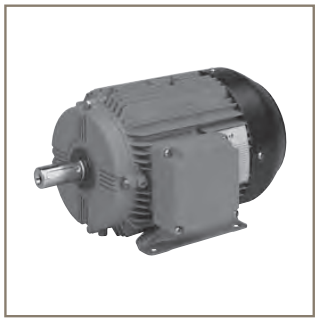




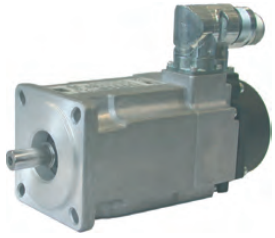
aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
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AC 890 Modular Systems Drive

AC Drives 0.55 – 1200kW (0.75 – 1500 HP)



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WARNING — USER RESPONSIBILITY

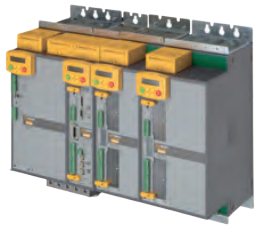
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Modular Systems Drives

Modular Systems Drives - AC890
0.55 - 1200 kW



Description
The AC890 is a compact, modular systems drive engineered to control speed and position of open-loop and closed-loop, single- or multi-motor AC or servo motor applications.

Features
The AC890 can be configured for 4 different modes of operation.

Open-loop (volts / frequency) control
This mode is ideal for basic, single or multi-motor speed control.

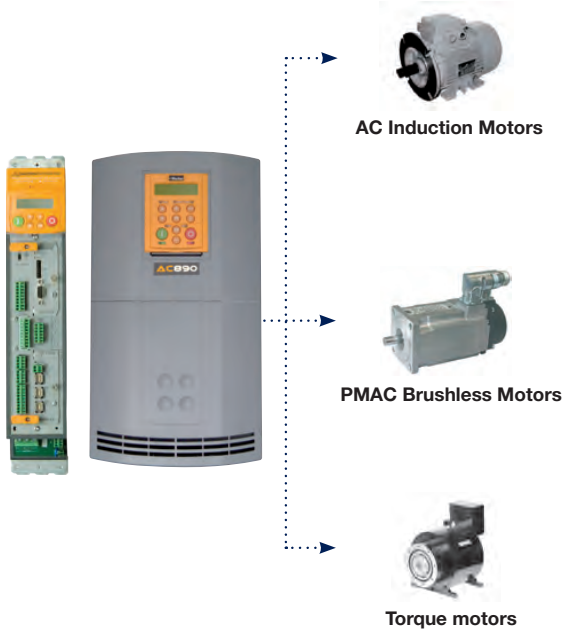
Sensorless vector control
With its ultra high performance sensorless vector algorithm, the AC890 delivers a combination of both high torque and close speed regulation without the need for any speed measuring transducer.

Closed-loop vector control
Full closed-loop flux vector performance can be achieved with the AC890 by simply adding an encoder feedback 'technology box'. This provides 100 % continuous full load standstill torque, plus a highly dynamic speed loop more than sufficient for the most demanding applications.

4 Quadrant active front-end power supply module
With this configuration, the energy is fed back into the mains supply with sinusoidal currents and unity power factor; a very low current harmonic content is achieved (THD < 5 %).

Compatible with a wide range of feedback options.
The AC890 is compatible with any AC motor and virtually any speed/position feedback options. With this flexibility you may not even need to replace your existing AC motor to achieve high performance, saving you time and money.

- Incremental encoder
- EnDat2.1 (SinCos) encoder
- Resolver



International Standards
Complies with:
- EN 61800-3 (EMC) Directive
- CE marked to EN 50178 (Low Voltage) Directive
- UL listed to US safety standard UL508C

Demanding Environments
For environments that have dusty, humid or corrosive atmospheres, the AC890 can optionally be supplied with conformally coated circuit boards that improve the drives resistance to corrosion, thereby increasing reliability and service life.
Industries that would typically benefit from conformal coating could include:
- **Water and wastewater**
- **Paper and pulp processing**
- **Steel**
- **Marine and offshore**
- **Outdoor cranes**
- **Wind & wave power generation**
- **Food processing**

* stand alone version shown

Features

Range of feedback options

- Incremental encoder
- EnDat® 2.1 (SinCos) encoder
- Resolver

Open FireWire IEEE 1394 Process Port

- 125 µs cycle time
- Real-time synchronization between drives





Open communication

EtherNet/IP conformance tested · DeviceNet · PROFIBUS · CANopen · ControlNet · PROFINET

Ultra-fast control loops

- Torque loop: 62.5 µs
- Speed loop: 62.5 µs
- Position loop: 62.5 µs

Serves the most demanding applications

Taking advantage of leading edge control algorithms running on a fast 150 MHz microprocessor, the AC890 drive can achieve very high-bandwidth control loops.
This allows you to use the drive for the most demanding industrial applications e.g. printing, cut-to-length, rotary shear, converting and slitting.

Benefits

Integrated safety functionality

The integrated Safe Torque Off (STO) functionality offers protection against unexpected motor start-up, in accordance to EN 13849-1 PLe, SIL 3 as standard.

Minimal delay between fieldbus setpoints and the control loops

Designed to integrate in existing automation systems, the AC890 features high performance ports linked directly to the fast control loops of the drive.
Minimum delay exists between your digital setpoint sent thorugh a fieldbus and the control loops.

Replacement of analogue solutions

Your existing analogue setpoint-based solutions can be replaced by a digital fieldbus-based solution with minimal bandwidth loss.

Flexible feedback options

The AC890 offers system designers complete flexibility in their choice of feedback technology to best suit the needs of their application.

Open standards for protection of investment

The AC890 has been specifically designed to integrate seamlessly into your automation network.

To connect to your PLC or fieldbus network you can simply choose from the wide range of communication technology boxes.

Two performance levels to suit all applications:

Advanced Performance

Motion control with position control,
Motion control function blocks: incremental move, absolute move, move home
Section Control: line drive master ramp, winder blocks (speed and current winder), PID process, sequencer, ...

High Performance

All advanced features plus:
Library of pre-engineered application specific LINK VM function blocks such as:
Shaftless printing, cut-to-length, adanced winding, advanced traversing and others.

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Space saving compact footprint thanks to modular design concept

Stand Alone version



The Complete Drive

The AC890SD series Stand Alone drive provides a complete AC input to AC motor output, with power input and output terminals.

Other characteristics of the AC890SD include:

- Power output up to 900 kW
- 208-500 VAC input supply
- Access to all feedback and networking options
- Built-in dynamic brake switch provisions to add external braking resistor
- 24 VDC control board supply for programming without power
- Torque and speed outputs
- USB programming port

Common Bus version



Common Bus Drive

The AC890 is also available in a common bus platform, where individual motor output drives are easily connected to a common bus supply.

Characteristics of the common bus drive (AC890CD):

- Power output to 900 kW (1200HP) in 9 frame sizes
- Power Supply: 320-705 VDC
- Access to all feedback and networking options
- 24 VDC control board supply for programming without power
- Torque and speed analogue outputs
- USB programming port

Characteristics of the common bus supply module (AC890CS):

- Power output 7.5-110 kW
- Power Supply: 208-500 VAC
- Built-in dynamic braking unit (external braking resistor required)
- Operator display for diagnostics
- Up to 162 A output per module

Removable terminal block connections for easier installation and maintenance



Reduced dimensions, compact footprint

The AC890 has been designed to be compact and require the minimum possible cabinet space. Boasting the latest innovations in semiconductor cooling the AC890 is a class leader in terms of its size.

The control terminals are pluggable, simplifying connection to the drive during installation and allowing a fast swap-out for maintenance purposes.

The Common DC bus also helps to keep the overall size of the system to a minimum. Simply open the bus terminal cover, connect the busbars and close.

