

The PowerFlex® 700H AC drive is available in normal duty power ratings from 132-1600 kW (200-2300 Hp) at 380V-500V, and 160-2000kW (150-2400 Hp) at 525-690V.

This high horsepower drive features the same powerful performance and flexible control customers have come to expect from the PowerFlex family of drives.



## Product Features

### Excellent Speed Control Performance

- Open-loop speed control with slip compensation.
- Excellent torque at low speeds for demanding speed control applications.
- Configurable for Volts-per-Hertz or Sensorless Vector control modes for a wide variety of applications.
- ATEX certified option for drives that operate in potentially explosive environments.

### Flexible Programming, Hardware, and Communication Interfaces

- Advanced features and parameter set modeled after the PowerFlex® 700 AC drive.
- Standard I/O includes either 24V or 115V digital I/O plus analog I/O.
- NetLinx communication options, including DeviceNet™, ControlNet™, and EtherNet/IP™ networks.
- Full-featured LCD Human Interface Module (HIM) with multi-line and multi-lingual display simplifies programming.
- S.M.A.R.T. Start and assisted startup routines in the LCD HIM allow for easy configuring and tuning of the drive.
- Pull-apart control terminal blocks allow for easy wiring and quick disconnect of I/O wiring.
- Easy-to-remove control module is common among all PowerFlex 700H power ratings.

- Optimized global voltage settings designed to worldwide standards allow quick set-up anywhere in the world.
- Excellent PC software tools, such as DriveExplorer™ and DriveTools™ SP make programming, configuration, monitoring and troubleshooting a snap.

### Premier Integration with PowerFlex Drives

For simplified AC drive start-up and reduced development time using the Allen-Bradley® Logix control platform, we've integrated PowerFlex® AC drive configuration with RSLogix™ 5000 software. This single-software approach simplifies parameter and tag programming while still allowing stand-alone drive software tool use on the factory floor.

### Industry-Standard Packaging

- Modular design and high degree of power structure commonality with equivalent PowerFlex® 700S AC drive ratings for reduced spare parts stocking.
- Standard floor-standing Rittal or MCC-style cabinet designs (frame 10 and larger) for compact stand-alone drive applications or multi-drive lineups.
- Along with IP21/UL Type 1 (NEMA 1) package options, many PowerFlex 700H drive ratings are also available in an IP54/UL Type 12 (NEMA 12) package.
- Option of internally mounted, or door-mounted NEMA 1 or NEMA 4/12 operator interface.
- Line reactor on AC input for all ratings.

LISTEN.  
THINK.  
SOLVE.

|  |  |  |
|--|--|--|
| Application Logic                            | <ul style="list-style-type: none"> <li>• Sensorless Vector or Volts-per-Hertz Control</li> <li>• Slip Compensation</li> <li>• Process PI Loop</li> <li>• Auto-economizer</li> </ul>  | <ul style="list-style-type: none"> <li>• Flying Start</li> <li>• DC Braking</li> <li>• DC Bus Regulation</li> <li>• S-Curve Accel and Decel</li> </ul> |
| Operator Interface                           | • LCD HIM places drive information in a 7-line by 21-character display that supports a variety of languages  |  |
| Standards                                    | <ul style="list-style-type: none"> <li>• CSA/cUL</li> <li>• UL</li> <li>• ATEX Certified (option)</li> <li>• CE <ul style="list-style-type: none"> <li>- EMC EN61800-3</li> <li>- Low Voltage EN60204-1 / EN50178</li> </ul> </li> </ul> |  |
| Input Specifications                         | 3-Phase Voltage: 380-500V ± 10% / 525-690V ± 10%   | Frequency: 45 to 66 Hz   |
| Output Specifications                        | Voltage: Adjustable from 0V to rated motor voltage   | Frequency Range: 0-320 Hz  |
|  | Peak Current: Typically 200% of the heavy duty rating for 2 sec.   |  |
| Enclosure and Ambient Operating Temperatures | NEMA Type 1/IP21   | Frame 9 Normal Duty Ratings 0 to 40° C   |
|  |  | Frame 9 Heavy Duty Ratings 0 to 50° C  |
|  |  | Frames 10 -14 Normal or Heavy Duty Rating 0 to 40° C   |
|  | NEMA Type 12/IP54  | Frames 10 -14 Normal or Heavy Duty Rating 0 to 40° C   |

