

PROVEN PERFORMANCE
Our customers span over 70 countries and cover diverse markets and industries.



iSMK

Integrated Servo Drive Motor



- Compact body

Highly integrated motor, driver, encoder and brake in one;Flexible installation, no additional cables required, convenient application
- Adapt to harsh environments

D000 Model(IP65) : -20℃~40℃
FT00 Model(IP67) : -40℃~40℃

General Specifications

- Wide power supply range

Support 24 ~ 60VDC wide voltage
- More power options

100W ~750W optional
- High safety performance

A variety of safety protection measures such as overvoltage protection, Under-voltage protection, short-circuit protection, motor overheating (i²T) protection, and driver overheating protection
- Strong overload capability

With 3 times overload capacity
- Wide range of communication methods

Supports RS232、CANopen、Modbus RTU、EtherCAT etc

Application industry

Applicable Industry : Loaistics robots, Logistics equipment, Medical devices,Other occasionsrequiring high response speed and high positioning accuracy

Naming Rules

Model: iSMK 60-040-DMAK-AA-000-D000

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①-Series name	iSMK : iSMK Integrated servo motor	⑥-Brake	A:Without brake B:With brake
②-Flange	40 : 40x40(mm) 60 : 60x60(mm) 80 : 80x80(mm)	⑦-Output axis style	K: With key
③-Rated power	010:10x10(W) 020:20x10(W) 040:40x10(W) 075:75x10(W)	⑧ -Contro mode	AA:RS485、CANopen、Not pulse、24V logic power supply EA:RS485、EtherCAT、Not pulse、24V logic power supply
④- Supply voltage:	D : Input Voltage DC24～60V	⑨-Software version number	000:Software version number
⑤-Encoder type	M:Single turn communication type magnetoelectric encoder	⑩-Model	D000: IO upgrade model (IP65) FT00:High protection(IP67)+Low temperatuere resistatt model

Note: The oil seal is an optional accessory, and it can be omitted if it is not necessary.

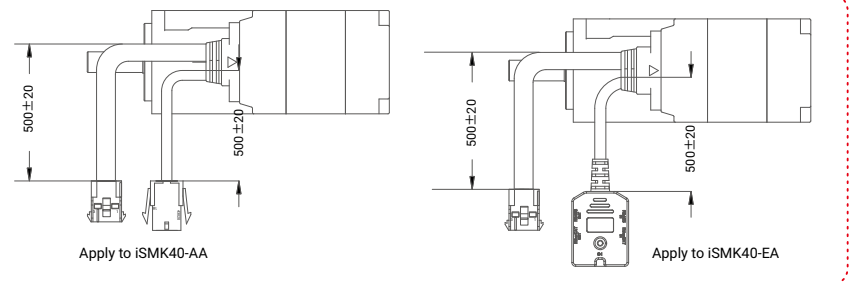
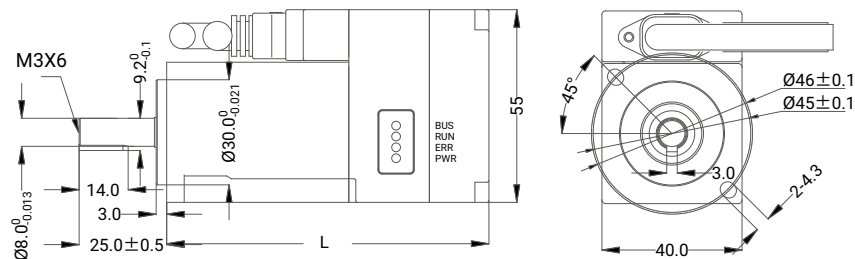
iSMK integrated servo drive motor technical parameter

