

Servonet DC

Decentralized double-axis servo drive

Parker核心代理商



北京润诚时代科技有限公司

自动化事业部

地址：北京市朝阳区汤立路218号C座968室

邮编：100012

电话：010-84450370

传真：010-84450371

网址：www.runcheng.net



ENGINEERING YOUR SUCCESS.



WARNING – USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.
- To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

Overview	5
Servonet DC	6
Technical Characteristics	8
Electrical Characteristics	8
Environmental Characteristics	9
Standards & Conformance	9
Dimensions	10
Hybrid Integrated Motion Solutions	11
PAC Parker Automation Controller	12
SMH-MH Brushless Servo Motors	12
Parker Servo Drive	12
Motornet DC	12
Order Code	13
Servonet DC	13
PSUP - Mains Module	13
PSI - Power Supply Interface	13
Capacitor Module	14
Mains Filter for PSUP	14
Braking Resistors	14
Servonet DC/Motornet DC Hybrid Cables	15
Power Motor Cables Accessories	15
Power Motor Cables	16
Feedback Motor Cables	17

Parker Hannifin

The global leader in motion and control technologies

Global Product Design

Parker Hannifin has more than 40 years experience in the design and manufacturing of drives, controls, motors and mechanical products. With dedicated global product development teams, Parker draws on industry-leading technological leadership and experience from engineering teams in Europe, North America and Asia.

Local Application Expertise

Parker has local engineering resources committed to adapting and applying our current products and technologies to best fit our customers' needs.

Manufacturing to Meet Our Customers' Needs

Parker is committed to meeting the increasing service demands that our customers require to succeed in the global industrial market. Parker's manufacturing teams seek continuous improvement through the implementation of lean manufacturing methods throughout the process. We measure ourselves on meeting our customers' expectations of quality and delivery, not just our own. In order to meet these expectations, Parker operates and continues to invest in our manufacturing facilities in Europe, North America and Asia.

Electromechanical Worldwide Manufacturing Locations

Europe

Littlehampton, United Kingdom
Dijon, France
Offenburg, Germany
Filderstadt, Germany
Milan, Italy

Asia

Wuxi, China
Jangan, Korea
Chennai, India

North America

Rohnert Park, California
Irwin, Pennsylvania
Charlotte, North Carolina
New Ulm, Minnesota



Offenburg, Germany

Local Manufacturing and Support in Europe

Parker provides sales assistance and local technical support through a network of dedicated sales teams and authorized technical distributors throughout Europe.

For contact information, please refer to the Sales Offices on the back cover of this document or visit www.parker.com



Milan, Italy



Littlehampton, UK



Filderstadt, Germany



Dijon, France

Decentralised Double-Axis Servo Drive with Robust IP67 Housing - Servonet DC

Overview

Description

Servonet DC is a double-axis servo drive built in a robust IP67 housing, allowing the drive to be used in rough environments outside the cabinet and close to the motor. The system is completed by a wide range of rotary and linear servo motors, a power supply and an interface module, which is the only system component which remains in the cabinet. The wiring of the system is fast and easy thanks to the hybrid cable, transferring power and communication.

Ideally suited to multi-axis applications with a number of drives mounted in close proximity on the machine, Servonet DC allows a decentralised motion control approach. Motion control functionality is executed by means of EtherCAT communication or optionally CANopen DS402 communication, allowing substantial savings in time and materials, while reducing machine footprints.

Typical applications for Servonet DC include packaging machines and rotary tables where numerous drives and motors are mounted on the machine.

