

# KNC-SRV-SMC130D-0150 Servo Motor



FEATURES

- 24-70VDC or 220VAC
- 1500W Power Rating
- Rated Torque of 708 oz-in
- 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

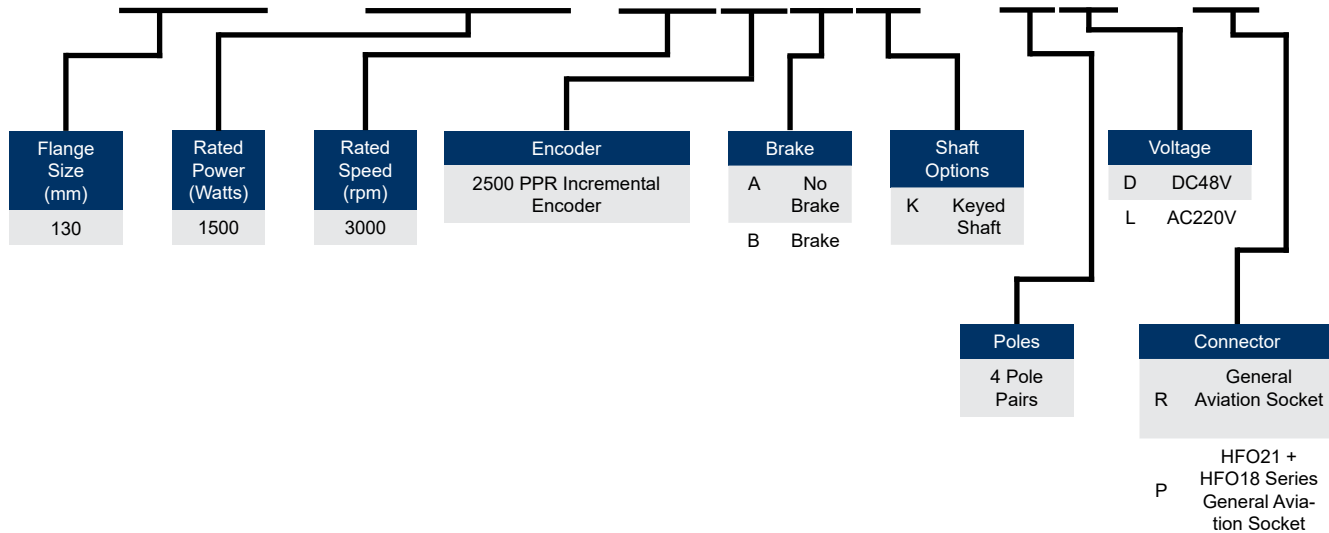


DESCRIPTION

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 1,770 oz-in, provide excellent dynamic response, allow for 3 times the overload capacity, and has a rated torque of 708 oz-in. It is available in a 130mm square flange size, with a brake option.

