KNC-SRV-SMK60D-0040 Servo Motor

FEATURES

- ***24-60VDC***
- ***400W Power Rating***
- ***Rated Torque of 180 oz-in***
- ***Maximum Speed of 3500 RPM***
- ***16/17 Bit Multi-Turn Magnetic Encoder***
- ***IP65 & IP54 Protection Levels***
- ***Insulation Class F***
- ***Brake Option Available***



DESCRIPTION

The SMK60D-0040 Series Servo Motor offers a low-cost solution for motion control applications requiring position and speed control. With the 16/17 Bit Single-Turn Magnetic 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 539 oz-in, provide excellent dynamic response, allow for 3 times the overload capacity, and has a rated torque of 180 oz-in. It is available in a 60mm square flange size, with a brake option.

ORDERING INFORMATION

SMK60D - 0040 - 30QAK - 5DCU

Flange Size (mm)	Inertia Type	Rated Power (Watts)	Rated Speed (rpm)	Encoder	Brake	Shaft Options	Voltage	Poles	Connector
60	D Medium Inertia	400	3000	Q 16/17 Bit Multi-Turn Magnetic	A No Brake B Brake	K Keyed Shaft	D DC48V	5 Pole Pairs	U Communication Encoder Socket A Special Socket for Common Body Motor

L012080

4985 E. Landon Dr. Anaheim, CA 92807 **Tel. (714) 992-6990** Fax. (714) 992-0471 **www.anaheimautomation.com**

SPECIFICATIONS

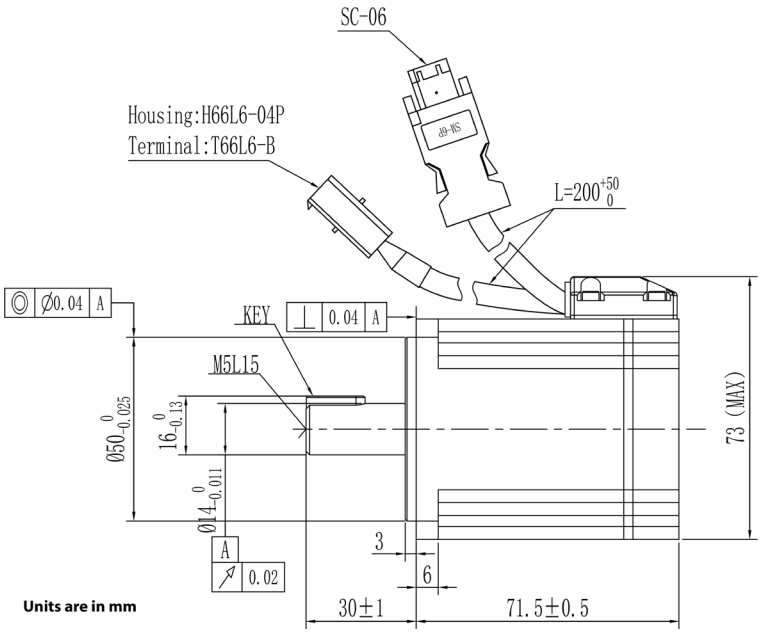
Model	KNC-SRV-SMK60D-0040-30QAK-5DCU KNC-SRV-SMK60D-0040-30QBK-5DCU
Compatible Driver	KNC-SRV-FD125S-AS-000 KNC-SRV-FD125S-ES-000
DC Link Voltage (VDC)	48
Rated Power (W)	400
Rated Torque (oz-in)	180
Rated Speed (RPM)	3000
Max Speed (RPM)	3500
Rated Current (A)	10
Maximum Torque (oz-in)	539
Maximum Current (A)	32
Rated Standstill Torque (oz-in)	198
Rated Standstill Current (A)	11
Resistance Line-Line (Ω)	0.28
Inductance Line-Line (mH)	0.52
Electrical Time Constant (ms)	1.86
Mechanical Time Constant (ms)	1.06
Torque Constant Kt (oz-in/A)	20
Rotor Moment of Inertia Jm (oz-in-s^2)	0.00608 0.00614 (with brake)
Brake Holding Torque (oz-in)	212
Pole Pair Number	5
Insulation Class	F
Maximum Radial Force F (N)	115
Maximum Axial Force F (N)	70
Weight (lbs)	1.98 2.86 (with brake)
Length of Motor (mm)	71.5 ± 0.5 100 ± 0.5 (with brake)

