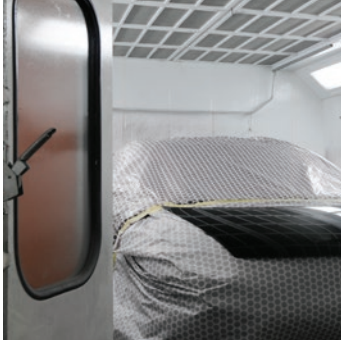
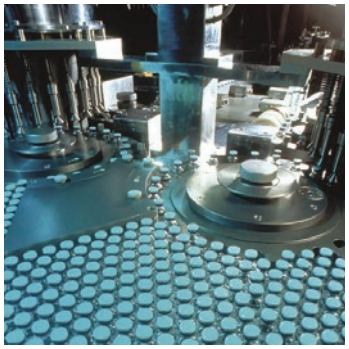
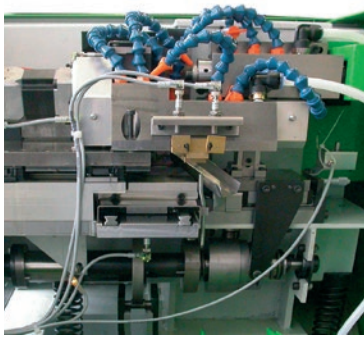




EY Series

Explosion Proof Servo Motor - Zone 2



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Explosion Proof Motor for Zone 2 - EY Series

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Milan, Italy

Asia
Wuxi, China
Jangan, Korea
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Milan, Italy

Littlehampton, UK

Filderstadt, Germany

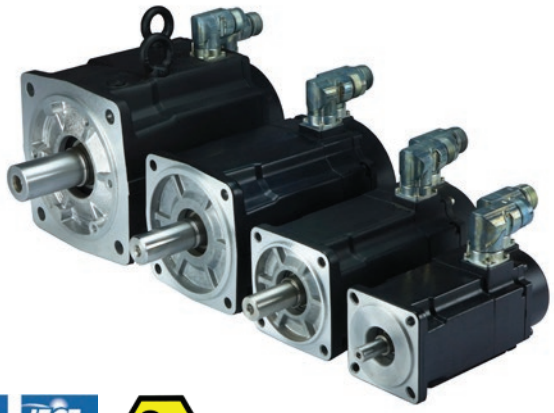
Dijon, France

Explosion Proof Motor for Zone 2 - EY Series

Overview

Description

The EY series is a range of permanent magnet explosion-proof brushless servo motors designed for use in **explosive atmospheres in zone 2** for gas and dust at 40°C or 60°C ambient temperature. The EY series of servo motors are characterized by excellent motion quality, dynamic acceleration/deceleration capabilities and high torque output over a wide speed range. Various winding variants and numerous options are available to offer maximum flexibility. This range is in accordance with the European (CE) and International safety standards (IECEx).



Advantages

- Brushless servo motors with explosion proof certification from a notified body.
- Conforming with CE/ATEX and International safety standard
- For an ambiant temperature at 40°c or 60°C
- For gas and dust explosive atmospheres
- High precision
- High motion quality
- High dynamic performance
- Low cogging
- Compactness and robustness
- Maintenance free
- High power density (6 kW in a 155 square frame)
- Compatible with all popular drives

Applications

- Printing machinery
- Paint spray equipments
- Chemical, petro-chemical and pharmaceutical industries
- Robot applications
- Special machines
- Cleaning applications
- Actuator for valve in Energy applications
- Waste processing plants

Technical characteristics

Motor type	Permanent magnet synchronous motors
Frame size	70 - 155 mm
Torque range	2 to 41 Nm
Speed range	Up to 6800 min^{-1}
Number of poles	10
Mounting	Flange with smooth holes
Marking	CE / ATEX and IECEx
Voltage supply	230 / 400 VAC
Conformance	ATEX 2014/34/EU Directive
	IEC/EN60034-1 IEC/EN60034-5 IEC/EN60079-0 IEC/EN60079-15 (Gas) IEC/EN60079-31 (Dust)
Classification	II 3 GD Ex nA IIC T3 Gc IP65 / Ex tc IIIC T200°C Dc IP65 (Gas and dust)
Ingress protection level	IP65
Connections	Connector