Model parameter		iSMK integrated servo drive motor technical parameters			
		iSMK40-010-DM■K□A-000-D000	iSMK60-020-DM■K□A-000-D000 iSMK60-020-DM■K-AA-000-FT00	iSMK60-040-DM■K□A-000-D000 iSMK60-040-DM■K-AA-000-FT00	iSMK80-075-DM■K□A-000-D000 iSMK80-075-DM■K-AA-000-FT00
Input	Power (VDC)	24V～60V			
	Built-in Fuse	Null			
	Logic power (VDC)	24V,1A			
Output	Maximum continuous output current (Arms)	4	7	12	23
	Peak current (AP)	18	24	48	100
Duty		S3-10min-60% (intermittent periodic duty ,cycle time 10min , 60% working time) ;S1 (continuous duty) torque must be derated to 70%			
Motor part	Rated power Pn(W)	100	200	400	750
	Rated speed n _r (rpm)	3000	3000	3000	3000
	Rated torque Ts(N.m)	0.32	0.64	1.27	2.39
	Maximum torque Tm(N.m)	0.96	1.92	3.81	7.17
	Rotational inertia	0.044	0.17	0.31	0.85
		Jm(Kg・cm ²)	0.046 (With brake)	0.174 (With brake)	0.314 (With brake)
Logic loss power (mW)		900			
Energy consumption brake		There is no brake circuit inside the driver, and an external brake module is required			
Overvoltage alarm voltage		The default is 68V±2V			
Undervoltage alarm voltage		The default is 18V±2V			
Cooling mode		Natural cooling			
General function	Input specification	iSMK40 2 digital inputs , iSMK60&80 4 digital inputs ; High: 12.5VDC～30VDC. Low: 0VDC～5VDC. Input impedance: 5KΩ. Input frequency: <1KHz			
	Input function	Freely defined as required, the functions are as follows: drive enable, drive error reset, drive mode control, speed loop proportional control, positive limit, negative limit, origin signal, command reverse, internal speed segment control, internal position segment control, emergency stop, start to find the origin, command activation, electronic gear ratio switching, gain switching			
	Output specification	1 digital output, OUT1 for the open collector output, the highest voltage 30V, driving capacity of 100mA			
	Output function	Freely defined according to needs, the functions are as follows: driver ready, driver error, motor position to, motor zero speed, motor lock brake, motor speed to, index Z signal appears, maximum limit speed in torque mode, motor lock shaft, motor limit medium, origin finding			
	Protect function	Overvoltage protection, undervoltage protection, motor overheat (I ² T) protection, short circuit protection, drive overheat protection			
Bus function	Modbus/RS485	Supports up to 115.2 Kbps and communicates with the controller via the Modbus RTU protocol			
	CANopen	Supports up to 1 Mbps and communicates with the controller via the CANopen protocol			
	EtherCAT	Support CoE(CiA402 protocol)and CSP/CSV/PP/PV/PT/HM mode , communication speed 100Mbps			
Apply environment	Working Temperature	D000 Model : -20℃～40℃ (no freezing) , FT00 Model : -40℃～40℃ (no freezing) When the operating temperature exceeds 40℃, the driver needs to be derated			
	Storage temperature	Short-term storage (within 1 month) : -20～65℃ , Long-term storage (within 1 month) : -20～65℃			
	Storage humidity	90%RH (no condensation)			
	Installation method	Motor flange installation (vertical side installation)			
	Protection grade	D000 Model : IP65, shaft end IP54;FT00 Model : IP67, shaft end IP54			
	Altitude	The rated working altitude is less than 1000 meters above sea level. When the working altitude is higher than 1000 meters, it is necessary to reduce the rated value by 1.5% for every 100 meters of elevation. The maximum working altitude is 3000 meters above sea level.			
	Atmospheric pressure	67kpa～106kpa			

Note : ■=A : Without brake □=A: RS485、CANopen
 =B : With brake (Power supply =E: RS485、EtherCAT
 conversion, external unlocking.)

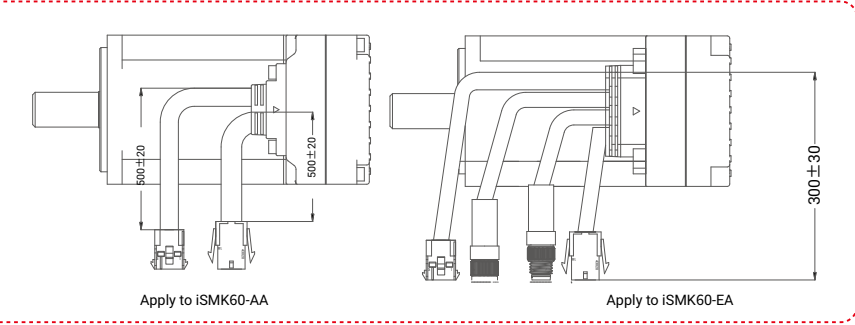
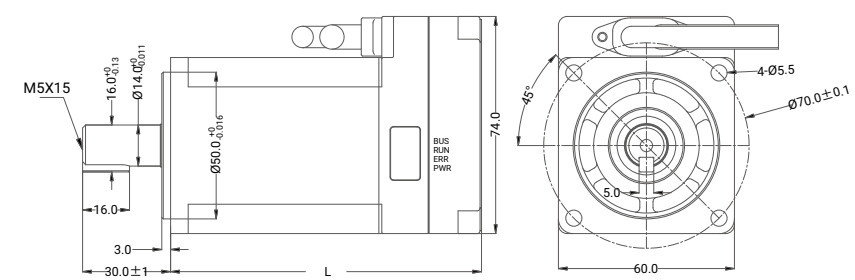
iSMK integrated servo drive motor mechanical dimension

iSMK40-010-DM ■K-□A-000-D000 (Unit:mm)



