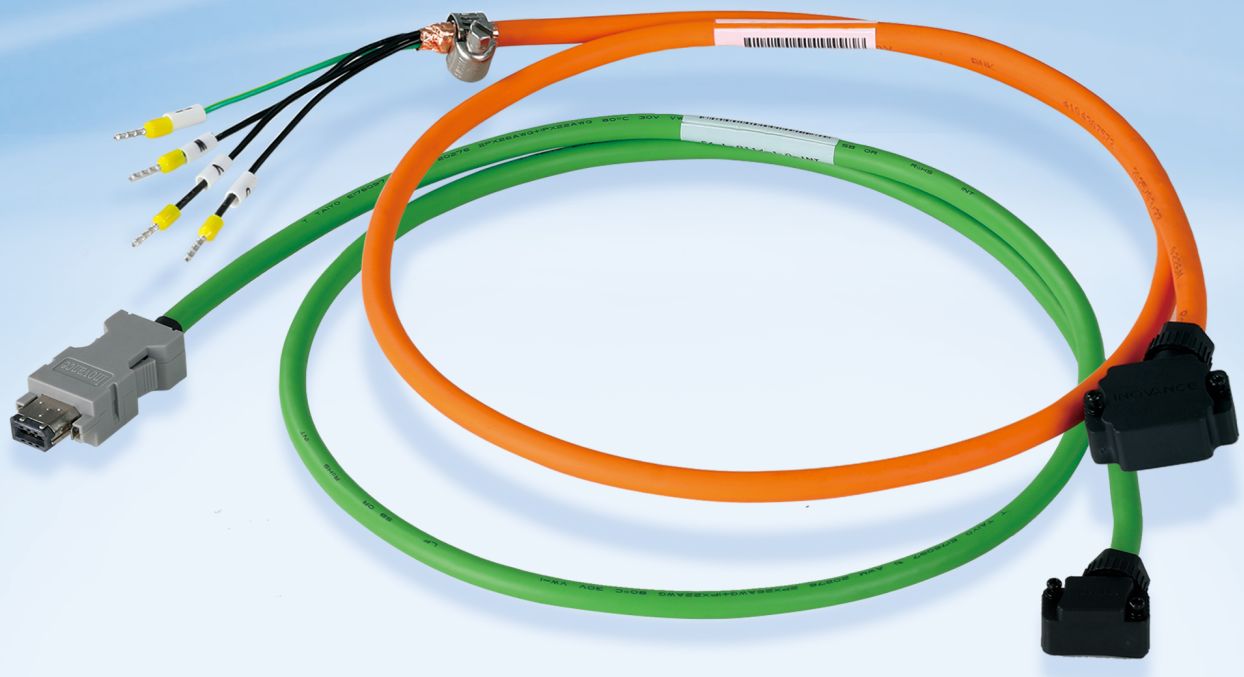
INOVANCE

S6-L-INT Series
Servo Connection Cable



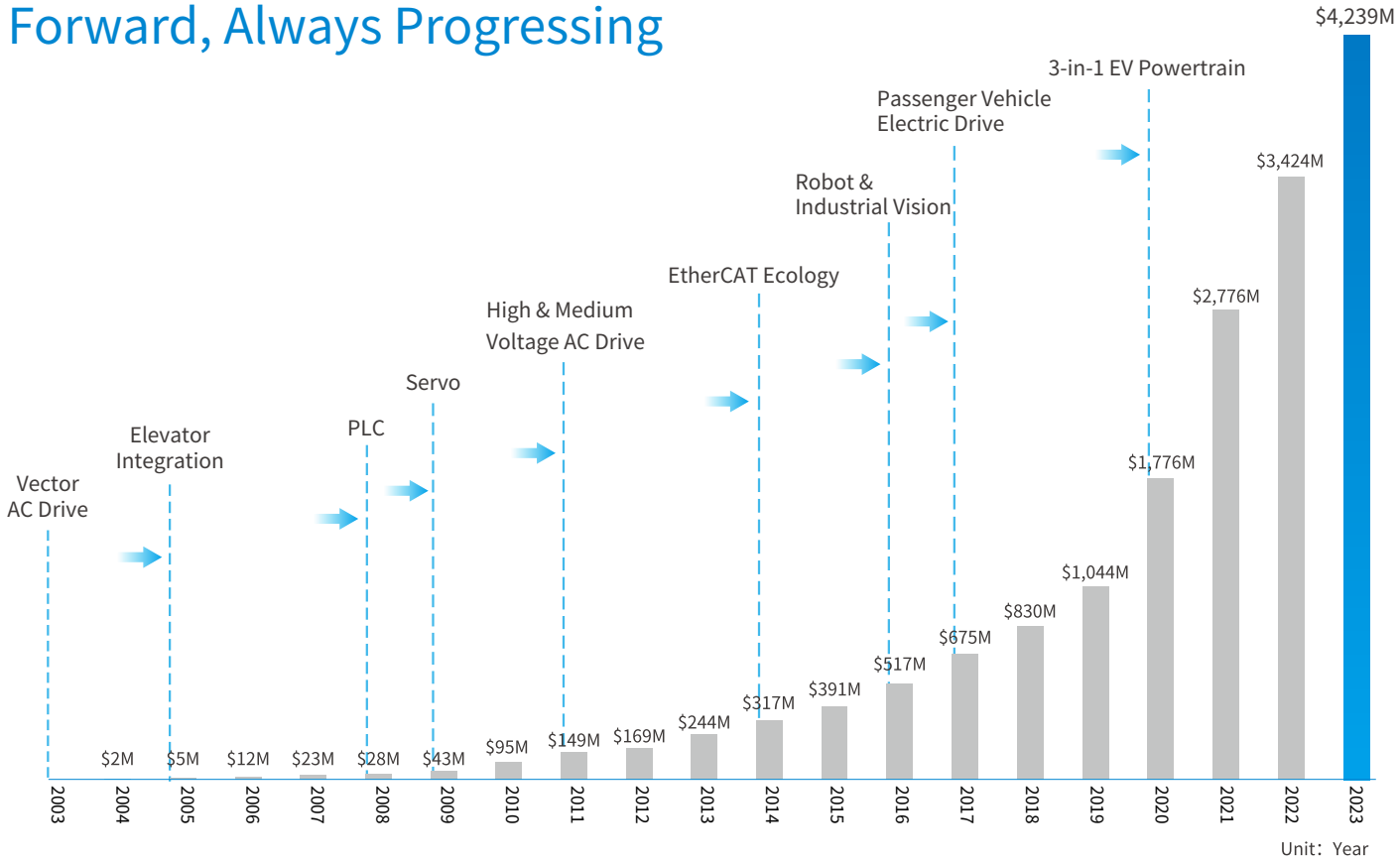


About Inovance

The Inovance Group, founded in 2003, is a rising star in the global industrial automation business and has revenues of $4.2 in 2023. Inovance is headquartered in Shenzhen, China, and has built a global operation with offices and facilities in Germany, France, Italy, Spain, Turkey, India, and South Korea. Additionally, the company has a strong network of distribution partners around the world.

The company 's flexible production techniques and expert understanding of all industry sectors - from plastics to printing to packaging to iron & steel production - have allowed it to establish globally leading industry-specific business units. Over the years, Inovance has built an engineering team with specialist expertise in industrial automation. This knowledge allows it to form strong partnerships with OEMs and end users, providing ongoing advice about how to get the most out of their automation solutions today, and how to stay prepared for the market and technology changes that are coming in future.

