

SMC130D-0150 Servo Motor

FEATURES

- 24-70VDC or 220VAC
- 1500W Power Rating
- Rated Torque of 5 Nm
- Maximum Speed of 4000 RPM
- Rated Speed of 3000 RPM
- 2500 PPR Incremental Encoder
- IP65 for Body, IP54 Shaft Seal
- Insulation Class F
- Brake Option Available
- CE Certified

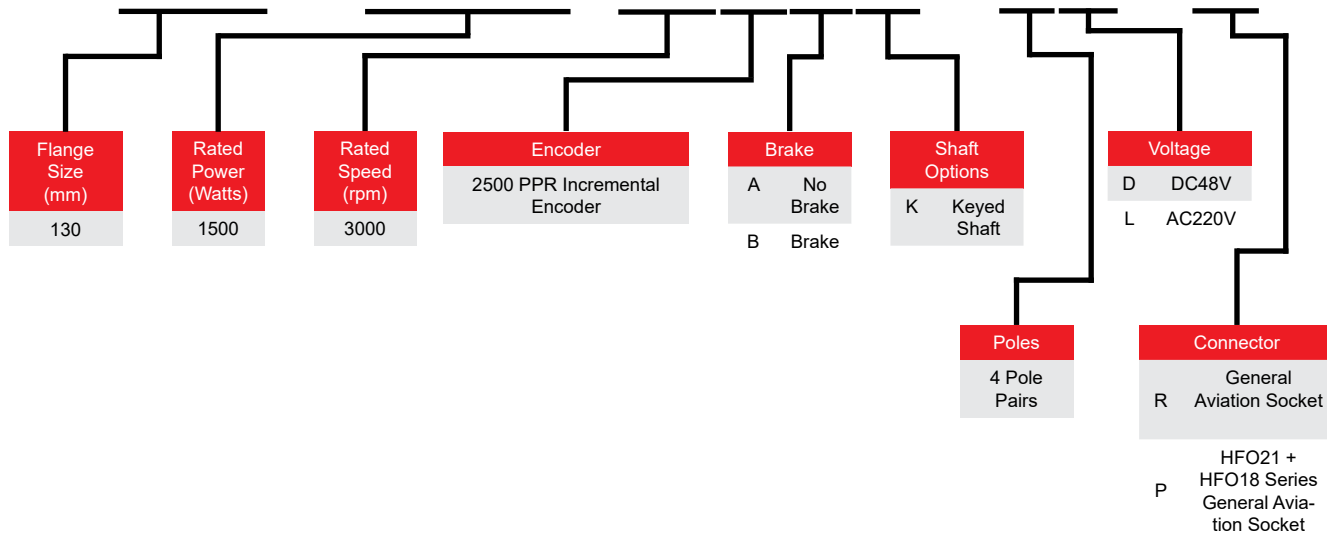


DESCRIPTION

The SMC130D-0150 Series Servo Motor offers a low-cost solution for motion control applications requiring position and speed control. With the 2500 PPR Incremental Encoder it allows for better cushioning ability and higher cost-performance ratio. These Servo Motors have Insulation Class F which is the best Insulation Class on the market. They are very quiet with high reliability and stability in high temperature environments. These Servo Motors boast peak torque values up to 12.5 Nm, provide excellent dynamic response, allow for 3 times the overload capacity, and has a rated torque of 5 Nm. It is available in a 130mm square flange size, with a brake option.