Standards

Hazardous Areas Classification

Dangerous Areas Identification

European directive 99/92/EC makes explicit the responsibility of employers to protect employees who may be exposed to risk of ATEX environments (Explosive Atmosphere). The employer must assess the risk and classify potentially dangerous areas. Equipment and materials must also be suited for use in dangerous areas in accordance with ATEX directive 2014/34/EU.

Hazard	Permanent	Occasional	Unusal
Definition	Explosive atmospheres present continuously, for long periods or frequently	Explosive atmospheres are likely to occur	Explosive atmospheres are unlikely to occur or present only infrequently and for a short period only
Gas and vapour	Zone 0	Zone 1	Zone 2
Dust	Zone 20	Zone 21	Zone 22
Category	1 Very high level of protection	2 High level of protection	3 Normal level of protection
Compatible Parker motor range		EX Series	EY Series

Suitable for ATEX/IECEX EY servomotors

Classification of common combustible gases and vapours according to temperature class and explosion group

Group	Temperature class					
	T1	T2	T3	T4	T5	T6
I	Methane					
II A	Acetic acid Acetone Ammonia Benzene Carbon monoxide Ethane Ethyl... Methane Methanol Methyl... Naphtalene Propane Toluene Xylene	Butyl acetate Amylic alcohol Liquefied gas Natural gas Butane Ethyl alcohol	Cyclohexane Cyclohexanol Diesel fuels Gasoline Heptane Hexane Pentane Petroleum (depending on composition)	Acetaldehyde Ether		
II B	Coke gas	Butadiene Ethylene Ethylbenzene Ethylene oxide	Hydrogen sulphide Isoprene Petroleum (depending on composition)	Ethyl ether		
II C	Hydrogen	Acetylene				Carbon disulphide Ethyl nitrate

Operating category and marking of EY servomotors

ATEX/IECEx gazeous atmospheres

II 3 G Ex nA IIC T3 Gc IP65

I I	3	G	Ex	nA	II	C	T3*	Gc	IP65
I Mine	M1 Very high level of protection	G Gas Vapour	Protection against explosions	nC Equipment with protection against sparks	I Mine	Methane	T1 450 °C	Ma Very high level of protection	IP65
	M2 High level of protection			nR Equipment with restricted breathing			T2 300 °C	Mb High level of protection	
II Surface	1 Very high level of protection			nA Equipment not generating sparks	II Surface	A Propane	T3 200 °C	Ga Very high level of protection	
	2 High level of protection					B Ethylene	T4 135 °C	Gb High level of protection	
	3 Normal level of protection					C Hydrogen Acetylene	T5 100 °C	Gc Normal level of protection	
							T6 85 °C		

* Maximum surface temperature

ATEX/IECEx dusty atmospheres

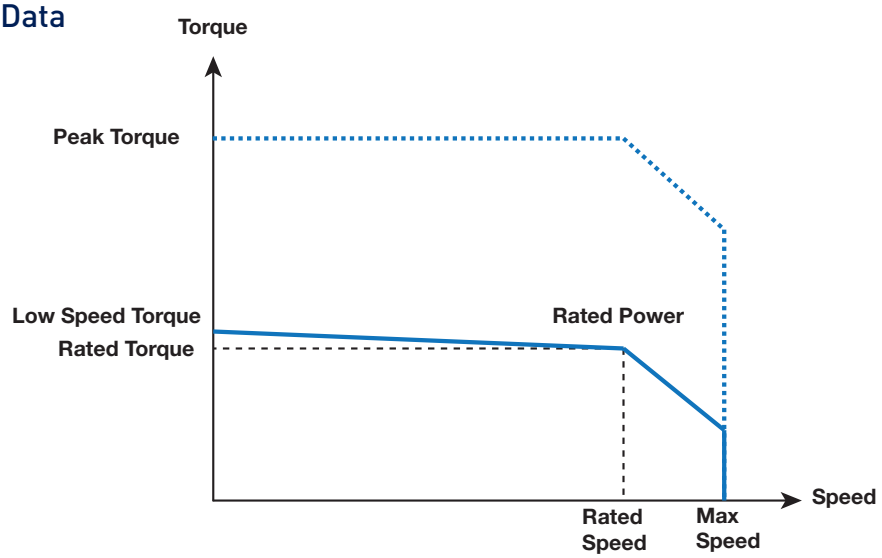
I 3 GD Ex nA IIC T3 Gc IP65 / Ex tc IIIC T200°C Dc IP65