Forward, Always Progressing



2003
founded

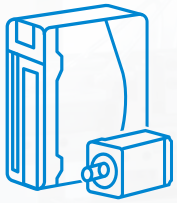
IPO:2010
Shenzhen, China

20,000
employees

Global
network of offices and distributors

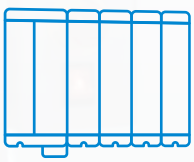
$4.2+bn
revenues in 2023

Servo System



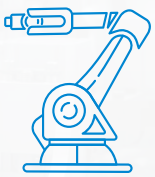
4,500,000+
sets delivered in 2023

AC Drive



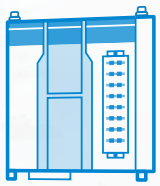
2,20,000+
sets delivered in 2023

Industrial Robot



22,000+
sets delivered in 2023

Controller



3,400,000+
sets delivered in 2023

INOVANCE Cable Factory Introduction

INOVANCE BNK Cable Co., Ltd., founded in 1998, is a professional manufacturer of elevator and servo cables, as well as cable harness processing. It joined INOVANCE in 2019 and is now a wholly-owned subsidiary of INOVANCE.

Manufacture Overview

The factory strictly controls every production process through measures such as real-time online monitoring of critical parameters during manufacturing and automated production lines enabling seamless integration of order and product information, ensuring the highest quality of products. The quality management process meets the requirements of EN ISO 9001.