#### Ratings

| Output Power |             | 400 Volt Class |             |             |            | 480 Volt Class |             |             |            |
|--------------|-------------|----------------|-------------|-------------|------------|----------------|-------------|-------------|------------|
|              |             | Output Current |             |             |            | Output Current |             |             |            |
| KW           | Hp          | Cont.          | 1 min.      | 2 sec.      | Frame Size | Cont.          | 1 min.      | 2 sec.      | Frame Size |
| ND (HD)      | ND (HD)     | ND (HD)        | ND (HD)     | ND (HD)     | Size       | ND (HD)        | ND (HD)     | ND (HD)     | Size       |
| 132 (110)    | 200 (150)   | 261 (205)      | 287 (308)   | 410 (410)   | 9          | 261 (205)      | 287 (308)   | 410 (410)   | 9          |
| 160 (132)    | 250 (200)   | 300 (225)      | 330 (338)   | 450 (490)   | 9          | 300 (245)      | 330 (368)   | 450 (490)   | 9          |
| 200 (160)    | 350 (250)   | 385 (300)      | 424 (450)   | 600 (600)   | 10         | 385 (300)      | 424 (450)   | 600 (600)   | 10         |
| 250 (200)    | 350 (350)   | 460 (385)      | 506 (578)   | 770 (770)   | 10         | 460 (385)      | 506 (578)   | 770 (770)   | 10         |
| 250 (200)    | 450 (350)   | 500 (420)      | 550 (630)   | 750 (840)   | 10         | 500 (420)      | 550 (630)   | 750 (840)   | 10         |
| 315 (250)    | 500 (450)   | 590 (520)      | 649 (780)   | 956 (956)   | 11         | 590 (520)      | 649 (780)   | 956 (956)   | 11         |
| 355 (315)    | 500 (500)   | 650 (590)      | 715 (885)   | 1062 (1062) | 11         | 650 (590)      | 715 (885)   | 1062 (1062) | 11         |
| 400 (355)    | 600 (500)   | 730 (650)      | 803 (975)   | 1095 (1170) | 11         | 730 (650)      | 803 (975)   | 1095 (1170) | 11         |
| 450 (400)    | 700 (600)   | 820 (730)      | 902 (1095)  | 1230 (1314) | 12         | 820 (730)      | 902 (1095)  | 1230 (1314) | 12         |
| 500 (450)    | 800 (700)   | 920 (820)      | 1012 (1230) | 1380 (1476) | 12         | 920 (820)      | 1012 (1230) | 1380 (1476) | 12         |
| 560 (500)    | 900 (800)   | 1030 (920)‡    | 1133 (1370) | 1555 (1600) | 12         | 1030 (920)‡    | 1133 (1370) | 1555 (1600) | 12         |
| 630 (560)    | 1000 (900)  | 1150 (1030)    | 1265 (1545) | 1620 (1620) | 13         | 1150 (1030)    | 1265 (1545) | 1620 (1620) | 13         |
| 710 (630)    | 1200 (1000) | 1300 (1150)    | 1430 (1725) | 2079 (2079) | 13         | 1300 (1150)    | 1430 (1725) | 2079 (2079) | 13         |
| 800 (710)    | 1250 (1000) | 1450 (1200)    | 1595 (1800) | 2175 (2400) | 13         | 1450 (1200)    | 1595 (1800) | 2175 (2400) | 13         |
| 1000 (900)   | 1500 (1400) | 1770 (1600)    | 1947 (2400) | 2655 (2880) | 14         | 1770 (1600)    | 1947 (2400) | 2655 (2880) | 14         |
| 1200 (1100)  | 1900 (1700) | 2150 (1940)    | 2365 (2910) | 3225 (3492) | 14         | 2150 (1940)    | 2365 (2910) | 3225 (3492) | 14         |
| 1600 (1300)  | 2300 (2000) | 2700 (2300)    | 2970 (3287) | 3933 (3933) | 14         | 2700 (2300)    | 2970 (3287) | 3933 (3933) | 14         |

| Dimensions |                 |               |               |
|------------|-----------------|---------------|---------------|
| Frame Size | Height* mm (in) | Width mm (in) | Depth mm (in) |
| 9          | 1150 (45.28)    | 480 (18.9)    | 362 (14.25)   |

| Rittal Dimensions |                 |                 |               |
|-------------------|-----------------|-----------------|---------------|
| Frame Size        | Height* mm (in) | Width** mm (in) | Depth mm (in) |
| 10*               | 2275 (89.6)     | 600 (23.62)     | 600 (23.62)   |
| 11*               | 2275 (89.6)     | 800 (31.49)     | 600 (23.62)   |
| 12*               | 2275 (89.6)     | 1200 (47.24)    | 600 (23.62)   |
| 13*               | 2275 (89.6)     | 1600 (63)       | 600 (23.62)   |
| 14*               | 2275 (89.6)     | 2800 (110)      | 600 (23.62)   |

| MCC Dimensions |                |               |               |
|----------------|----------------|---------------|---------------|
| Frame Size     | Height mm (in) | Width mm (in) | Depth mm (in) |
| 10*            | 2286 (90)      | 635 (25)      | 635 (25)      |
| 11*            | 2286 (90)      | 889 (35)      | 635 (25)      |
| 12*            | 2286 (90)      | 1270 (50)     | 635 (25)      |