ORDERING INFORMATION

## SMC130D-0150-30AAK - 4DKR

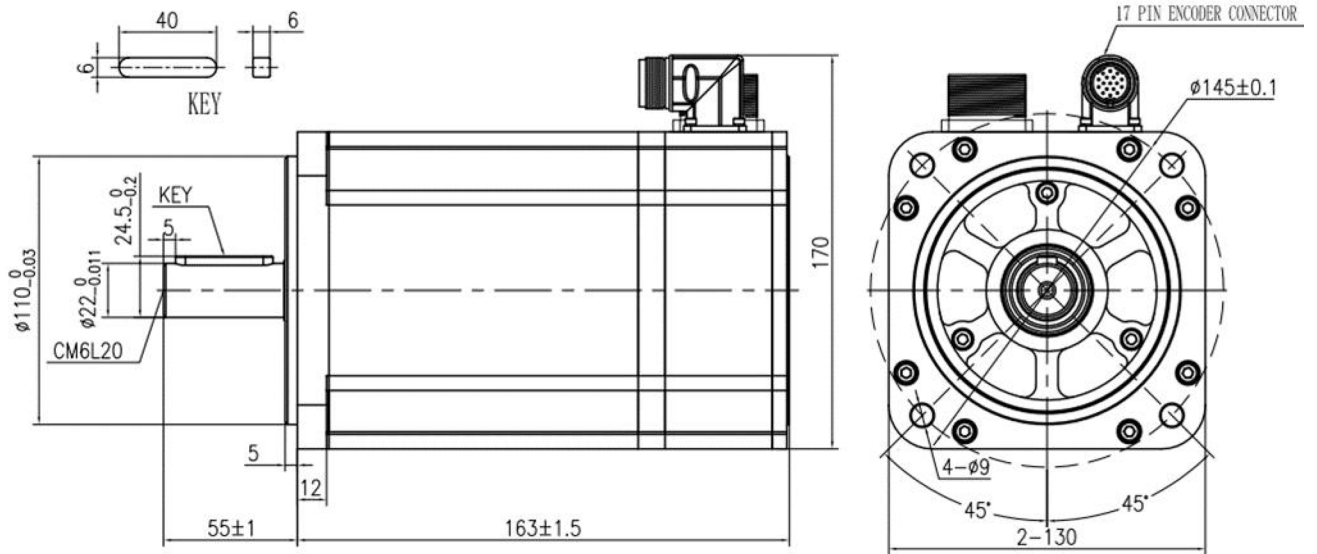


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Model	KNC-SRV-SMC130D-0150-30AAK-4DKR KNC-SRV-SMC130D-0150-30ABK-4DKR
Compatible Driver	KNC-SRV-FD144S-LB-000
DC Link Voltage (VDC)	48
Rated Power (W)	1500
Rated Torque (oz-in)	708
Rated Speed (RPM)	3000
Max Speed (RPM)	4000
Rated Current (A)	37.4
Maximum Torque (oz-in)	1770
Maximum Current (A)	93.4
Rated Standstill Torque (oz-in)	779
Rated Standstill Current (A)	39.2
Resistance Line-Line ( $\Omega$ )	0.025
Inductance Line-Line (mH)	0.169
Electrical Time Constant (ms)	0.676
Mechanical Time Constant (ms)	3
Torque Constant Kt (oz-in/A)	19.9
Rotor Moment of Inertia Jm (oz-in-s <sup>2</sup> )	0.16993 0.17135 (with brake)
Brake Holding Torque (oz-in)	1416.1
Pole Pair Number	4
Maximum Voltage Rising du/dt (KV/ $\mu$ s)	8
Insulation Class	F
Maximum Radial Force F (N)	900
Maximum Axial Force F (N)	450
Weight (lbs)	16.53 21.61 (with brake)
Length of Motor (mm)	163 $\pm$ 1.5 224 $\pm$ 1.5 (with brake)