ORDERING INFORMATION

SMC130D-0150-30AAK - 4DKR

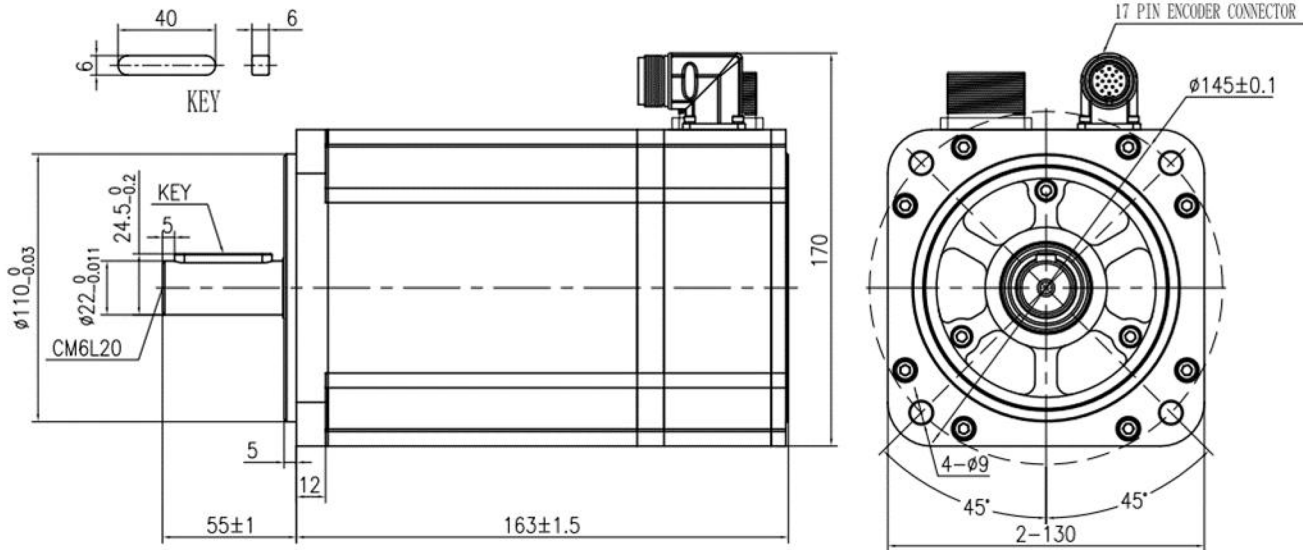


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Model	SMC130D-0150-30AAK-4DKR SMC130D-0150-30ABK-4DKR
Compatible Driver	FD144S-LB-000
DC Link Voltage (VDC)	48
Rated Power (W)	1500
Rated Torque (Nm)	5
Rated Speed (RPM)	3000
Max Speed (RPM)	4000
Rated Current (A)	37.4
Maximum Torque (Nm)	12.5
Maximum Current (A)	93.4
Rated Standstill Torque (Nm)	5.5
Rated Standstill Current (A)	39.2
Resistance Line-Line (Ω)	0.025
Inductance Line-Line (mH)	0.169
Electrical Time Constant (ms)	0.676
Mechanical Time Constant (ms)	3
Torque Constant Kt (Nm/A)	0.1406
Rotor Moment of Inertia Jm (Kg-cm ²)	12 12.1 (with brake)
Brake Holding Torque (Nm)	10.0
Pole Pair Number	4
Maximum Voltage Rising du/dt (KV/ μ s)	8
Insulation Class	F
Maximum Radial Force F (N)	900
Maximum Axial Force F (N)	450
Weight (Kg)	7.5 9.8 (with brake)
Length of Motor (mm)	163 \pm 1.5 224 \pm 1.5 (with brake)