Application

- Food, pharmaceuticals & beverage
- Packaging machines
- Material forming
- Material handling
- Factory automation
- Robotics

Features

- Multi-axis servo system
- Double axis servo drive module (5A/5A, 10A/5A or 10A/10A)
- Power range from 2.7 kW to 10.8 kW
- Protection class IP67
- Fieldbus: EtherCAT (option CANopen)
- Feedback: DSL®, resolver



Technical Characteristics - Overview

Model	Current		DC Voltage	
	Continuous [A]	Peak [A]	Min [VDC]	Max [VDC]
SDC20505NxxxxK000	5 + 5	10 + 10	300	680
SDC21005NxxxxK000	10 + 5	20 + 10		
SDC21010NxxxxK000	10 + 10	20+20		

Servonet DC

Overview

Machine design becomes very easy because of the modular nature of Servonet DC, additional axes can be added with minimal effort, simply by duplicating schematic drawings from other axes. This not only reduces engineering time and costs, but simplifies build and significantly improves time to market.

Servonet DC works on a common DC bus power supply that allows the system to absorb and re-supply much of the braking energy to other Servonet DC units rather than dissipating it in the form of heat via external resistors. In some instances, resistors can be removed completely and in others smaller resistors are sufficient.

Servonet DC solutions are usable together with motor integrated drives of the Motornet DC family, as the cabling concept and communication is identical.

Machines equipped with Servonet DC have a minimal machine footprint: power supply and interface module being the only additional components required in the cabinet. The electronics footprint is up to 70 % smaller than traditional centralised solutions. Additionally, all wiring changes are made on the machine via plug and socket connections rather than in the electrical cabinet.

EtherCAT[®]



High speed communication

- Communication over Ethernet via TCP/IP.
- Onboard EtherCAT connection
- 100 Mbit/s, 500 µs cycle time



Optional motor feedback

- Resolver, Hiperface, Hall



Quick and simple wiring

- Reduction in wiring costs
- Increased reliability
- SpeedTec



DSL feedback interface

- Single cable feedback interface as standard
- Electronic motor nameplate



HIPERFACE[®]
DSL

Inputs / outputs

- Servonet DC offers 1 digital input and 1 digital selectable input/output
- Connection via fast and simple push-in direct plug-in technology.



Configuration Software - MotionWiz -

MotionWiz is free of charge downloadable configuration software that allows users to configure and optimise the Servonet DC series with a few easy clicks of the mouse.

MotionWiz features an intuitive, easy and simple to use Windows® style environment to aid installation, optimisation and diagnostic use.

MotionWiz permits operation in both “on line” mode, directly in the controller, and in “offline” mode, remotely on the PC before downloading to the controller.

MotionWiz allows users to copy the configuration from one application to another to simplify the configuration of systems with a large number of similar axes but with different motion profiles.

Inside the MotionWiz configurator is a database containing the technical characteristics of the full range of Parker motors and drives.

MotionWiz can be downloaded from www.parker.com/eme

EtherCAT monitor

- EtherCAT alias address or CAN address
- 2 communication's status led

DC bus energy saving

- Energy exchange between drives
- No accessories required

Technical Characteristics

Electrical Characteristics

Servonet DC

Servonet DC Model	Unit	SDC20505	SDC21005	SDC21010
Continuous Current	[A]	5 + 5	10 + 5	10 + 10
Peak Current	[A]	10 + 10	20 + 10	20 + 20
DC Voltage Min	[VDC]	300		
DC Voltage Max	[V]	680		

PSUP - Power Supply Unit

Mains Supply

Power Supply Type	Unit	PSUP10			PSUP20			PSUP30 ⁽²⁾		
Input Voltage		3*230...480 VAC ±10 % 50...60 Hz (Rated voltage 3*400 VAC)								
Output Voltage		325...680 VDC ±10 %								
Supplied Voltage	[VAC]	230	400	480	230	400	480	230	400	480
Output Power	[kVA]	6	10	10	12	20	20	18	30	30
Output Peak Power (<5 s)	[kVA]	12	20	20	24	40	40	34	60	60

Control Supply

Rated Input Voltage		24 VDC ±10 %								
Maximum Ripple		1 V _{pkpk}								
Supply Current	[A]	PSUP10D6: 0,2 A			PSUP20D6: 0,3 A			PSUP30D6: 0,3 A		

⁽²⁾ Operation of the PSUP30 only with line choke.