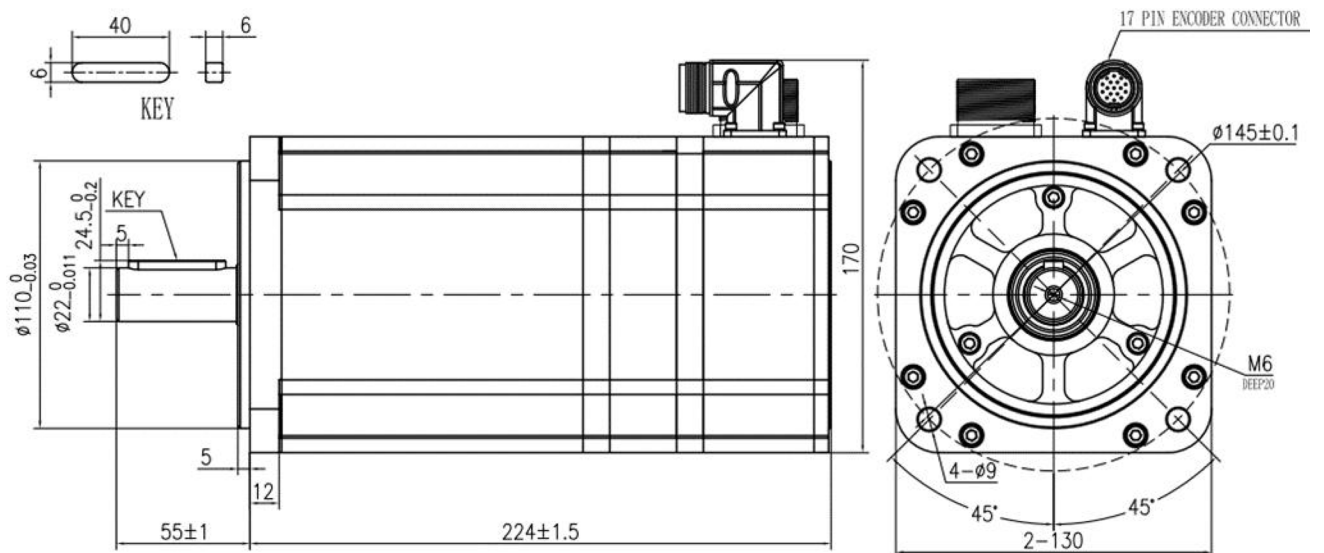
Model	KNC-SRV-SMC130D-0150-20AAK-4LKP KNC-SRV-SMC130D-0150-20ABK-4LKP
Compatible Driver	KNC-SRV-FD432S-CA-000 KNC-SRV-FD432S-AA-000 KNC-SRV-FD432S-LA-000
DC Link Voltage (VDC)	300
Rated Power (W)	1500
Rated Torque (oz-in)	1019
Rated Speed (RPM)	2000
Max Speed (RPM)	3000
Rated Current (A)	6.5
Maximum Torque (oz-in)	2549
Maximum Current (A)	16.2
Rated Standstill Torque (oz-in)	1121
Rated Standstill Current (A)	7.1
Resistance Line-Line ( $\Omega$ )	1.53
Inductance Line-Line (mH)	13.3
Electrical Time Constant (ms)	8.69
Mechanical Time Constant (ms)	2.31
Torque Constant Kt (oz-in/A)	165
Rotor Moment of Inertia Jm (oz-in-s <sup>2</sup> )	0.16993 0.17135 (with brake)
Brake Holding Torque (oz-in)	1416.1
Pole Pair Number	4
Maximum Voltage Rising du/dt (KV/ $\mu$ s)	8
Insulation Class	F
Maximum Radial Force F (N)	900
Maximum Axial Force F (N)	450
Weight (lbs)	16.53 21.60 (with brake)

KNC-SRV-SMC130D-0150-30AAK-4DKR



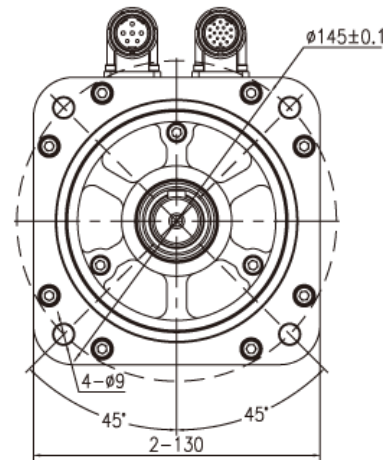
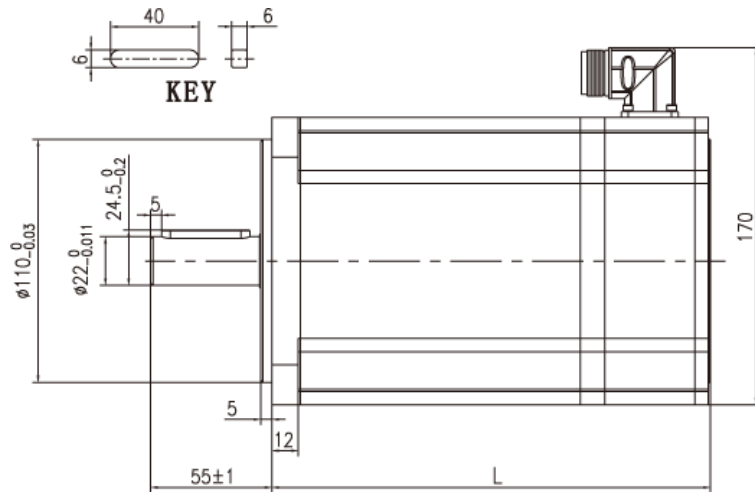
Dimensions are in mm

