

KNC-SRV-SMH80S Servo Motor



FEATURES

- 120 VAC & 220 VAC
- 80mm Frame Size
- Power Rating up to 750 or 1000 Watts
- Rated Torque up to 338 or 450 oz-in
- Rated Speed of 3000 RPM
- Brake Option Available
- 2500PPR Incremental Encoder
- Totally Enclosed, Non-Ventilated
- IP65 Protection for Body, IP54 Shaft Sealing
- CE Certified

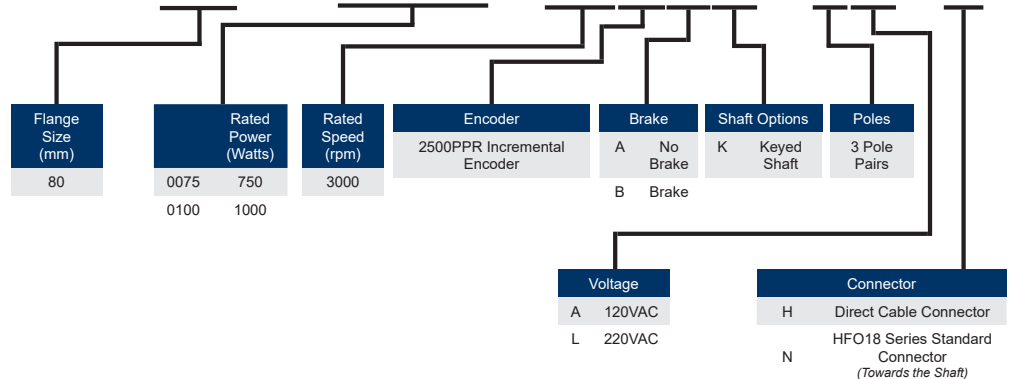


DESCRIPTION

The KNC-SRV-SMH80S Series Servo Motor offers a solution to servo applications requiring position and speed control. This servo motor series comes standard with a 2,500 Pulses per Revolution (PPR) Incremental Encoder, runs at a rated speed of 3000 RPM, provides peak values up to 300% of the rated torque and current values, and has a rated torque up to 338 or 450 oz-in with a 750 or 1000 Watt power rating. This servo motor series enables industrial motion control applications to attain a great combination of position and speed functionality.

ORDERING INFORMATION

KNC - SRV - SMH80S - 0075 - 30AAK - 3AKH

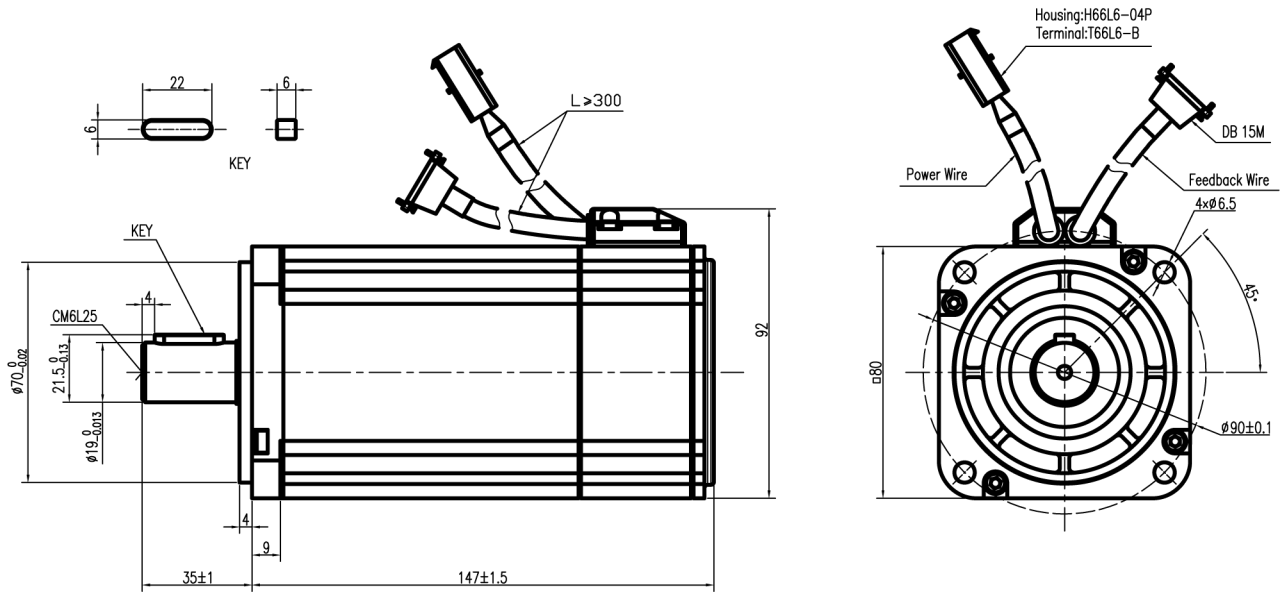


L011231 *Note: Part Numbers with -30ABK are equipped with a brake.

