



aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



AC890PX

High Power Modular AC Drives
150 – 600 HP / 110 – 400 kW



ENGINEERING YOUR SUCCESS.

AC890PX

High Power Modular AC Drives

Building Block Drive

PowerPak modules plug into a common bus rail system to form a **COMPLETE DRIVE**.

Enclosure, disconnect, line reactor and fusing included.

Plug-in Modularity

- Sealed modules are easy to install and service
- Modules replace in minutes
- Easy-to-handle-under 50lbs.
- Replaceable by local technical staff
- Freight Friendly, easily shipped around the globe using major overnight carriers
- Packaged and designed to clear customs quickly

Integrated Bus System

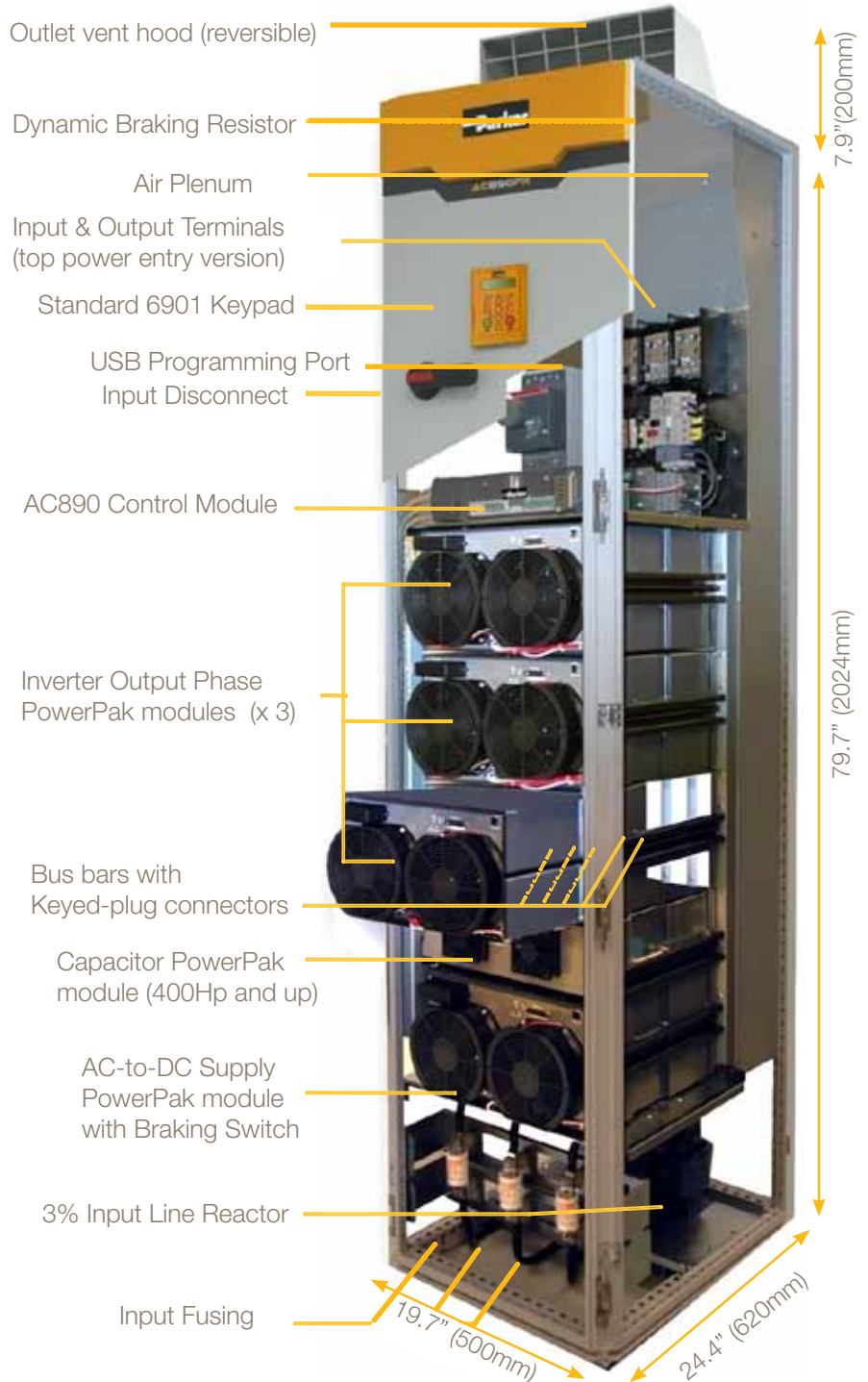
- Power wiring minimized
- Keyed modules eliminate errors