PSI - Power Supply Fieldbus Interface for Servonet DC

Power Supply Interface	Unit	PSI5	PSI10	PSI20
Supply Voltage				
DC Voltage Range	[V]	300...750 VDC		
Regenerative Braking				
Capacity	[µF]	470	940	940
Storable Energy	[WS]	75@400 VAC 42@480 VAC	150@400 VAC 84@480 VAC	150@400 VAC 84@480 VAC

PSC - Capacitor Module

Capacitor Module	Unit	PSC023	PSC047	PSC068
Capacity	[µF]	2300	4700	6800

Environmental Characteristics

Servonet DC, PSUP - Power Supply Unit and PSI - Power Supply Interface

Temperature			
	<ul style="list-style-type: none"> Operating Temperature: 0...+40 °C Storage Temperature: -25...+55 °C Shipping Temperature: -25...+70 °C 		
Product Enclosure Rating			
	Servonet DC	PSUP	PSI
	IP65 / IP67	IP20 (only in closed electrical cabinet) UL open type equipment	
Altitude			
	1000 m ASL. Derate output current by 1.5 % per 100 m to a maximum of 2000 m		
Humidity			
	<ul style="list-style-type: none"> Operating Humidity: Class 3K3 - Maximum 85 % non-condensing Storage Humidity: Class 1K3 - Maximum 95 % non-condensing Shipping Humidity: Class 2K3 - Maximum 95 % at 40 °C 		
Operating Vibration			
	Servonet DC	PSUP	PSI
		IEC60068-2-6 10...57 Hz width 0.075 mm 57...150 Hz accel. 9.81 m/s ²	

Standards & Conformance

Servonet DC

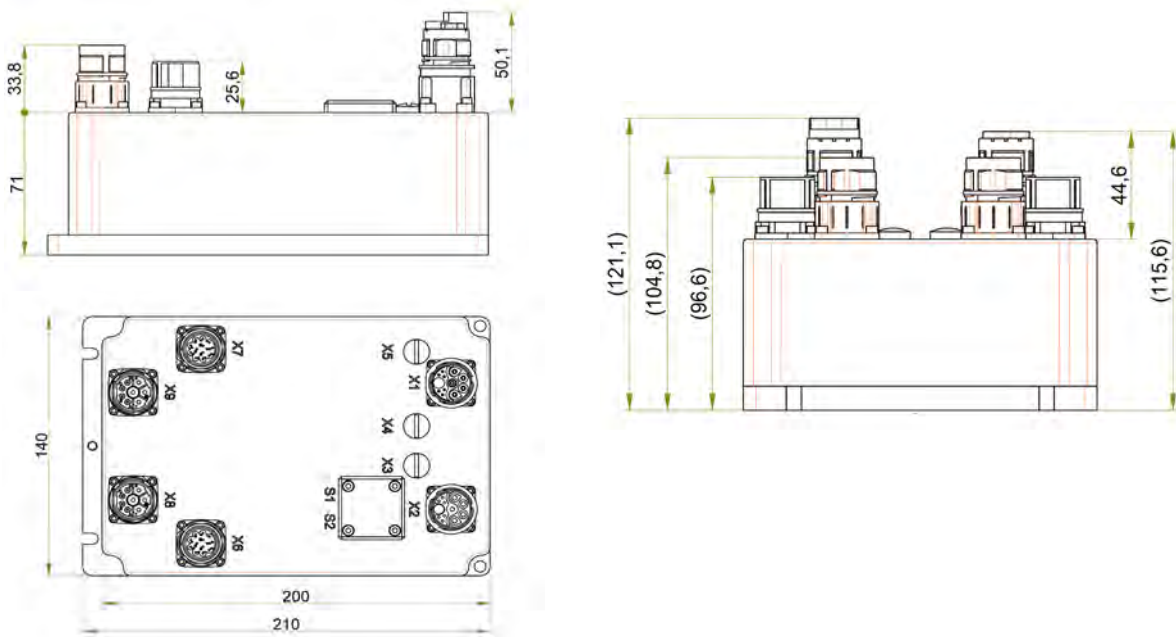
2014/35/EU	Low Voltage Directive
EN61800-5-1	Adjustable speed electrical power drive systems - Part 5-1: Safety requirements - Electrical, thermal and energy
UL61800-5-1	Adjustable speed electrical power drive systems - Part 5-1: Safety requirements - Electrical, thermal and energy (under preparation)
CSA22.2 No. 274-13	(Canada) Power Conversion Equipment (under preparation)
2014/30/EU	EMC Directive
EN61800-3	Adjustable speed electrical power drive systems - Part 3: EMC product standard including specific test method