I I	3	D	Ex	tc	III	C	T3*	Dc	IP65
I Mine	M1 Very high level of protection	D Dust	Protection against explosions	ta Protection by enclosure	III Dust	A Combustible flying	T1 450 °C	Ma Very high level of protection	IP65
	M2 High level of protection			tb/tc Protection by enclosure			T2 300 °C	Mb High level of protection	
II Surface	1 Very high level of protection			pb/pc pressurized enclosure		B Non-conductive dust	T3 200 °C	Da Very high level of protection	
	2 High level of protection			ia/ib/ic intrinsic safety			T4 135 °C	Db High level of protection	
	3 Normal level of protection			ma/mb/mc Encapsulation		C Conductive dust	T5 100 °C	Dc Normal level of protection	
							T6 85 °C		

Suitable for ATEX/IECEX EY servomotors

EY Servo Motors - CE Marked for Explosive Atmospheres

Technical Data



230 VAC power supply - single or three-phased

Motor	Rated Power Pn	Rated Torque Mn	Rated Speed Nn	Rated Current In	Low speed torque Mo	Low Speed Current Io	Peak Torque M peak	Peak Current I peak	Max. Speed N max
	[kW]	[Nm]	[rpm]	[Arms]	[Nm]	[Arms]	[Nm]	[Arms]	[rpm]
40°C ambient temperature									
EY310EAP	0.46	1.9	2300	1.4	2	1.4	6.6	5.4	2300
EY310EAK	0.72	1.7	4000	2.2	2	2.5	6.6	9.4	4000
EY420EAP	0.9	3.8	2300	3.0	4	3.1	13.1	11.3	2300
EY420EAJ	1.4	3.4	4000	4.2	4	4.9	13.4	18.4	4000
EY430EAL	1.2	5.0	2300	3.5	5.5	3.8	18.8	14.3	2300
EY430EAF	1.7	4.1	4000	5.1	5.5	6.6	18.8	25.1	4000
EY620EAV	0.9	7.9	1100	2.8	8	2.8	26.7	10.7	1100
EY620EAR	1.7	7.4	2200	5.0	8	5.3	26.7	20.1	2200
EY630EAR	1.7	11.3	1450	5.2	12	5.5	40.0	20.8	1450
EY630EAN	2.5	10.5	2300	7.3	12	8.3	40.0	31.4	2300
EY820EAR	3.3	14.5	2200	9.7	16	10.7	50.0	40.2	2200
EY840EAK	4.9	23.5	2000	13.7	28	16.2	92.0	61.9	2000
EY860EAJ	5.2	34.4	1450	14.9	41	17.7	137.0	68.6	1450
60°C ambient temperature									
EY310EAP	0.40	1.7	2300	1.2	1.8	1.3	6.6	5.4	2300
EY310EAK	0.61	1.5	4000	1.9	1.8	2.3	6.6	9.4	4000
EY420EAP	0.8	3.1	2300	2.4	3.5	2.7	13.1	11.3	2300
EY420EAJ	1.1	2.7	4000	3.4	3.5	4.3	13.4	18.4	4000
EY430EAL	1.1	4.4	2300	3.1	5.0	3.4	18.8	14.3	2300
EY430EAF	1.4	3.4	4000	4.2	5.0	6.0	18.8	25.1	4000
EY620EAV	0.8	7.0	1100	2.5	7.2	2.5	26.7	10.7	1100
EY620EAR	1.5	6.4	2200	4.3	7.2	4.8	26.7	20.1	2200
EY630EAR	1.5	10.1	1450	4.6	10.8	4.9	40.0	20.8	1450
EY630EAN	2.2	9.1	2300	6.3	10.8	7.4	40.0	31.4	2300
EY820EAR	2.7	11.7	2200	7.9	14.0	9.3	50.0	40.2	2200
EY840EAK	3.9	18.4	2000	10.8	25.5	14.7	92.0	61.9	2000
EY860EAJ	4.4	29.0	1450	12.6	37.0	15.9	137.0	68.6	1450