Technology and Qualification Overview

Through continuous innovation, the company has developed lightweight Mini elevator traveling cables, high-flame-retardant, low-smoke and halogen-free eco-friendly elevator cables, as well as various other innovative modular products and solutions. The company has obtained 56 cable-related patents.



Meets approvals such as CE/UL/ROHS/China CCC.













Product Overview

The S6-L-INT series servo system connection cable is suitable for connecting SV series servo drivers with MS1 series motors. The cables in this Selection Guide have been tested with our servo-system, guaranteeing the highest level of performance and quality. S6-L-INT series product includes two types of fixed installation and flexible installation, which can be applied to various different processing and production machinery.



Compliance with standards

High reliability

- Power and encoder cable with shield to enhance EMC characteristic.
- Degree of protection IP67 (motor side when mated and locked).
- Number of bending cycles for flexible cable ⩾ 10 000 000.

Easy to use

- Easy to plug-in.
- Options for terminal-type connector with front or rear outlet .
- Circular metal connector can adjust the cable routing by 360° .

Harsh resistance environment

- Oil resistance and flame-retardant meet approvals such as UL and CE
- 10g Strength of vibration resistance

Model Description

Power cable model

S6-L-M 0 0 1 - 3.0 - T - INT

① ② ③ ④ ⑤ ⑥ ⑦

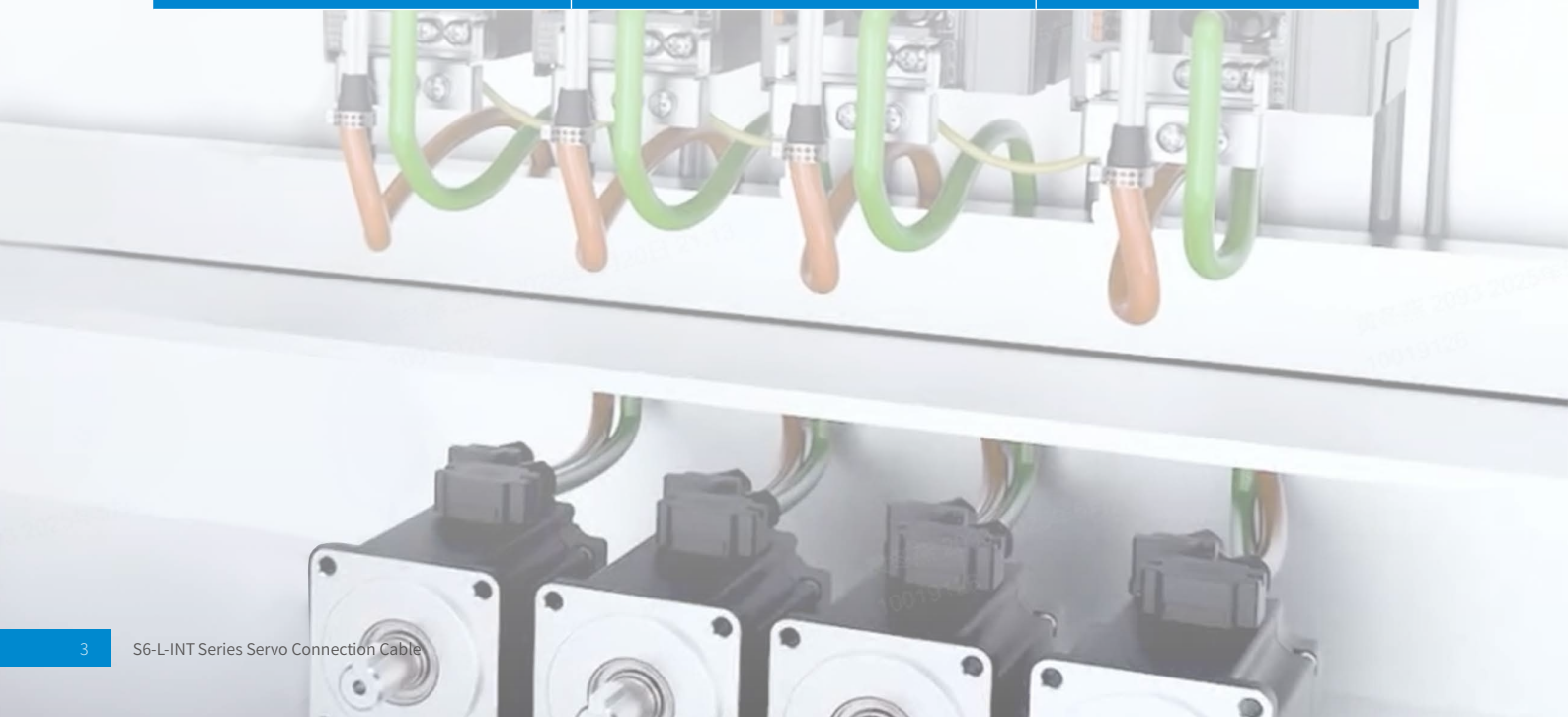
① Servo system power cable B: With brake M: Without brake	③ Applicable power of the motor 0: Frame sizes 40/60/80 1: Frame sizes 100/130/180 2: Frame size 180 (motors of 4.4kW and above)	⑤ Cable length (m) 3.0: 3 5.0: 5 10.0: 10
② Connector type at drive side 0: U-shaped cable lug 1: Pin-shaped cable lug	④ Connector type at motor side 1: 9-core aviation connector 2: 6-core aviation connector 7: Specified connector for FS 40/60/80mm motor (front outlet) 8: Specified connector for FS 40/60/80mm motor (rear outlet)	⑥ Special requirements Null: Non-flexible T: Flexible cables ⩾ 10 million bendings ⑦ Version INT: Global version