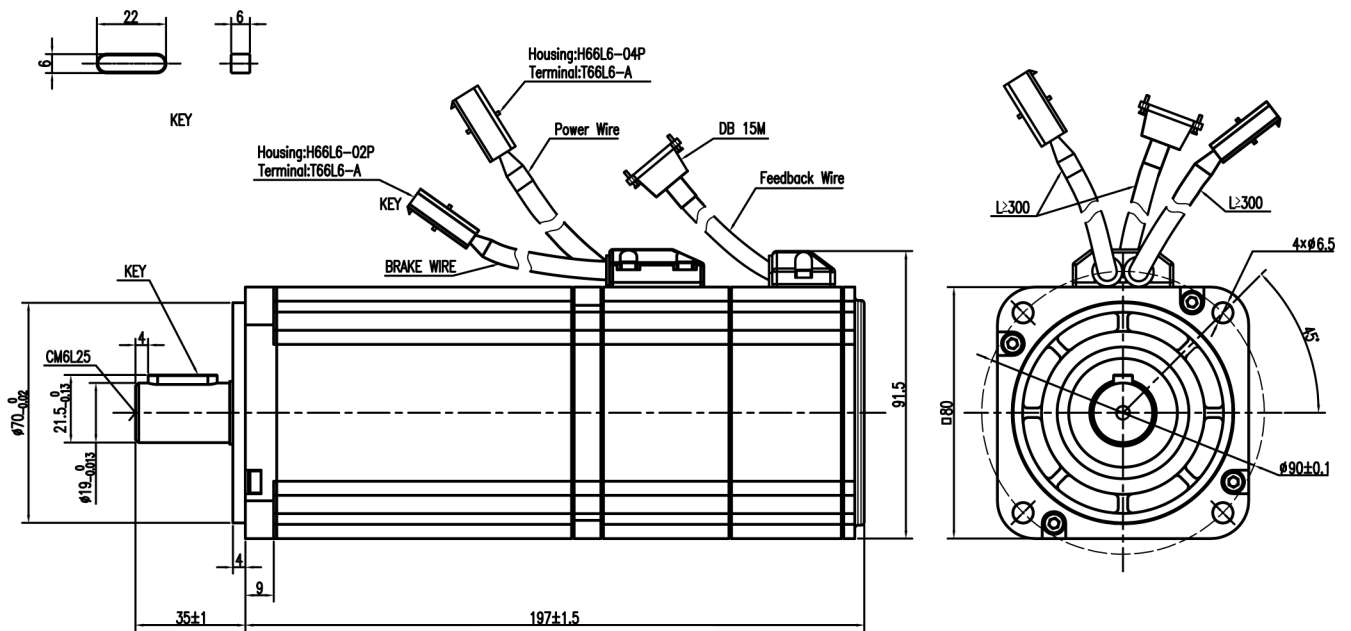
Model	KNC-SRV-SMH80S-0075-30AAK-3AKH KNC-SRV-SMH80S-0075-30ABK-3AKH	KNC-SRV-SMH80S-0100-30AAK-3AKH KNC-SRV-SMH80S-0100-30ABK-3AKH
Compatible Driver	KNC-SRV-FD332S-LA-000	KNC-SRV-FD332S-LA-000
DC Link Voltage (VDC)	155	155
Rated Power (W)	750	1000
Rated Torque (oz-in)	338	450
Rated Speed (RPM)	3000	3000
Max Speed (RPM)	6000	5500
Rated Current (A)	7.5	10
Maximum Torque (oz-in)	1015	1350
Maximum Current (A)	22.5	30
Standstill Torque (oz-in)	372	495
Standstill Current (A)	8.25	11
Resistance Line-Line (Ω)	0.41	0.32
Inductance Line-Line (mH)	1.95	1.6
Electrical Time Constant (ms)	4.8	5
Mechanical Time Constant (ms)	0.92	0.94
Reverse Voltage Constant Ke (V/krpm)	20	20
Torque Constant Kt (oz-in/A)	46.87	46.87
Rotor Moment of Inertia Jm (oz-in-s ²)	0.02 0.0196 (with brake)	0.0262 0.0262 (with brake)
Brake Holding Torque (oz-in)	453.1	453.1
Pole Pair Number	6	6
Maximum Voltage Rising du/dt (KV/ μ s)	8	8
Insulation Class	F	F
Maximum Radial Force Fr (N)	335	335
Maximum Axial Force F (N)	167.5	167.5
Weight (lbs)	3.3 4.0 (with brake)	3.9 4.6 (with brake)
Length of Motor L (mm)	147 197 \pm 1.5 (with brake)	167 217 \pm 1.5 (with brake)
Position Feedback Device	Incremental Encoder 2500PPR	
Cooling Method	Totally Enclosed, Non-Ventilated	
Protection Level	IP65 for Body, Shaft Sealing IP54	
Environmental Conditions of Operation	Temperature	-20°C~40°C
	Humidity	Below 90% RH (No 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

*Note: Part Numbers with -30ABK are equipped with a brake.