KNC-SRV-SMC130D-0150-30ABK-4DKR



DIMENSIONS

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



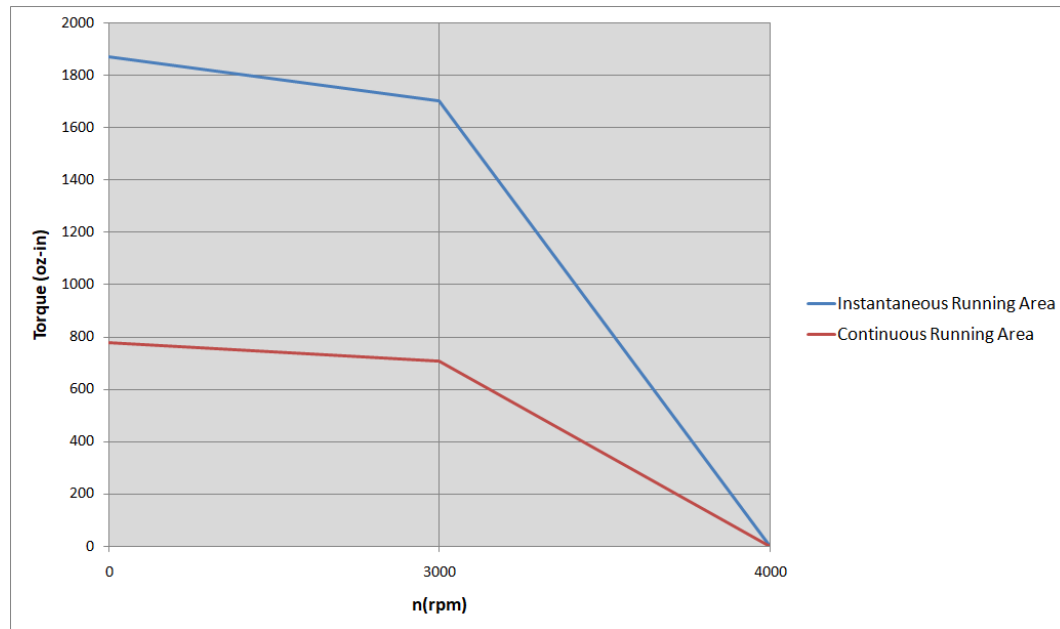
Model	KNC-SRV-SMC130D-0150-20AAK-4LKP KNC-SRV-SMC130D-0150-20ABK-4LKP
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Length of Motor L (mm)	159 ± 1.5 220 ± 1.5 (with brake)
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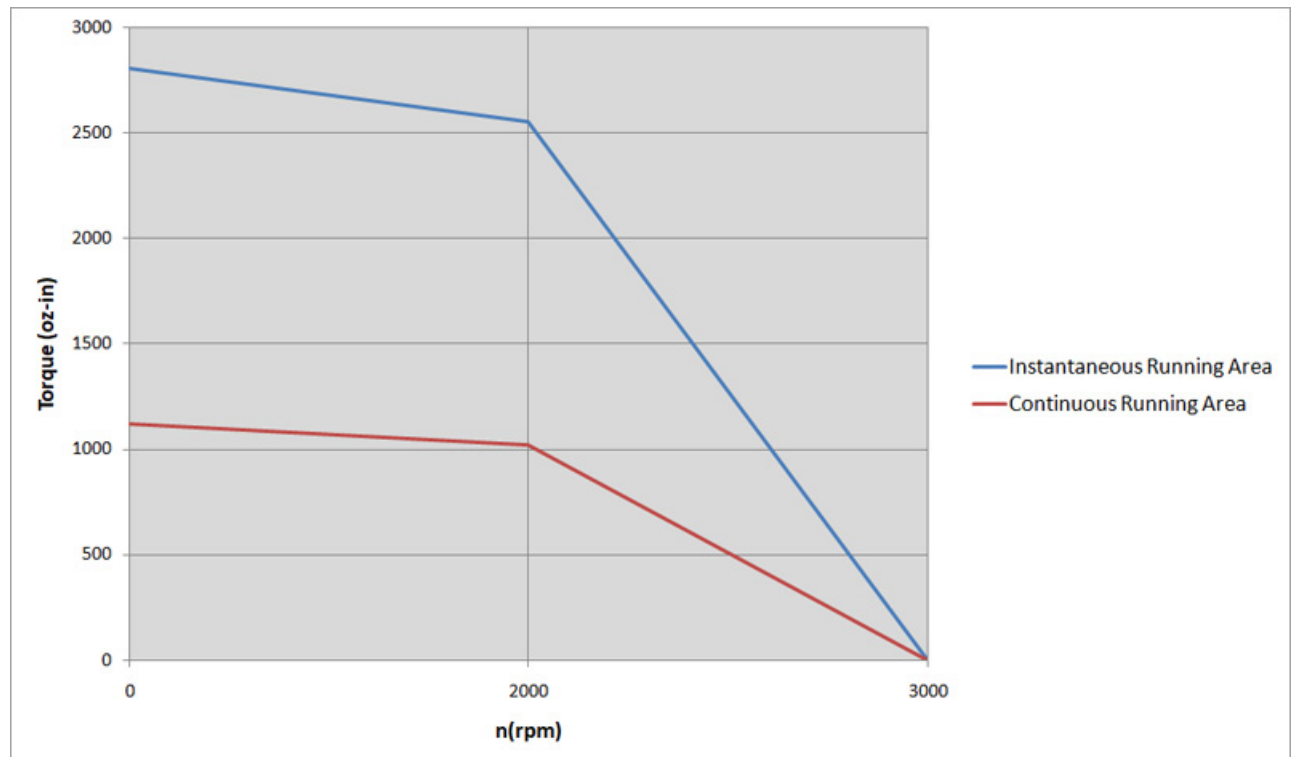
Dimensions are in mm