Encoder cable model

S6-L-P 1 2 1 - 3.0 - T - INT

① ② ③ ④ ⑤ ⑥ ⑦

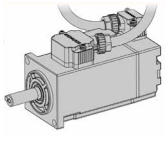
① Servo system encoder cable ② Connector type at drive side 1: 1394 Connector (6pin plug)	④ Connector type at motor sider 1: 9-core aviation connector 4: Specified connector for FS 40/60/80mm motor (front outlet) 5: Specified connector for FS 40/60/80mm motor (rear outlet)	⑥ Special requirements Null: Non-flexible T: Flexible cables ⩾ 10 million bendings
③ Encoder 1: Communication-type incremental encoder 2: Multi-turn absolute encoder	⑤ Cable length(m) 3.0: 3m 5.0: 5m 10.0: 10m	⑦ Version INT: Global version



Power Cables With Terminal Connector

S6-L***-INT Terminal connector type for MS1 series of frame size 40mm/60mm/80mm motors				
Product pictures exmp				
Cable category	Power cable with terminal connector, without braking lead		Power cable with terminal connector, with braking lead	
Cable types	Fixed installation	Flexible installation	Fixed installation	Flexible installation
Insulation material	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Outer jacket	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Recommended drive types	SV630/SV660/SV670/SV680 1 AC / 3 AC 200~240V		SV630/SV660/SV670/SV680 1 AC / 3 AC 200~240V	
Recommended motor types	MS1H1 and MS1H4 type motor,power range 0.05kW~1kW		MS1H1 and MS1H4 type motor,power range 0.05kW~1kW	
Cable model [1]	S6-L-M107-3.0-INT (Front outlet) S6-L-M107-5.0-INT (Front outlet) S6-L-M107-10.0-INT (Front outlet) S6-L-M108-3.0-INT (Rear outlet) S6-L-M108-5.0-INT (Rear outlet) S6-L-M108-10.0-INT (Rear outlet)	S6-L-M107-3.0-T-INT (Front outlet) S6-L-M107-5.0-T-INT (Front outlet) S6-L-M107-10.0-T-INT (Front outlet) S6-L-M108-3.0-T-INT (Rear outlet) S6-L-M108-5.0-T-INT (Rear outlet) S6-L-M108-10.0-T-INT (Rear outlet)	S6-L-B107-3.0-INT (Front outlet) S6-L-B107-5.0-INT (Front outlet) S6-L-B107-10.0-INT (Front outlet) S6-L-B108-3.0-INT (Rear outlet) S6-L-B108-5.0-INT (Rear outlet) S6-L-B108-10.0-INT (Rear outlet)	S6-L-B107-3.0-T-INT (Front outlet) S6-L-B107-5.0-T-INT (Front outlet) S6-L-B107-10.0-T-INT (Front outlet) S6-L-B108-3.0-T-INT (Rear outlet) S6-L-B108-5.0-T-INT (Rear outlet) S6-L-B108-10.0-T-INT (Rear outlet)
No. of cores × conductor cross section	4x0.5mm²		4x0.5mm² +2x0.2mm²(Braking lead)	
Colour of wire cores	U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped		U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped, BK+：White，BK-：Brown	
Degree of protection motor side (When mated and locked)	IP67		IP67	
Certifications	CE,UKCA,UL,cURus,RoHS		CE,UKCA,UL,cURus,RoHS	
Test voltage	AC 2.0 kV		AC 2.0 kV	
Conductor DC resistance (20℃ Ω/ km)	⩽ 36.2		⩽ 36.2+ ⩽ 94.2(Braking lead)	
Insulation resistance (20℃ MΩ/ km)	⩾ 10		⩾ 10	
Load capacity（Ambient temperature 30°C，single wiring in the air)	7.8A		7.8A+3.9A(Braking lead)	
Smallest bending radius	5xOuter diameter	10xOuter diameter	5xOuter diameter	10xOuter diameter
Number of bending cycles	Fixed installation applications	Drag chain applications: 10 million	Fixed installation applications	Drag chain applications: 10 million
Tensile load for permanently installed cable, max.	50N/mm² (7252 lbf/in²)	/	50N/mm² (7252 lbf/in²)	/
Tensile load for moving cable, max.	/	20N/mm² (2901 lbf/in²)	/	20N/mm² (2901 lbf/in²)
Motor-side connector	Terminal connector（Options of direction: front or rear outlet）		Terminal connector（Options of direction: front or rear outlet）	
Outer diameter of the cable sheath	Φ6.5±0.2 mm		Φ6.5±0.2 mm	
Sheilding coverage ratio	⩾ 85% Continuous mesh screen		⩾ 85% Continuous mesh screen	
Color of the cable sheath	Color orange RAL 2003		Color orange RAL 2003	
Operating temperature on the surface	-20° C~+105 ° C		-20° C~+105 ° C	
Type of insulation	CFC/silicone-free		CFC/silicone-free	
Flame-retardant	UL VW-1, EN 60332-1-1 to 1-3		UL VW-1, EN 60332-1-1 to 1-3	
Oil resistance	UL758 60°C x168h, EN 60811-2-1		UL758 60°C x168h, EN 60811-2-1	
Commodity code (For China export)	8544422100		8544422100	
Estimated mass (Including connector)	· 3m length: 216g · 5m length: 337g · 10m length: 641g		· 3m length: 223g · 5m length: 348g · 10m length: 662g	