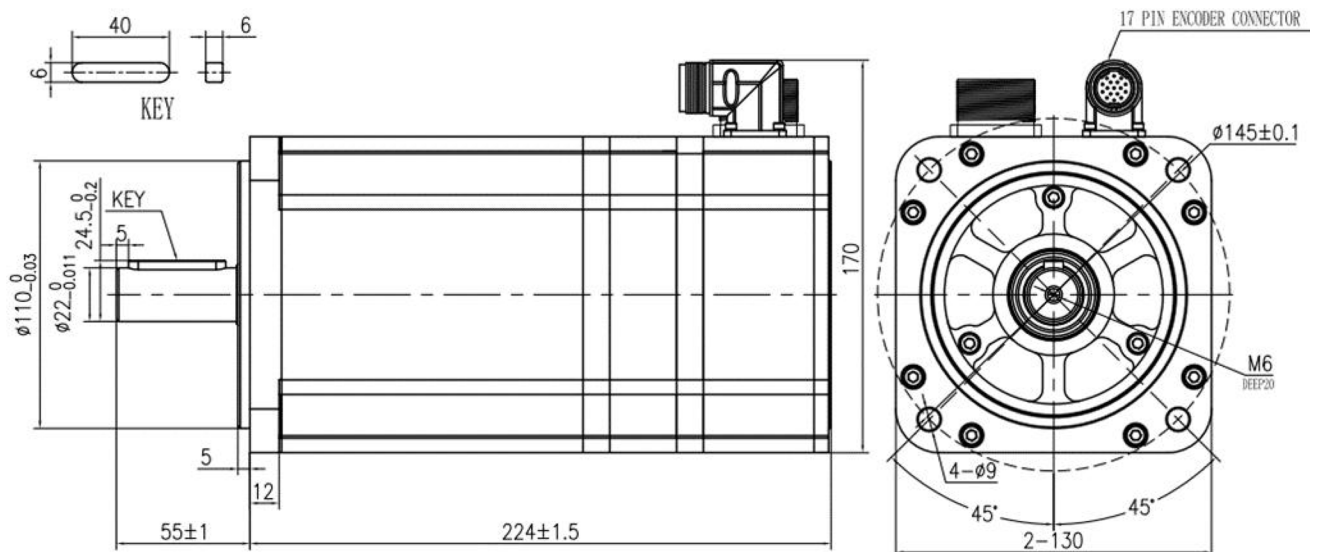
Model	SMC130D-0150-20AAK-4LKP SMC130D-0150-20ABK-4LKP
Compatible Driver	FD432S-CA-000 FD432S-AA-000 FD432S-LA-000
DC Link Voltage (VDC)	300
Rated Power (W)	1500
Rated Torque (Nm)	7.2
Rated Speed (RPM)	2000
Max Speed (RPM)	3000
Rated Current (A)	6.5
Maximum Torque (Nm)	18
Maximum Current (A)	16.2
Rated Standstill Torque (Nm)	7.92
Rated Standstill Current (A)	7.1
Resistance Line-Line (Ω)	1.53
Inductance Line-Line (mH)	13.3
Electrical Time Constant (ms)	8.69
Mechanical Time Constant (ms)	2.31
Torque Constant Kt (Nm/A)	1.17
Rotor Moment of Inertia Jm (Kg cm ²)	12 12.1 (with brake)
Brake Holding Torque (Nm)	10.0
Pole Pair Number	4
Maximum Voltage Rising du/dt (KV/ μ s)	8
Insulation Class	F
Maximum Radial Force F (N)	900
Maximum Axial Force F (N)	450
Weight (Kg)	7.5 9.8 (with brake)