400 VAC power supply - three-phased

Motor	Rated Power Pn	Rated Torque Mn	Rated Speed Nn	Rated Current In	Low speed torque Mo	Low Speed Current Io	Peak Torque M peak	Peak Current I peak	Max. Speed N max
	[kW]	[Nm]	[rpm]	[Arms]	[Nm]	[Arms]	[Nm]	[Arms]	[rpm]
40°C ambient temperature									
EY310EAP	0.72	1.7	4000	1.3	2	1.4	6.6	5.4	4000
EY310EAK	0.87	1.2	6800	1.6	2	2.5	6.6	9.4	6800
EY420EAP	1.1	3.6	3000	2.9	4	3.1	13.1	11.3	3000
EY420EAJ	1.7	2.6	6000	3.4	4	4.9	13.4	18.4	6000
EY430EAL	1.7	4.1	4000	2.9	5.5	3.8	18.8	14.3	4000
EY430EAF	1.6	2.7	5800	3.4	5.5	6.6	18.8	25.1	5800
EY620EAV	1.6	7.5	2000	2.7	8	2.8	26.7	10.7	2000
EY620EAR	2.5	6.2	3900	4.2	8	5.3	26.7	20.1	3900
EY630EAR	2.8	10.0	2700	4.6	12	5.5	40.0	20.8	2700
EY630EAN	3.3	7.9	4000	5.6	12	8.3	40.0	31.4	4000
EY820EAR	5.3	12.9	3900	8.8	16	10.7	50.0	40.2	3900
EY840EAK	6.8	18.6	3500	11.0	28	16.2	92.0	61.9	3500
EY860EAJ	6.3	23.0	2600	10.2	41	17.7	137.0	68.6	2600
60°C ambient temperature									
EY310EAP	0.61	1.5	4000	1.1	1.8	1.3	6.6	5.4	4000
EY310EAK	0.67	0.9	6800	1.3	1.8	2.3	6.6	9.4	6800
EY420EAP	0.9	3.0	3000	2.3	3.5	2.7	13.1	11.3	3000
EY420EAJ	1.2	2.0	6000	2.6	3.5	4.3	13.4	18.4	6000
EY430EAL	1.4	3.4	4000	2.4	5.0	3.4	18.8	14.3	4000
EY430EAF	1.3	2.6	4900	3.3	5.0	6.0	18.8	25.1	4900
EY620EAV	1.4	6.5	2000	2.3	7.2	2.5	26.7	10.7	2000
EY620EAR	2.0	4.9	3900	3.3	7.2	4.8	26.7	20.1	3900
EY630EAR	2.4	8.4	2700	3.9	10.8	4.9	40.0	20.8	2700
EY630EAN	2.4	5.8	4000	4.1	10.8	7.4	40.0	31.4	4000
EY820EAR	3.2	7.8	3900	5.4	14.0	9.3	50.0	40.2	3900
EY840EAK	3.9	14.1	2600	8.4	25.5	14.7	92.0	61.9	2600
EY860EAJ	4.8	21.8	2100	9.6	37.0	15.9	137.0	68.6	2100