#### Notes:

- ❖ Free standing Rittal enclosure
- ‡ Rating is limited to 35° C surrounding air.
- ✓ MCC-style enclosure
- \* NEMA 12/IP54 2405mm, 94.7in
- \*\* Fr 13 400/480V 1150A Drive 1412mm, 56in
- Fr 14 600/690V 1500A Drive 2400mm, 189in

| Output Power |             | 600V AC Input |             |             |            | 690V AC Input |             |             |            |
|--------------|-------------|---------------|-------------|-------------|------------|---------------|-------------|-------------|------------|
|              |             | Output Amps   |             |             |            | Output Amps   |             |             |            |
| KW           | Hp          | Cont.         | 1 min.      | 2 sec.      | Frame Size | Cont.         | 1 min.      | 2 sec.      | Frame Size |
| ND (HD)      | ND (HD)     | ND (HD)       | ND (HD)     | ND (HD)     | Size       | ND (HD)       | ND (HD)     | ND (HD)     | Size       |
| 160 (132)    | 150 (150)   | 170 (144)     | 187 (216)   | 245 (245)   | 9          | 170 (144)     | 187 (216)   | 245 (245)   | 9          |
| 200 (160)    | 200 (150)   | 208 (170)     | 230 (250)   | 289 (289)   | 9          | 208 (170)     | 230 (250)   | 289 (289)   | 9          |
| 250 (200)    | 250 (200)   | 261 (208)     | 287 (312)   | 375 (375)   | 10         | 261 (208)     | 287 (312)   | 375 (375)   | 10         |
| 315 (250)    | 350 (250)   | 325 (261)     | 358 (392)   | 470 (470)   | 10         | 325 (261)     | 358 (392)   | 470 (470)   | 10         |
| 355 (315)    | 400 (350)   | 385 (325)     | 424 (488)   | 585 (585)   | 10         | 385 (325)     | 424 (488)   | 585 (585)   | 10         |
| 400 (315)    | 450 (350)   | 416 (325)     | 458 (488)   | 585 (585)   | 10         | 416 (325)     | 458 (488)   | 585 (585)   | 10         |
| 450 (355)    | 500 (400)   | 460 (385)     | 506 (578)   | 693 (693)   | 11         | 460 (385)     | 506 (578)   | 693 (693)   | 11         |
| 500 (450)    | 500 (500)   | 502 (460)     | 552 (690)   | 828 (828)   | 11         | 502 (460)     | 552 (690)   | 828 (828)   | 11         |
| 560 (500)    | 600 (500)   | 590 (502)     | 649 (753)   | 885 (904)   | 11         | 590 (502)     | 649 (753)   | 885 (904)   | 11         |
| 630 (560)    | 700 (650)   | 650 (590)     | 715 (885)   | 1062 (1062) | 12         | 650 (590)     | 715 (885)   | 1062 (1062) | 12         |
| 710 (630)    | 800 (700)   | 750 (650)     | 825 (975)   | 1170 (1170) | 12         | 750 (650)     | 825 (975)   | 1170 (1170) | 12         |
| 800 (630)    | 900 (700)   | 820 (750)‡    | 902 (975)   | 1170 (1170) | 12         | 820 (750)‡    | 902 (975)   | 1170 (1170) | 12         |
| 900 (800)    | 1000 (900)  | 920 (820)     | 1012 (1230) | 1380 (1410) | 13         | 920 (820)     | 1012 (1230) | 1380 (1410) | 13         |
| 1000 (900)   | 1100 (1000) | 1030 (920)    | 1133 (1380) | 1545 (1755) | 13         | 1030 (920)    | 1133 (1380) | 1545 (1755) | 13         |
| 1100 (1000)  | 1300 (1100) | 1180 (1030)   | 1298 (1463) | 1755 (1755) | 13         | 1180 (1030)   | 1298 (1463) | 1755 (1755) | 13         |
| 1500 (1300)  | 1600 (1400) | 1500 (1300)   | 1650 (1950) | 2250 (2340) | 14         | 1500 (1300)   | 1650 (1950) | 2250 (2340) | 14         |
| 1800 (1500)  | 2000 (1600) | 1900 (1500)   | 2090 (2250) | 2700 (2700) | 14         | 1900 (1500)   | 2090 (2250) | 2700 (2700) | 14         |
| 2000 (1800)  | 2400 (2000) | 2250 (1900)   | 2475 (2782) | 3335 (3335) | 14         | 2250 (1900)   | 2475 (2782) | 3335 (3335) | 14         |

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