
1870 Avellaneda (BUENOS  
AIRES) ARGENTINA  
Tel. + 54 11 4222 5040  
Fax. +54 11 4201 2478

### AUSTRIA

ING. REINHOLD SPÖRK  
MECHANISCHE  
U.ELEKTRONISCHE  
ANTRIEBSSYSTEME GMBH  
Gewerbegasse 4  
A-2540 BAD VÖSLAU AUSTRIA  
Tel. +43 (0) 22527 1110  
Fax. +43 (0) 225271333

### AUSTRALIA

RUTTY & CO.  
Street Address:  
44 Beaumont Road  
Mount Kuring-Gai 2080 NSW  
Postal Address:  
PO Box 129  
Mt Kuring-Gai 2080 NSW AUSTRALIA  
Tel. + 61 2 9457 2222  
Fax. + 61 2 9457 2299

### BRASIL

PRODAU IND. E COM. DE  
AUTOMAÇÃO LTDA  
Rua Cabreuva, no 437  
Jd Leocadia, Sorocaba.Sp.  
Brasil CEP 18085-340  
Tel. + 55 15 3228 3730 / + 55 15  
3228 1651  
Fax. + 55 15 3228 3730

### BULGARIA

ZGPU Group Ltd.  
20 L. Karavelov St.  
5300 Gabrovo BULAGRIA  
Tel. + 359 66 800 926  
Fax. + 359 66 800 925

### CHILE

LUREYE ELECTROMECAÁNICA  
S. A. Av. Vicua Mackenna 1503,  
1er piso Santiago CHILE  
Tel. + 56 2 450 42 00  
Fax. + 56 2 450 42 50

### REP. OF CHINA

INFRANOR MOTION CONTROL  
TECHNOLOGY (Shanghai) Co.Ltd  
Room. 601 No. 448 HongCao Rd.  
Shanghai P.R. China CN-200233  
Tel. + 86 21 61455455  
Fax. + 86 2161455457

### COLOMBIA

SERVELEC  
Carrera 72C N°ba 23F-06  
Bogota, D.C. - Colombia  
Tel. +57 1 295 1333; +57 1 609  
5037 / 38  
Fax. +57 1 263 78 13

### CROATIA

GENERAL GRAFIK doo.  
Zavrtnica,17  
10000 ZAGREB CROATIA  
Tel. + 38 51 6055224  
Fax. + 38 51 6055225

### CZECH REPUBLIC

RONAX DEVICES s.r.o.  
Halasova 810/ 8  
703 00 OSTRAVA VITKOVICE  
Czech Republic  
Tel. + 420 605 348 798  
E-mail: info@mavilor.cz

### DENMARK

DELTA ELEKTRONIK A/S  
Husby Allé 178 DK- 2630  
TAASTRUP DINAMARCA  
Tel. + 45 437 1 8088  
Fax + 45 437 1 8038

### EGYPT

AEE Advanced Electronic  
Engineering  
26, Rabaa Bldgs Nozha St.,Nasr  
CityCairo EGYPT  
Tel. + 202 24185020  
Fax + 202 24159265

### FINLAND

SKS GROUP  
P.O. Box 122 Martinkyläntie,50  
FI-01721 Vantaa FINLANDIA  
Tel: +358 20 764 6750  
Fax.: +358 500 217 479

### FRANCE

INFRANOR S.A.  
3 avenue Louis Delage  
F-91310 LINASFRANCIA  
Tel. + 33 (0) 1696 33515  
Fax + 33 (0) 1696 33516

### GERMANY

INFRANOR GmbH  
Donaustrasse, 19a -  
D-63452 HANAU  
Tel. + 49 6181 180 120  
Fax + 49 6181 180 1290

### GREECE

KYMA GmbH  
54500 Meseon  
THESSALONIKI  
Tel. + 30 2 310556 239  
Fax + 30 2 310566 491

### HUNGARY

SYNCRODAN Kft.  
Gyomroi ut 140  
1108 BUDAPEST  
Tel. + 36 1265 0677  
Fax. + 36 1265 0677

### INDIA

GROUP INTELMAC  
No. 100/ 5, Ambegaon, Pune.  
Tel. + 91 20 2431 8111  
Fax. + 91 20 2431 8116

### IRAN

RAD.Electric Co.  
NO 35South Ferdowsi st. Imam Khomeini Sq.11155-  
3358 TEHERAN

### IRAN

IRAN  
Tel. + 98 2133910071  
Fax + 98 2133973805

### ISRAEL

ABIRY TECHNOLOGIES L.T.D.  
31, Habarzel Street  
69710 TEL-AVIV  
Tel. +972 36470471  
Fax +972 36470472

### ITALY

ELCAM S.P.A.  
Via Derganino 17  
20158 MILANO  
Tel. + 39 (0) 266200980  
Fax + 39 (0) 266200989