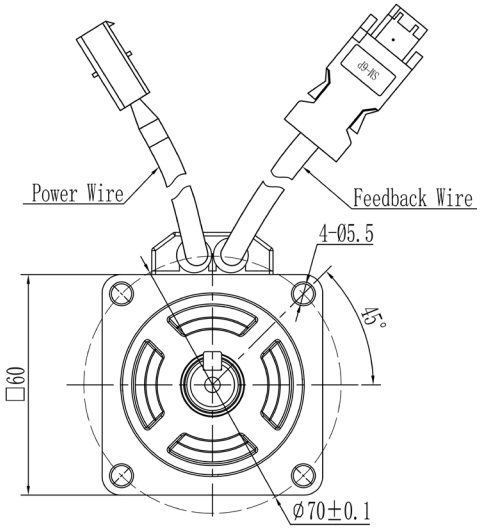
SPECIFICATIONS

Model	KNC-SRV-SMK60D-0040-30QAK-5DCA KNC-SRV-SMK60D-0040-30QBK-5DCA
Compatible Driver	KNC-SRV-FD125S-AS-000 KNC-SRV-FD125S-ES-000
DC Link Voltage (VDC)	48
Rated Power (W)	400
Rated Torque (oz-in)	180
Rated Speed (RPM)	3000
Max Speed (RPM)	3500
Rated Current (A)	10
Maximum Torque (oz-in)	539
Maximum Current (A)	32
Rated Standstill Torque (oz-in)	198
Rated Standstill Current (A)	11
Resistance Line-Line (Ω)	0.275
Inductance Line-Line (mH)	0.52
Electrical Time Constant (ms)	1.89
Mechanical Time Constant (ms)	1.03 1.05 (with brake)
Torque Constant Kt (oz-in/A)	20
Rotor Moment of Inertia Jm (oz-in-s^2)	0.00608 0.00614 (with brake)
Brake Holding Torque (oz-in)	212
Pole Pair Number	5
Insulation Class	F
Maximum Radial Force F (N)	115
Maximum Axial Force F (N)	70
Weight (lbs)	1.98 2.86 (with brake)
Length of Motor (mm)	74.5 ± 0.5 101 ± 0.5 (with brake)