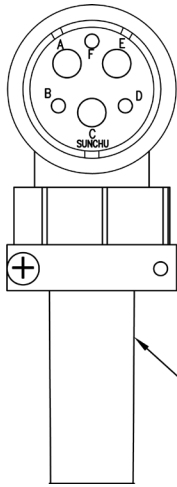
KNC-SRV-SMC130D-0150-30AAK-4DKR & KNC-SRV-SMC130D-0150-30ABK-4DKR



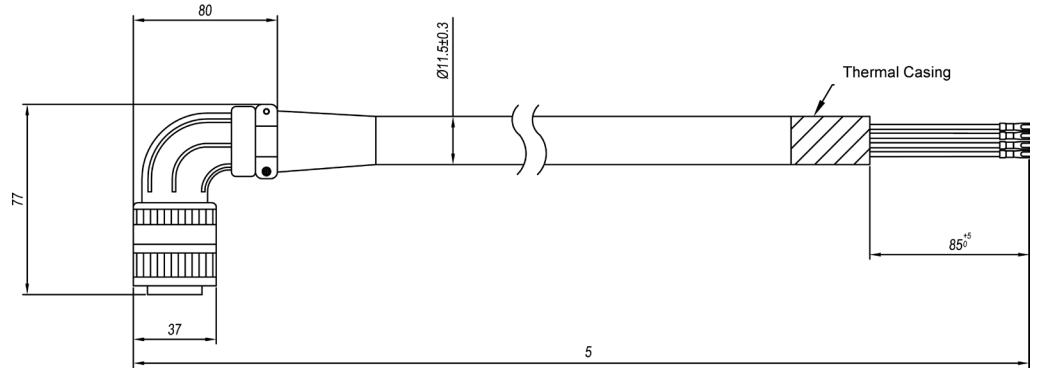
KNC-SRV-SMC130D-0150-20AAK-4LKP & KNC-SRV-SMC130D-0150-20ABK-4LKP



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



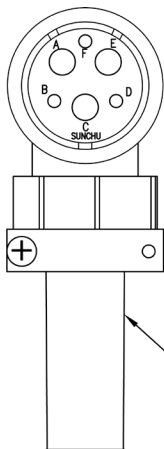
Final Position After Clamping



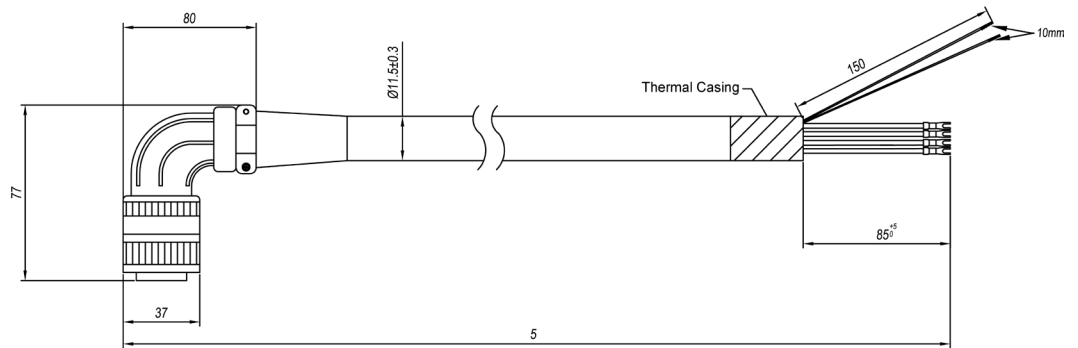
KNC-SRV-MOT-040-05-KC5		
Cable Color	Signal	PIN #
Yellow	U	PINA
Red	V	PINE
Green	W	PINC
Yellow-green	PE	PINF
Shield	Shield	Metal Ring