KNC-SRV-SMH80S-0075-30AAK-3AKH

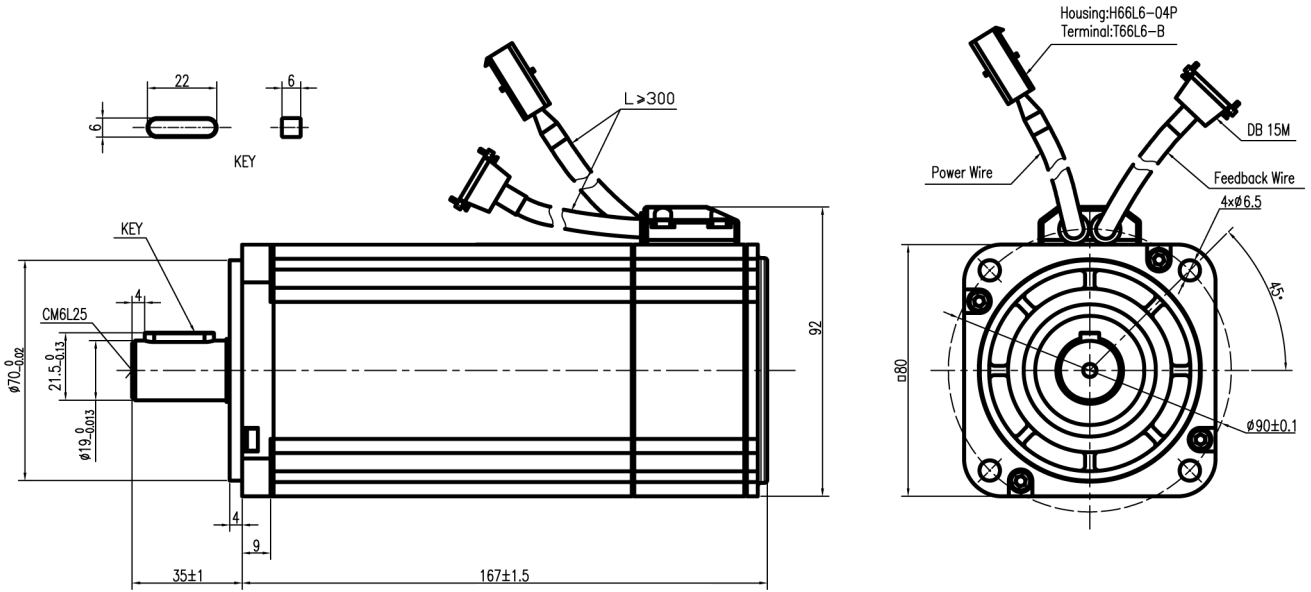


KNC-SRV-SMH80S-0075-30ABK-3AKH

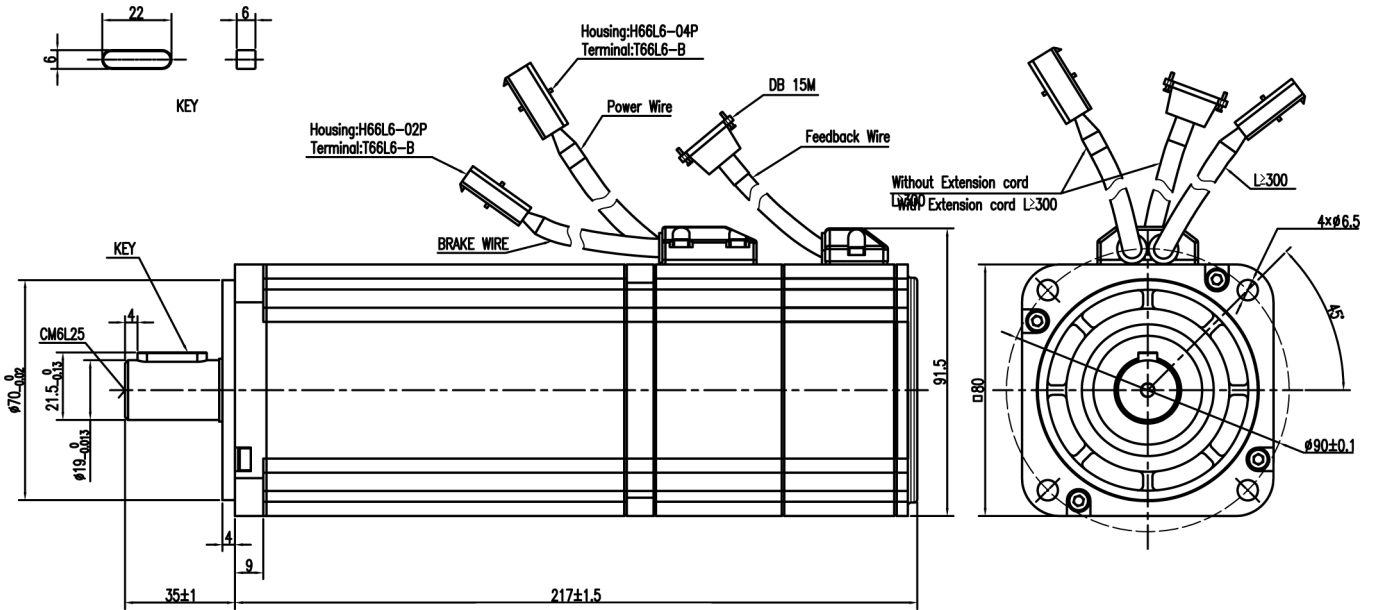


All units are in mm

KNC-SRV-SMH80S-0100-30AAK-3AKH



KNC-SRV-SMH80S-0100-30ABK-3AKH

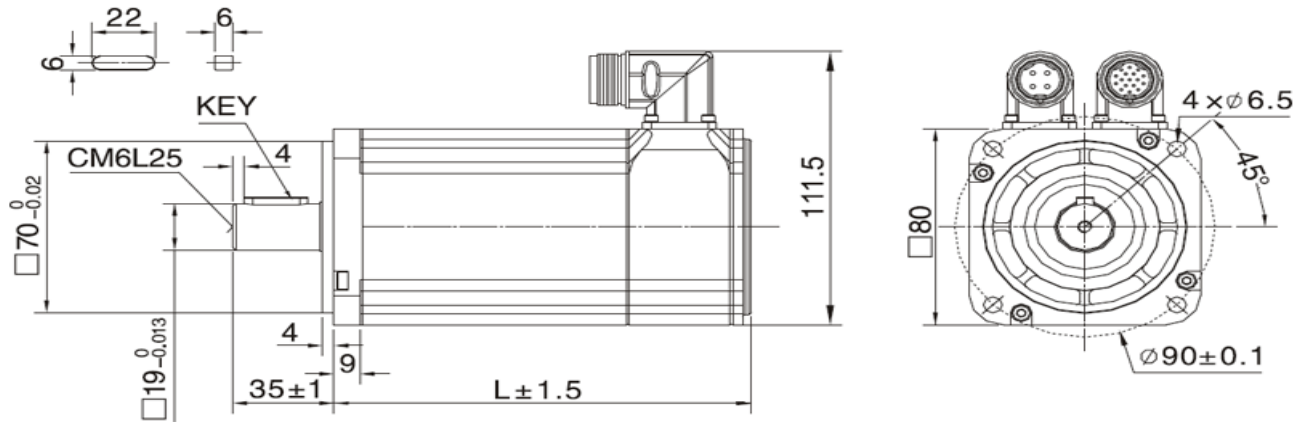


All units are in mm

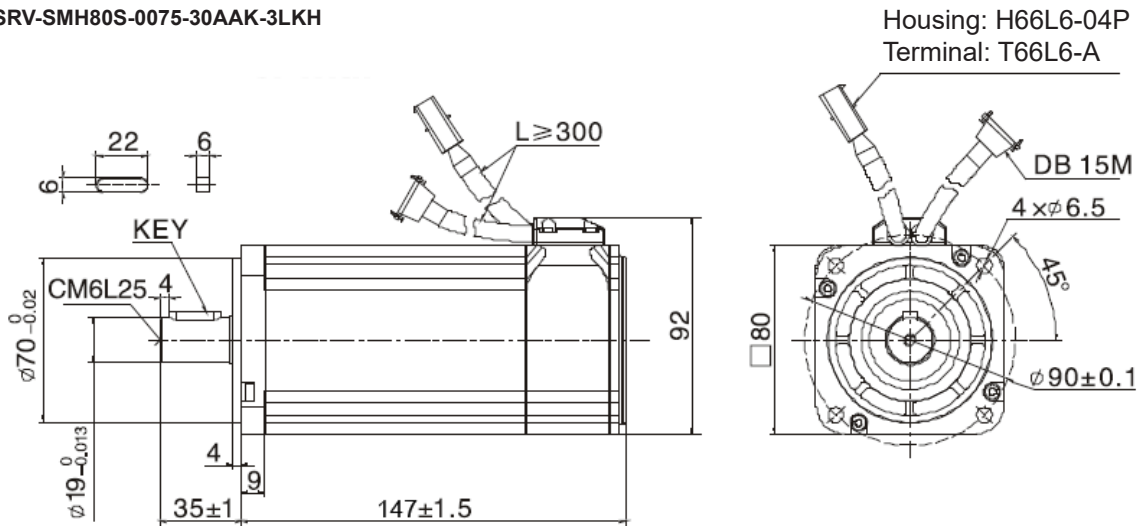
Model	KNC-SRV-SMH80S-0075-30AAK-3LKH KNC-SRV-SMH80S-0075-30ABK-3LKH KNC-SRV-SMH80S-0075-30AAK-3LKN	KNC-SRV-SMH80S-0100-30AAK-3LKH KNC-SRV-SMH80S-0100-30ABK-3LKH
Compatible Driver	KNC-SRV-FD422S-(CA/LA/AA)-000	KNC-SRV-FD432S-(CA/LA/AA)-000
DC Link Voltage (VDC)	300	300
Rated Power (W)	750	1000
Rated Torque (oz-in)	338	450
Rated Speed (RPM)	3000	3000
Max Speed (RPM)	5500	5500
Rated Current (A)	3.9	6.3
Maximum Torque (oz-in)	1015	1342
Maximum Current (A)	11.7	18.9
Standstill Torque (oz-in)	372	467
Standstill Current (A)	4.4	6.93
Resistance Line-Line (Ω)	1.4	0.86
Inductance Line-Line (mH)	7.5	4.5
Electrical Time Constant (ms)	5.35	5.23
Mechanical Time Constant (ms)	0.75	0.89
Reverse Voltage Constant K_e (V/krpm)	40	34
Torque Constant K_t (oz-in/A)	93	79
Rotor Moment of Inertia J_m (oz-in-s ²)	0.0192 0.0196 (with brake)	0.0269 0.0273 (with brake)
Brake Holding Torque (oz-in)	453.1	453.1
Pole Pair Number	3	3
Maximum Voltage Rising du/dt (KV/ μ s)	8	8
Insulation Class	F	F
Maximum Radical Force F (N)	335	335
Maximum Axial Force F (N)	167.5	167.5
Weight (lbs)	3.3 4.0 (with brake)	3.9 4.6 (with brake)
Length of Motor L (mm)	147 197 \pm 1.5 (with brake)	167 217 \pm 1.5 (with brake)
Position Feedback Device	Incremental Encoder 2500PPR	
Cooling Method	Totally Enclosed, Non-Ventilated	
Protection Level	IP65 for Body, Shaft Sealing IP54	
Environmental Conditions of Operation	Temperature	-20°C~40°C
	Humidity	Below 90% RH (No 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

*Note: Part Numbers with -30ABK are equipped with a brake.

