

# PRODUCT PROFILE

## PowerFlex® 700H AC DRIVE

### PRODUCT DESCRIPTION

The PowerFlex® 700H high power AC drive is available in normal duty power ratings from 200-900 hp (132- 560 kW) at 380V-500V, and 150-900 hp (160-800kW) 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

- Good 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

### 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

### EASY TO USE

- 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



PowerFlex 700H AC Drive  
(Frame 10 shown)

- 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

### 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 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

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>• CE</li> </ul>	
	- EMC	EN61800-3
	- Low Voltage	EN60204-1 / EN50178
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 -12 Normal or Heavy Duty Rating 0 to 40° C
	NEMA Type 12/IP54	Frames 10 -11 Normal or Heavy Duty Rating 0 to 40° C

Dimensions mm (in) & Ratings

Output Power		400 Volt Class				480 Volt Class			
		Output Current			Frame Size	Output Current			Frame Size
kW	HP	Cont.	1 min.	2 sec.		Cont.	1 min.	2 sec.	
ND (HD)	ND (HD)	ND (HD)	ND (HD)	ND (HD)		ND (HD)	ND (HD)	ND (HD)	
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

Output Power		600V AC Input				690V AC Input			
		Output Amps			Frame Size	Output Amps			Frame Size
kW	HP	Cont.	1 min.	2 sec.		Cont.	1 min.	2 sec.	
ND (HD)	ND (HD)	ND (HD)	ND (HD)	ND (HD)		ND (HD)	ND (HD)	ND (HD)	
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

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

Notes:  
 ❖ Free standing Rittal enclosure  
 ‡ Rating is limited to 35°C surrounding air.  
 \* NEMA 12/IP54 2405 (94.7)

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