WIRING PINOUTS

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

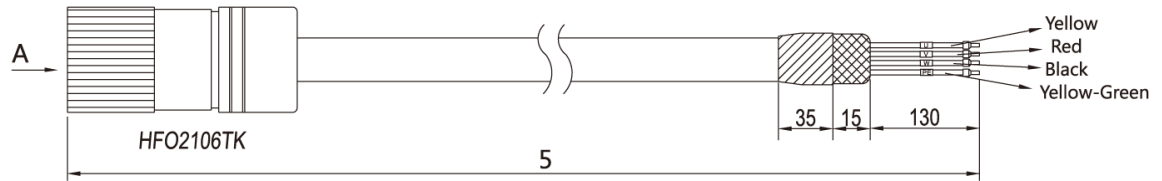
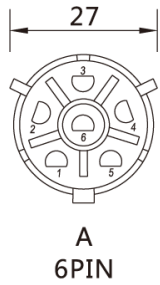


Final Position After Clamping



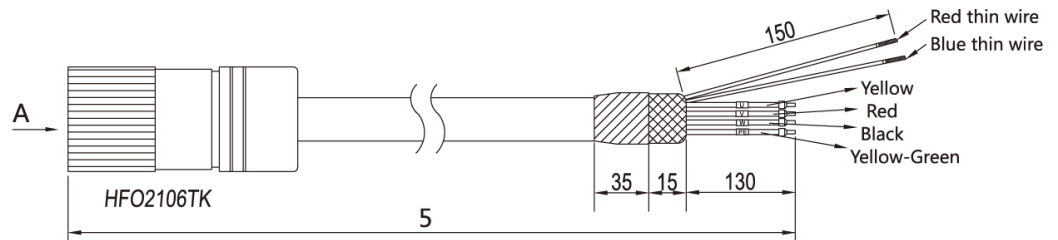
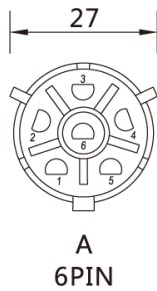
KNC-SRV-MOT-040-05-KC5-B		
Cable Color	Signal	Pin #
Yellow	U	PINA
Red	V	PINE
Green	W	PINC
Yellow/Green	PE	PINF
Red	Brake+	PINB
Blue	Brake-	PIND
Shield	Shield	Shield

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



KNC-SRV-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

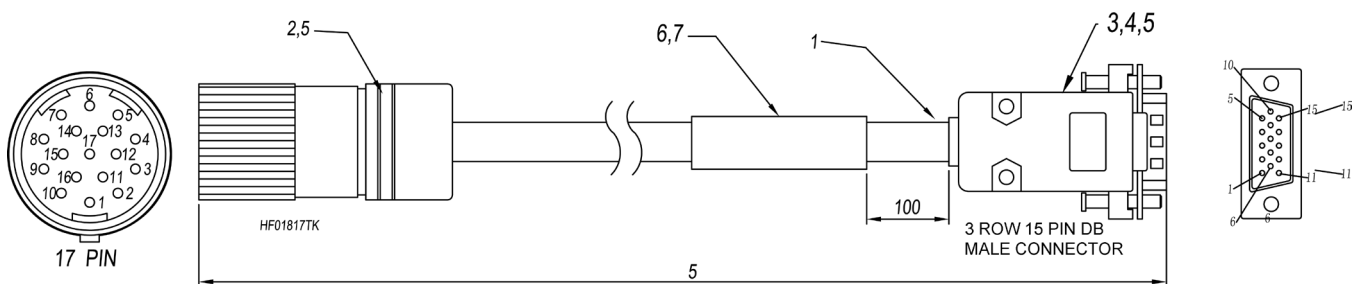
Motor / Brake Cable: KNC-SRV-MOT-008-05-KC4-B for KNC-SRV-SMC130D-0150-20ABK-4LKP