Drive Associations

230 VAC power supply

Motor	Associated Drive Sizes[1]				
	PSD1[2]	Compax3	SLVD-N	AC890	AC30V
With 40°C ambiant temperature - 230 VAC power supply					
EY310EAP	PSD1SW1200...	C3S025V2...	SLVD2N...	890SD-231300B...	-
EY310EAK	PSD1SW1300...	C3S025V2...	SLVD5N...	890SD-231550B...	-
EY420EAP	PSD1SW1300...	C3S063V2...	SLVD5N...	890SD-231700B...	-
EY420EAJ	PSD1SW1300...	C3S063V2...	SLVD5N...	890SD-231700B...	-
EY430EAL	PSD1SW1300...	C3S063V2...	SLVD5N...	890SD-231700B...	-
EY430EAF	-	C3S100V2...	SLVD7N...	890SD-232165B...	-
EY620EAV	PSD1SW1300...	C3S063V2...	SLVD5N...	890SD-231550B...	-
EY620EAR	-	C3S063V2...	SLVD7N...	890SD-231700B...	-
EY630EAR	-	C3S063V2...	SLVD7N...	890SD-232165B...	-
EY630EAN	-	C3S100V2...	SLVD10N...	890SD-232165B...	-
EY820EAR	-	C3S150V2...	SLVD15N...	890SD-232240C...	-
EY840EAK	-	-	-	890SD-232240C...	-
EY860EAJ	-	-	-	890SD-232240C...	-
With 60°C ambiant temperature - 230 VAC power supply					
EY310EAP	PSD1SW1200...	C3S025V2...	SLVD2N...	890SD-231300B...	-
EY310EAK	PSD1SW1300...	C3S025V2...	SLVD5N...	890SD-231550B...	-
EY420EAP	PSD1SW1300...	C3S063V2...	SLVD5N...	890SD-231550B...	-
EY420EAJ	PSD1SW1300...	C3S063V2...	SLVD5N...	890SD-231700B...	-
EY430EAL	PSD1SW1300...	C3S063V2...	SLVD5N...	890SD-231700B...	-
EY430EAF	-	C3S063V2...	SLVD7N...	890SD-232165B...	-
EY620EAV	PSD1SW1300...	C3S025V2...	SLVD5N...	890SD-231550B...	-
EY620EAR	-	C3S063V2...	SLVD5N...	890SD-231700B...	-
EY630EAR	-	C3S063V2...	SLVD5N...	890SD-231700B...	-
EY630EAN	-	C3S100V2...	SLVD10N...	890SD-232165B...	-
EY820EAR	-	C3S100V2...	SLVD10N...	890SD-232165B...	-
EY840EAK	-	C3S150V2...	SLVD15N...	890SD-232240C...	-
EY860EAJ	-	-	-	890SD-232240C...	-

[1]Ambient temperature for the drives is 40°C
[2]PSD drive with optional resolver board only