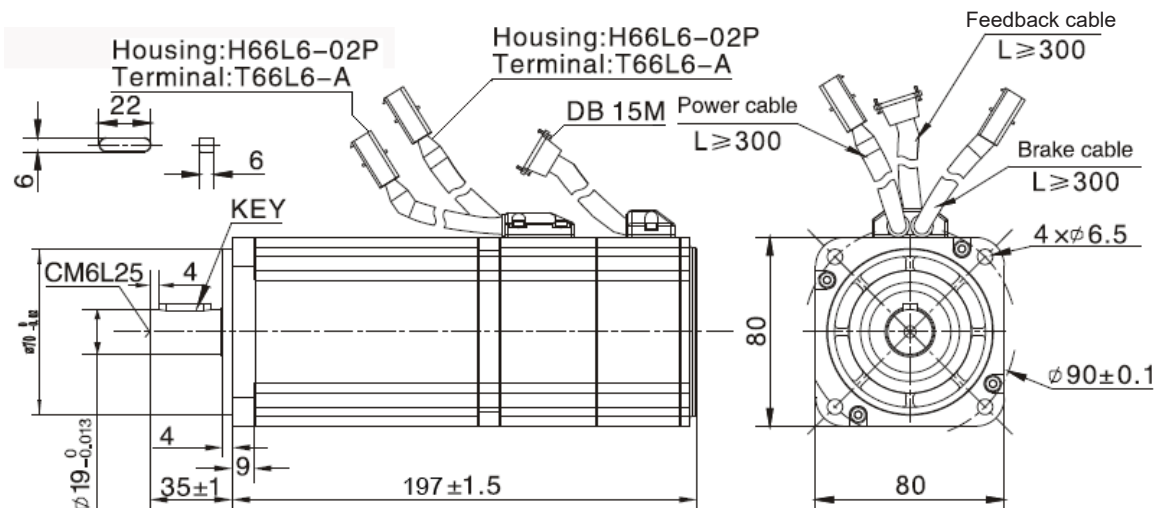
KNC-SRV-SMH80S-0075-30AAK-3LKN



KNC-SRV-SMH80S-0075-30AAK-3LKH

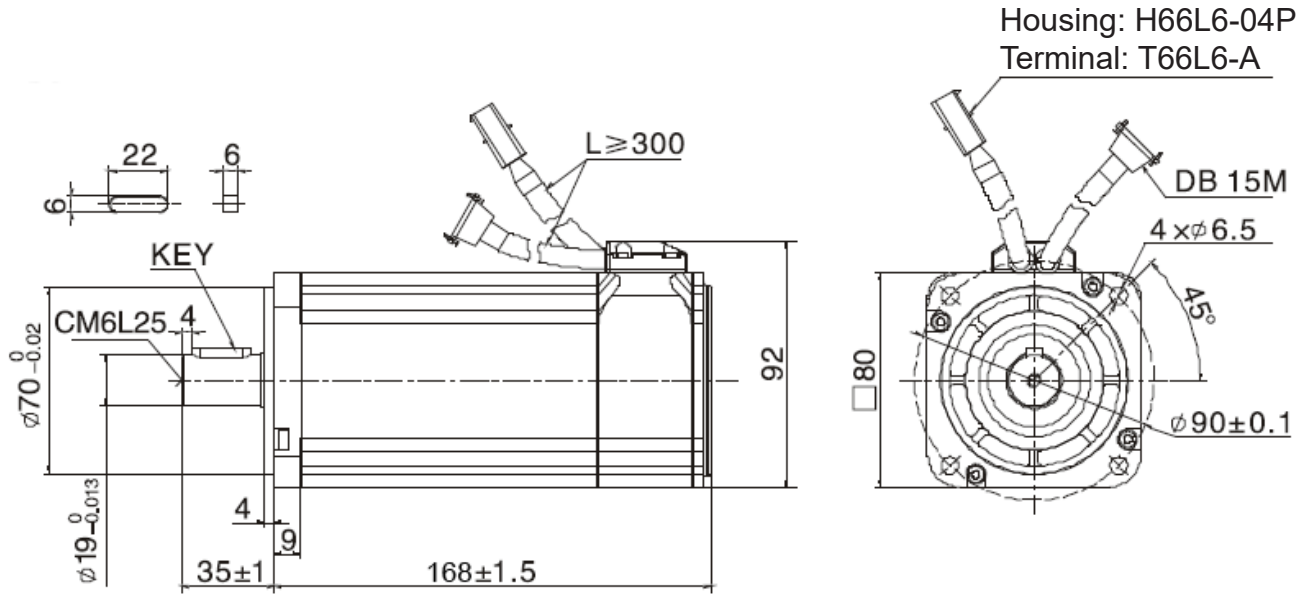


KNC-SRV-SMH80S-0075-30ABK-3LKH

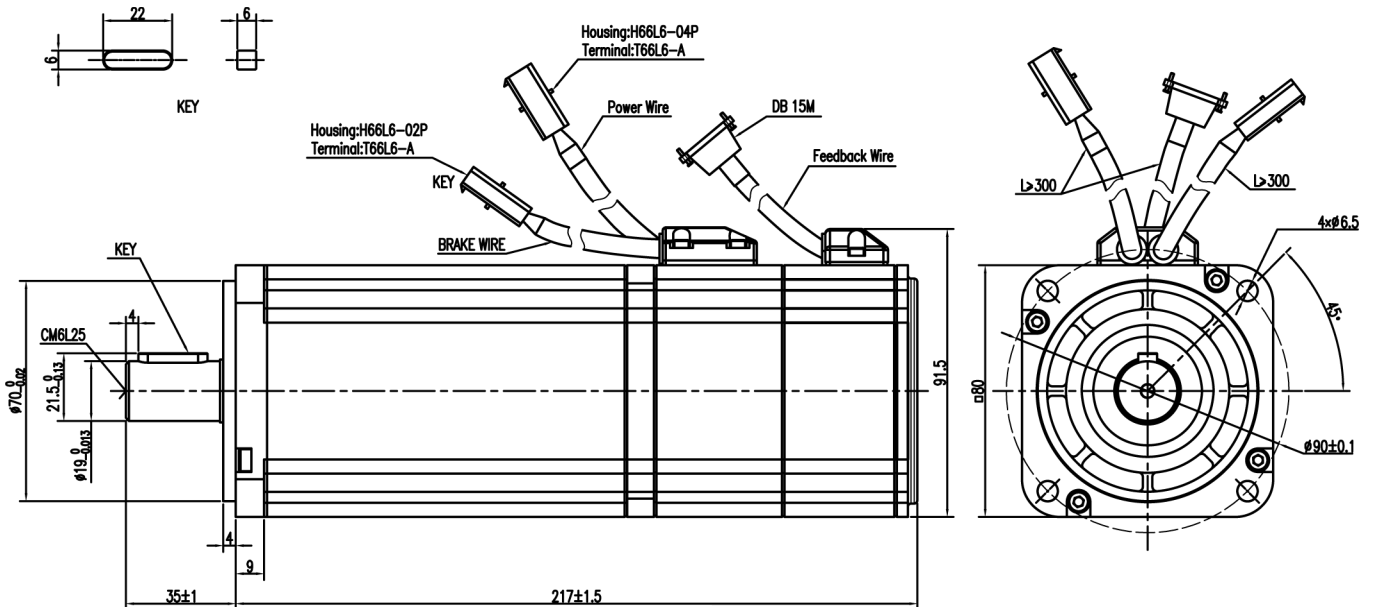


All units are in mm

KNC-SRV-SMH80S-0100-30AAK-3LKH

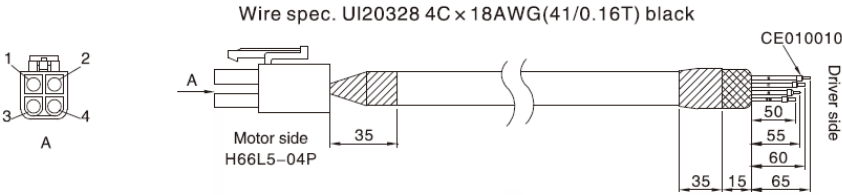


KNC-SRV-SMH80S-0100-30ABK-3LKH



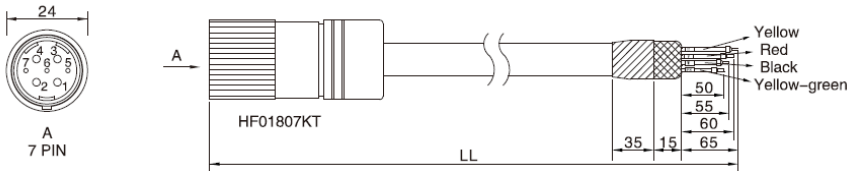
All units are in mm