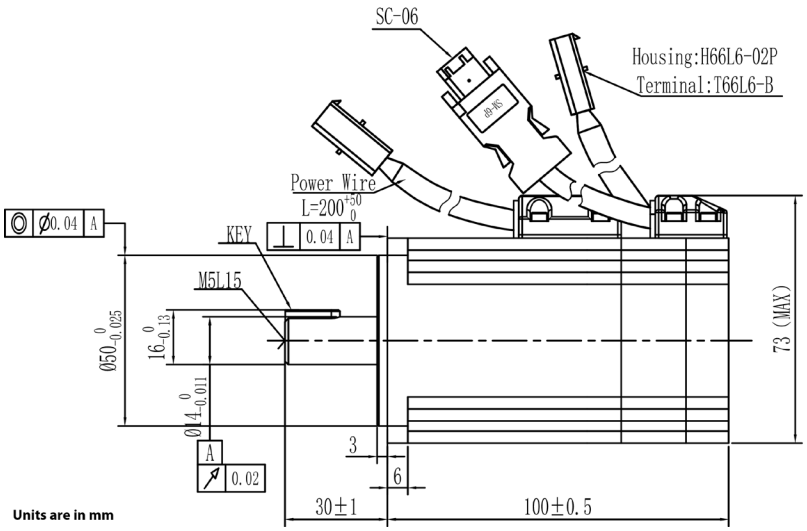
DIMENSIONS

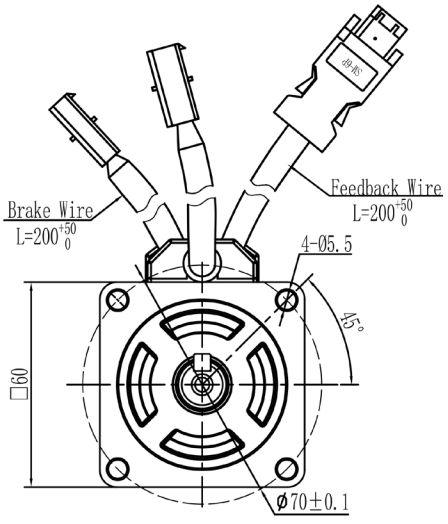
KNC-SRV-SMK60D-0040-30QAK-5DCU





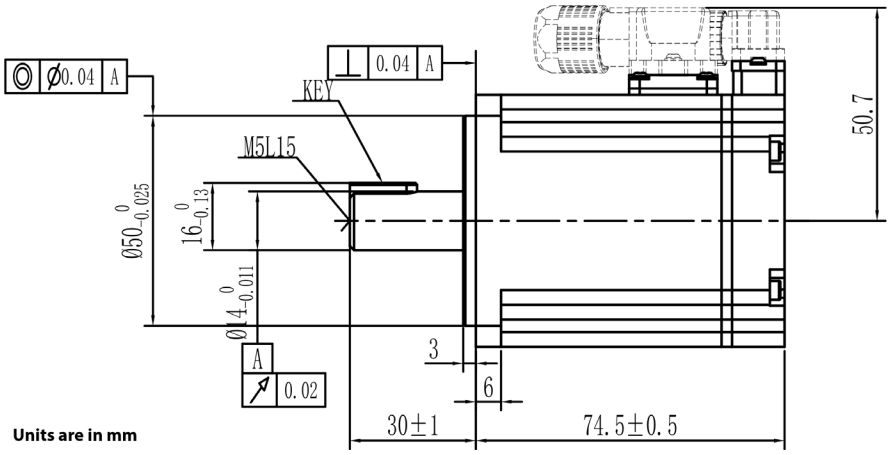
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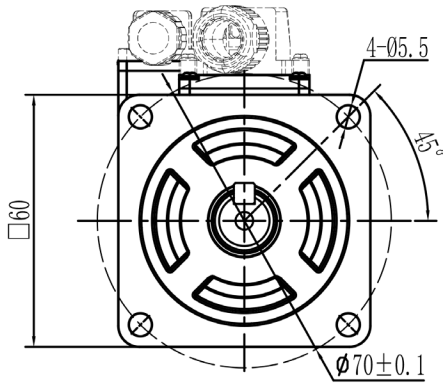




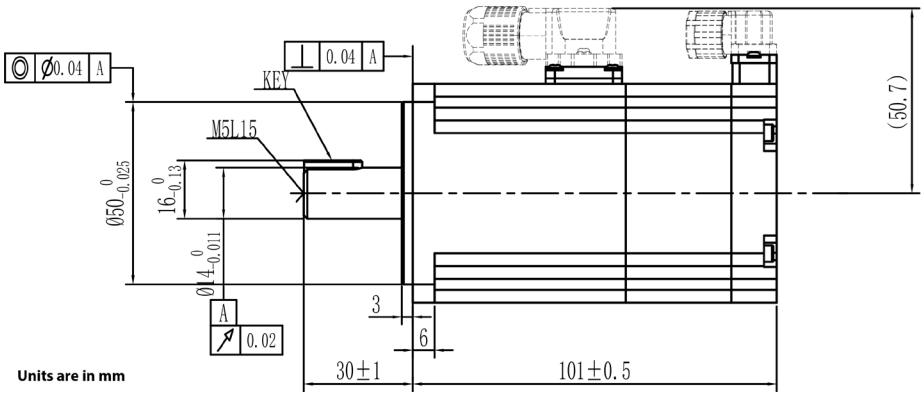
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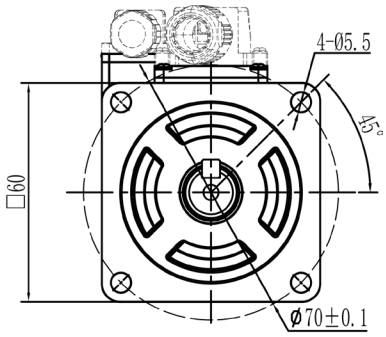
KNC-SRV-SMK60D-0040-30QAK-5DCA