Fast connection of the common DC bus



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Technical Specification

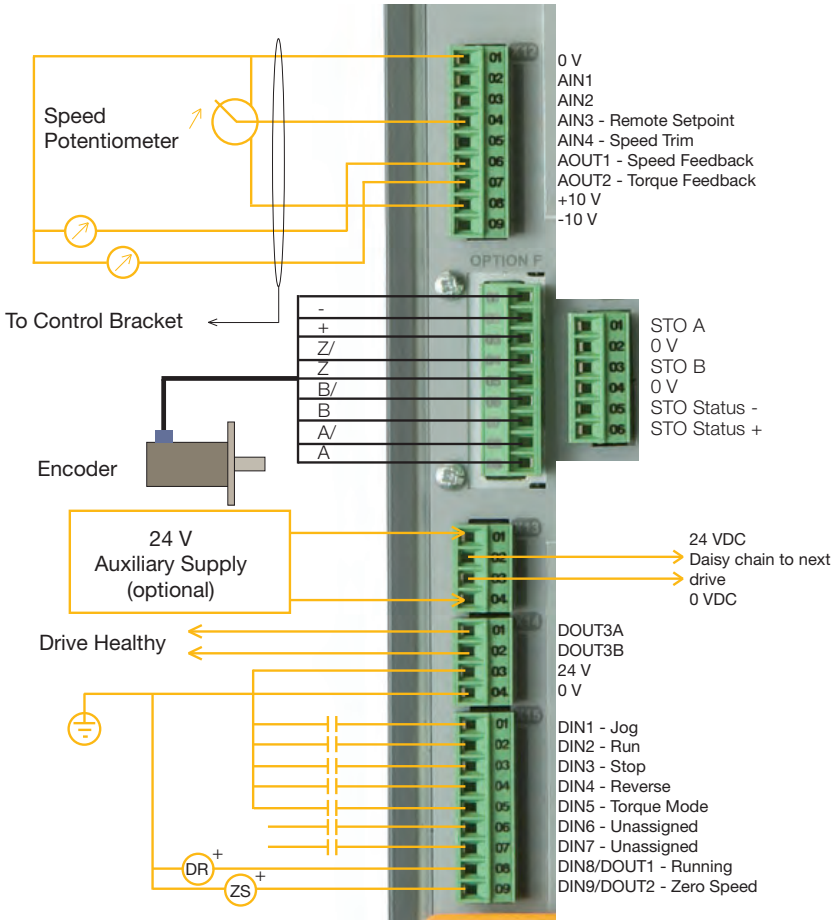
Power Supply	**890CS:** 208-500 VAC ±10 % **890CD:** 320/560-705 VDC **890SD:** 380-500 VAC ±10 % **Frames E/F/G/H/J/K:** 380-460 VAC ±10 %
Environment	0-45 °C (derate by 2 %/°C up to 50 °C maximum) Max.1000 m ASL (derate by 1 %/100 m to 4000 m)
Protection	IP20 (Frames G/H/J/K: IP00)
Humidity	Maximum 85 % Non-Condensing
Analogue Inputs	4; Configurable 2 x 0-10 V, ±10 V, 0-20 mA, 4-20 mA and 2 x 0-10 V, ±10 V
Analogue Outputs	2; Configurable 0-10 V, +/- 10 V
Digital Inputs	7; Configurable 24 VDC
Digital Output	2; Configurable 24 VDC
Digital Relay Output	1; Configurable
Communications Options	EtherNet/IP, Modbus/TCP, CANopen, PROFIBUS, PROFINET, DeviceNet, ControlNet, FireWire, EtherCAT, Peer to peer, RS458/Modbus
Axis Synchronisation	Internally via Firewire
Registration Control Options	Mark Registration (EnDat 2.1 Encoder)

Safe Torque Off - STO

The AC890 features Safe Torque Off functionality as standard, offering users protection against unexpected motor start-up in accordance with EN 18849-1 PLe or SIL 3.

The STO functionality helps protect personnel and machinery by preventing the drive from restarting automatically. It disables the drive pulses and disconnects the power supply to the motor, so that the drive cannot generate any potentially hazardous movement. The state is monitored internally within the drive.

Connection Diagram



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Active Front End

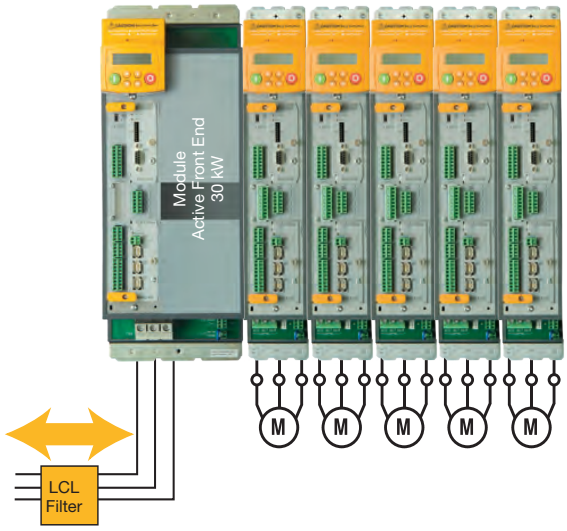
4 Quadrant active front-end power supply with regeneration to the supply network

The AC890CD and AC890SD can be configured to feed energy back into the mains supply with sinusoidal currents and unity power factor; with very low levels of harrmonic current distortion.

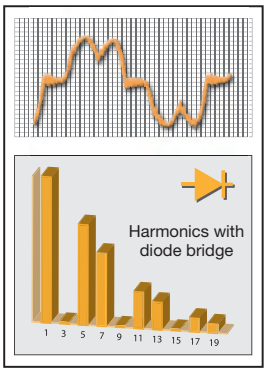
Required Parts

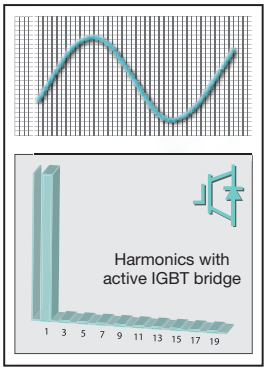
- Pre-load circuit
- LCL Filter

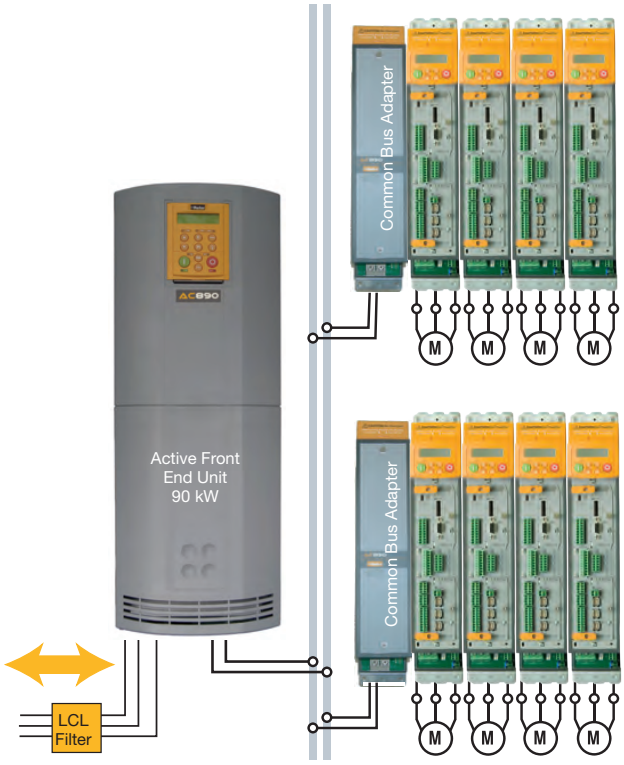
- **Fully Bidirectionnel power flow**
- **150 % overload for 60 s**
- **Sinusoidal input current**
- **Harmonic levels meet requirements of IEEE 519**



Note:
It is possible to use a larger separate active front-end module for higher power AC890 systems. In this case, several AC890's can be connected to the AFE using the AC890CA common bus adapter.







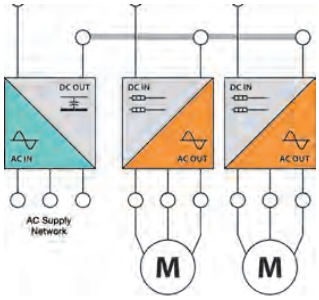
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DC Power Supply Module - AC890CS
40 - 200 A



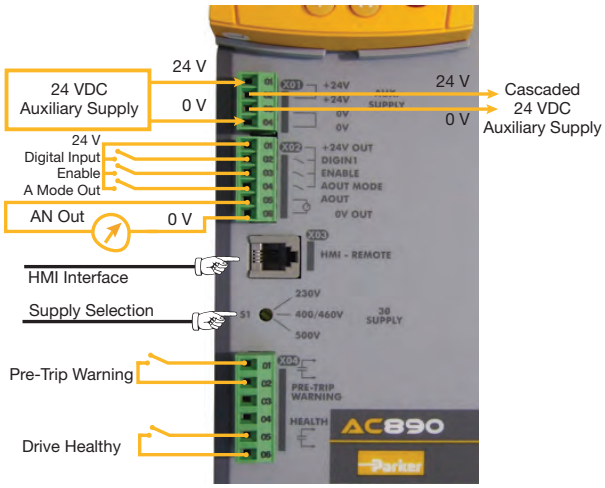
Description

The AC890CS power module is able to provide dual output voltages to power one or more AC890CD or stand alone AC890SD drives connected to a common DC bus. This modularity provides significant space saving in the enclosure.