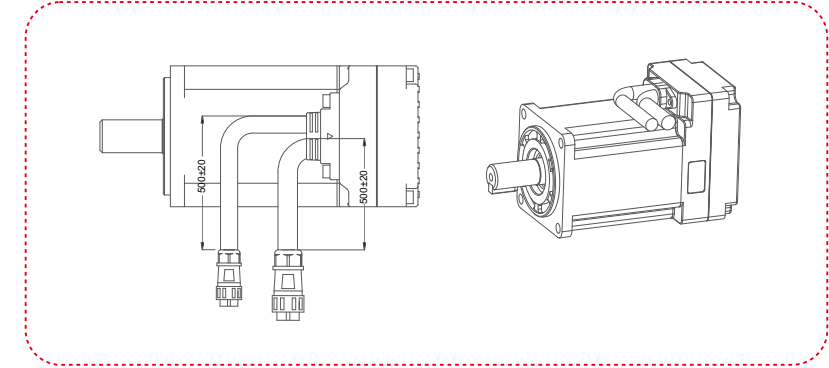
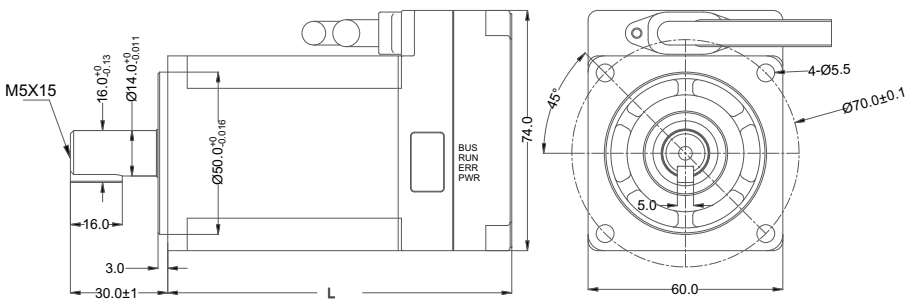
iSMK40 series model	With brake	Weight(kg)	Motor body size L (mm)
iSMK40-010-DMAK-AA-000-D000		0.6	92
iSMK40-010-DMBK-AA-000-D000	✓	0.8	126
iSMK40-010-DMAK-EA-000-D000		0.7	92
iSMK40-010-DMBK-EA-000-D000	✓	0.9	126

iSMK60-020/040-DM ■K-□A-000-D000 (Unit:mm)



iSMK integrated servo drive motor mechanical dimension

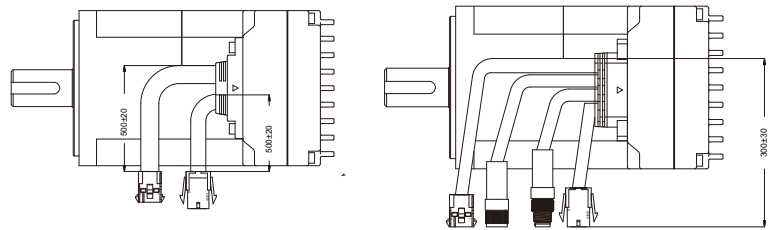
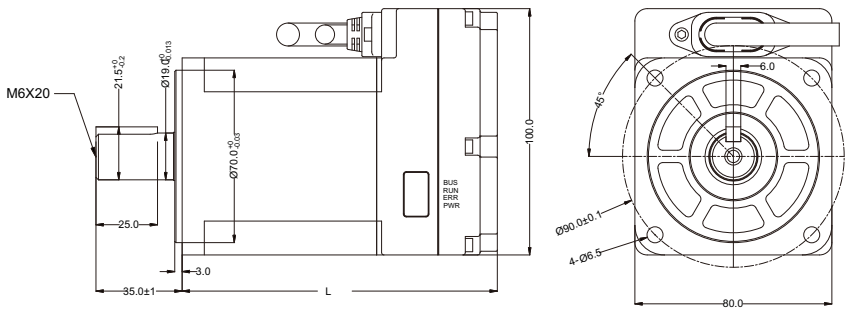
iSMK60-020/040-DM ■K-AA-000-FT00 (unit:mm)