SMC130D-0150-30AAK-4DKR

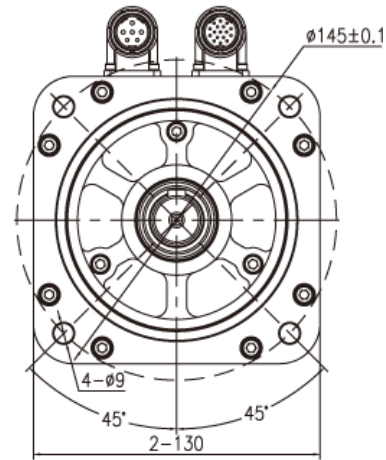
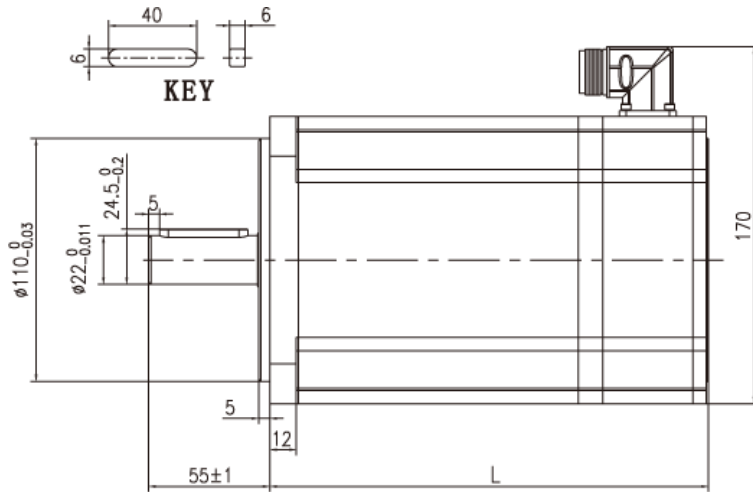