PSUP - Power Supply Unit and PSI - Power Supply Interface for Servonet DC

2006/95/EC	Low voltage directive
2004/108/CE	EMC Directive
EN 61800-3	Adjustable speed electrical power drive systems - Part 3: EMC product standard including specific test method
EN 61800-5-1	Adjustable speed electrical power drive systems - Part 5-1: Safety requirements - Electrical, thermal and energy
UL508C	(USA) Power Conversion Equipment
CSA22.2 No. 274-13	(Canada) Power Conversion Equipment

Dimensions

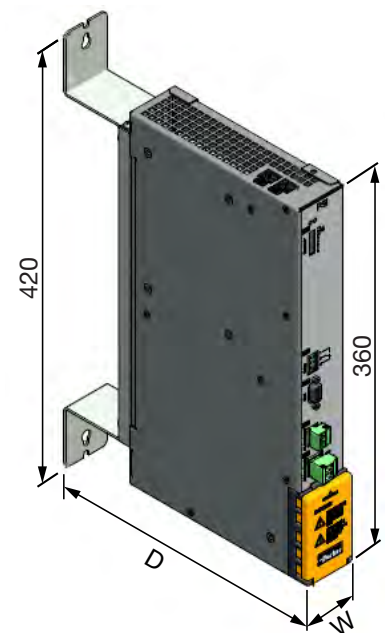
Servonet DC



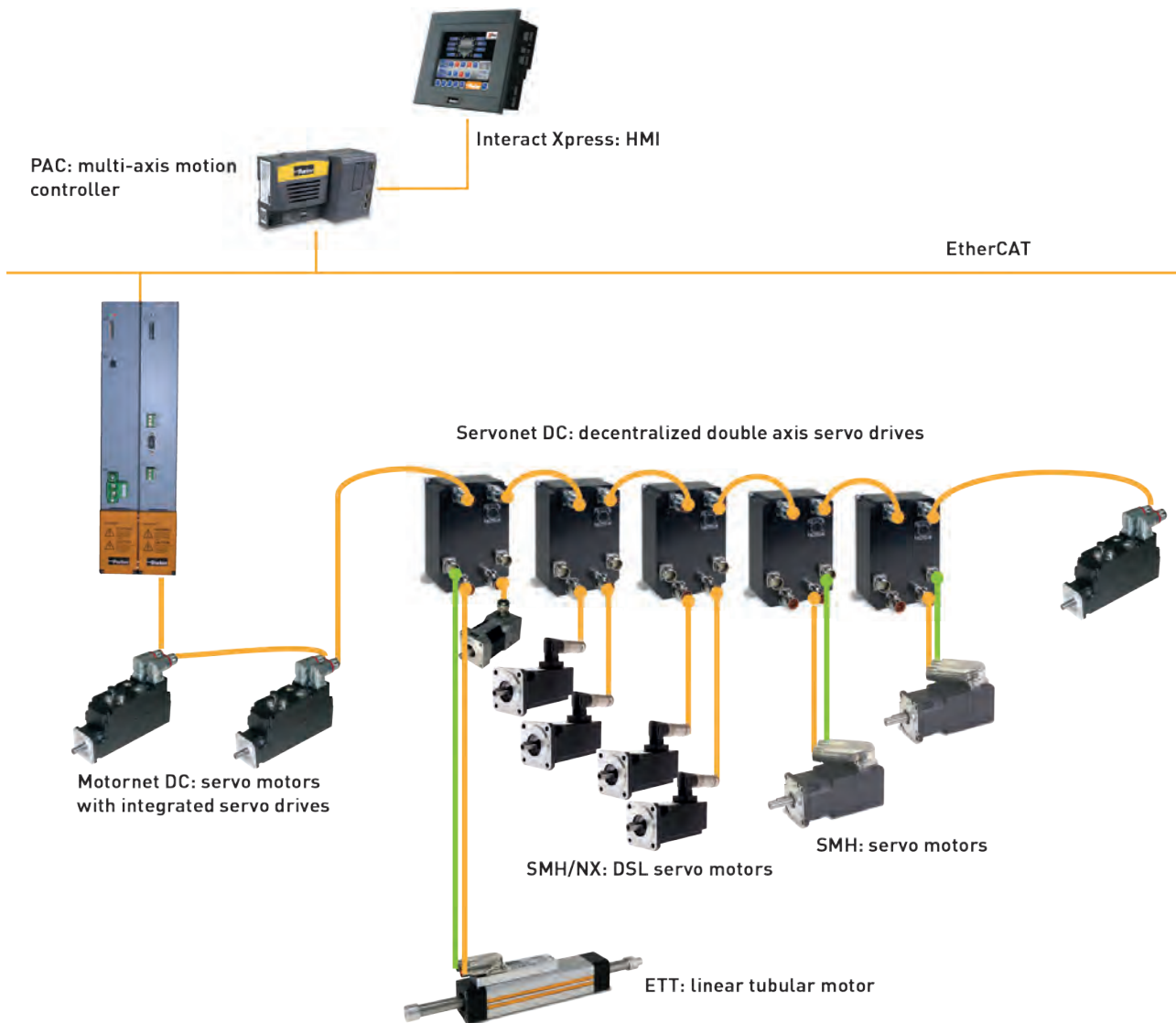
Type	H [mm]	W [mm]	D [mm]	Weight [kg]
SDC20505	71	210	140	2.3
SDC21005				
SDC21010				

PSU - Power Supply Unit and PSI - Power Supply Interface for Servonet DC

Type	W [mm]	D [mm]	Weight [kg]
PSUP10, PSI5/PSI10/PSI20	50	270	3.6
PSUP20/PSUP30	100	270	5.4



Hybrid Integrated Motion Solutions



In this example Servonet DC is shown in a system which also uses the Motornet DC servo motors with integrated servo drives, SMB/H single cable DSL servo motors series, InteractXpress series HMI, PAC multi-axis controller with I/O to form a complete integrated hybrid motion solution. This type of architecture can be used for the complete control of packaging or process lines.

PAC Parker Automation Controller Centralised motion control for precise multi-axis synchronisation

Designed for OEMs to maximize efficiencies while exceeding performance expectations, the EtherCAT based Parker Automation Controller (PAC) combines machine logic, signal handling, and high-speed motion control into a standards based, performance driven, fan-less and din rail mountable solution.

This programmable automation controller comes equipped with a native, uninterrupted EtherCAT bus for high-speed I/O and motion control, a modular interface slot for 3rd Party device communication, standard Ethernet and USB ports, and onboard SD program storage. Programmed with the Parker Automation Manager software, OEMs can produce efficient, high-performance control systems based on the IEC61131-3 and PLCopen Motion standards.