Features

- **Power Supply 208-500 VAC**
- **Built-in dynamic braking unit**
- **Dual DC bus power output terminals**
- **Operator display for diagnostics**
- **"Drive Healthy" contact**
- **24 VDC auxiliary supply (optional)**
- **HMI Interface**
- **Power supply selector**
- **Configurable analogue outputs**



Electrical Characteristics - AC890CS Drives

Old Order reference**	New Order reference	Frame	Input voltage [VAC]	Power [kW]	AC input current [A]	DC output current [A]
890CS/5/0032B/B	890CS-532320B0-000-U	B	230	7.5	32	40
			400 / 460	15		
			500	18		
890CS/5/0054B/B	890CS-532540B0-000-U		230	15	54	65
			400 / 460	30		
			500	37		
890CS/5/0108D/D	890CS-533108D0-000-U	D	230	30	108	135
			400 / 460	60		
			500	75		
890CS/5/0162D/D	890CS-533162D0-000-U		230	45	162	200
			400 / 460	90		
			500	110		

Note: For increased power, additional units can be connected in parallel. For further details, contact our technical support department.
**Old reference refers to legacy part references prior to 2009

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Systems Drives - AC890CD Series
1.5 - 180 A



Features

- **Power supply 320, 650, 705 VDC**
- **Operator display supplied as standard**
- **Common options as AC890SD**
- **Fieldbus options:**
  EtherNet/IP, Modbus/TCP, CANopen, PROFIBUS, PROFINET, DeviceNet, ControlNet, FireWire, EtherCAT, Peer to peer, RS458/Modbus

Electrical Characteristics - AC890CD Drives

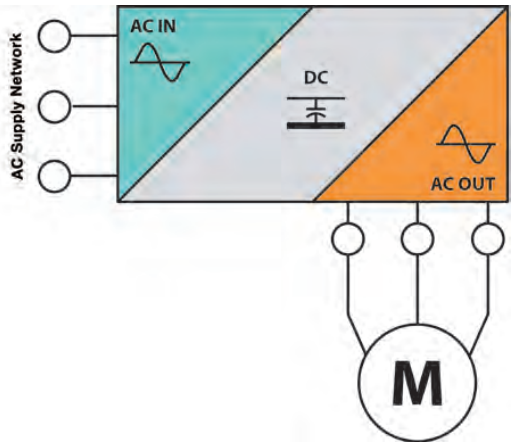
Old Order reference**	New Order reference	Frame	Input voltage [VDC]	Power [kW]	DC input current [A]	Output current [A]	
						Vector mode	Servo mode
890CD/2/0003B/N/...	890CD-231300B0-000-...	B	320	0.55	4.2	3	2.2
890CD/2/0005B/N/...	890CD-231550B0-000-...			1.1	7.6	5.5	4
890CD/2/0007B/N/...	890CD-231700B0-000-...			1.5	9.3	7	6
890CD/2/0011B/N/...	890CD-232110B0-000-...			2.2	15.2	11	8
890CD/2/0016B/N/...	890CD-232165B0-000-...			4	22.2	16.5	12
890CD/5/0002B/N/...	890CD-531200B0-000-...		560	0.55	2.9	2	1.5
890CD/5/0003B/N/...	890CD-531350B0-000-...			1.1	5	3.5	2.5
890CD/5/0004B/N/...	890CD-531450B0-000-...			1.5	6.6	4.5	3.5
890CD/5/0006B/N/...	890CD-531600B0-000-...			2.2	8.6	6	4
890CD/5/0010B/N/...	890CD-532100B0-000-...			4	14.1	10	6
890CD/5/0012B/N/...	890CD-532120B0-000-...			5.5	16.8	12	9
890CD/5/0016B/N/...	890CD-532160B0-000-...			7.5	22.2	16	12
890CD/2/0024C/N/...	890CD-232240C0-000-...	C	320	5.5	31	24	24
890CD/2/0030C/N/...	890CD-232300C0-000-...			7.5	39	30	30
890CD/4/0024C/N/...	890CD-532240C...		560	11	33	24	20
890CD/4/0030C/N/...	890CD-532300C...			15	43	30	25
890CD/4/0039D/N/...	890CD-532390D0-000-...	D	560	18.5	44	39	35
890CD/4/0045D/N/...	890CD-532450D0-000-...			22	51	45	38
890CD/4/0059D/N/...	890CD-532590D0-000-.			30	66	59	50
890CD/4/0073E/N/...	890CD-432730E0-0...	E	560	37	82	73	73
890CD/4/0087E/N/...	890CD-432870E0-0...			45	100	87	87
890CD/5/0073E/N/...	890CD-532730E0-0...		705	37	66	67	67
890CD/5/0087E/N/...	890CD-532870E0-0...			45	80	79	79
890CD/4/0105F/N/...	890CD-433105F...	F	560	55	123	105	78
890CD/4/0145F/N/...	890CD-433145F...			75	166	145	110
890CD/4/0156F/N/...	890CD-433156F...			90	203	180	135
890CD/4/0180F/N/...	890CD-433180F...			90	203	180	135
890CD/5/0105F/N/...	890CD-533105F...		705	55	98	100	74
890CD/5/0145F/N/...	890CD-533145F...			75	133	125	95
890CD/5/0156F/N/...	890CD-533156F...			90	162	156	117

Note: For higher powers, refer to AC890SD series supplied from a DC bus.
Note: Power ratings are given for 320 and 560 VDC
*For future developments, please contact us or visit our website www.parker.com/ssd
**Old reference refers to legacy part references prior to 2009

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Systems Drives - AC890SD Series
1.5 - 1681 A





Description

The AC890SD (Standalone) drives are independent modules with integrated three-phase supply inputs. With its wide range of sizes available, the AC890SD is suitable for every type of application from a small machine to a large industrial high power process line (eg rolling mill). It is also suitable for applications requiring sectional control and assembly of independent modules (eg printing systems).

Features

- **Directly supplied AC or DC common bus**
- **Built-in dynamic braking module**
- **Operator display fitted as standard**
- **Common options as AC890CD**
- **Fieldbus options:**
  EtherNet/IP, Modbus/TCP, CANopen, PROFIBUS, PROFINET, DeviceNet, ControlNet, FireWire, EtherCAT, Peer to peer, RS458/Modbus

Electrical Characteristics - AC890SD Drives

Old Order reference**	New Order reference	Frame	Input voltage [VAC]	Power [kW]	Input current [A]		Output current [A]	
					Vector mode	Servo mode	Vector mode	Servo mode
890SD/2/0003B/B/...	890SD-231300B0-B00-...	B	230	0.55	4.2	4.2	3	2.2
890SD/2/0005B/B/...	890SD-231550B0-B00-...			1.1	7.7	7.3	5.5	4
890SD/2/0007B/B/...	890SD-231700B0-B00-...			1.5	10.1	9.9	7	6
890SD/2/0011B/B/...	890SD-232110B0-B00-...			2.2	15.2	12.9	11	8
890SD/2/0016B/B/...	890SD-232165B0-B00-...			4	21.8	18.2	16.5	12
890SD/2/0024C/B/...	890SD-232240C0-B00-...	C		5.5	31	31	24	24
890SD/2/0030C/B/...	890SD-232300C0-B00-...			7.5	40	40	30	30

Note: Power ratings are given for 230 VAC
Permitted overload: 150 % for 60 s in vector mode - 200 % for 4 s in servo mode.
**Old reference refers to legacy part references prior to 2009

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Electrical Characteristics - AC890SD Drives (contd.)