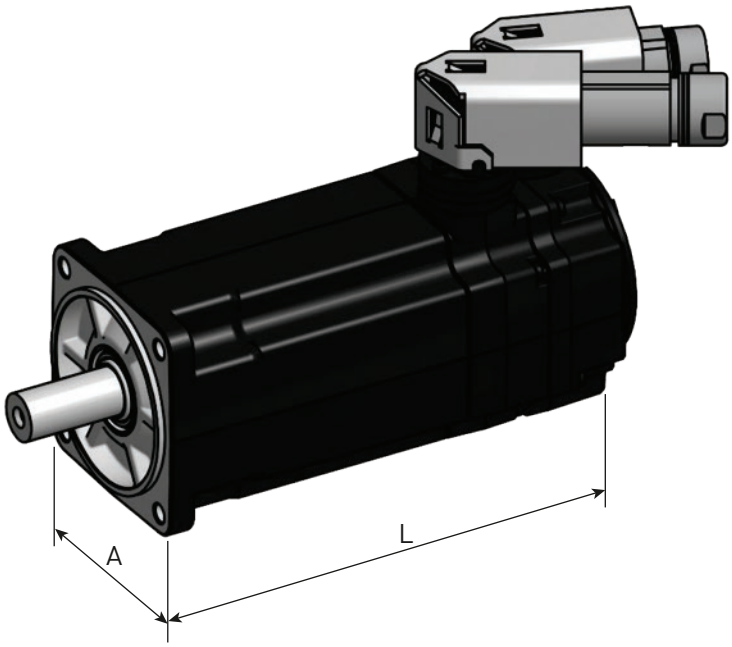
400 VAC power supply

Motor	Associated Drive Sizes[1]				
	PSD1[2]	Compax3	SLVD-N	AC890	AC30V
With 40°C ambiant temperature - 400 VAC power supply					
EY310EAP	PSD1MW1300…	C3S015V4…	-	890SD-531200B…	31V-4D-0004
EY310EAK	PSD1MW1300…	C3S038V4…	-	890SD-531350B…	31V-4D-0004
EY420EAP	PSD1MW1300…	C3S038V4…	-	890SD-531450B…	31V-4D-0004
EY420EAJ	PSD1MW1300…	C3S075V4…	-	890SD-532100B…	31V-4D-0008
EY430EAL	PSD1MW1300…	C3S038V4…	-	890SD-532100B…	31V-4D-0005
EY430EAF	PSD1MW1400…	C3S075V4…	-	890SD-532120B…	31V-4D-0008
EY620EAV	PSD1MW1300…	C3S038V4…	-	890SD-531450B…	31V-4D-0004
EY620EAR	PSD1MW1400…	C3S075V4…	-	890SD-532100B…	31V-4D-0008
EY630EAR	PSD1MW1400…	C3S075V4…	-	890SD-532100B…	31V-4D-0008
EY630EAN	PSD1MW1600…	C3S150V4…	-	890SD-532120B…	31V-4D-0010
EY820EAR	PSD1MW1600…	C3S150V4…	-	890SD-532160B…	31V-4D-0012
EY840EAK	PSD1MW1800…	C3S300V4…	-	890SD-53216SB…	31V-4E-0023
EY860EAJ	PSD1MW1800…	C3S300V4…	-	890SD-532240C…	31V-4E-0023
With 60°C ambiant temperature - 400 VAC power supply					
EY310EAP	PSD1MW1300…	C3S015V4…	-	890SD-531200B…	31V-4D-0004
EY310EAK	PSD1MW1300…	C3S038V4…	-	890SD-531350B…	31V-4D-0004
EY420EAP	PSD1MW1300…	C3S038V4…	-	890SD-531450B…	31V-4D-0004
EY420EAJ	PSD1MW1300…	C3S075V4…	-	890SD-531600B…	31V-4D-0006
EY430EAL	PSD1MW1300…	C3S038V4…	-	890SD-531450B…	31V-4D-0005
EY430EAF	PSD1MW1400…	C3S075V4…	-	890SD-532100B…	31V-4D-0008
EY620EAV	PSD1MW1300…	C3S038V4…	-	890SD-531350B…	31V-4D-0004
EY620EAR	PSD1MW1300…	C3S075V4…	-	890SD-532100B…	31V-4D-0008
EY630EAR	PSD1MW1300…	C3S075V4…	-	890SD-532100B…	31V-4D-0008
EY630EAN	PSD1MW1400…	C3S075V4…	-	890SD-532120B…	31V-4D-0010
EY820EAR	PSD1MW1600…	C3S150V4…	-	890SD-532160B…	31V-4D-0012
EY840EAK	PSD1MW1600…	C3S150V4…	-	890SD-53216SB…	31V-4E-0023
EY860EAJ	PSD1MW1800…	C3S300V4…	-	890SD-53216SB…	31V-4E-0023

[1]Ambient temperature for the drives is 40°C
[2]PSD drive with optional resolver board only

Dimensions

EY



Motor	A	Mounting Flange centering / interaxis hole	Shaft diameter x length	Without Brake		With Brake	
	[mm]	[mm]	[mm]	L [mm]	Weight [kg]	L [mm]	Weight [kg]
EY310	71	60 / 75-80	11 x 23	159	2	207	2.4
EY420	91.5	80 / 100	19 x 40	181	3.7	232	4.5
EY430				206	4.6	257	5.4
EY620	121	110 / 130	24 x 50	195	6.9	249	8
EY630				224	8.8	278	10
EY820	155	130 / 165	32 x 58	213	13	279	16.5
EY840				273	20	339	23.5
EY860				333	27	399	30.5