MOTOR CABLE: KNC-SRV-MOT-005-05-KL for KNC-SRV-SMH80S-0075-30AAK-3LKH, KNC-SRV-SMH80S-0075-30ABK-3LKH, KNC-SRV-SMH80S-0075-30AAK-3AKH, KNC-SRV-SMH80S-0075-30ABK-3AKH



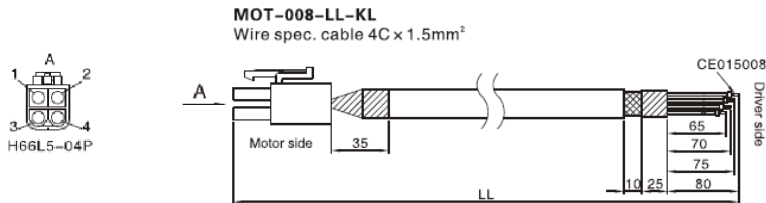
KNC-SRV-MOT-005-05-KL		
CABLE COLOR	SIGNAL	PIN ASSIGNMENT
YELLOW	U	1
RED	V	2
BLACK	W	3
YELLOW-GREEN	PE	4

MOTOR CABLE: KNC-SRV-MOT-005-05-KC0 for KNC-SRV-SMH80S-0075-30AAK-3LKN



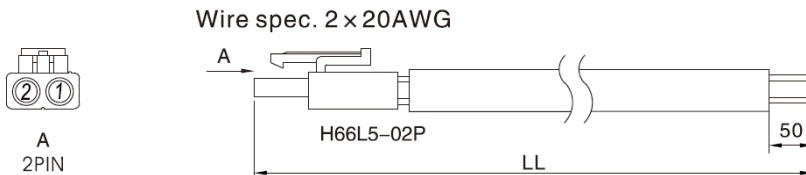
KNC-SRV-MOT-005-05-KC0		
CABLE COLOR	SIGNAL	PIN ASSIGNMENT
YELLOW	U	1
RED	V	2
BLACK	W	3
YELLOW-GREEN	PE	4
METAL-RING	SHIELD	SHIELD CABLE

MOTOR CABLE: KNC-SRV-MOT-008-05-KL for KNC-SRV-SMH80S-0100-30AAK-3LKH, KNC-SRV-SMH80S-0100-30ABK-3LKH, KNC-SRV-SMH80S-0100-30AAK-3AKH, KNC-SRV-SMH80S-0100-30ABK-3AKH



KNC-SRV-MOT-008-05-KL		
CABLE COLOR	SIGNAL	PIN ASSIGNMENT
YELLOW	U	1
RED	V	2
BLACK	W	3
YELLOW-GREEN	PE	4

BRAKE CABLE: KNC-SRV-BRA-05-KL for KNC-SRV-SMH80S-0075-30ABK-3LKH, KNC-SRV-SMH80S-0100-30ABK-3LKH, KNC-SRV-SMH80S-0075-30ABK-3AKH, KNC-SRV-SMH80S-0100-30ABK-3AKH