Old Order reference**	New Order reference	Frame	Input voltage [VAC]	Power [kW]	Input current [A]		Output current [A]	
					Vector mode	Servo mode	Vector mode	Servo mode
890SD/5/0002B/B/...	890SD-531200B0-B00-...	B	380-500	0.55	2.9	2.9	2	1.5
890SD/5/0003B/B/...	890SD-531350B0-B00-...			1.1	5	4.7	3.5	2.5
890SD/5/0004B/B/...	890SD-531450B0-B00-...			1.5	6.8	6.4	4.5	3.5
890SD/5/0006B/B/...	890SD-531600B0-B00-...			2.2	9	7.2	6	4
890SD/5/0010B/B/...	890SD-532100B0-B00-...			4	14	9,7	10	6
890SD/5/0012B/B/...	890SD-532120B0-B00-...			5.5	16.5	13.8	12	9
890SD/5/0016B/B/...	890SD-532160B0-B00-...			7.5	21.7	17.9	16	12
890SD/5/0024C/B/...	890SD-532240C0-B00-...	C	380-500	11	32	32	24	20
890SD/5/0030C/B/...	890SD-532300C0-B00-...			15	40	40	30	25
890SD/5/0039D/B/...	890SD-532390D0-B00-...	D	380-500	18.5	42	38	39	35
890SD/5/0045D/B/...	890SD-532450D0-B00-...			22	50	45	45	38
890SD/5/0059D/B/...	890SD-532590D0-B00-...			30	62	54	59	50
890SD/4/0073E/B/...	890SD-432730E0-0...	E	380-460	37	81	81	73	73
890SD/4/0087E/B/...	890SD-432870E0-0...			45	95	95	87	87
890SD/4/0105F/B/...	890SD-433105F...	F	380-460	55	114	114	105	78
890SD/4/0145F/B/...	890SD-433145F...			75	143	143	145	110
890SD/4/0156F/B/...	890SD-433156F...			90	164	164	180	135
890SD/4/0216G/B/...	890SD-433216G...	G	380-460	110	216	216*	216	153
890SD/4/0250G/B/...	890SD-433250G...			132	246	246	250	171
890SD/4/0316G/B/...	890SD-433316G...			160	305	305	316	224
890SD/4/0361G/B/...	890SD-433361G...			180	336	336	361	253
890SD/4/0375H/B/...	890SD-433375H...	H	380-460	200	367	367	375	268
890SD/4/0420H/B/...	890SD-433420H...			220	400	400	420	300
890SD/4/0480H/B/...	890SD-433480H...			250	466	466	480	336
890SD/4/0520H/B/...	890SD-433520H...			280	516	516	520	368
890SD/4/0590J/B/...	890SD-433590J...	J	380-460	315	576	576	590	411
890SD/5/0073E/B/...	890SD-532730E0-0...	E	380-500	37	69	69	67	67
890SD/5/0087E/B/...	890SD-532870E0-0...			45	82	82	79	79
890SD/5/0105F/B/...	890SD-533105F...	F	380-500	55	93	93	100	74
890SD/5/0145F/B/...	890SD-533145F...			75	118	118	125	95
890SD/5/0156F/B/...	890SD-533156F...			90	140	140	156	117
890SD/5/0685K/ * /1F/A/US	890SD/5/0685K/ * /1F/A/US	K(2xG)	380-460	355	663	Data not available*	685	480
890SD/5/0798K/ * /1F/A/US	890SD/5/0798K/ * /1F/A/US	K(2xH)		400	727		798	570
890SD/5/0988K/ * /1F/A/US	890SD/5/0988K/ * /1F/A/US	K(2xH)		500	921		988	699
890SD/5/1028K/ * /1F/A/US	890SD/5/1028K/ * /1F/A/US	K(3xG)		600	1027		1028	720
890SD/5/1120K/ * /1F/A/US	890SD/5/1120K/ * /1F/A/US	K(2xJ)		550	1097		1120	780
890SD/5/1197K/ * /1F/A/US	890SD/5/1197K/ * /1F/A/US	K(3xH)		630	1145		1197	855
890SD/5/1482K/ * /1F/A/US	890SD/5/1482K/ * /1F/A/US	K(3xH)		800	1474		1482	1049
890SD/5/1681K/ * /1F/A/US	890SD/5/1681K/ * /1F/A/US	K(3xJ)		900	1646		1681	1171

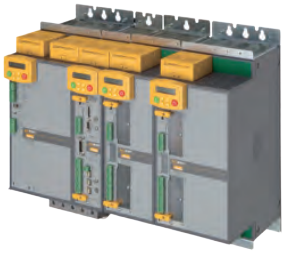
Note: Power ratings are given for 400 VAC
*For future developments please contact us, or visit our website
**Old reference refers to legacy part references prior to 2009

Permitted overload:
150 % for 60 s in vector mode
200 % for 4 s in servo mode (Frames B, C, D)
150 % for 60 s in servo mode (Frames E, F, G, H, J)

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Alternative Input Power Configurations
1.5 - 1681 A

The modular design of the AC890 makes it easy to connect parallel input modules and multi-phase configurations. By using 12-pulse or 18-pulse configurations, harmful line harmonics can be greatly reduced. For thew utimate in harmonic abatement, an Active Front End (AFE) may be selected.





6 pulse model	Power rating	Constant torque: 355-900 kW Variable torque: 400-1000 kW
	Supply voltage	380-460 VAC (±10 %) 3-phase
	Disconnect switch	Standard
	Input inductance	Standard for limiting harmonic current
	Output choke	Standard
	Operator panel	6901 operator keypad mounted on enclosure door
12 pulse model (option)	Harmonics	Reduced harmonic current
	Power rating	Constant torque: 355-600 kW Variable torque: 400-650 kW
	Supply voltage	380-460 VAC (±10 %) 3-phase
	Disconnect switch	Standard
	Input transformer	(not included in the enclosure) optional 2 secondaires U/D
	Output choke	Standard
	Operator panel	6901 operator keypad mounted on enclosure door
18 pulse model (option)	Harmonics	Total harmonic distortion (current) in accordance with limits of IEEE 519 (1992)
	Power rating	Constant torque: 630-900 kW Variable torque: 750-1000 kW
	Supply voltage	380-460 VAC (±10 %) 3-phase
	Disconnect switch	Standard
	Input transformer	(not included in the enclosure) optional 3 secondaires phase shifted by 20°
	Output choke	Standard
	Operator panel	6901 operator keypad mounted on enclosure door

Standards

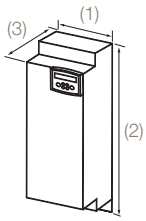
The AC890 series meets the following standards when installed in accordance with the relevant product manual.

- CE marked to EN 50178 (Safety, Low Voltage Directive)
- CE marked to EN 61800-3 (EMC Directive)
- UL listed to US safety standard L508C
- cUL listed to Canadian standard C22.2 #14

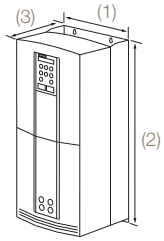
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Dimensions

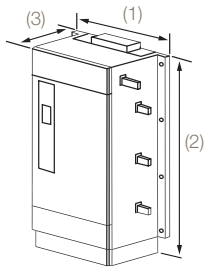




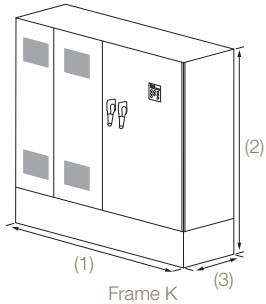
Frames B/C/D



Frames E/F



Frames G/H/J



Frame K

Dimensions and Weights

Model	Width (1) [mm]	Height (2) [mm]	Depth (3) [mm]	Weight [kg]		
				890CS	890CD	890SD
890 Frame B	72.4	433	258	3.5	5	6
890 Frame C	116			Data not available	6.6	7.6
890 Frame D	160			8.7	12.1	13.1
890 Frame E	257	668	312	Data not available	32.5	33.5
890 Frame F		720	355		41	42
890 Frame G	456	1042	465		Data not available	108
890 Frame H	572	1177				138
890 Frame J	675	1288				176
Frame K 355/400 kW	1600	2000	600	Data not available	Data not available	Data not available
Frame K 400/475 kW	1600	2000	600			
Frame K 500/600 kW	1600	2000	600			
Frame K 600/650 kW	2000	2000	600			
Frame K 550/630 kW	2400	2000	600			
Frame K 630/750 kW	2400	2000	600			
Frame K 800/900 kW	2400	2000	600			
Frame K 900/1000 kW	3000	2000	600			

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Selection and Order Code



AC890CS Series - AC-DC for DC Bus Connection

	Example	Block 1		Block 2				Block 3		Block 4
		890CS	**-**	**53**	**2320**	**B**	**0**	**B**	**00**	**U**
Product family										
AC890 Common Bus Supply Unit		890CS								
Rating data										
Supply voltage										
400/500 V three-phase				53						
Current [A]	Frame Size									
32	B				2320	B				
54	B				2540	B				
108	D				3108	D				
162	D				3162	D				
Auxiliary supply										
None							0			
Brake switch										
Fitted								B		
Special option										
None									00	
Language										
English (50/60 Hz)										U

AC890CA Series - Common Bus Adapter

	Example	Block 1		Block 2				Block 3		Block 4
		890CA	**-**	**53**	**2500**	**B**	**0**	**R**	**00**	**U**
Product family										
AC890 Common Bus Adapter		890CA								
Rating data										
Supply voltage										
400/500 V three-phase				53						
Current [A]	Frame Size									
50	B				2500	B				
80	B				2800	B				
Auxiliary supply										
None							0			
Hardware characteristics										
None (80 A only)								0		
Ride through capacitors only (50 A only)								R		
Special option										
None									00	
Language										
English (50/60 Hz)										U

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AC890CD Series - Common Bus Drive <37 kW

