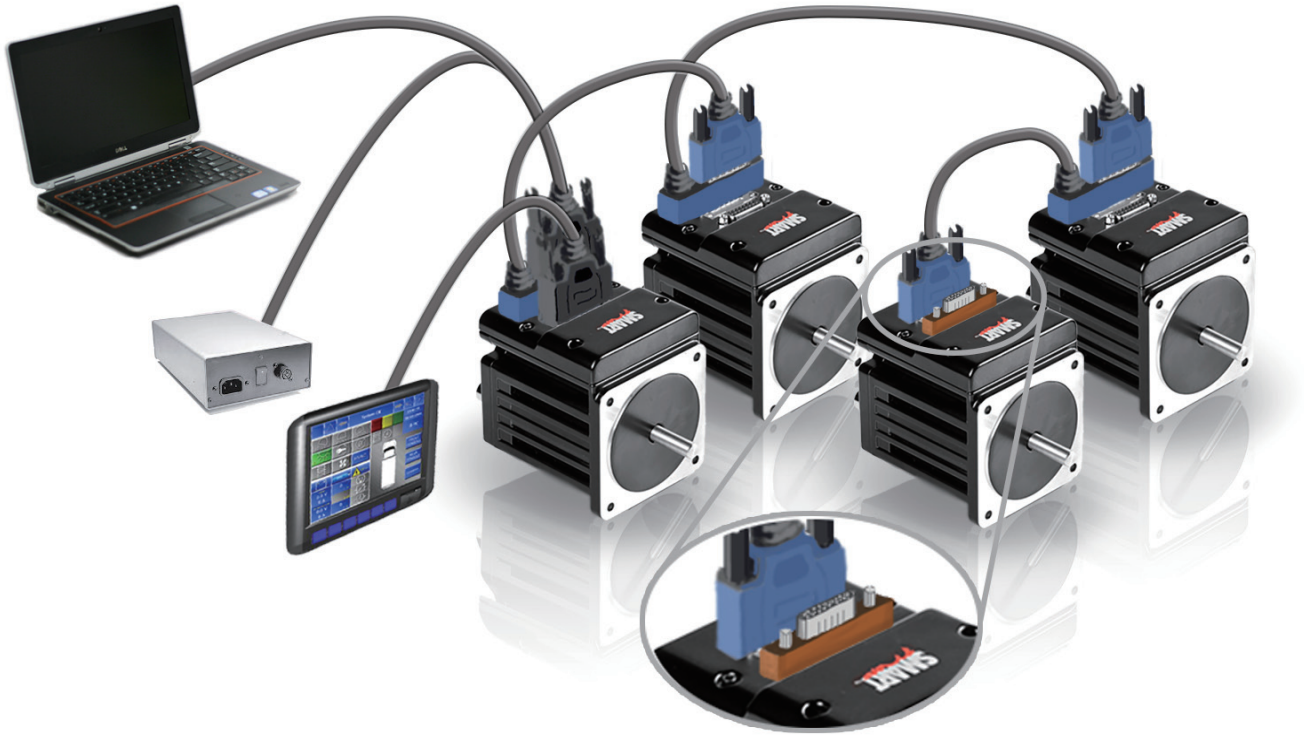
SmartMotor™

System integrated servo motor

NewCDS7

Only one wire required



Main features of SmartMotor™ CDS7

- Only one cable containing power, CAN, and RS232C between smart motors
- Combitronic communication using CAN available
- Simple and compact equipment design possible

CDS7 D-sub 7 & 15 pin connector input/output function

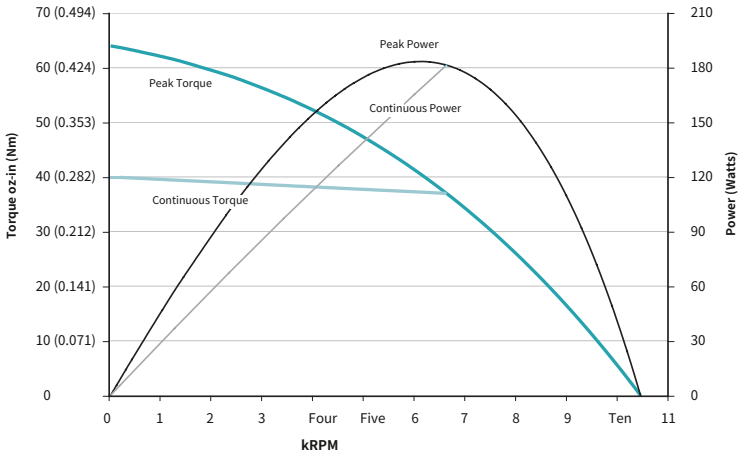
7-pin combo D-sub power & I/O connector		
pin number	name	function
1	CAN-L	CAN-Low
2	CAN-H	CAN-High
3	RS232 Tx	RS232 output, Com ch 0
Four	RS232 Rx	RS232 input, Com cn 0
Five	GND	signal ground
A1	DRIVE POWER	Drive power supply (20-48Vdc)
A2	POWER GND	power ground