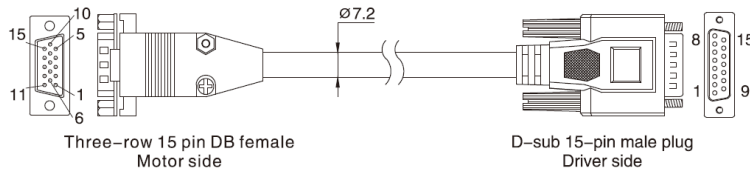


KNC-SRV-BRA-05-KL		
CABLE COLOR	SIGNAL	PIN ASSIGNMENT
RED	BRAKE+	1
BLUE	BRAKE-	2

Note: The 'LL' in the cable drawing signifies the cable length. Standard length will be 5m. Other lengths are available upon request.

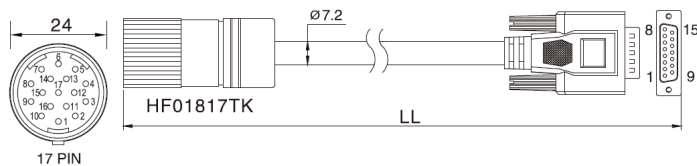
ENCODER CABLE: KNC-SRV-ENCCA-05-KH for KNC-SRV-SMH80S-0075-30AAK-3LKH, KNC-SRV-SMH80S-0075-30ABK-3LKH, KNC-SRV-SMH80S-0100-30AAK-3LKH, KNC-SRV-SMH80S-0100-30ABK-3LKH, KNC-SRV-SMH80S-0075-30AAK-3AKH, KNC-SRV-SMH80S-0075-30ABK-3AKH, KNC-SRV-SMH80S-0100-30AAK-3AKH, KNC-SRV-SMH80S-0100-30ABK-3AKH

Wire spec. 1P x 24AWG(7/0.20T)+7P x 28AWG(7/0.127T)



KNC-SRV-ENCCA-05-KH				
Three-row 15 pin DB	Two-row 15 pin DB	Signal	External Wire Color	Motor Wire Color
PIN 1	PIN 1	+5V	Red (thick)	Red
PIN 8	PIN 2	A	Orange	Blue-Black
PIN 7	PIN 3	B	Yellow	Green
PIN 6	PIN 4	Z	Green	Yellow
PIN 4	PIN 5	U	Brown	Brown-Black
PIN 10	PIN 6	V	Purple	White-Black
PIN 9	PIN 7	W	Blue	Gray-Black
PIN 2	PIN 9	GND	Black (thick)	Black
PIN 13	PIN 10	/A	Orange-White	Blue
PIN 12	PIN 11	/B	Yellow-White	Green-Black
PIN 11	PIN 12	/Z	Green-White	Yellow-Black
PIN 5	PIN 13	/U	Brown-White	Brown
PIN 15	PIN 14	/V	Purple-White	White
PIN 14	PIN 15	/W	Blue-White	Gray
PIN 3 empty	PIN 8 empty			
Metal Shell	DB Metal Shell	Shield	Shield	Metal Shell

ENCODER CABLE: KNC-SRV-ENCCA-05-KC0 for KNC-SRV-SMH80S-0075-30AAK-3LKN



KNC-SRV-ENCCA-05-KC0				
Three-row 15 pin DB	Two-row 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

Note: The 'LL' in the cable drawing signifies the cable length. Standard length will be 5m. Other lengths are available upon request.

Model	Motor Cable	Encoder Cable	Brake Cable
KNC-SRV-SMH80S-0075-30AAK-3LKH			--
KNC-SRV-SMH80S-0075-30ABK-3LKH	KNC-SRV-MOT-005-05-KL	KNC-SRV-ENCCA-05-KH	KNC-SRV-BRA-05-KL
KNC-SRV-SMH80S-0075-30AAK-3AKH			--
KNC-SRV-SMH80S-0075-30ABK-3AKH			KNC-SRV-BRA-05-KL
KNC-SRV-SMH80S-0075-30AAK-3LKN	KNC-SRV-MOT-005-05-KC0	KNC-SRV-ENCCA-05-KC0	--
KNC-SRV-SMH80S-0100-30AAK-3LKH			--
KNC-SRV-SMH80S-0100-30ABK-3LKH	KNC-SRV-MOT-008-05-KL	KNC-SRV-ENCCA-05-KH	KNC-SRV-BRA-05-KL
KNC-SRV-SMH80S-0100-30AAK-3AKH			--
KNC-SRV-SMH80S-0100-30ABK-3AKH			KNC-SRV-BRA-05-KL