### JAPAN

KANOSHIOJI Co., Ltd.  
1-13-8, Kanda Sudacho, Chiyoda-  
Ku Tokyo, 101-0041  
Tel. +81 3 5298 2700  
Fax +81 3 5298 2888

### KOREA

KYUNG HEE TRADING Co. Ltd.  
Room 808-B Hong Woo Bldg  
43-3, YOIDO-DONG,  
YOUNGDEUNGPO-KU  
SEOUL  
Tel. + 82 (02) 7852262  
Fax + 82 (02) 7842896

### MALAYSIA

SOUTH PACIFIC RADIO Co.  
SDN BHD  
146, JLN Pasir Puteh  
31650 IPOH, PERAK DR- MALASIA  
Tel. +60 5 2538 555  
Fax + 60 5 2541 161

### MEXICO

INDUSTRIAL MAGZA  
Ciudad de México  
Av. Dr. Gustavo Baz N°ba 281  
Hda. de Echegaray  
Naucalpan, Edo de México 53300  
Tel+ 52 55 53 63 23 31 / 55 50 66  
Fax + 52 55 55 60 07 56

### MOROCCO

ADVANCED AUTOMATION  
130, Rue Mohamed ERRAKAB  
Quartier des Hopitaux Extension  
B.P. 10927 Casa-Bandoeng  
CASABLANCA  
Tel. + 212 22 86 19 29 / 22 86 19  
39 Fax + 212 22 86 34 35

### NETHERLANDS

INFRANOR S.A.  
Einsteinstraat 6  
NL-3261 LP OUD-BEIJERLAND  
Tel. + 31 186 610 155  
Fax + 31 186 614 535

### NORWAY

FERMAR ASSOCIATES  
Kongens gate 16  
N-0153 OSLO  
Tel. + 47 2233 5301  
Fax + 47 2233 5301

### POLAND

LEMI BIS  
ul. Grabiszynska 240  
PI 53-235 Wroclaw POLONIA  
Tel. + 48 71 339 00 29/30  
Fax + 48 71 339 05 01

### RUSSIA

May Electronics Components  
Shelkovskoe ave 77  
Moscow, 107497  
Tel. + 7 (495) 2288898  
Fax. + 7 (495) 2288898

### SOUTH AFRICA

Pro-Vey (Pty) Ltd  
Park Avenue North Highway  
Business Park  
0046 CENTURION, GAUTENG,  
SOUTH AFRICA  
Tel. + 27 (12) 661 2909  
Fax + 27 (12) 661 1262

### SPAIN

INFRANOR SPAIN, S.L.U  
C/ Occitània, 24  
08911 BADALONA-Barcelona  
Tel. + 34 934 601 631 / 902 023  
982 Fax + 34 933 999 608

### SLOVAKIA

ECS SLUZBY, s.r.o.  
Staromlyneká'e1 29  
821 06 BRATISLAVA  
Tel. + 421 245643147  
Fax + 421 245259606

### SLOVENIA

JMB Commmerc, d.o.o.  
Drive Technology  
Mariborska ulica 57  
SI -96 2314 Zg. Polskava / Slovenia  
Tel. + 00386 2 80 333 81 / 82  
Fax + 386 2 8033380

### SWEDEN

ELFO Automation AB  
Glödgargrand 14  
S-721 30 Västerås, Sweden  
Tel. + 46 21 4703300  
Mobile + 46 70 4201590

### SWITZERLAND

INFRANOR S.A.  
Place de la Gare 2  
CH-1296 COPPET  
Tel + 41 (0)22 960 70 70  
Fax + 41 (0)22 960 70 80

### TAIWAN

EU-POR Co. Ltd.  
84, 7Fl, San Min Rd.  
hsintien city (231) TAIPEI HSIEN  
Tel + 886 229 1 45767  
Fax + 886 229 1 45337

### TURKEY

DAYE MACHINE  
Mimar Snam Str. 185 Cekmekoy  
81270 ISTAMBUL  
Tel. + 90 216 641 68 84 / 68 86  
Fax + 90 216 641 68 85

### UNITED KINGDOM

INFRANOR L.T.D.  
Unit 60A, Smithbrook kilns  
Cranleigh, UK Surrey GU6 8JJ  
Tel. + 44 1483 274887  
Fax + 44 1483 276037

### UNITED STATES

INFRANOR INC.  
299 Ballardvale Street, Suite 4  
Wilmington, MA 01887-1013  
Tel. + 1 9789889002  
Fax. + 1 9789889112

### VIETNAM

LIEN MINH HUNG Trading  
Service Company Limited.  
Nguyen Son Ha, R. 402, Ward 5,  
Dist 3 Ho Chi Min City, Vietnam  
Tel. + 84 8 9 032 578  
Fax. + 84 8 9 290 758