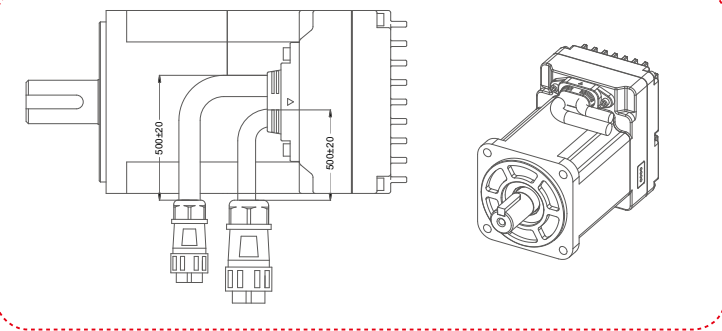
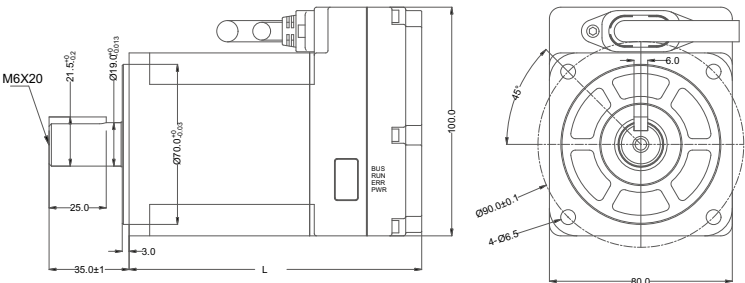
iSMK60 series model	With brake	Weight(kg)	Motor body size L (mm)
iSMK60-020-DMAK-AA-000-D000	✓	1.1	88
iSMK60-020-DMAK-AA-000-FT00			
iSMK60-020-DMBK-AA-000-D000	✓	1.6	127.5
iSMK60-020-DMBK-AA-000-FT00			
iSMK60-020-DMAK-EA-000-D000		1.3	88
iSMK60-020-DMBK-EA-000-D000	✓	1.9	127.5
iSMK60-040-DMAK-AA-000-D000		1.3	106
iSMK60-040-DMAK-AA-000-FT00		1.5	
iSMK60-040-DMBK-AA-000-D000	✓	1.8	145.5
iSMK60-040-DMBK-AA-000-FT00		2	
iSMK60-040-DMAK-EA-000-D000		1.6	106
iSMK60-040-DMBK-EA-000-D000	✓	2.1	145.5

iSMK integrated servo drive motor mechanical dimension

iSMK80-075-DM ■ K-□ A-000-D000 (Unit : mm)



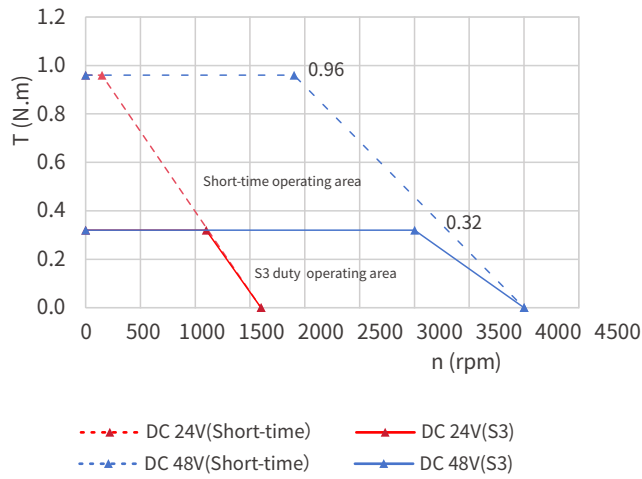
iSMK80-075-DM ■ K-AA-000-FT00 (unit : mm)



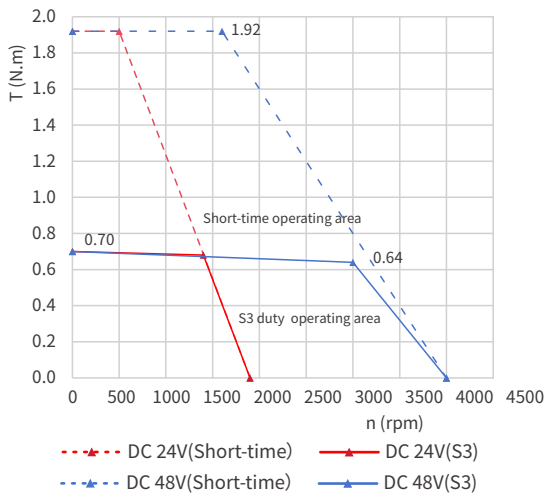
iSMK80 series model	With brake	Weight(kg)	Motor body size L (mm)
iSMK80-075-DMAK-AA-000-D000		2.5	128
iSMK80-075-DMAK-AA-000-FT00		2.7	128
iSMK80-075-DMBK-AA-000-D000	√	3	158
iSMK80-075-DMBK-AA-000-FT00	√	3.2	158
iSMK80-075-DMAK-EA-000-D000		2.8	128
iSMK80-075-DMBK-EA-000-D000	√	3.3	158