	Example	Block 1		Block 2				Block 3		Block 4				
		890CD	-	**23**	**1300**	**B**	**0**	**B**	**00**	**1**	**A**	**0**	**0**	**0**
Product family														
AC890 Common Bus Drive		890CD												
Rating data														
	Supply voltage													
	230 V nominal			23										
	Vector Mode kW/A 320 VDC / HP/A 320 VDC; Servo Mode kW/A 320 VDC / HP/A 320 VDC; Frame													
Power/Current Rating	0.55/3.0 / 0.75/3.0 / 0.55/2.2 / 0.75/2.2	B			1300	B								
	1.1/5.5 / 1.5/5.5 / 1.1/4.0 / 1.5/4.0	B			1550	B								
	1.5/7.0 / 2.0/7.0 / 1.5/6.0 / 2.0/6.0	B			1700	B								
	2.2/11 / 3.0/11 / 2.2/8.0 / 3.0/8.0	B			2110	B								
	4.0/16.5 / 5.0/16.5 / 4.0/12 / 5.0/12	B			2165	B								
	5.5/24 / 7.5/24 / 5.5/24 / 7.5/24	C			2240	C								
	7.5/30 / 10/30 / 7.5/30 / 10/30	C			2300	C								
	Supply voltage													
	500 V nominal			53										
	Vector Mode kW/A 560 VDC / HP/A 650-705 VDC; Servo Mode kW/A 320 VDC / HP/A 320 VDC; Frame													
Power/Current Rating	0.55/2.0 / 0.75/2.0 / 0.55/1.5 / 0.75/1.5	B			1200	B								
	1.1/3.5 / 1.5/3.5 / 1.1/2.5 / 1.5/2.5	B			1350	B								
	1.5/4.5 / 2.0/4.5 / 1.5/3.5 / 2.0/3.5	B			1450	B								
	2.2/6.0 / 3.0/5.0 / 2.2/4.0 / 3.0/4.0	B			1600	B								
	4.0/10 / 5.0/8.0 / 4.0/6.0 / 5.0/6.0	B			2100	B								
	5.5/12 / 7.5/12 / 5.5/9.0 / 7.5/9.0	B			2120	B								
	7.5/16 / 10/14 / 7.5/12 / 10/10	B			2160	B								
	7.5/- / 10/- / 7.5/16 / 10/14	B			216S	B								
	11/24 / 15/24 / 11/20 / 15/20	C			2240	C								
	15/30 / 20/27 / 15/25 / 20/22	C			2300	C								
	15/30 / 20/30 / 15/30 / 20/28	C			230S	C								
	18.5/39 / 25/35 / 18.5/35 / 25/29	D			2390	D								
	22/45 / 30/40 / 22/38 / 30/34	D			2450	D								
	30/59 / 40/52 / 30/50 / 40/45	D			2590	D								
Auxiliary supply														
Not required (not available on frames B-E)							0							
Brake switch														
Not fitted								0						
Special option														
None									00					
Documented special options (01-99) (Refer to local sales office)														
Performance														
Advanced										1				
High										2				
Language														
English (50 Hz)											A			
English (60 Hz)											B			
Option F														
None												0		
SinCos Encoder (EnDat2.1)												1		
Incremental Quadrature Encoder												3		
Resolver												5		
8902/M1 Sin/Cos Registration												7		
Option A														
Not Fitted													0	
CANopen													N	
ControlNet													C	
DeviceNet													D	
Ethernet IP													H	
Modbus/TCP													T	
PROFIBUS DP													P	
PROFINET													F	
RS485/Modbus													S	
8903/M1 Sin/Cos Registration													7	
Option B														
Not Fitted														0
Firewire 1394A														A

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AC890CD Series - Common Bus Drive >37 kW

	Example	Block 1		Block 2				Block 3		Block 4				
		890CD	-	43	2730	E	0	0	00	1	A	0	0	0

Product family

AC890 Common Bus Drive	890CD

Rating data

Supply voltage: 400 V nominal → 43

Power/ Current Rating	Induction Mode Constant kW/A 560 VDC	Induction Mode Constant HP/A 650 VDC	Induction Mode Quadratic kW/A 560 VDC	Induction Mode Quadratic HP/A 650 VDC	Servo Mode Constant kW/A 560 VDC	Servo Mode Constant HP/A 650 VDC	Servo Mode Quadratic kW/A 560 VDC	Servo Mode Quadratic HP/A 650 VDC	Frame	Block 2
	37/73	50/73	45/87	60/87	37/73	50/73	45/76	60/76	E	2730 E
	45/87	60/87	55/105	75/105	45/87	60/87	55/90	75/90	E	2870 E
	55/105	75/100	75/145	100/125	55/78	75/74	75/126	100/108	F	3105 F
	75/145	100/130	90/165	125/156	75/110	100/99	90/143	125/135	F	3145 F
	90/180	125/156	110/205	150/180	90/135	125/117	110/176	150/154	F	3156 F
	90/180	150/180	-	-	90/135	150/135	-	-	F	3180 F

Supply voltage: 500 V nominal → 53

Power/ Current Rating	Induction Mode Constant kW/A 705 VDC	Induction Mode Constant HP/A 705 VDC	Induction Mode Quadratic kW/A 705 VDC	Induction Mode Quadratic HP/A 705 VDC	Servo Mode Constant kW/A 705 VDC	Servo Mode Constant HP/A 705 VDC	Servo Mode Quadratic kW/A 705 VDC	Servo Mode Quadratic HP/A 705 VDC	Frame	Block 2
	37/67	-	45/79	-	37/67	-	45/69	-	E	2730 E
	45/79	-	55/98	-	45/79	-	55/84	-	E	2870 E
	55/100	-	75/125	100/125	55/74	-	75/93	100/93	F	3105 F
	75/125	-	90/156	125/156	75/95	-	90/118	125/118	F	3145 F
	90/156	-	-	-	90/117	-	-	-	F	3156 F

Auxiliary supply

Not required (not available on frames B-E)	0
115 V 1-phase (frame F only)	1
230 V 1-phase (frame F only)	2

Brake switch

Not fitted	0

Special option

None	00
Active Front End ('Y' caps removed - only available on frames E-F)	07
Documented special options (01-99) (Refer to local sales office)	

Performance

Advanced	1
High	2

Language

English (50 Hz)	A
English (60 Hz)	B

Option F

None	0
SinCos Encoder (EnDat2.1)	1
Incremental Quadrature Encoder	3
Resolver	5
8902/M1 Sin/Cos Registration	7

Option A

Not Fitted	0
CANopen	N
ControlNet	C
DeviceNet	D
Ethernet IP	H
Modbus/TCP	T
PROFIBUS	P
PROFINET	F
RS485/Modbus	S
8903/M1 Sin/Cos Registration	7

Option B

Not Fitted	0
Firewire 1394A	A

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AC890SD Series - Standalone Drive <37 kW

	Example	Block 1		Block 2				Block 3		Block 4				
		890SD	-	**23**	**1300**	**B**	**0**	**B**	**00**	**1**	**A**	**0**	**0**	**0**
Product family														
Standalone AC890 Drive		890SD												
Rating data														
	Supply voltage													
	230 V nominal			23										
	Induction Mode kW/A 230 VAC / HP/A 230 VAC; Servo Mode kW/A 230 VAC / HP/A 230 VAC; Frame													
Power/Current Rating	0.55/3.0 / 0.75/3.0 / 0.55/2.2 / 0.75/2.2	B			1300	B								
	1.1/5.5 / 1.5/5.5 / 1.1/4.0 / 1.5/4.0	B			1550	B								
	1.5/7.0 / 2.0/7.0 / 1.5/6.0 / 2.0/6.0	B			1700	B								
	2.2/11 / 3.0/11 / 2.2/8.0 / 3.0/8.0	B			2110	B								
	4.0/16.5 / 5.0/16.5 / 4.0/12 / 5.0/12	B			2165	B								
	5.5/24 / 7.5/24 / 5.5/24 / 7.5/24	C			2240	C								
	7.5/30 / 10/30 / 7.5/30 / 10/30	C			2300	C								
	Supply voltage													
	500 V nominal			53										
	Induction Mode kW/A 400 VAC / HP/A 460 VAC; Servo Mode kW/A 400 VAC / HP/A 460 VAC; Frame													
Power/Current Rating	0.55/2.0 / 0.75/2.0 / 0.55/1.5 / 0.75/1.5	B			1200	B								
	1.1/3.5 / 1.5/3.5 / 1.1/2.5 / 1.5/2.5	B			1350	B								
	1.5/4.5 / 2.0/4.5 / 1.5/3.5 / 2.0/3.5	B			1450	B								
	2.2/6.0 / 3.0/5.0 / 2.2/4.0 / 3.0/4.0	B			1600	B								
	4.0/10 / 5.0/8.0 / 4.0/6.0 / 5.0/6.0	B			2100	B								
	5.5/12 / 7.5/12 / 5.5/9.0 / 7.5/9.0	B			2120	B								
	7.5/16 / 10/14 / 7.5/12 / 10/10	B			2160	B								
	7.5/16 / 10/14 / 7.5/16 / 10/14	B			216S	B								
	11/24 / 15/24 / 11/20 / 15/20	C			2240	C								
	15/30 / 20/27 / 15/25 / 20/22	C			2300	C								
	15/30 / 20/30 / 15/30 / 20/28	C			230S	C								
	18.5/39 / 25/35 / 18.5/35 / 25/29	D			2390	D								
	22/45 / 30/40 / 22/38 / 30/34	D			2450	D								
	30/59 / 40/52 / 30/50 / 40/45	D			2590	D								
Auxiliary supply														
Not Required (not available on frames B-D)							0							
Brake switch														
Not fitted								0						
Brake switch fitted (mandatory frames B-F)								B						
Special option														
None									00					
Documented special options (01-99) (Refer to local sales office)														
Performance														
Advanced										1				
High										2				
Language														
English (50 Hz)											A			
English (60 Hz)											B			
Option F														
None												0		
SinCos Encoder (EnDat2.1)												1		
Incremental Quadrature Encoder												3		
Resolver												5		
8902/M1 Sin/Cos Registration												7		
Option A														
Not Fitted													0	
CANopen													N	
ControlNet													C	
DeviceNet													D	
Ethernet IP													T	
Modbus/TCP													H	
PROFIBUS DP													P	
PROFINET													F	
RS485/Modbus													S	
8903/M1 Sin/Cos Registration													7	
Option B														
Not Fitted														0
Firewire 1394A														A