SMH-MH Low inertia brushless servo motors

The MH and SMH series of highly-dynamic brushless servo motors utilise "salient pole" technology to produce an extremely compact design. Motor dimensions are drastically reduced and significant gains in terms of torque and dynamic performance are achieved. The high quality Neodymium-Iron-Boron magnets and the encapsulation method used to fasten them to the shaft, allow the two series to achieve very high acceleration and withstand high overloads without risk of demagnetisation or detachment of the magnets. The MH and SMH series are available in sizes from 0.2 to 285 Nm.



Parker Servo Drive PSD1 Flexible and compact multi-axis servo drive

The PSD1 is Parker Servo Drive series, available with different power rating and in a variety of form factors. Today the offering contains:

The PSD1 S standalone version which can be connected directly to the main supply. The PSD1 M, a multi-axis system where each power module can supply up to three servo motors. The base configuration consists of a common DC bus supply and multiples PSD1 M modules, connected through DC bus bars. The modules are available in one, two and three-axis versions, making the system very flexible.

PSD-M servo drive is particularly suitable for all centralised automation systems, such as those found in many packaging machines, where large numbers of drives are often required.



Motornet DC Decentralized motion control solution to reduce wiring and complexity

Motornet DC is a brushless servo motor system with integrated servo drive, supplied from a DC-bus voltage. Hybrid power, control and communications cables, a power supply and interface module complete the system and local I/O's can be connected directly to the motor.

Ideally suited to multi-axis applications where a number of motors are mounted in close proximity on the machine, Motornet DC allows a decentralized approach to motion control to be taken.



Order Code

Servonet DC

	1	2	3	4	5	6	7	8
Example	SDC	2	1005	N	1	H	00	K000

1	Product type	
	SDC	Servonet DC servo drive
2	Number of axis	
	2	2 Axis available
3	Size [A]	
	0505	Axis one 5 A, axis two 5 A
	1005	Axis one 10 A, axis two 5 A
	1010	Axis one 10 A, axis two 10 A
4	Feedback type	
	N	Fixed field (Hiperface DSL & resolver)
5	Fieldbus	
	1	EtherCAT
	2	CANopen
6	Safety	
	H	In development
7	Option	
	00	No option
8	Customizing	
	K000	No Custom Version

PSUP - Mains Module

	1	2	3	4	5	
Example	PSU	P	10	D6	USB	M00

1	Device family	
	PSU	Power module
2	Device type	
	P	Power module
3	Nominal power; supply voltage	
	10 D6	10 kW; 400 VAC (3-phase)
	20 D6	20 kW; 400 VAC (3-phase)
	30 D6	30 kW; 400 VAC (3-phase) ¹⁾
4	Interface	
	USB	USB connection
5	Options	
	M00	No additional supplement

¹⁾ Operation of the PSUP30 only with line choke. Required line choke for the PSUP30: 0.45 mH / 55 A

PSI - Power Supply Interface

	1	2	3
Example	PSI	10	P

1	Device type	
	PSI	Power supply interface for Servonet DC
2	Power	
	5	5 kW rating
	10	10 kW rating
	20	20 kW rating

Capacitor Module

	1	2
Order example	PSC	023 M00

1 Accessories		
PSC	Capacitor module	
2 Type		
023 M00	2300 µF no additional supplement	
047 M00	4700 µF no additional supplement	
068 M00	6800 µF no additional supplement	

Mains filter for PSUP

	1	2
Order example	NFI	03/01

1 Accessories		
NFI	Mains filter	
2 Type		
03/01	For PSUP10 Reference axis combination 3 x 480 V 25 A 6 x 10 m motor cable length	
03/02	For PSUP10 Reference axis combination 3 x 480 V 25 A 6 x 50 m motor cable length	
03/03	For PSUP20, PSUP30 Reference axis combination 3 x 480 V 50 A 6 x 50 m motor cable length	