iSMK integrated servo drive motor torque characteristic curve

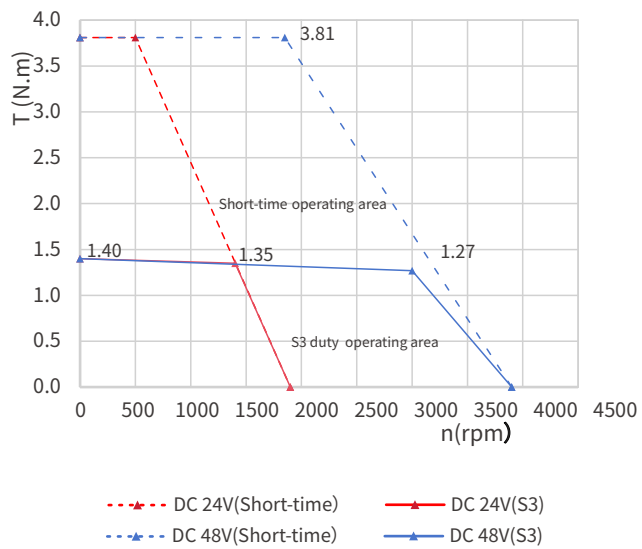
iSMK40 (100W)



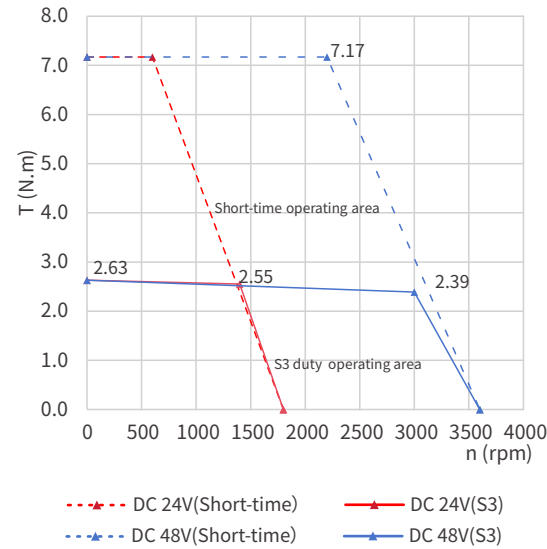
iSMK60 (200W)



iSMK60 (400W)



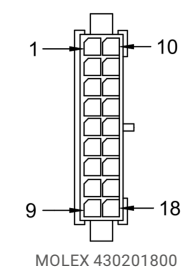
iSMK80 (750W)



iSMK integrated servo drive motor connection port description

D000 Model interface description

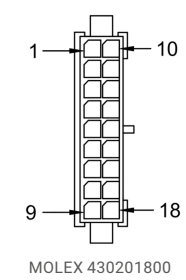
iSMK40-AA
communication
terminal definition



A			B		
PIN	Signal	Color	PIN	Signal	Color
1	24V	Red	10	GND	Black
2	/	/	11	GNDC	Purple and black
3	CANH	Outer lead A	12	CANL	Outer lead C
4	CANH	Blue and black+ Outer lead A	13	CANL	Blue+ Outer lead C
5	RS485A	Outer lead B	14	RS485B	Outer lead D
6	RS485A	Orange and black+ Outer lead B	15	RS485B	Orange+ Outer lead D
7	OUT1+	Yellow and black	16	COMO	Yellow
8	COMI	White	17	DI1	Green
9	/	/	18	DI2	White and black

Note: Kinco EXC-iGMK-AA-A6 external cable can be purchased

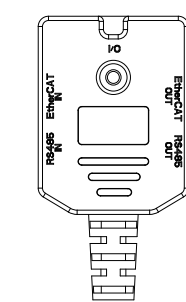
iSMK60&80-AA
communication
terminal definition