KNC-SRV-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

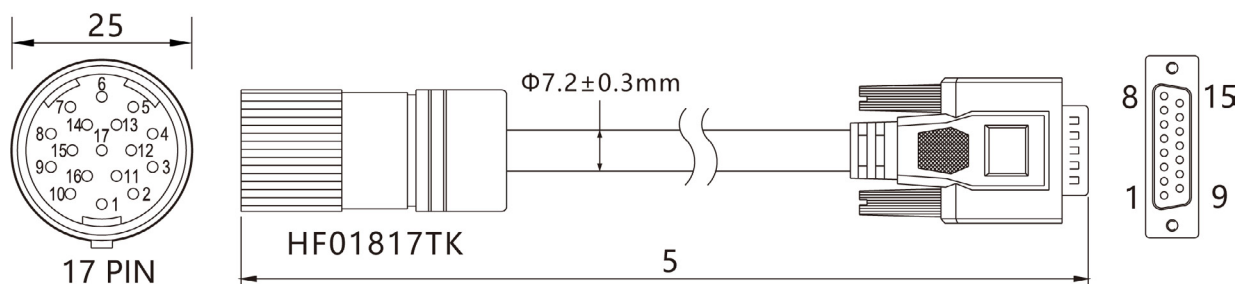


Encoder Cable: KNC-SRV-ENCHA-05-KC0 for KNC-SRV-SMC130D-0150-30AAK-4DKR & KNC-SRV-SMC130D-0150-30ABK-4DKR



KNC-SRV-ENCHA-05-KC0			
17 PIN Connector	3 Row 15 PIN DB	Signal	Color
PIN1	PIN1	+5V	Red
PIN3	PIN8	A	Orange
PIN5	PIN7	B	Yellow
PIN14	PIN6	Z	Green
PIN9	PIN4	U	Brown
PIN11	PIN10	V	Purple
PIN16	PIN9	W	Blue
PIN2	PIN2	GND	Black
PIN4	PIN13	/A	Orange/White
PIN6	PIN12	/B	Yellow/White
PIN15	PIN11	/Z	Green/White
PIN10	PIN5	/U	Brown/White
PIN12	PIN15	/V	Purple/White
PIN17	PIN14	/W	Blue/White
PIN7	PIN3	PTC/KTY+	Red
PIN8	PIN2	PTC/KTY-	Red/White
Shield			Shield

Encoder Cable: KNC-SRV-ENCCA-05-KC0 for KNC-SRV-SMC130D-0150-20AAK-4LKP & KNC-SRV-SMC130D-0150-20ABK-4LKP



KNC-SRV-ENCCA-05-KC0			
17 PIN Connector	3 Row 15 PIN DB	Signal	Color
PIN1	PIN1	+5V	Red
PIN3	PIN8	A	Orange
PIN5	PIN7	B	Yellow
PIN14	PIN6	Z	Green
PIN9	PIN4	U	Brown
PIN11	PIN10	V	Purple
PIN16	PIN9	W	Blue
PIN2	PIN2	GND	Black
PIN4	PIN13	/A	Orange/White
PIN6	PIN12	/B	Yellow/White
PIN15	PIN11	/Z	Green/White
PIN10	PIN5	/U	Brown/White
PIN12	PIN15	/V	Purple/White
PIN17	PIN14	/W	Blue/White
PIN7	PIN3	PTC/KTY+	Red
PIN8	PIN2	PTC/KTY-	Red/White
Shield			Shield

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

Model	Motor Cable	Encoder Cable	Brake Cable
KNC-SRV-SMC130D-0150-20AAK-4LKP	KNC-SRV-MOT-008-05-KC4	KNC-SRV-ENCCA-05-KC0	N/A
KNC-SRV-SMC130D-0150-20ABK-4LKP	KNC-SRV-MOT-008-05-KC4-B		In Motor Cable

Model		KNC-SRV-SMC130D-0150-30AAK-4DKR KNC-SRV-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		KNC-SRV-SMC130D-0150-20AAK-4LKP KNC-SRV-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