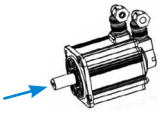
Note：[1] Motor with power 50W, the power cables must select the rear outlet model as shown on the right. This is to prevent the mounting flange face from be disturbed by the power cable. For detailed cable model selection, please refer to the servo drive and servo motor selection guide files.



Power Cables With Aviation Connector

S6-L***-INT Aviation connector type for MS1 series of frame size 100mm/130mm motors				
Product pictures exmp				
Cable category	Power cable with aviation connector, without braking lead		Power cable with aviation connector, with braking lead	
Cable types	Fixed installation	Flexible installation	Fixed installation	Flexible installation
Insulation material	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Outer jacket	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Recommended drive types	SV630/SV660/SV670/SV680 1 AC / 3 AC 200~240V and 3 AC 380V~480V		SV630/SV660/SV670/SV680 1 AC / 3 AC 200~240V and 3 AC 380V~480V	
Recommended motor types	**MS1H2 motors rated power ⩽ 3kW or MS1H3 motors rated power ⩽ 1.8kW**		**MS1H2 motors rated power ⩽ 3kW or MS1H3 motors rated power ⩽ 1.8kW**	
Cable model	S6-L-M111-3.0-INT S6-L-M111-5.0-INT S6-L-M111-10.0-INT	S6-L-M111-3.0-T-INT S6-L-M111-5.0-T-INT S6-L-M111-10.0-T-INT	S6-L-B111-3.0-INT S6-L-B111-5.0-INT S6-L-B111-10.0-INT	S6-L-B111-3.0-T-INT S6-L-B111-5.0-T-INT S6-L-B111-10.0-T-INT
No. of cores × conductor cross section	4x1.3mm²		4x1.3mm²+2x0.75mm²(Braking lead)	
Colour of wire cores	U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped		U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped, BK+：Black 4，BK-：Black 5	
Degree of protection motor side (When mated and locked)	IP67		IP67	
Certifications	CE,UKCA,UL,cURus,RoHS		CE,UKCA,UL,cURus,RoHS	
Test voltage	AC 2.0 kV		AC 2.0 kV	
Conductor DC resistance (20°C Ω/ km)	⩽ 12.8		⩽ 12.8+ ⩽ 23.2(Braking lead)	
Insulation resistance (20°C MΩ/ km)	⩾ 10		⩾ 10	
Load capacity（Ambient temperature 30°C，single wiring in the air）	15.5A		15.5A+8.8A(Braking lead)	
Smallest bending radius	5xOuter diameter	10xOuter diameter	5xOuter diameter	10xOuter diameter
Number of bending cycles	Fixed installation applications	Drag chain applications: 10 million	Fixed installation applications	Drag chain applications: 10 million
Tensile load for permanently installed cable, max.	50N/mm² (7252 lbf/in²)	/	50N/mm² (7252 lbf/in²)	/
Tensile load for moving cable, max.	/	20N/mm² (2901 lbf/in²)	/	20N/mm² (2901 lbf/in²)
Motor-side connector	Aviation connector（360° adjustable cable routing [1]）		Aviation connector（360° adjustable cable routing [1]）	
Outer diameter of the cable sheath	Φ10.5±0.3 mm		Φ11.5±0.3 mm	
Sheilding coverage ratio	⩾ 85% Continuous mesh screen		⩾ 85% Continuous mesh screen	
Color of the cable sheath	Color orange RAL 2003		Color orange RAL 2003	
Operating temperature on the surface	-20° C~+105 ° C		-20° C~+105 ° C	
Type of insulation	CFC/silicone-free		CFC/silicone-free	
Flame-retardant	UL VW-1, EN 60332-1-1 to 1-3		UL VW-1, EN 60332-1-1 to 1-3	
Oil resistance	UL758 60°C x168h, EN 60811-2-1		UL758 60°C x168h, EN 60811-2-1	
Commodity code (For China export)	8544422100		8544422100	
Estimated mass (Including connector)	· 3m length: 583g · 5m length: 855g · 10m length: 1536g		· 3m length: 719g · 5m length: 1081g · 10m length: 1987g	