Compact Size

- Saves factory floor space
- Only 20" (500mm) wide – Best-in-Class!

Industrially Rugged

- Built-in Full Torque Braking
- 4-quadrant dynamic response
- Duty-cycle limited Braking resistor



PowerPak Modules



PowerPak Phase
Module – Front View

- Each bay location holds 1 PowerPak module
- Includes inverter phase assemblies, DC supplies and capacitor modules
- Bus bars run across the PowerPak module back, w/self aligning, silver-plated pluggable connectors
- Cooling fans draw air in the front & out a top plenum
- Integrally mounted in a 79.7”H x 24.4”D x 19.7”W (2024mmH x 620mmD x 500mmW) enclosure



PowerPak Phase
Module - Rear View

AC890PX

High Power Modular AC Drives

A unique high power AC drive with modular architecture

Pluggable PowerPak Modules mean less down time

Line fuses, input line reactor, AC line disconnect included for easy installation

380, 415, 460, 575, and 690 volt inputs accommodated

Dynamic braking switch and resistor included

Safe Torque Off - SIL3, PLe level per EN ISO13849 and EN61800-5-2



AC890PX Power Entry Types

TOP POWER ENTRY/EXIT



BOTTOM POWER ENTRY/EXIT



Can a new AC drive design increase your up-time while saving factory floor space and seamlessly integrating with your production line?

The AC890PX from Parker SSD Drives will change your perception of AC drives. The standard drive comes with everything needed to run your process, and once it's installed, will never need a trip back to the factory if service is required.

Four Operating Modes

- Volts/Hertz
- Sensorless vector
- Full flux vector
- Servo (PMAC)