Dimensions are in mm

SMC130D-0150-30ABK-4DKR



SMC130D-0150-20AAK-4LKP and SMC130D-0150-20ABK-4LKP

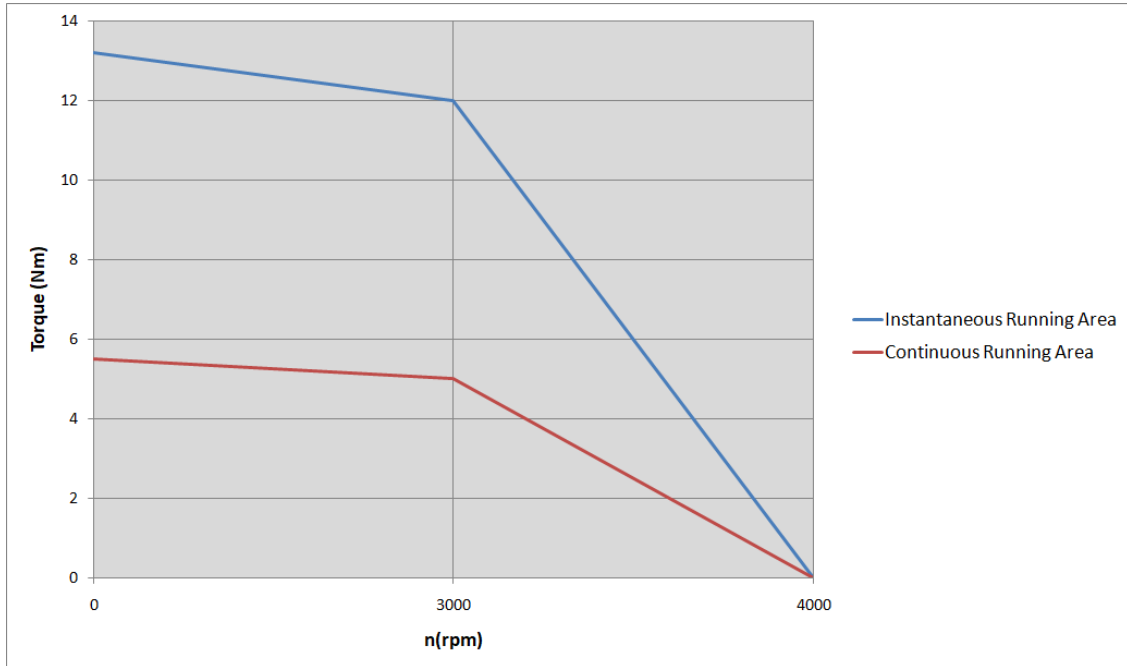


Model	SMC130D-0150-20AAK-4LKP SMC130D-0150-20ABK-4LKP
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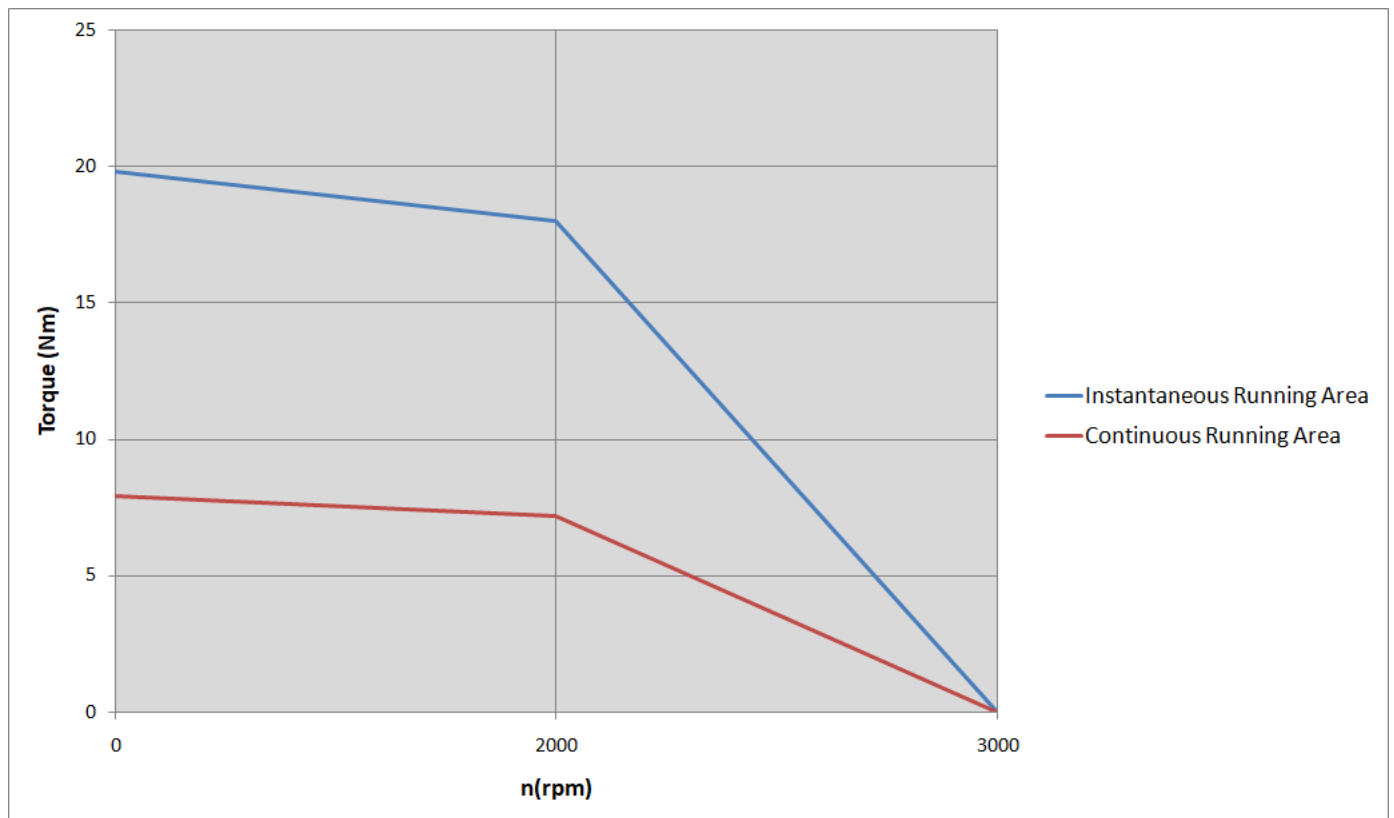
Length of Motor L (mm)	159 ± 1.5 220 ± 1.5 (with brake)
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Dimensions are in mm