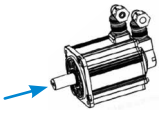
Note：[1] The cable outlet direction on the motor right when viewed from motor shaft end side.



Power Cables With Aviation Connector

S6-L***-INT Aviation connector type for MS1 series of frame size 130mm motors				
Product pictures exmp				
Cable category	Power cable with aviation connector, without braking lead		Power cable with aviation connector, with braking lead	
Cable types	Fixed installation	Flexible installation	Fixed installation	Flexible installation
Insulation material	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Outer jacket	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Recommended drive types	SV630/SV660/SV670/SV680 3 AC 200~240V and 3 AC 380V~480V		SV630/SV660/SV670/SV680 3 AC 200~240V and 3 AC 380V~480V	
Recommended motor types	**MS1H2 motors rated power 4kW and 5kW**		**MS1H2 motors rated power 4kW and 5kW**	
Cable model	S6-L-M011-3.0-INT S6-L-M011-5.0-INT S6-L-M011-10.0-INT	S6-L-M011-3.0-T-INT S6-L-M011-5.0-T-INT S6-L-M011-10.0-T-INT	S6-L-B011-3.0-INT S6-L-B011-5.0-INT S6-L-B011-10.0-INT	S6-L-B011-3.0-T-INT S6-L-B011-5.0-T-INT S6-L-B011-10.0-T-INT
No. of cores × conductor cross section	4x1.3mm²		4x1.3mm²+2x0.75mm²(Braking lead)	
Colour of wire cores	U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped		U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped, Black 4：BK+，Black 5：BK-	
Degree of protection motor side (When mated and locked)	IP67		IP67	
Certifications	CE,UKCA,UL,cURus,RoHS		CE,UKCA,UL,cURus,RoHS	
Test voltage	AC 2.0 kV		AC 2.0 kV	
Conductor DC resistance (20°C Ω/ km)	⩽ 12.8		⩽ 12.8 + ⩽ 23.2(Braking lead)	
Insulation resistance (20°C MΩ/ km)	⩾ 10		⩾ 10	
Load capacity（Ambient temperature 30°C，single wiring in the air）	15.5A		15.5A + 8.8A(Braking lead)	
Smallest bending radius	5xOuter diameter	10xOuter diameter	5xOuter diameter	10xOuter diameter
Number of bending cycles	Fixed installation applications	Drag chain applications: 10 million	Fixed installation applications	Drag chain applications: 10 million
Tensile load for permanently installed cable, max.	50N/mm² (7252 lbf/in²)	/	50N/mm² (7252 lbf/in²)	/
Tensile load for moving cable, max.	/	20N/mm² (2901 lbf/in²)	/	20N/mm² (2901 lbf/in²)
Motor-side connector	Aviation connector（360° adjustable cable routing [1]）		Aviation connector（360° adjustable cable routing [1]）	
Outer diameter of the cable sheath	Φ10.5±0.3 mm		Φ11.5±0.3 mm	
Sheilding coverage ratio	⩾ 85% Continuous mesh screen		⩾ 85% Continuous mesh screen	
Color of the cable sheath	Color orange RAL 2003		Color orange RAL 2003	
Operating temperature on the surface	-20° C~+105 ° C		-20° C~+105 ° C	
Type of insulation	CFC/silicone-free		CFC/silicone-free	
Flame-retardant	UL VW-1, EN 60332-1-1 to 1-3		UL VW-1, EN 60332-1-1 to 1-3	
Oil resistance	UL758 60°C x168h, EN 60811-2-1		UL758 60°C x168h, EN 60811-2-1	
Commodity code (For China export)	8544422100		8544422100	
Estimated mass (Including connector)	· 3m length: 583g · 5m length: 855g · 10m length: 1536g		· 3m length: 719g · 5m length: 1081g · 10m length: 1987g	