Four Feedback Options

- Incremental encoder
- Sin/Cos encoder
- Endat absolute encoder
- Resolver



Runs induction, torque motors, or PMAC Servo

POWER INPUT AND OUTPUT

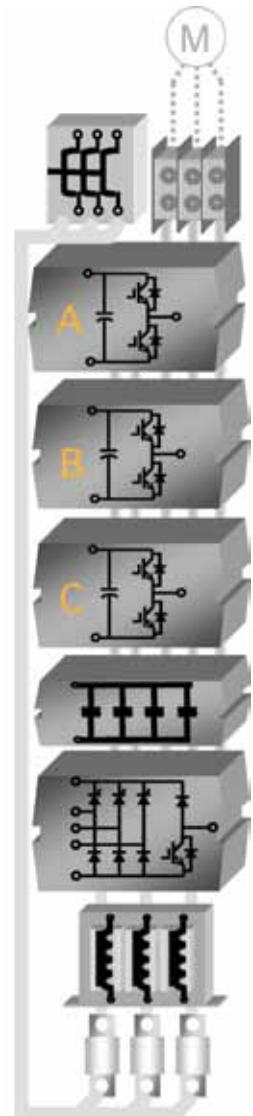
INVERTER PHASE MODULES

FILTER CAPS

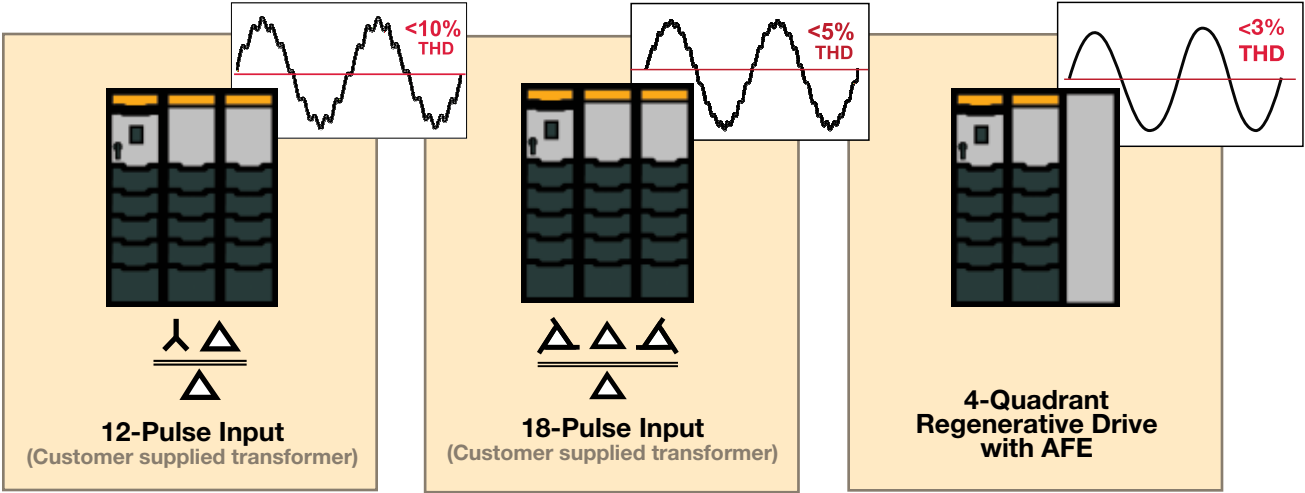
CONVERTER

LINE REACTOR

FUSES



Alternate Input Power Configurations



Line Regenerative Capabilities

For applications requiring 4-quadrant operation, the AC890PX Active Front End (AFE) can be specified.

- Fully line regenerative drive
- Continuous duty at full torque – motoring or braking
- Negligible power line harmonics – meets IEEE519
- Unity power factor
- Compact 3-bay (63"/1600mm) enclosure

Labels in the enclosure photo: Input Power Entry, AFE Power Frame, Motor Inverter Power Frame, LCL Harmonic Line Filter, Motor Output, AC890PX Control Units.

Schematic diagram components: LCL Filter, Active Bridge, Inverter, Motor (M). A yellow arrow labeled "POWER FLOW" indicates bidirectional flow.

Specialized grid tie configurations for wind power, solar power, and grid energy storage are available...please consult factory for specifics.

Specifications

OPERATING SPECS	
Std Duty O/L Ratings:	110% for 60 seconds
Heavy Duty O/L Ratings:	150% for 60 seconds
Servo Torque Ratings:	Consult factory
Output Frequency	0 - 1000 Hz; V/Hz mode 0 - 350 Hz; closed loop vector mode 0 - 120 Hz; sensorless vector mode
Switching Frequency	2 kHz (standard default), adjustable to 4 KHz** de-rating may apply; consult factory. Audibly silent switching frequency pattern.
Dynamic Braking	Built-in DB switch and DB Resistor Standard, 100% Torque rated (limited duty) Option for external resistor
Ambient Temperature	0°C to 40°C (32°F to 104°F)
Product Enclosure	Rating IP21/NEMA 1 standard. Consult factory for other ratings.
Enclosure Rating	Enclosure provides 15dB attenuation to radiated emissions between 30-100MHz.
Humidity	Maximum 90% relative humidity at 40°C non-condensing
Atmosphere	Non flammable, non corrosive and dust free
Climatic Conditions	Class 3k3, as defined by EN50178 (1998)
Vibration	Test Fc of EN60068-2-6
STANDARDS	
Pollution Degree	Pollution Degree II (non-conductive pollution, except for temporary condensation)
Europe	This product conforms with the Low Voltage Directive 73/23/EEC with amendment 93/68/EEC, Article 13 and Annex III using EN50178 (1998) to show compliance. Meets EN61800-3 (2nd environment)
North America/ Canada	Complies with the requirements of UL 508C

Options & Accessories



Increase the flexibility of the AC890PX by adding:

- 6911 enhanced keypad
- 500mm auxiliary enclosure for following options:
- Output reactor or dV/dt filters for long motor leads
- Additional dynamic resistor capacity
- External EMC filter for 1st environment
- Input or Output contactor

Applications



Paper and Pulp



Metals



Alternative Energy



Water Treatment

Specific Applications

- Fans and Pumps
- Compressors
- Extruders
- Web Rewind/Unwind
- Plating
- Engine dynamometers

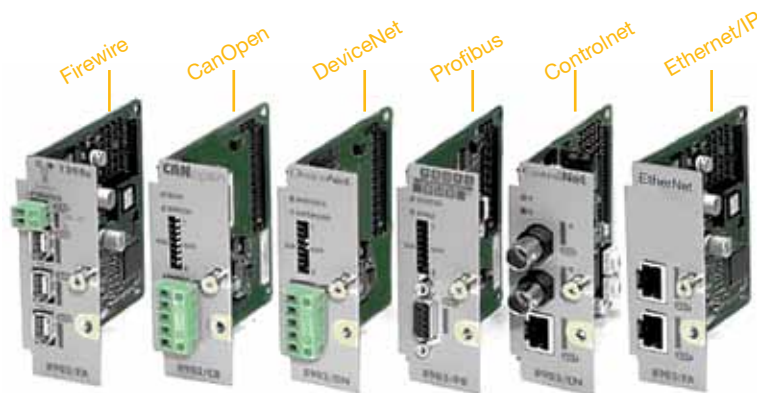
Communications

AC890PX controllers use a fast 150MHz DSP to manage communications to all major industrial Fieldbus networks. High performance communication ports are linked directly to the fast control loops of the drive. Minimum delay exists between a digital setpoint sent through fieldbus and the control loops.



Communication Port Options

- **Firewire IEEE1394A** - Peer-to-peer
- **DeviceNet** - FieldBus
- **CanOpen** - FieldBus
- **Profibus** - FieldBus
- **Profinet/IO** - FieldBus
- **ControlNet** - FieldBus
- **Ethernet/IP** - FieldBus
- **Modbus/TCP** - FieldBus
- **EtherCAT** - FieldBus
- **RS485/Modbus** - FieldBus



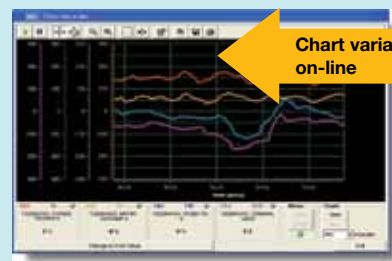
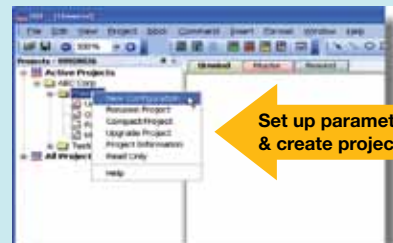
See page 7 for option part numbers.

DSE

Drive System Explorer Software Tool

DSE has been designed to assist you in the creation and management of your project. It offers user-defined macros and PLC-like function blocks for advanced applications.

- **32 bit architecture**
- **Multiple Configuration Interface**
- **Graphical Programmability**
- **Object Oriented Software**
- **Fully Deterministic**



DSE Lite is included free of charge

Model Number Key



- 1 Product Series**
890 Standard
891 Conformal Coated PCB's
- 2 Product Type**
PX Modular Standalone Drive
- 3 Voltage Rating**
4 380-460 VAC
6 500-575 VAC
7 600-690 VAC
- 4 Current Rating**
if Voltage code is 4 Cont. Output RMS Amps@400VAC/150% OL
0215 150 HP/110 kW
0260 200 HP/132 kW
0300 250 HP/160 kW
0420 300 HP/200 kW
0480 400 HP/250 kW
0520 280 kW
0580 500 HP/315 kW
if Voltage code is 6 or 7 Cont. Output RMS Amps@ 690VAC/150% OL
0130 150 HP/110 kW
0160 200 HP/132 kW
0190 250 HP/160 kW
0230 200 kW
0280 300 HP/250 kW
0320 280 kW
0340 400 HP/315 kW
- 5 Dynamic Braking**
B Braking Control includes internal brake resistor (200kJ/2.4 kW) and thermal OL protection
N No Brake Switch
- 6 Build Options**
00 Top Entry
01 Bottom Entry
02 Top Entry no reactor
03 Bottom Entry no reactor
- 7 Performance Level**
A Advanced
H High Performance
- 8 Destination**
FR France
GR Germany
IT Italy
PL Poland
PO Portugal
SP Spain
SW Sweden
UK UK
US US/Canada