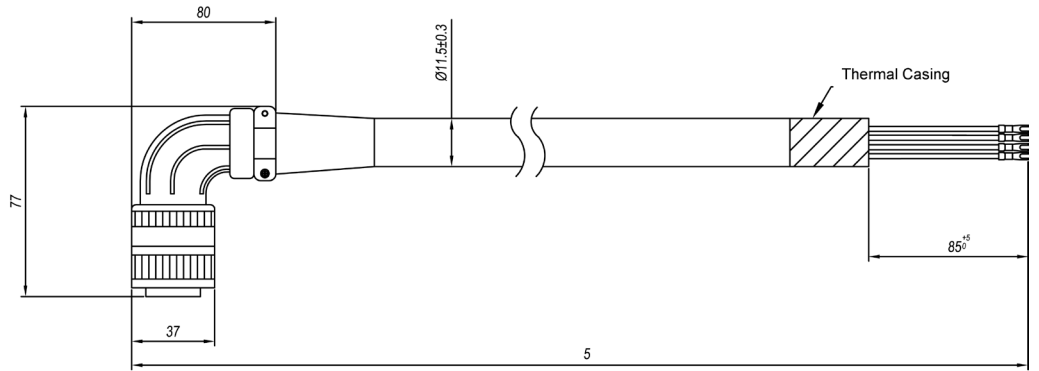
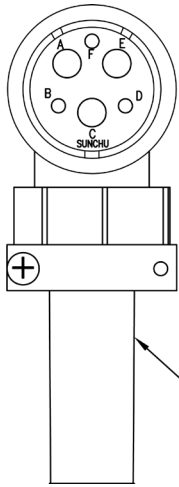
SMC130D-0150-30AAK-4DKR & SMC130D-0150-30ABK-4DKR



SMC130D-0150-20AAK-4LKP & SMC130D-0150-20ABK-4LKP

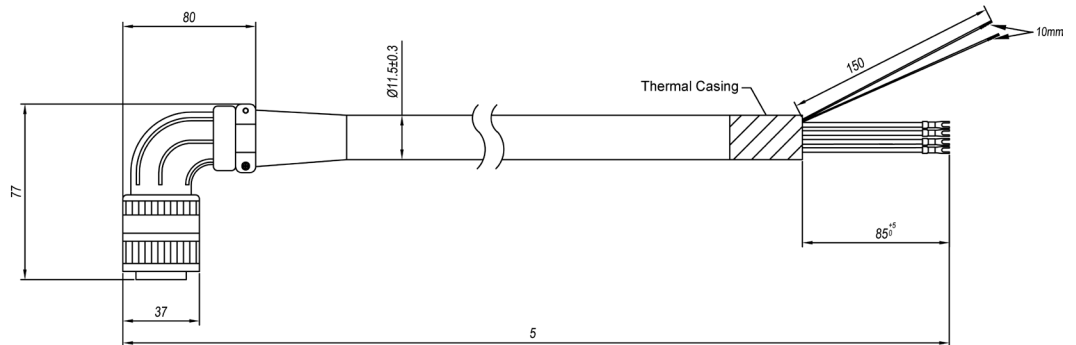
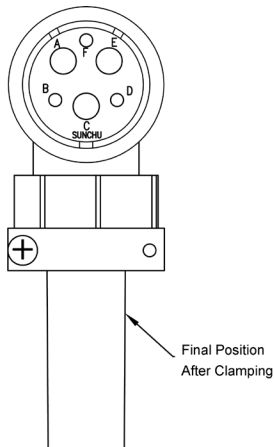