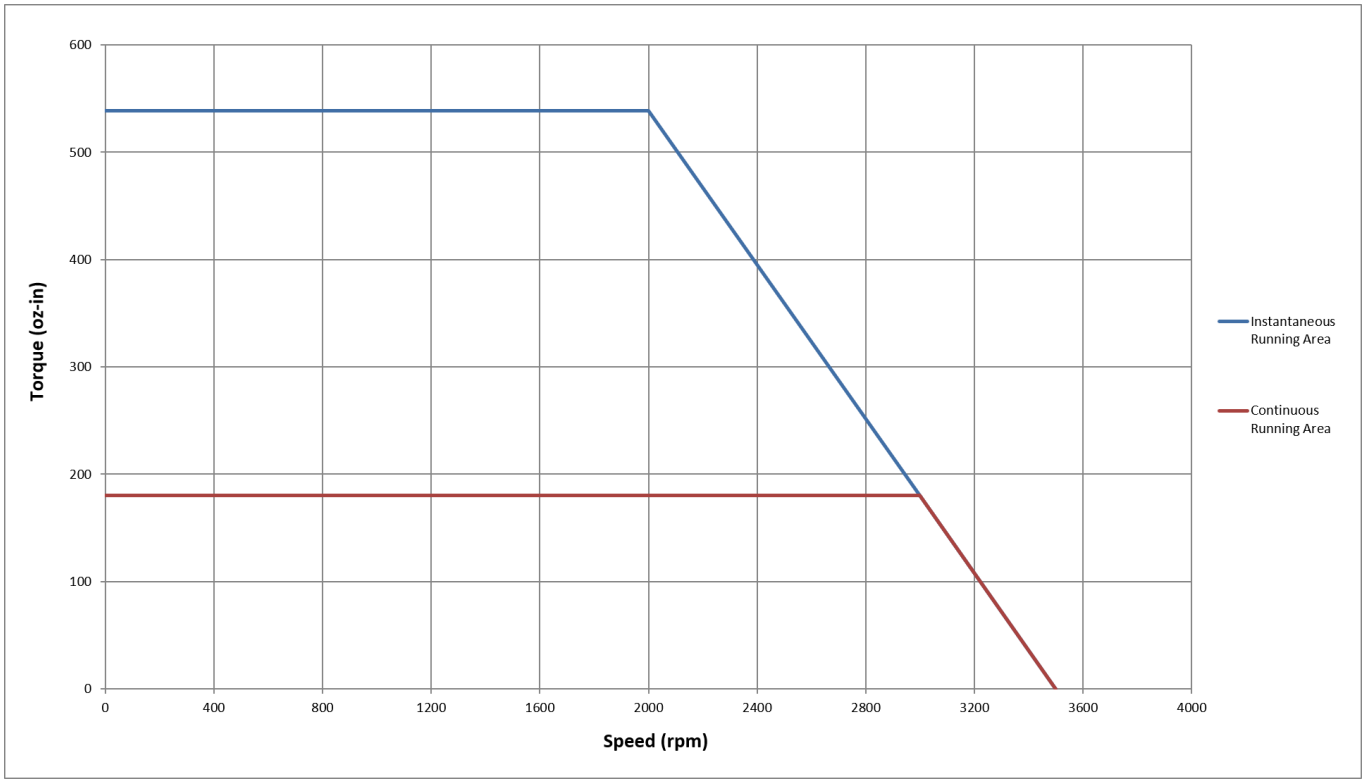
KNC-SRV-SMK60D-0040-30QBK-5DCA





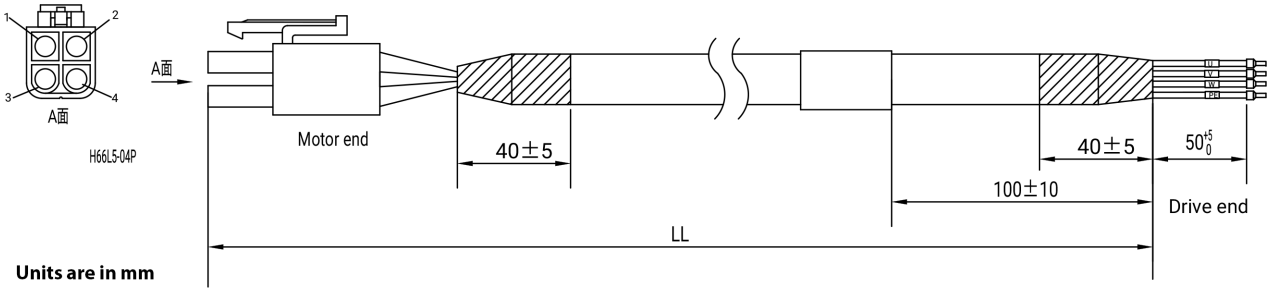
TORQUE CURVE

KNC-SRV-SMK60D-0040-30QAK-5DCA, KNC-SRV-SMK60D-0040-30QBK-5DCA,
KNC-SRV-SMK60D-0040-30QAK-5DCU & KNC-SRV-SMK60D-0040-30QBK-5DCU