Feedback Option Cards	
HTTL Encoder Quadrature Incremental	8902/EQ/00/FF
Sin/Cos Encoder, Endat 2.1	8902/M1/00/FF
Resolver (Standard for Servo PM Motors)	8902/RE/00/FF
Tech Slot A Option Cards	
DeviceNet FieldBus	8903/DN/00/FF
Profibus FieldBus	8903/PB/00/FF
ControlNet FieldBus	8903/CN/00/FF
CANopen FieldBus	8903/CB/00/FF
Ethernet FieldBus (Ethernet/IP)	8903/IP/00/FF
Ethernet FieldBus (Modbus/TCP)	8903/IM/00/FF
EtherCAT FieldBus	8903/CT/00/FF
Peer to Peer	8903/SP/00/FF
RS485/Modbus	8903/RS/00/FF
Reference Encoder	8903/EP/00/FF
Reference Encoder with hi-res Analog Input	8903/AI/00/FF
Mark Registration Encoder Input	8903/M1/00/FF
Tech Slot B Option Cards	
FireWire 1394A (peer to peer comms, 400Mbs)	8903/FA/00/FF

Drive Ratings

400V Model Numbers	Heavy Duty / CT Rating	Std Duty / VT Rating	HD/CT Amps 150%/60s	SD/VT Amps 110%/60s	Rated Amps No overload
890PX/4/0215/B/00/A	110 kW	132 kW	215	260	265
890PX/4/0260/B/00/A	132 kW	160 kW	260	340	347
890PX/4/0300/B/00/A	160 kW	200 kW	300	390	398
890PX/4/0420/B/00/A	200 kW	250 kW	420	480	487
890PX/4/0480/B/00/A	250 kW	315 kW	480	600	609
890PX/4/0520/B/00/A	280 kW	355 kW	520	660	670
890PX/4/0580/B/00/A	315 kW	400 kW	580	720	731
460V Model Numbers					
890PX/4/0215/B/00/A	150 HP	200 HP	200	250	255
890PX/4/0260/B/00/A	200 HP	250 HP	250	320	326
890PX/4/0300/B/00/A	250 HP	300 HP	300	380	388
890PX/4/0420/B/00/A	300 HP	400 HP	380	480	487
890PX/4/0480/B/00/A	400 HP	500 HP	460	590	599
890PX/4/0580/B/00/A	500 HP	600 HP	580	700	711
575V Model Numbers					
890PX/6/0130/B/00/A	150 HP	200 HP	160	210	214
890PX/6/0160/B/00/A	200 HP	250 HP	210	250	255
890PX/6/0190/B/00/A	250 HP	300 HP	260	310	316
890PX/6/0280/B/00/A	300 HP	400 HP	310	420	426
890PX/6/0340/B/00/A	400 HP	500 HP	410	480	487
690V Model Numbers					
890PX/7/0130/B/00/A	110 kW	132 kW	130	160	163
890PX/7/0160/B/00/A	132 kW	160 kW	160	190	194
890PX/7/0190/B/00/A	160 kW	200 kW	190	240	245
890PX/7/0230/B/00/A	200 kW	250 kW	230	280	286
890PX/7/0280/B/00/A	250 kW	315 kW	280	340	347
890PX/7/0320/B/00/A	280 kW	355 kW	320	390	398
890PX/7/0340/B/00/A	315 kW	400 kW	340	430	436

Higher power ratings are available in AC890PXP Series

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