Motor Cable: MOT-040-05-KC5 for SMC130D-0150-30AAK-4DKR



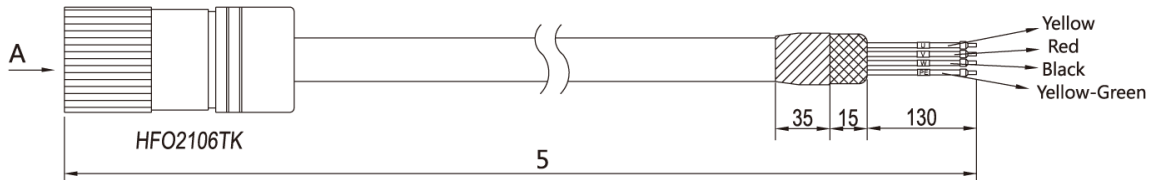
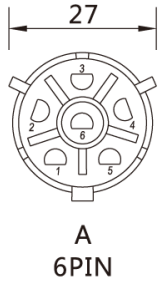
MOT-040-05-KC5		
Cable Color	Signal	PIN #
Yellow	U	PINA
Red	V	PINE
Green	W	PINC
Yellow-green	PE	PINF
Shield	Shield	Metal Ring

Motor Cable with Brake Cable: MOT-040-05-KC5-B for SMC130D-0150-30ABK-4DKR



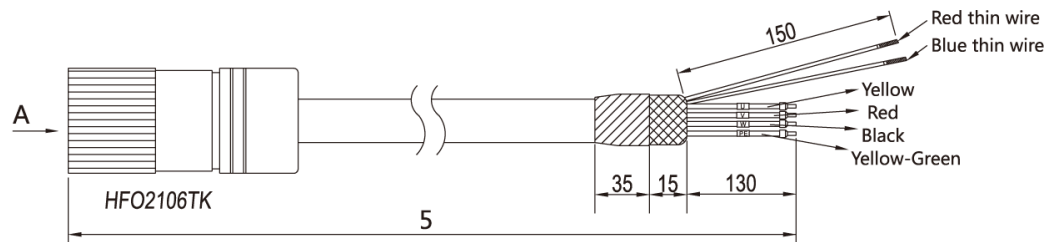
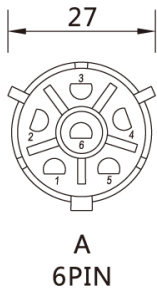
MOT-040-05-KC5-B		
Cable Color	Signal	Pin #
Yellow	U	PINA
Red	V	PINE
Green	W	PINC
Yellow/Green	PE	PINF
Red	Brake+	PINB
Blue	Brake-	PIND
Shield	Shield	Shield

Motor Cable: MOT-008-05-KC4 for SMC130D-0150-20AAK-4LKP



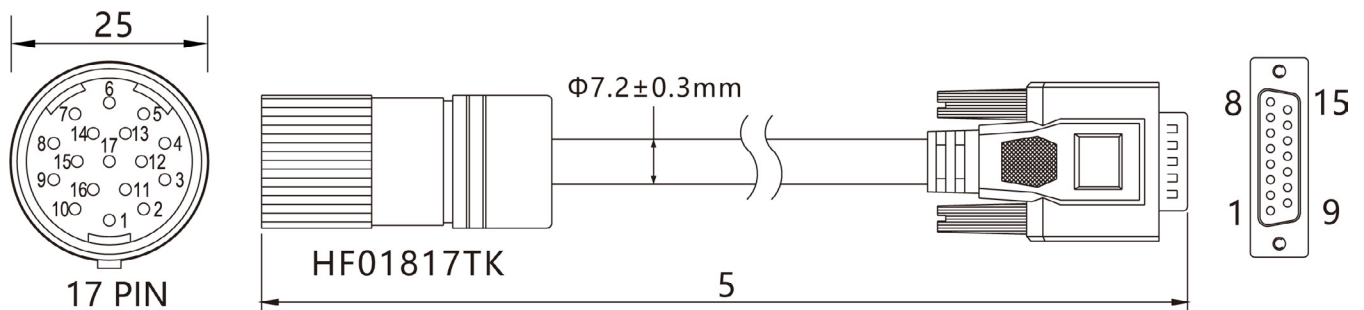
MOT-008-05-KC4		
Cable Color	Signal	PIN #
Yellow	U	PIN 2
Red	V	PIN 3
Black	W	PIN 4
Yellow-green	PE	PIN 6