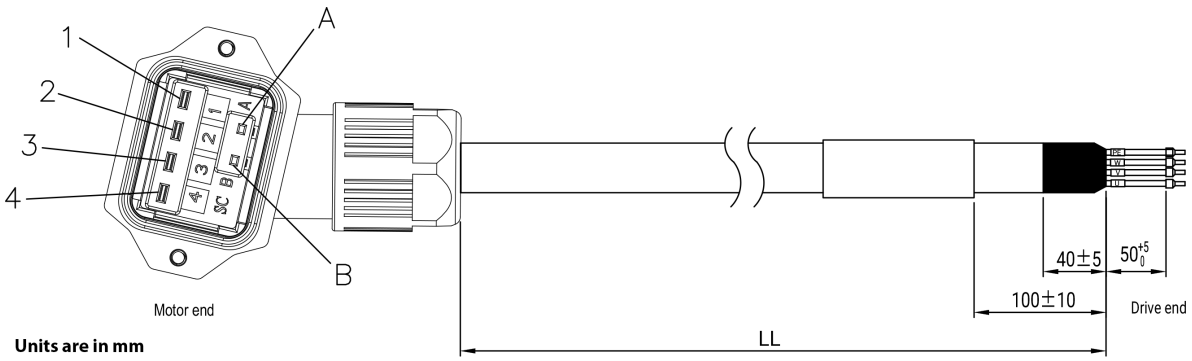
WIRING PINOUTS

Motor Cable: KNC-SRV-M-A-12A-L-LL-S for KNC-SRV-SMK60D-0040-30QAK-5DCU &
KNC-SRV-SMK60D-0040-30QBK-5DCU



KNC-SRV-M-A-12A-L-LL-S		
Color	Signal	Motor End H66L5-04P
White	U	PIN1
Black	W	PIN3
Red	V	PIN2
Yellow-Green+Shielding	PE	PIN4

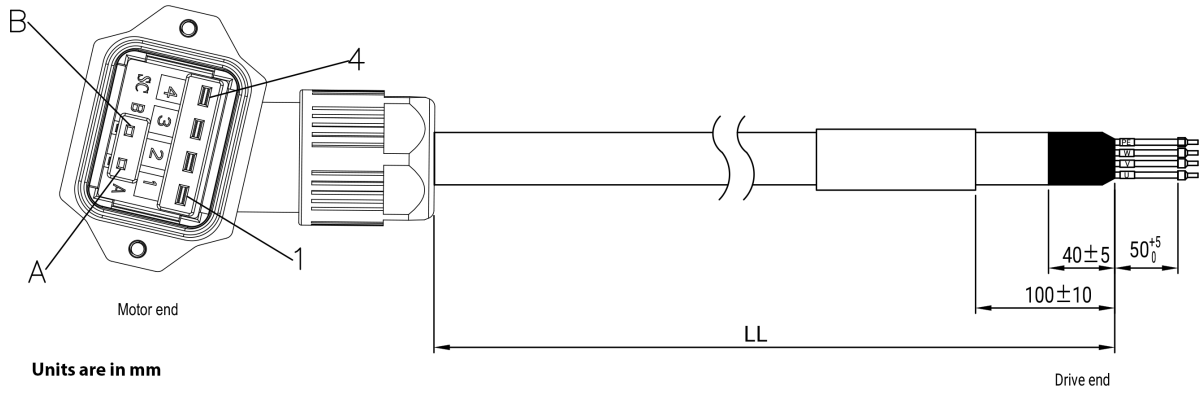
Motor Cable: KNC-SRV-M-A-12A-KB0-LL-S for KNC-SRV-SMK60D-0040-30QAK-5DCA



Units are in mm

KNC-SRV-M-A-12A-KB0-LL-S		
Color	Signal	Motor End SC-MC6S-AQ20-00
White	U	PIN1
Black	W	PIN2
Red	V	PIN3
Yellow-Green+Shielding	PE	PIN4

Motor and Brake Cable: KNC-SRV-M-A-12A-KB1-LL-S for KNC-SRV-SMK60D-0040-30QBK-5DCA