Order Code

EY Motors

	1	2	3	4	5	6	7	8	9	10
Order example	**EY**	**3**	**10**	**E**	**A**	**K**	**B**	**7**	**1**	**10**

1	**Product Series**	
	EY	Atex servo motor Zone 2
2	**Motor size**	
	3	71 mm square
	4	92 mm square
	6	121 mm square
	8	155 mm square
3	**Motor length**	
	10	up to 60 depending on size
4	**Fixed code**	
	E	ATEX/IECEx motor
5	**Feedback sensor**	
	A	2 pole resolver
	K	Without sensor
6	**Torque/Speed characteristics**	
		see table "Technical data"
	...	
7	**Painting**	
	B	Black RAL9005
8	**Electric connection**	
	7	Connector
9	**Brake and thermal sensor option***	
	PTC on power connector (AC890,AC30V,...)	
	1	PTC sensor
	4	PTC sensor + brake
	PTC on feedback connector (PSD,Compax3,SLVD,...)	
	A	PTC sensor
	D	PTC sensor + brake
10	**Mechanical interface**	
	10	IP65 with smooth shaft
	11	IP65 with keyed shaft

* other options on request

Accessories

Motor cable

Drive	Cable reference [1]	
	Current ≤ 12 A @40°C Current ≤ 9 A @60°C	Current ≤ 24 A @40°C Current ≤ 17 A @60°C
PSD1	CP1UQ1F1R0xxx	CP1UQ2F1R0xxx
Compax3	CC3UQ1F1R0xxx	CC3UQ2F1R0xxx
SLVDN	CS5UQ1F1R0xxx	CS5UQ2F1R0xxx
AC890	CS4UQ1F1R0xxx	CS4UQ2F1R0xxx
AC30	CS7UQ1F1R0xxx	CS7UQ2F1R0xxx

Feedback cable (2 pole resolver)

Drive	Cable reference [1]
PSD1	CP1UA1F1R0xxx
Compax3	CC3UA1F1R0xxx
SLVDN	CS5UA1F1R0xxx
AC890	CS4UA1F1R0xxx
AC30	CS7UA1F1R0xxx

[1] The 3 last digits indicate cable length in meters ± 5 % max
For non-standard length cable with length different from: 3/4/5/10/15/20/25/30/40/50m please contact us.
Example CC3UQ1F1R0015: power cable, length = 15 m
For connecting other drives please see the technical manual

Parker's Motion & Control Technologies

At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker. For further info call 00800 27 27 5374

Aerospace

Key Markets

Aftermarket services
Commercial transports
Engines
General & business aviation
Helicopters
Launch vehicles
Military aircraft
Missiles
Power generation
Regional transports
Unmanned aerial vehicles

Key Products

Control systems & actuation products
Engine systems & components
Fluid conveyance systems & components
Fluid metering, delivery & atomization devices
Fuel systems & components
Fuel tank inerting systems
Hydraulic systems & components
Thermal management
Wheels & brakes

Climate Control

Key Markets

Agriculture
Air conditioning
Construction Machinery
Food & beverage
Industrial machinery
Life sciences
Oil & gas
Precision cooling
Process
Refrigeration
Transportation

Key Products

Accumulators
Advanced actuators
CO_2 controls
Electronic controllers
Filter driers
Hand shut-off valves
Heat exchangers
Hose & fittings
Pressure regulating valves
Refrigerant distributors
Safety relief valves
Smart pumps
Solenoid valves
Thermostatic expansion valves

Electromechanical

Key Markets

Aerospace
Factory automation
Life science & medical
Machine tools
Packaging machinery
Paper machinery
Plastics machinery & converting
Primary metals
Semiconductor & electronics
Textile
Wire & cable