Motor / Brake Cable: MOT-008-05-KC4-B for SMC130D-0150-20ABK-4LKP



MOT-008-05-KC4-B		
Cable Color	Signal	PIN #
Yellow	U	PIN 2
Red	V	PIN 3
Black	W	PIN 4
Yellow-green	PE	PIN 6
Red Thin Wire	Brake +	PIN 1
Blue Thin Wire	Brake -	PIN 5

Encoder Cable: ENCCA-05-KC0 for SMC130D-0150-30AAK-4DKR, SMC130D-0150-30ABK-4DKR, SMC130D-0150-20AAK-4LKP and SMC130D-0150-20ABK-4LKP



ENCCA-05-KC0				
17 PIN Connector	15 PIN DB	Signal	External Wire Color	Motor Wire Color
PIN 1	PIN 1	+5V	Red(thick)	Red
PIN 3	PIN 2	A	Orange	Blue
PIN 5	PIN 3	B	Yellow	Green
PIN 14	PIN 4	Z	Green	Yellow
PIN 9	PIN 5	U	Brown	Brown
PIN 11	PIN 6	V	Purple	Gray
PIN 16	PIN 7	W	Blue	White
PIN 2	PIN 9	GND	Black(thick)	Black
PIN 4	PIN 10	/A	Orange-White	Blue-Black
PIN 6	PIN 11	/B	Yellow-White	Green-Black
PIN 15	PIN 12	/Z	Green-White	Yellow-Black
PIN 10	PIN 13	/U	Brown-White	Brown-Black
PIN 12	PIN 14	/V	Purple-White	Gray-Black
PIN 17	PIN 15	/W	Blue-White	White-Black
Internal Metal Ring	DB Metal Shell	Shield	Shield	Shield

Model	Motor Cable	Encoder Cable	Brake Cable
SMC130D-0150-30AAK-4DKR	MOT-040-05-KC5	ENCCA-05-KC0	N/A
SMC130D-0150-30ABK-4DKR	MOT-040-05-KC5-B		In Motor Cable

Model	Motor Cable	Encoder Cable	Brake Cable
SMC130D-0150-20AAK-4LKP	MOT-008-05-KC4	ENCCA-05-KC0	-
SMC130D-0150-20ABK-4LKP			MOT-008-05-KC4-B

Model	SMC130D-0150-30AAK-4DKR SMC130D-0150-30ABK-4DKR	
Length of Motor L(mm)	163 ± 1.5 224 ± 1.5 (with brake)	
Cooling Method	Totally Enclosed, Non-Ventilated	
Protection Level	IP65 for Body, Shaft Sealing IP54	
Environmental Conditions of Operation	Temperature	-20°C~40°C (Non-freezing)
	Humidity	Below 90% RH (Non-condensing)
	Ambient Environment	Away from active gas, combustible gas, oil drops and dust
	Altitude	Maximum Altitude 4000m, Rated Power at 1000m or Below, Above 1000m: Decreasing 1.5% per 100m Rise

Model	SMC130D-0150-20AAK-4LKP SMC130D-0150-20ABK-4LKP	
Length of Motor L(mm)	159 ± 1.5 220 ± 1.5 (with brake)	
Cooling Method	Totally Enclosed, Non-Ventilated	
Protection Level	IP65 for Body, Shaft Sealing IP54	
Environmental Conditions of Operation	Temperature	-20°C~40°C (Non-freezing)
	Humidity	Below 90% RH (Non-condensing)
	Ambient Environment	Away from active gas, combustible gas, oil drops and dust
	Altitude	Maximum Altitude 4000m, Rated Power at 1000m or Below, Above 1000m: Decreasing 1.5% per 100m Rise