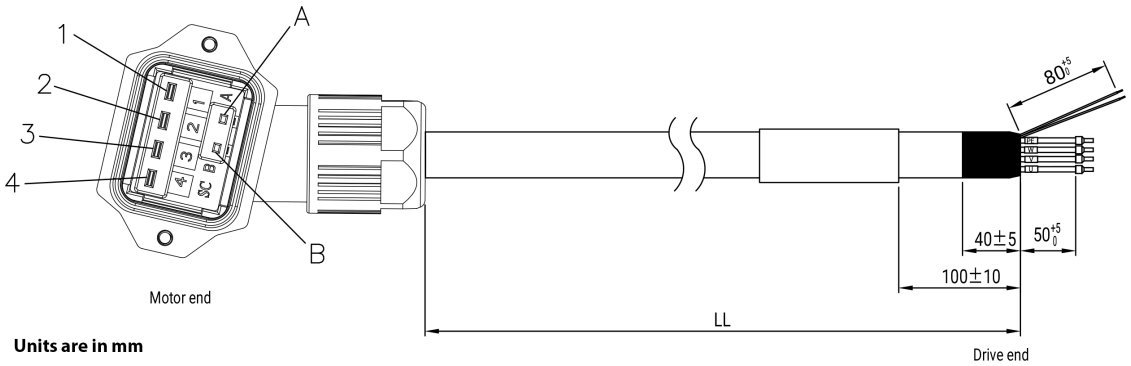


Units are in mm

KNC-SRV-M-A-12A-KB1-LL-S		
Color	Signal	Motor End SC-MC6S-AQ20-00
White	U	PIN1
Black	W	PIN2
Red	V	PIN3
Yellow-Green+Shielding	PE	PIN4

Note: Cable exits away from Shaft (Tail Out)

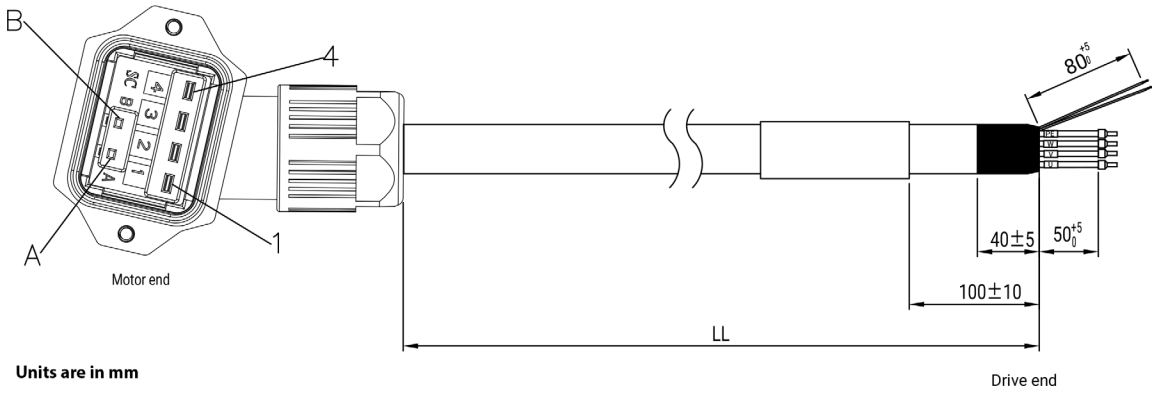
Motor Cable: KNC-SRV-M-A-12A-KB0-LL-BS for KNC-SRV-SMK60D-0040-30QBK-5DCA



Units are in mm

KNC-SRV-M-A-12A-KB0-LL-BS		
Color	Signal	Motor End SC-MC6S-AQ20-00
White	U	PIN1
Black	W	PIN2
Red	V	PIN3
Yellow-Green+Shielding	PE	PIN4
Brown	BR+	PINA
Blue	BR-	PINB

Motor and Brake Cable: KNC-SRV-M-A-12A-KB1-LL-BS for KNC-SRV-SMK60D-0040-30QBK-5DCA