Key Products

AC/DC drives & systems
Electric actuators, gantry robots & slides
Electrohydrostatic actuation systems
Electromechanical actuation systems
Human machine interface
Linear motors
Stepper motors, servo motors, drives & controls
Structural extrusions

Filtration

Key Markets

Aerospace
Food & beverage
Industrial plant & equipment
Life sciences
Marine
Mobile equipment
Oil & gas
Power generation & renewable energy
Process
Transportation
Water Purification

Key Products

Analytical gas generators
Compressed air filters & dryers
Engine air, coolant, fuel & oil filtration systems
Fluid condition monitoring systems
Hydraulic & lubrication filters
Hydrogen, nitrogen & zero air generators
Instrumentation filters
Membrane & fiber filters
Microfiltration
Sterile air filtration
Water desalination & purification filters & systems

Fluid & Gas Handling

Key Markets

Aerial lift
Agriculture
Bulk chemical handling
Construction machinery
Food & beverage
Fuel & gas delivery
Industrial machinery
Life sciences
Marine
Mining
Mobile
Oil & gas
Renewable energy
Transportation

Key Products

Check valves
Connectors for low pressure fluid conveyance
Deep sea umbilicals
Diagnostic equipment
Hose couplings
Industrial hose
Mooring systems & power cables
PTFE hose & tubing
Quick couplings
Rubber & thermoplastic hose
Tube fittings & adapters
Tubing & plastic fittings

Hydraulics

Key Markets

Aerial lift
Agriculture
Alternative energy
Construction machinery
Forestry
Industrial machinery
Machine tools
Marine
Material handling
Mining
Oil & gas
Power generation
Refuse vehicles
Renewable energy
Truck hydraulics
Turf equipment

Key Products

Accumulators
Cartridge valves
Electrohydraulic actuators
Human machine interfaces
Hybrid drives
Hydraulic cylinders
Hydraulic motors & pumps
Hydraulic systems
Hydraulic valves & controls
Hydrostatic steering
Integrated hydraulic circuits
Power take-offs
Power units
Rotary actuators
Sensors

Pneumatics

Key Markets

Aerospace
Conveyor & material handling
Factory automation
Life science & medical
Machine tools
Packaging machinery
Transportation & automotive

Key Products

Air preparation
Brass fittings & valves
Manifolds
Pneumatic accessories
Pneumatic actuators & grippers
Pneumatic valves & controls
Quick disconnects
Rotary actuators
Rubber & thermoplastic hose & couplings
Structural extrusions
Thermoplastic tubing & fittings
Vacuum generators, cups & sensors

Process Control

Key Markets

Alternative fuels
Biopharmaceuticals
Chemical & refining
Food & beverage
Marine & shipbuilding
Medical & dental
Microelectronics
Nuclear Power
Offshore oil exploration
Oil & gas
Pharmaceuticals
Power generation
Pulp & paper
Steel
Water/wastewater

Key Products

Analytical Instruments
Analytical sample conditioning products & systems
Chemical injection fittings & valves
Fluoropolymer chemical delivery fittings, valves & pumps
High purity gas delivery fittings, valves, regulators & digital flow controllers
Industrial mass flow meters/ controllers
Permanent no-weld tube fittings
Precision industrial regulators & flow controllers
Process control double block & bleeds
Process control fittings, valves, regulators & manifold valves

Sealing & Shielding

Key Markets

Aerospace
Chemical processing
Consumer
Fluid power
General industrial
Information technology
Life sciences
Microelectronics
Military
Oil & gas
Power generation
Renewable energy
Telecommunications
Transportation

Key Products

Dynamic seals
Elastomeric o-rings
Electro-medical instrument design & assembly
EMI shielding
Extruded & precision-cut, fabricated elastomeric seals
High temperature metal seals
Homogeneous & inserted elastomeric shapes
Medical device fabrication & assembly
Metal & plastic retained composite seals
Shielded optical windows
Silicone tubing & extrusions
Thermal management
Vibration dampening