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AC890SD Series - Standalone Drive >37 kW

		Example	Block 1		Block 2					Block 3			Block 4				
			890SD	-	43	2730	E	0	-	0	00	-	1	A	0	0	0
Product family																	
Standalone AC890 drive			890SD														
Rating data																	
Supply voltage																	
400 V nominal					43												
Induction Mode							Servo Mode		Frame								
Constant		Quadratic		Constant		Quadratic											
kW/A 400 VAC	HP/A 460 VAC	kW/A 400 VAC	HP/A 460 VAC	kW/A 400 VAC	HP/A 460 VAC	kW/A 400 VAC	HP/A 460 VAC										
Power/ Current Rating	37/73	50/73	45/87	60/87	37/73	50/73	45/76	60/76	E	2730	E						
	45/87	60/87	55/105	75/105	45/87	60/87	55/90	75/90	E	2870	E						
	55/105	75/100	75/145	100/125	55/78	75/74	75/126	100/108	F	3105	F						
	75/145	100/130	90/165	125/156	75/110	100/99	90/143	125/135	F	3145	F						
	90/180	125/156	110/205	150/180	90/135	125/117	110/176	150/154	F	3156	F						
	90/180	150/180	-	-	90/135	150/135	-	-	F	3180	F						
	110/216	175/216	132/260	200/260	110/153	175/153	132/210	200/210	G	3216	G						
	132/250	200/250	150/302	250/302	132/171	200/171	150/237	250/237	G	3250	G						
	160/316	250/316	180/361	300/361	160/224	250/224	180/286	300/286	G	3316	G						
	180/361	300/361	220/420	350/420	180/253	300/253	220/331	350/331	G	3361	G						
	200/375	-	250/480	-	200/268	-	250/343	-	H	3375	H						
	220/420	350/420	250/480	400/480	220/300	350/300	250/383	400/383	H	3420	H						
	250/480	400/480	300/545	450/545	250/336	400/336	300/428	450/428	H	3480	H						
	280/520	450/520	315/590	500/590	280/368	450/368	315/368	500/465	H	3520	H						
	315/590	500/590	355/650	550/650	315/411	500/411	355/471	550/471	J	3590	J						
Supply voltage																	
500 V nominal					53												
Induction Mode							Servo Mode		Frame								
Constant		Quadratic		Constant		Quadratic											
kW/A 500 VAC	HP/A 500 VAC	kW/A 500 VAC	HP/A 500 VAC	kW/A 500 VAC	HP/A 500 VAC	kW/A 500 VAC	HP/A 500 VAC										
Power/ Current Rating	37/67	-	45/79	-	37/67	-	45/69	-	E	2730	E						
	45/79	60/79	55/98	75/98	45/79	-	55/84	-	E	2870	E						
	55/100	-	75/125	100/125	55/74	-	75/93	100/93	F	3105	F						
	75/125	-	90/156	125/156	75/95	-	90/118	125/118	F	3145	F						
	90/156	-	110-180	-	90/117	-	-	-	F	3156	F						
Auxiliary supply																	
Not fitted (not available on frames B-E)								0									
115 V 1-phase (frames F-J only)								1									
230 V 1-phase (frames F-J only)								2									
Brake switch																	
Not fitted										0							
Brake switch fitted (option on frame F-J only)										B							
Special option																	
None											00						
Active Front End ('Y' caps removed - only available on frames E-F)											07						
Documented special options (01-99) (Refer to local sales office)																	
Performance																	
Advanced													1				
High													2				
Language																	
English (50 Hz)														A			
English (60 Hz)														B			
Option F																	
None															0		
SinCos Encoder (EnDat2.1)															1		
Incremental Quadrature Encoder															3		
Resolver															5		
8902/M1 Sin/Cos Registration															7		
Option A																	
Not Fitted																0	
CANopen																N	
ControlNet																C	
DeviceNet																D	
Ethernet IP																H	
Modbus/TCP																T	
PROFIBUS DP																P	
PROFINET																F	
RS485/Modbus																S	
8903/M1 Sin/Cos Registration																7	
Option B																	
Not Fitted																	0
Firewire 1394A																	A

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Accessories and Options

AC890/AC890PX Series



Options	Frame	Fitted	Reference
Power Module			
Common bus adapter 50 ADC with additional bus caps	B	Option	890CA-532500B0-R-00-U
Common bus adapter 80 ADC without bus caps	B	Option	890CA-532800B0-0-00-U
EMC filter	B	Option	
Options Cards			
Firewire peer-to-peer		Option	8903-FA-00
CAN peer-to-peer		Option	8903-SP-00
Ethernet Modbus/TCP		Option	8903-IM-00
Ethernet Ethernet/IP		Option	8903-IP-00
PROFINET		Option	8903-PN-00
PROFIBUS-DP		Option	8903-PB-00
DeviceNet		Option	8903-DN-00
CANopen		Option	8903-CB-00
ControlNet		Option	8903-CN-00
EtherCAT		Option	8903-CT-00
RS485 / Modbus		Option	8903-RS-00
Resolver feedback		Option	8902-RE-00
Resolver feedback with simulated incremental encoder		Option	8902-RR-00
SinCos® EnDat2.1 feedback		Option	8902-E1-00
Incremental quadrature encoder		Option	8902-EQ-00
Incremental pulse encoder		Option	8902-EP-00
SinCos® EnDat2.1 feedback and registration		Option	8902-M1-00
SinCos® EnDat2.1 master and registration		Option	8903-M1-00
Incremental master encoder		Option	8903-EP-00
High resolution analogue input		Option	8903-AI-00
Accessories			
Braking resistor		Option	
AC line reactor		Option	NRTFxxxx
Standard compact keypad		Standard	6511-RS232-00-B
Alphanumeric keypad		Option	6901-00-B
Graphical operator station		Option	6911-01-00-G
Remote mounting kit for keypad		Option	6052-00-B
Configuration tool software including USB cable		Option	
System Busbars - frame B-D	B-D	Option	BH465850
Installation kit frame B-D	B-D	Standard	LA468430Uxx3
Ventilation duct kit (1M exhaust for frames B, C, D)	B-D	Option	8905-DUCTKIT-190
Ventilation fan kit frame B-D	B-D	Option	8905-DUCTFAN-190
Cables			
HMI Touchscreen 3” to 15”		Option	TS800x
Motors			
Induction motors			
Brushless servo motors		See Servo Catalogue	
Torque motors			

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Accessories

Keypad



6511



6901



6911

Model	Description
6511-TTL-00	4 Digit LCD keypad*
6901/00	Alphanumeric multilingual keypad**
6911-01-00-G	Graphical operator station
6052/00	Remote mounting kit for 6901 with 3 m cable

* Standard equipment for frames B - D
** Standard equipment for frames E - K and All AC890PX

Screened power cables with connectors

Model	Description
CD1UA1F9R00xx	Power cable with motor connector for NX motor and Io < 14 Arms
CD1UP2F1R00xx	Power cable with motor connector for NX motor and Io < 22 Arms
CS4UA1F1R00xx	Resolver cable with motor connector and Sub-D connector for NX motor

Assembly kit

Model	Description
LA468430U003	Assembly kit for 890CS/CA
LA468430U103	Assembly kit for 890CD, B to D
LA468430U203	Assembly kit for 890SD, B to D
8905-DUCTKIT-00	Ventilation duct kit
8905-DUCTFAN-00	Ventilation duct fan