A			B		
PIN	Signal	Color	PIN	Signal	Color
1	24V	Red	10	GND	Black
2	DI4	Purple	11	GNDC	Purple and black
3	CANH	Blue and black	12	CANL	Blue
4	CANH	Blue and black	13	CANL	Blue
5	RS485A	Orange and black	14	RS485B	Orange
6	RS485A	Orange and black	15	RS485B	Orange
7	OUT1+	Yellow and black	16	COMO	Yellow
8	COMI	White	17	DI1	Green
9	DI3	Green and black	18	DI2	White and black

Note: Kinco EXC-iGMK-AA-A6 external cable can be purchased

iSMK40-EA
communication
terminal definition



A		B	
PIN	Signal	PIN	Signal
1	24V	10	GND
2	/	11	GNDC
3	/	12	/
4	/	13	/
5	RS485A	14	RS485B
6	RS485A	15	RS485B
7	OUT1+	16	COMO
8	COMI	17	DI1
9	/	18	DI2

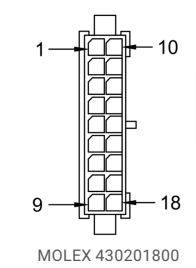
Note: Kinco EXC-iGMK-AA-A6 external cable can be purchased
(Pins 3, 4, 12, 13 of the iSMK-EA series are empty, and the corresponding color cable of these four pins of the external cable can be ignored.)

	PIN	RS485 IN/RS485 OUT	EtherCAT IN	EtherCAT OUT
1	/	/	IN TX+	OUT TX+
2	/	/	IN TX-	OUT TX-
3	/	/	IN RX+	OUT RX+
4	GND_C	/	/	/
5	RS485B	/	/	/
6	RS485A	IN RX-	OUT RX-	/
7	/	/	/	/
8	/	/	/	/

iSMK integrated servo drive motor connection port description

D000 Model interface description

iSMK60&80-EA
communication
terminal definition



A		B	
PIN	Signal	PIN	Signal
1	24V	10	GND
2	DI4	11	GNDC
3	/	12	/
4	/	13	/
5	RS485A	14	RS485B
6	RS485A	15	RS485B
7	OUT1+	16	COMO
8	COMI	17	DI1
9	DI3	18	DI2

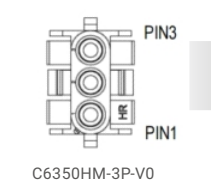
Note: Kinco EXC-iGMK-AA-A6 external cable can be purchased
(Pins 3, 4, 12, 13 of the iSMK-EA series are empty, and the corresponding color cable of these four pins of the external cable can be ignored.)

	PIN	Signal
M8-PD4 male	1	IN TX+
	2	IN RX+
	3	IN TX-
	4	IN RX-
Note: Kinco M8SD4-RJ45-LL-F and M8SD4-M8PD4-LL-F external cable can be purchased		
M8-SD4 female	1	OUT TX+
	2	OUT RX+
	3	OUT TX-
	4	OUT RX-
Note: Kinco M8PD4-RJ45-LL-F, M8PD4-M8PD4-LL-F and M8SD4-M8PD4-LL-F external cable can be purchased		

IO signal description

Signal	Function description
24V	24V logic power input;The logic power supply is an optional option. When using the logic power supply, ensure that the power supply and logic are completely isolated. If the system power supply is not isolated, the logical ground cable is not connected. The logic power supply is connected at DC- and 24V
GND	Logic electrical reference ground
CANH	CAN signal positive end (only the iSMK-AA series has this pin)
CANL	CAN signal negative end (only the iSMK-AA series has this pin)
RS485A	RS485 data positive end
RS485B	RS485 data negative end
DI1	Digital signal input, COMI terminal; High level: 12.5 ~ 30VDC Low level: 0 ~ 5VDC Input impedance: 5KΩ Maximum frequency: 1KHz
DI2	
DI3	
DI4	
COMO	Digital signal output common end
COMI	Digital signal input common end
OUT1+	Digital signal output, OUT1 for the open collector output, the highest voltage 30V, driving capacity of 100mA

Power
terminal definition

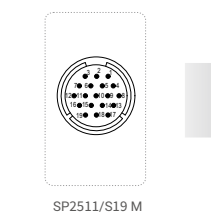


PIN	Signal	Color
1	48V+	Red
2	/	/
3	48V-	Black

Note: Kinco EXC-iGMK-AA-A6 external cable can be purchased

FT00 Model interface description

iSMK60&80-AA
communication
terminal definition



PIN	Signal	Color	PIN	Signal	Color
1	24V	Red	11	GNDC	Purple-Black
2	DI4	Purple	12	CANL	Blue
3	CANH	Blue-Black	13	CANL	Blue
4	CANH	Blue-Black	14	RS485B	Orange
5	RS485A	Orange-Black	15	RS485B	Orange
6	RS485A	Orange-Black	16	COMO	Yellow
7	OUT1+	Yellow-Black	17	DI1	Green
8	COMI	White	18	DI2	Black-White
9	DI3	Green-Black	19	PE	/
10	GND	Black	/	/	/