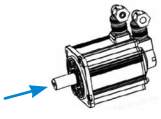
Note：[1] The cable outlet direction on the motor right when viewed from motor shaft end side.



Power Cables With Aviation Connector

S6-L***-INT Aviation connector type for MS1 series of frame size 180mm motors				
Product pictures exmp				
Cable category	Power cable with aviation connector, without braking lead		Power cable with aviation connector, with braking lead	
Cable types	Fixed installation	Flexible installation	Fixed installation	Flexible installation
Insulation material	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Outer jacket	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Recommended drive types	SV630/SV660/SV670/SV680 3 AC 200~240V and 3 AC 380V~480V		SV630/SV660/SV670/SV680 3 AC 200~240V and 3 AC 380V~480V	
Recommended motor types	MS1H3 motors rated power 2.9kW		MS1H3 motors rated power 2.9kW	
Cable model	S6-L-M112-3.0-INT S6-L-M112-5.0-INT S6-L-M112-10.0-INT	S6-L-M112-3.0-T-INT S6-L-M112-5.0-T-INT S6-L-M112-10.0-T-INT	S6-L-B112-3.0-INT S6-L-B112-5.0-INT S6-L-B112-10.0-INT	S6-L-B112-3.0-T-INT S6-L-B112-5.0-T-INT S6-L-B112-10.0-T-INT
No. of cores × conductor cross section	4x1.3mm²		4x1.3mm² + 2x0.75mm²	
Colour of wire cores	U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped		U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped, Black 4：BK+，Black 5：BK-	
Degree of protection motor side (When mated and locked)	IP67		IP67	
Certifications	CE,UKCA,UL,cURus,RoHS		CE,UKCA,UL,cURus,RoHS	
Test voltage	AC 2.0 kV		AC 2.0 kV	
Conductor DC resistance (20°C Ω/ km)	⩽ 12.8		⩽ 12.8+ ⩽ 23.2(Braking lead)	
Insulation resistance (20°C MΩ/ km)	⩾ 10		⩾ 10	
Load capacity（Ambient temperature 30°C，single wiring in the air）	15.5A		15.5A + 8.8A(Braking lead)	
Smallest bending radius	5xOuter diameter	10x Outer diameter	5xOuter diameter	10xOuter diameter
Number of bending cycles	Fixed installation applications	Drag chain applications: 10 million	Fixed installation applications	Drag chain applications: 10 million
Tensile load for permanently installed cable, max.	50N/mm² (7252 lbf/in²)	/	50N/mm² (7252 lbf/in²)	/
Tensile load for moving cable, max.	/	20N/mm² (2901 lbf/in²)	/	20N/mm² (2901 lbf/in²)
Motor-side connector	Aviation connector（360° adjustable cable routing [1]）		Aviation connector（360° adjustable cable routing [1]）	
Outer diameter of the cable sheath	Φ10.5±0.3 mm		Φ11.5±0.3 mm	
Sheilding coverage ratio	⩾ 85% Continuous mesh screen		⩾ 85% Continuous mesh screen	
Color of the cable sheath	Color orange RAL 2003		Color orange RAL 2003	
Operating temperature on the surface	-20° C~+105 ° C		-20° C~+105 ° C	
Type of insulation	CFC/silicone-free		CFC/silicone-free	
Flame-retardant	UL VW-1, EN 60332-1-1 to 1-3		UL VW-1, EN 60332-1-1 to 1-3	
Oil resistance	UL758 60°C x168h, EN 60811-2-1		UL758 60°C x168h, EN 60811-2-1	
Commodity code (For China export)	8544422100		8544422100	
Estimated mass (Including connector)	· 3m length: 583g · 5m length: 855g · 10m length: 1536g		· 3m length: 719g · 5m length: 1081g · 10m length: 1987g	

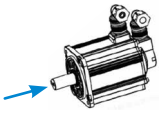
Note：[1] The cable outlet direction on the motor right when viewed from motor shaft end side.