Cables

Model	Description
905-USBCL1-00	USB programming cable for 890
8905-FWCBL200-00	FireWire cable 200 mm
8905-FWCBL280-00	FireWire cable 280 mm
8905-FWCBL1000-00	FireWire cable 1m
8905-FWCBL4500-00	FireWire cable 4.5 m

Busbar System

Model	Description
BH465850	DC SSD Rail/Bus Bar 140 A (UL) 1 m
BC465938U200	Insulator for DC bus bars 200 mm

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Options

Communication Interfaces



Ethernet IP (8903-IP-00) and Modbus/TCP (8903-IM-00)	
Supported Protocols	Card 8903-IM-00: Modbus/TCP Card 8903-IP-00: Ethernet IP
Communication speed	10/100 Mbits/s
Station Address	By Drive System Explorer software via RTNX protocol
Suitable for Drives	AC890 version 3.2+

DeviceNet (8903-DN-00)	
Supported Protocols	Supports the group 2 only slave subset of the DeviceNet protocol
Supported Messages	Polled I/O, Cyclic Outputs, Change of State (COS), Explicit Messaging
Communication Speed	125 k, 250 k and 500 k bits/s
Station Address (MACID)	Dip switch or software setting of station address and network speed
Suitable for Drives	AC890 version 1.9+

CANopen (8903-CB-00)	
Profile	DS402
Supported Messages	SDO, PDO, NMT, SYNC
Communication Speed	20 k, 50 k, 125 k, 250 k, 500 k, 1 Mbits/s selectable by software or dip switch setting
Station Address	Dip switch or software setting of station address and network speed
Suitable for Drives	AC890 version 1.3+

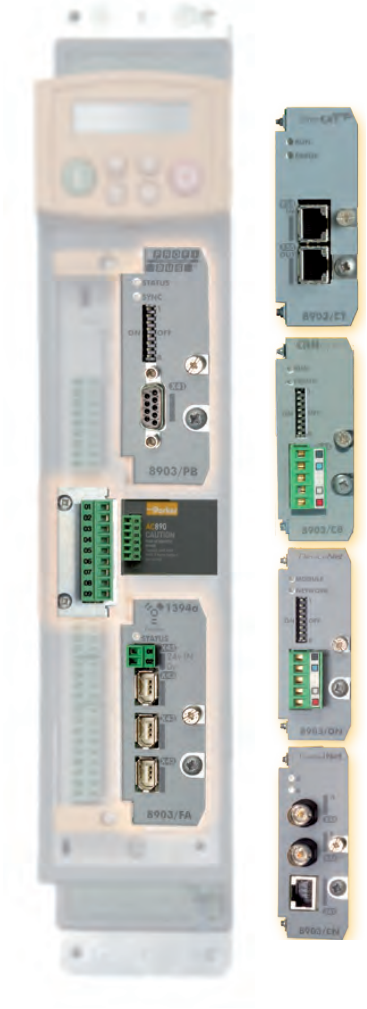
ControlNet (8903-CN-00)	
Supported Messages	Polled I/O
Station Address	Selectable by software
Station Address	Selectable by dip switch
Suitable for Drives	AC890 version 1.4+

PROFIBUS-DP (8903-PB-00)	
Supported Protocols	PROFIBUS-DP; Demand Data and Data Exchange
Communication Speed	Up to 12 Mbits/s selected by the master
Station Address	Dip switch or software setting of station address
Suitable for Drives	AC890 version 1.4+

FireWire IEEE 1394 (8902-FA-00)	
Communication Supported	peer-to-peer communication between drives

PROFINET (8903-PN-00 and 8903-PN-FF)	
Supported Protocols	PROFINET I/O RT Protocol
Station Address (IP)	Software setting of IP address via DSE
Suitable for Drives	AC890 version 3.3+

Peer to peer (8903-SP-00 and 8903-SP-FF)	
Supported Protocols	Peer to peer data exchange with other drives
Communications Speed	up to 1 Mbits/s selectable by dip switch
Suitable for Drives	AC890 version 3.3+



Options

Communication Interfaces

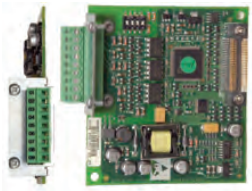
EtherCAT (8903-CT-00)	
Supported Protocols	CANopen over EtherCAT (CoE) DS301 Compliant
Communication speed	100 M bits/s
Suitable for Drives	AC890 version 3.7 onwards and 4.1 onwards

RS485 / Modbus (8903-RS-00)	
Supported Protocols	Modbus RTU only
Cabling	RS485 2 wire
Communication Speed	1200 to 115200 bits/s
Station Address	Selectable via software
Suitable for Drives	AC890 version 3.7 onwards and 4.1 onwards

Incremental Quadrature encoder card 8902-EQ

Description

The HTTL 8902-EQ speed feedback option allows incremental encoders to be connected directly to the drive to provide highly accurate speed feedback measurement. Supplies variable voltage isolated encoder power supply.



Product Codes

Code	Description
8902-EQ-00-00	Optional HTTL incremental encoder
8902-EQ-00-FF	Option HTTL encoder factory-fitted



Features

Maximum pulse rate	250 kHz (differential) 200 kHz (single ended)
Receiver current	≦10 mA per channel
Input Format	Two differential channels in quadrature (Clock/direction or clock only)
Input Voltage	±30 V (differential), 0-30 V (single-ended)
Input Voltage Differential	±30 V maximum
Input Voltage Threshold dip switch settings	3 V ±1 V (differential) 8 V ±1 V (single-ended)
Encoder Power Supply	Maximum load 200 mA or 2 W

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Options



Resolver feedback card 8902-RE

Description

The 8902-RE resolver speed feedback option allows the resolver to be connected directly to the drive to provide highly accurate speed feedback measurement. Contains a carrier output signal to power the resolver.

Product Codes

Code	Description
8902-RE-00-00	Optional Resolver feedback card
8902-RE-00-FF	Option Resolver feedback factory-fitted

Features

Maximum Speed	Up to 50 000 min^{-1} (with 2 pole resolver)
Carrier Output Signal	7 Vrms, 8 kHz
Maximum Carrier Supply	70 mArms
Maximum Input Voltage	±12 Vpeak
Accuracy	< 5 minutes
Resolution	Equivalent to 16 bits in one revolution of resolver
Inputs	Differential inputs Zin ~2 kΩ
Maximum Input Voltage	12 Vpeak

SinCos® EnDat2.1 Feedback Card 8902-E1

Description

The SinCos® speed feedback option 8902-E1 allows a 1 V_{pp} SinCos® encoder to be connected directly to the drive to provide highly accurate speed feedback measurement. Decodes Heidenhain EnDat2.1 absolute position encoders and supplies 5 V or 10 V for the encoder.



Product Codes

Code	Description
8902-EI-00-00	Optional SinCos® encoder card
8902-EI-00-FF	Optional SinCos® card factory-fitted

Features

Maximum Pulse Rate	250 kHz
Receiver Impedance	120 Ω
Input Format	two differential 1 V_{pp} signals in quadrature
Encoder Supply	Maximum load 250 mA Adjustable Voltage 5 V/10 V

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Options

SinCos® registration position 8902-M1 and 8903-M1



Description

- The 8903-M1-00 and 8902-MA-00 feedback cards allow operation without external registration position, thanks to the connection of the encoder to the drive. They provide highly accurate speed feedback measurement and regstration. Nevertheless registration applications are best achieved when both cards are used.
- Registration achieved in the drive
- Interpolates each encoder line with 11-bit accuracy giving 4 million counts/rev. on a 2048 line encoder
- Optional 1 V input from 'Z' index pulse for use with registration
- Supplies 5 V or 10 V to the encoder
- Decodes Heidenhain EnDat2.1 absolute position encoders
- 4 optically isolated auxiliary digital outputs that can be used either for general purpose inputs, or for inputs from registration mark sensor (8903-M1 only)
- 3 non-isolated auxiliary digital outputs that can be either for general purpose outputs or for synthesizing an encoder output (8903-M1 only)

Specification

Encoder Inputs (8902-M1... and 8903-M1...)