Power
terminal definition



PIN	Signal	Color
1	48V+	Red
2	48V-	Black
3	PE	/

Note: Kinco EXC-iGMK-AA-LL-SP external cable can be purchased

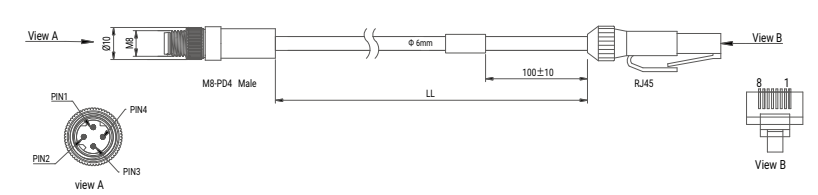
IO signal description

Signal	Function description
24V	24V logic power input;The logic power supply is an optional option. When using the logic power supply, ensure that the power supply and logic are completely isolated. If the system power supply is not isolated, the logical ground cable is not connected. The logic power supply is connected at DC- and 24V
GND	Logic electrical reference ground
CANH	CAN signal positive end (only the iSMK-AA series has this pin)
CANL	CAN signal negative end (only the iSMK-AA series has this pin)
RS485A	RS485 data positive end
RS485B	RS485 data negative end
DI1	Digital signal input, COMI terminal; High level: 12.5 ~ 30VDC Low level: 0 ~ 5VDC Input impedance: 5KΩ Maximum frequency: 1KHz
DI2	
DI3	
DI4	
COMO	Digital signal output common end
COMI	Digital signal input common end
OUT1+	Digital signal output, OUT1 for the open collector output, the highest voltage 30V, driving capacity of 100mA

Attachment

M8PD4-RJ45-LL-F

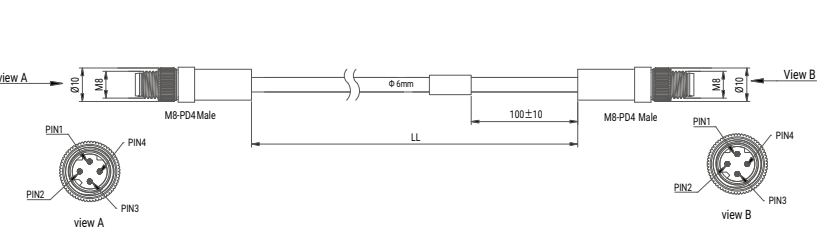
Wire spec:2P*26AWG,Shielding, drag chain 10 million times
Optional line length:0.5m,1.5m,3m,5m



Signal	M8-PD4 Male	Color	RJ45
TX+	1	White-Orange	1
RX+	2	White-Green	3
TX-	3	Orange	2
RX-	4	Green	6

M8PD4-M8PD4-LL-F

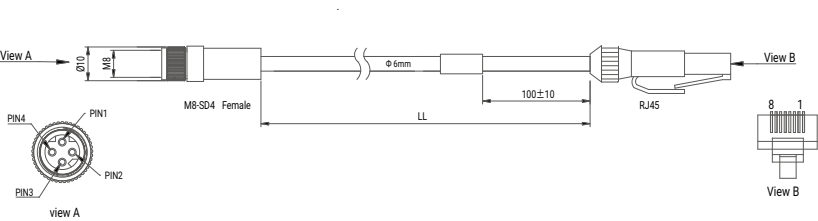
Wire spec:2P*26AWG,Shielding, drag chain 10 million times
Optional line length:0.5m,1.5m,3m,5m



Signal	M8-PD4 Male	Color	M8-PD4 Male
TX+	1	White-Orange	1
RX+	2	White-Green	2
TX-	3	Orange	3
RX-	4	Green	4

M8SD4-RJ45-LL-F

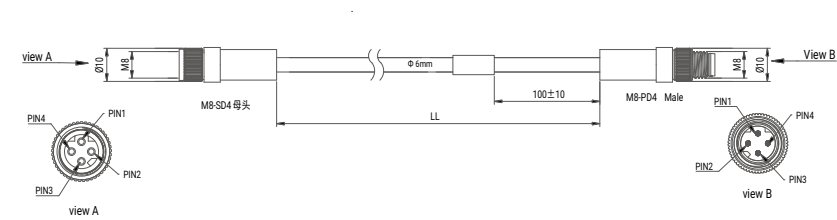
Wire spec:2P*26AWG,Shielding, drag chain 10 million times
Optional line length:0.5m,1.5m,3m,5m