15-pin D-sub I/O connector					
pin number	name	Function 1 Default configuration	Function 2 -	Function 3 Digital I/O	Function 4 analog input (10 bit resolution)
1	I/OA	External encoder A phase input	Pulse train input	5V TTL *1	0~5V
2	I/OB	External encoder B phase input	direction input	5V TTL *1	0~5V
3	I/OC	Positive limit input	External brake control output	5V TTL *1	0~5V
Four	I/OD	Negative limit input	-	5V TTL *1	0~5V
Five	I/OE	RS485 A (+), Com ch 1	-	5V TTL *1	0~5V
6	I/OF	RS485 B (+), Com ch 1	-	5V TTL *1	0~5V
7	I/OG	G (start) input	External brake control output or RS485ISO adapter flow Control	5V TTL *1	0~5V
8	ENC A Out	Internal encoder A phase output			
9	ENC B Out	Internal encoder B phase output			
Ten	CAN-L	CAN-Low			
11	CAN-H	CAN-High			
12	5Vdc Out	5Vdc output			
13	GND	signal ground			
14	POWER GND	power ground	For DE option, Pin15 is used as control power input (20V-48V) and Pin14 is used as ground.		
15	POWER	Input Power			

*1. If 24VDC I/O signals are required, an isolated voltage conversion device is available.
*2. 10 points of 24VDC I/O can be added.

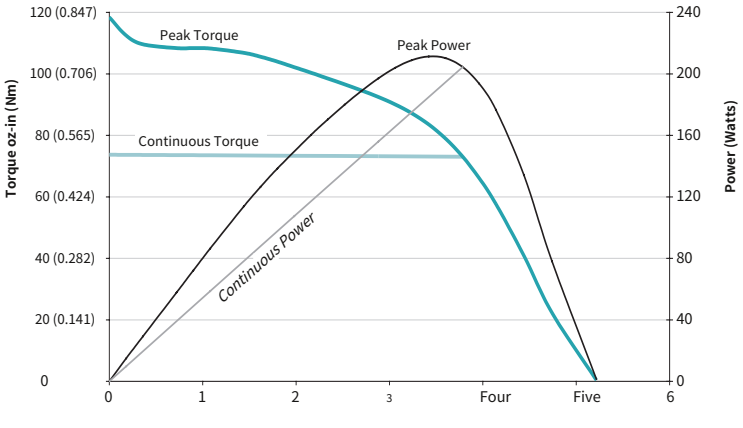
SM23165D-CDS7	
Continuous torque @48V	0.28 Nm
peak torque	0.45 Nm
Maximum continuous output @6500 RPM	181 Watts
Maximum speed without load	10,400 RPM
Continuous maximum current* @ 6500 RPM	3.545 Amps
Peak current @ 6000 RPM	4.43 Amps
constant voltage	4.45V/kRPM
inductance	0.829 mH
Encoder resolution	4,000 Counts/Rev
rotor inertia	0.6991 10-Fivekg-m2
mass	0.45kg
Shaft diameter	6.35 mm
Radial load (axis)	3.18kg
Axial load (axis)	1.36 kg
DeviceNet options	Yes
ProfiBus options	Yes
CANopen options	Yes

SM23165D-CDS7 Torque - Rotational speed characteristics



SM23165DT-CDS7	
Continuous torque @48V	0.52 Nm
peak torque	0.84 Nm
Maximum continuous output @3800RPM	204 Watts
Maximum speed without load	5,200 RPM
Continuous maximum current* @ 3800RPM	5.074 Amps
Peak current @ 3500 RPM	5.73 Amps
constant voltage	9.08V/kRPM
Encoder resolution	4,000 Counts/Rev
rotor inertia	0.706 10-Fivekg-m2
mass	0.59 kg
Shaft diameter	6.35 mm
Radial load (axis)	3.18kg
Axial load (axis)	1.36 kg
DeviceNet options	Yes
ProfiBus options	Yes
CANopen options	Yes

SM23165DT-CDS7 Torque - Rotational speed characteristics



maximum temperature: +85° C(basis), +130° C(Winding)
Recommended ambient temperature range: 0° C～+50° C
Storage temperature range: -10°C～+85° C
humidity:maximum90%(No condensation)

note : **The above torque curve is a measured value using a 48VDC power supply and an ambient temperature of 25°C.**

Please note that the characteristics may change depending on the power supply voltage and ambient temperature used. For more information about smart motors, please visit our website www.moog.co.jp If you would like a detailed catalog, please contact our authorized distributor. Product specifications and dimensions are subject to change without notice. 2023-9

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