Maximum Pulse Rate	250 kHz
Receiver Impedance	120 Ω
Input Format	2 differential 1 V_{pp} signals in quadrature
Encoder Supply	250 mA maximum load
Supply Voltage	5 V/10 V adjustable
Terminal Type	Sub-D15 connector
Maximum Cable Length	150 m screened cable
Serial Protocol	EnDat2.1

Product Codes

Code	Description
8902-M1-00	Slave SinCos® registration
8903-M1-00	Master SinCos® registration
8902-M1-FF	Slave SinCos® registration factory-fitted
8903-M1-FF	Master SinCos® registration factory-fitted

Approved Encoders

	1 V_{pp}	EnDat 2.1	Single Turn ABS	Multi-turn ABS
Heidenhain:				
EQN425	√	√		√
ECN413	√	√	√	
ERN480	√			
Stegmann:				
HG660 AKR (xxxx)S	√			
HG660 DKR (xxxx)S	√			
Hengstler:				
RIS58-H				

Auxiliary digital input (8903-M1… only)

Low Logic Level **High Logic Level** **Absolute Max. Input Voltage**	0 V to 5 V relative to X63 pin 5 15 V to 26 V relative to X63 pin 5 30 V relative to X63 pin 5
Input Current	Low logic level < 1 mA High logic level > 3 mA, < 10 mA Typical input at 24 V: 7 mA
Isolation withstand relative to drive chassis	30 V
Input Safety Category	SELV
Terminal Type	6-way pluggable 3.5 mm terminal block
Maximum Cable Length	150 m screened cable is reccomended for all lengths, but essential if over 30 m in order to comply with EMC regulations

Auxiliary digital outputs (8903-M1… only)

Input Voltage (VS)	5 V to 24 V
Maximum Input Voltage	30 V
Maximum Output Current	±100 mA per output
Output Voltage	Low logic level < 3 V to 100 mA High logic level > VS – 4 V to 100 mA
Overload and short circuit duration	Indefinite withstand
Max. Output Frequency	250 kHz per output
Terminal Type	8-way pluggable 3.5 mm terminal block
Maximum Cable Length	150 m screened cable is reccomended for all lengths, but essential if over 30 m in order to comply with EMC regulations

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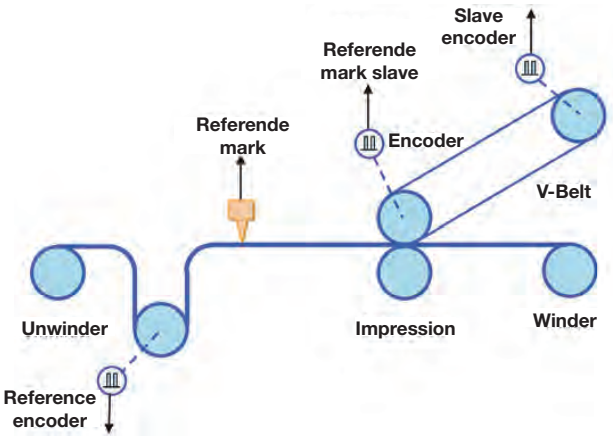
Options

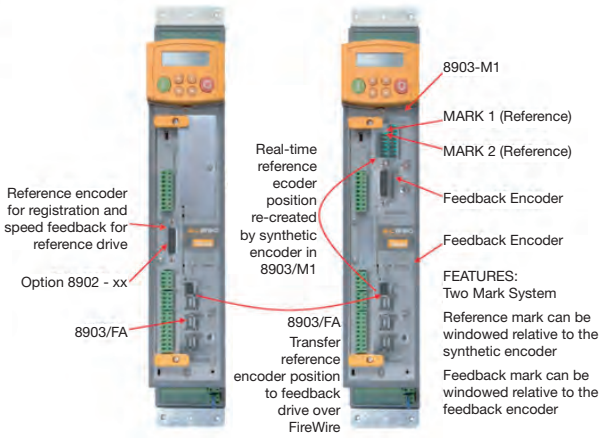
SinCos® registration position 8902-M1 and 8903-M1

Possible Configurations

	8902-M1… fitted in slot C 8903-M1… not fitted	8902-M1… not fitted 8903-M1… fitted in slot A	8902-M1… fitted in slot C 8903-M1… fitted in slot A
Speed feedback Encoder	Via 8902-M1 card	Via 8903-M1 card	Via 8902-M1… card
Reference Encoder Signal		In this combination, a reference encoder position would normally be supplied by a FireWire option interface (8903/FA).	Supplied by 8903-M1… card
Registration	Available only using the encoder's 1 V index pulse.	Auxiliary digital inputs and the encoder's index pulse (if supplied by the encoder) for registration even inputs.	Auxiliary digital inputs and the encoder's index pulse (if supplied by the encoders) from both encoders are available for registration even inputs.
Inputs/Outputs		The auxiliary digital inputs are also available for general purpose digital inputs. Auxiliary digital inputs are also for simulated pulse encoder output, or for general purpose digital output.	The auxiliary digital inputs are also available for general purpose digital inputs. Auxiliary digital inputs are also for simulated pulse encoder output, or for general purpose digital output.

Example of two-mark registration





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Accessories

Drive System Explorer (DSE) Software

Description

DSE890 is the programming, monitoring and diagnostic software platform for AC890 and AC890PX series variable speed drives. Communication between the drive and PC is via a mini USB port located on the front of the drive.
Thanks to the on-line help, users can achieve the optimum drive configuration without the need to navigate through complicated parameter menus.

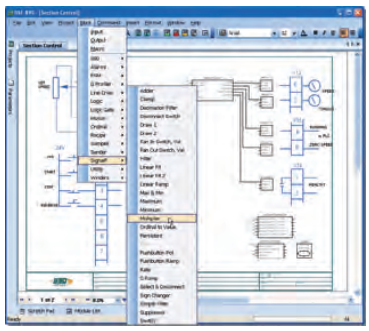
Advanced programming is carried out through a set of pre-engineered templates in order to create the required configuration.
It is possible to monitor every parameter of the drive either as a digital value or as a function in the “chart recorder” during normal operation.

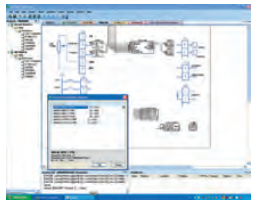
- Creates projects quickly and easily
- Graphical tool based on a block diagram approach
- Integrated digital oscilloscope
- On-line configuration and monitoring
- System identification tool

Product Codes

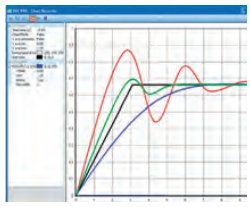
8906-DSELITE-00	DSE Lite software (single axis) + USB cable
8906-DSEDEV-00	DSE Development software + USB cable
8906-DSERUN-00	DSE Runtime/Maintenance + USB cable
8906-DSEDEVUPG-00	DSD Development to DSE Development Upgrade + USB cable
906-DSERUNUPG-00	DSD Runtime to DSE Runtime Upgrade + USB cable

DSE890 Programming Software

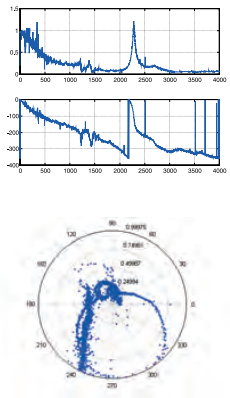




Parameter djustment and project creation



real-time data acquisition scilloscope



System identification tool

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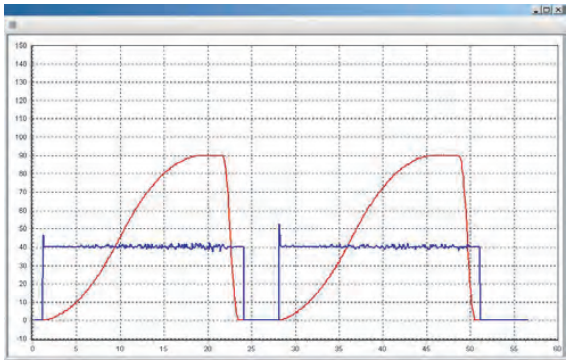
Accessories for all AC Drives

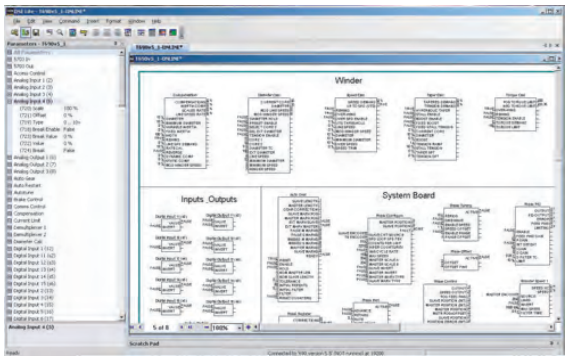
Drive System Explorer Lite (DSE Lite) Software

Description

DSE LITE software is an easy to use configuration, commissioning and monitoring tool with graphical interface for the Parker SSD Drives range of AC and DC drives.
While the drive is in running mode the oscilloscope function allows “on-line” monitoring of selected parameters and the recording of trends.

DSE LITE, allows the user to create, parameterize and configure user defined applications thanks to function blocks dedicated to speed control, Winder, PID, Diameter calculator, Shaftless...
DSE LITE is downloadable from our website.
www.parker.com





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192-300010N2 May 2012

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