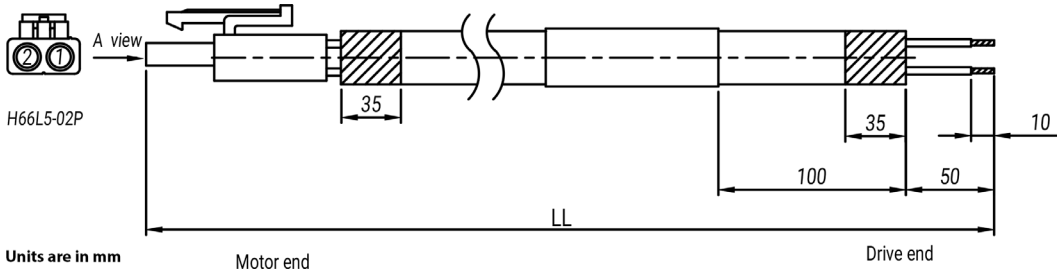


Units are in mm

KNC-SRV-M-A-12A-KB0-LL-BS		
Color	Signal	Motor End SC-MC6S-AQ20-00
White	U	PIN1
Black	W	PIN2
Red	V	PIN3
Yellow-Green+Shielding	PE	PIN4
Brown	BR+	PINA
Blue	BR-	PINB

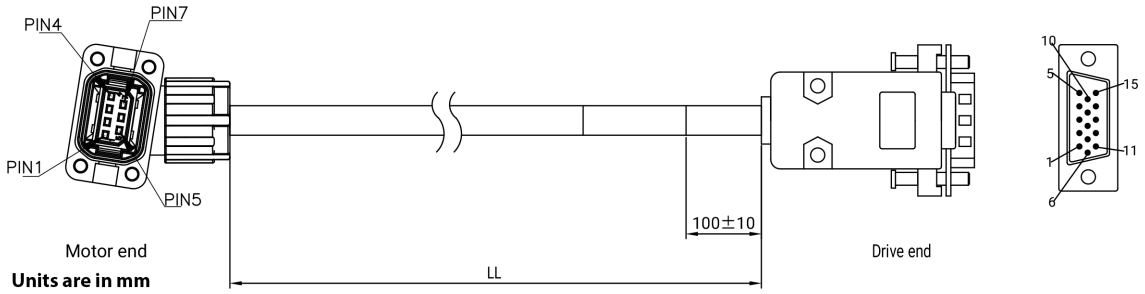
Note: Cable exits away from Shaft (Tail Out)

Brake Cable: KNC-SRV-BRA-LL-KL for KNC-SRV-SMK60D-0040-30QBK-5DCU



KNC-SRV-BRA-LL-KL		
Cable Color	Signal	PIN #
Red	BR +	PIN 1
Blue	BR -	PIN 2

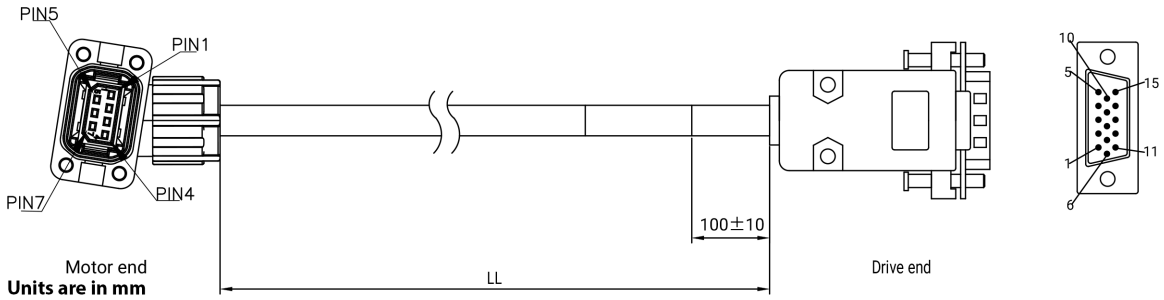
Encoder Cable: KNC-SRV-E-H-MV-KA0-LL for KNC-SRV-SMK60D-0040-30QAK-5DCA & KNC-SRV-SMK60D-0040-30QBK-5DCA



KNC-SRV-E-H-MV-KA0-LL			
Color	Signal	Motor End SC-MC7S-A820-P0	Drive End 15PIN DB Male
Red	VDD	PIN1	PIN1
Orange	GND	PIN2	PIN2
/	/	PIN3	/
/	/	PIN4	/
Blue	485+	PIN5	PIN9
Purple	485-	PIN6	PIN14
Shield	Shield	PIN7	Metal Button