Braking Resistors

	1	2
Order example	BRM	05/01

1 Accessories		
BRM	Braking resistor	
2 Type		
13/01	30 Ω / 0.5 kW _{cont.} for PSUP10D6, for PSUP20D6 (2x30Ω parallel)	
14/01	15 Ω / 0.5 kW _{cont.} for PSUP10D6 (2 x 15 Ω in series) for PSUP20, PSUP30	
12/01	18 Ω / 4.5 kW _{cont.} for PSUP30	

Servonet DC/Motornet DC Hybrid Cables

	1	2	3	4
Order example	HYBCA	0030	PSI	4

1	Cable type	
	HYBCA	Hybrid cable for Servonet DC/Motornet DC
2	Length (x10 mm)	
	0030	300 mm
	0100	1000 mm (1 m)
	1000	10 m
	Note: maximum cable length is 15 m	
3	Connector Type	
	PSI	Wired cable for PSI to Servonet DC with PSI connector and female mating Servonet DC connector
	MDC	Wired cable for Servonet DC to Servonet DC with male and female mating Servonet DC connectors
4	Cable Size	
	Empty field	2.5 mm ² cable size
	4	4.0 mm ² cable size

Cables options

HYBCA1	Servonet DC hybrid cable only (no connectors) - 1 m length / 2.5 mm ²
HYBCA4	Servonet DC hybrid cable only (no connectors) - 1 m length / 4 mm ²
CONMDCMV	Servonet DC hybrid connector (male)
CONMDCFV	Servonet DC hybrid connector (female)
TAPMDCETH	Terminal cup for Servonet DC/Motornet DC
TAPMDCETHS	Terminal cup for Servonet DC/Motornet DC EtherCAT
TAPMDCCANS	Terminal cup for Servonet DC/Motornet DC CANbus

Power Motor Cables Accessories

HYBCA-U	Hybrid cable 200 mm for connecting 2 Servonet DC drives
CBACAP00-M23-SDX-0000-00	Cover for M23 interconnectron receptable (plastic black)
CBACAM-M23-SDX-0000-00	Cover for M23 Phoenix receptable (metal)

Power Motor Cables

	1	2	3	4	5	6	7	8
Example	CBM	007	H	D	M23	SDX	0050	00

1	Cable type	CBM Motor motor cable
2	Cable Section	007 Section 0.75 mm ² 010 Section 1 mm ² 015 Section 1.5 mm ² 025 Section 2.5 mm ²
3	Cable Type	S Standard motor cable H High flex motor cable
4	Brake	0 Power cable without brake B Power cable with brake D Power DSL cable with brake
5	Motor Connection Type	M15 Interconnectron connector M23 Interconnectron connector motor type: Mx 70,105,145 SMx 60,82,100,115,142 TBX Terminal box solution
6	Drive Connection Type	SDX Servonet DC
7	Cable Length	0030 3 m 0050 5 m 0070 7 m 0100 10 m
8	Fixed Field	00 Fixed field

Feedback Motor Cables

	1	2	3	4	5	6	7	8
Example	CBF	RE0	H	0	M23	SDX	0050	00

1	Cable type	
	CBF	Feedback motor cable
2	Feedback Type	
	RE0	Resolver
	HFO	Hiperface
	INO	Incremental
	HLO	Hall
3	Cable Type	
	H	High flex feedback cable
4	Brake	
	0	Fixed field
5	Motor Connection Type	
	M15	Interconnectron connector
	M23	Interconnectron connector motor type: Mx 70,105,145 SMx 60,82,100,115,142
	TBX	Terminal box solution
6	Drive Connection Type	
	SDX	Servonet DC
7	Cable Length	
	0030	3 m
	0050	5 m
	0070	7 m
	0100	10 m
8	Fixed Field	
	00	Fixed field



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
- CO₂ 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
- Electrohydraulic 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



北京润诚时代科技有限公司

自动化事业部

地址：北京市朝阳区汤立路218号C座968室

邮编：100012

电话：010-84450370

传真：010-84450371

网址：www.runcheng.net