Signal	M8-SD4 Female	Color	RJ45
TX+	1	White-Orange	1
RX+	2	White-Green	3
TX-	3	Orange	2
RX-	4	Green	6

M8SD4-M8PD4-LL-F

Wire spec:2P*26AWG,Shielding, drag chain 10 million times
Optional line length:0.5m,1.5m,3m,5m

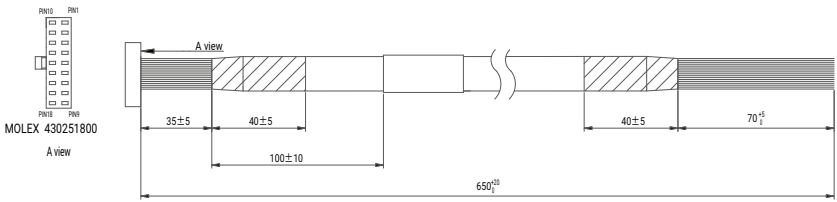


Note: The M8SD4-M8PD4-LL-F is a straight-through cable with a one-to-one pin assignment, enabling direct interchangeability of its connectors.

Attachment

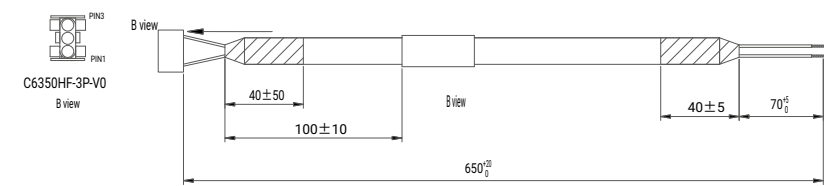
EXC-iGMK-AA-A6

Communication terminal cable:
Wire spec:10P*28AWG



Signal	MOLEX 430251800	Color
24V	1	Red
DI4	2	Brown
CANH	3	Light Green
CANH	4	Pink
RS485A	5	Yellow
RS485A	6	Gray
OUT1+	7	Purple
COMI	8	White-Brown
DI3	9	White-Green
GND	10	Black
GNDC	11	Blue
CANL	12	Light Blue
CANL	13	White-Black
RS485B	14	Green
RS485B	15	White
COMO	16	Orange
DI1	17	White-Red
DI2	18	White-Orange

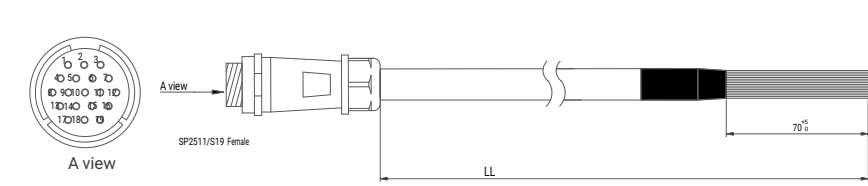
Power cable:
Wire spec:2*14AWG, Shielding Drag Chain



Signal	C6350HM-3P-V0	Color
48V+	1	Red
/	2	/
48V-	3	Black

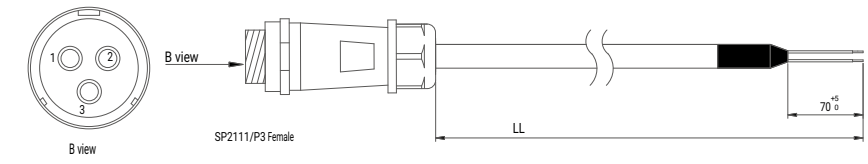
EXC-ixMK-AA-LL-SP

Communication terminal cable:
Wire spec:10P*28AWG



Signal	SP2511/S19 Female	Color
24V	1	Red
DI4	2	Brown
CANH	3	Light Green
CANH	4	Pink
RS485A	5	Yellow
RS485A	6	Gray
OUT1+	7	Purple
COMI	8	White-Brown
DI3	9	White-Green
GND	10	Black
GNDC	11	Blue
CANL	12	Light Blue
CANL	13	White-Black
RS485B	14	Green
RS485B	15	White
COMO	16	Orange
DI1	17	White-Red
DI2	18	White-Orange

Power cable:
Wire spec:2*14AWG, Shielding, 5 million times



Signal	SP2111/S3 Female	Color
48V+	1	Red
48V-	2	Black
Shielding	3	Shielding wire