WIRING PINOUTS

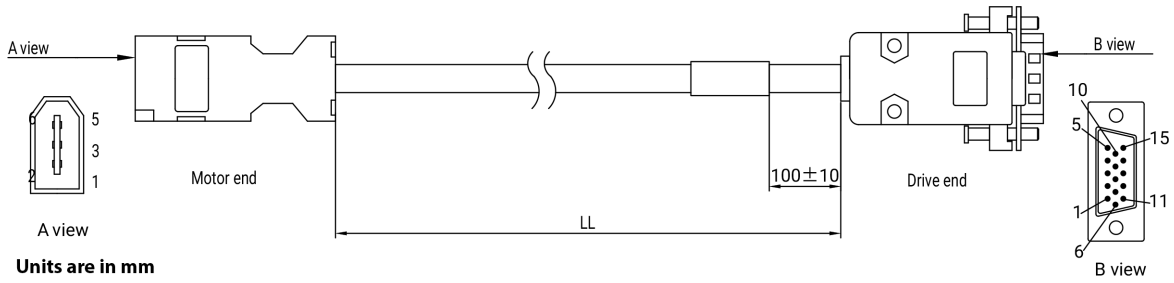
Encoder Cable: KNC-SRV-E-H-MV-KA1-LL for KNC-SRV-SMK60D-0040-30QAK-5DCA & KNC-SRV-SMK60D-0040-30QBK-5DCA



KNC-SRV-E-H-MV-KA1-LL			
Color	Signal	Motor End SC-MC7S-A820-P0	Drive End 15PIN DB Male
Red	VDD	PIN1	PIN1
Orange	GND	PIN2	PIN2
/	/	PIN3	/
/	/	PIN4	/
Blue	485+	PIN5	PIN9
Purple	485-	PIN6	PIN14
Shield	Shield	PIN7	Metal Button

Note: Cable exits away from Shaft (Tail Out)

Encoder Cable: KNC-SRV-E-H-MV-U-LL for KNC-SRV-SMK60D-0040-30QAK-5DCU & KNC-SRV-SMK60D-0040-30QBK-5DCU



KNC-SRV-E-H-MV-U-LL			
Signal	Motor Side SC-06 Female	Color	Driver Side 15PIN DB Male
VDD	PIN1	Red	PIN1
GND	PIN2	Orange	PIN2
MA_P+	PIN3	Brown	PIN10
MA_N-	PIN4	Black	PIN15
SLO_P+	PIN5	Blue	PIN9
SLO_N-	PIN6	Purple	PIN14
Shield	Shell	Shielding Wire	Shell

SPECIFICATIONS

Model	Motor Cable	Encoder Cable	Brake Cable
KNC-SRV-SMK60D-0040-30QAK-5DCU	KNC-SRV-M-A-6A-L-LL-S	KNC-SRV-E-H-MV-U-LL	-
KNC-SRV-SMK60D-0040-30QBK-5DCU			KNC-SRV-BRA-LL-KL
KNC-SRV-SMK60D-0040-30QAK-5DCA	KNC-SRV-M-A-12A-KB0-LL-S / KNC-SRV-M-A-12A-KB1-LL-S	KNC-SRV-E-H-MV-KA0-LL / KNC-SRV-E-H-MV-KA1-LL	KNC-SRV-M-A-12A-KB1-LL-S
KNC-SRV-SMK60D-0040-30QBK-5DCA	KNC-SRV-M-A-12A-KB0-LL-BS / KNC-SRV-M-A-12A-KB1-LL-BS		KNC-SRV-M-A-12A-KB1-LL-BS

Model		KNC-SRV-SMK60D-0040-30QAK-5DCU KNC-SRV-SMK60D-0040-30QBK-5DCU KNC-SRV-SMK60D-0040-30QAK-5DCA KNC-SRV-SMK60D-0040-30QBK-5DCA
Length of Motor L(mm) (5DCU Motor)		71.5 ± 0.5 100 ± 0.5 (with brake)
Length of Motor L(mm) (5DCA Motor)		74.5 ± 0.5 101 ± 0.5 (with brake)
Cooling Method		Totally Enclosed, Self-Cooling
Protection Level		IP65 & IP54
Environmental Conditions of Operation	Temperature	-20˚C~+40˚C
	Humidity	Below 90% RH (No condensation)
	Ambient Environment	Keep away from corrosion, flammable gases, oil droplets and dust
	Altitude	Maximum Altitude 2000m, From 1000 to 2000m, the power decreases by 1.5% per 100m increase.