Power Cables With Aviation Connector

S6-L***-INT Aviation connector type for MS1 series of frame size 180mm motors				
Product pictures exmp				
Cable category	Power cable with aviation connector, without braking lead		Power cable with aviation connector, with braking lead	
Cable types	Fixed installation	Flexible installation	Fixed installation	Flexible installation
Insulation material	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Outer jacket	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Recommended drive types	SV630/SV660/SV670/SV680 3 AC 200~240V and 3 AC 380V~480V		SV630/SV660/SV670/SV680 3 AC 200~240V and 3 AC 380V~480V	
Recommended motor types	MS1H3 motors rated power ⩾ 4.4kW		MS1H3 motors rated power ⩾ 4.4kW	
Cable model	S6-L-M022-3.0-INT S6-L-M022-5.0-INT S6-L-M022-10.0-INT	S6-L-M022-3.0-T-INT S6-L-M022-5.0-T-INT S6-L-M022-10.0-T-INT	S6-L-B022-3.0-INT S6-L-B022-5.0-INT S6-L-B022-10.0-INT	S6-L-B022-3.0-T-INT S6-L-B022-5.0-T-INT S6-L-B022-10.0-T-INT
No. of cores × conductor cross section	4x3.3mm²		4x3.3mm²+2x0.75mm²(Braking lead)	
Colour of wire cores	U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped		U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped, Black 4：BK+，Black 5：BK-	
Degree of protection motor side (When mated and locked)	IP67		IP67	
Certifications	CE,UKCA,UL,cURus,RoHS		CE,UKCA,UL,cURus,RoHS	
Test voltage	AC 2.0 kV		AC 2.0 kV	
Conductor DC resistance (20°C Ω/ km)	⩽ 5.4		⩽ 5.4 + ⩽ 23.2(Braking lead)	
Insulation resistance (20°C MΩ/ km)	⩾ 10		⩾ 10	
Load capacity（Ambient temperature 30°C，single wiring in the air）	26A		26A + 8.8A(Braking lead)	
Smallest bending radius	5xOuter diameter	10xOuter diameter	5xOuter diameter	10xOuter diameter
Number of bending cycles	Fixed installation applications	Drag chain applications: 10 million	Fixed installation applications	Drag chain applications: 10 million
Tensile load for permanently installed cable, max.	50N/mm² (7252 lbf/in²)	/	50N/mm² (7252 lbf/in²)	/
Tensile load for moving cable, max.	/	20N/mm² (2901 lbf/in²)	/	20N/mm² (2901 lbf/in²)
Motor-side connector	Aviation connector（360° adjustable cable routing [1]）		Aviation connector（360° adjustable cable routing [1]）	
Outer diameter of the cable sheath	Φ13.2±0.3 mm		Φ14±0.3 mm	
Sheilding coverage ratio	⩾ 85% Continuous mesh screen		⩾ 85% Continuous mesh screen	
Color of the cable sheath	Color orange RAL 2003		Color orange RAL 2003	
Operating temperature on the surface	-20° C~+105 ° C		-20° C~+105 ° C	
Type of insulation	CFC/silicone-free		CFC/silicone-free	
Flame-retardant	UL VW-1, EN 60332-1-1 to 1-3		UL VW-1, EN 60332-1-1 to 1-3	
Oil resistance	UL758 60°C x168h, EN 60811-2-1		UL758 60°C x168h, EN 60811-2-1	
Commodity code (For China export)	8544422100		8544422100	
Estimated mass (Including connector)	· 3m length: 932g · 5m length: 1434g · 10m length: 2690g		· 3m length: 1074g · 5m length: 1666g · 10m length: 3146g	

Note：[1] The cable outlet direction on the motor right when viewed from motor shaft end side.



Encoder Cables With Terminal Connector

S6-L***-INT Terminal connector type for MS1 series of frame size 40mm/60mm/80mm motors				
Product pictures exmp				
Cable category	Single-turn absolute encoder cable		Multi-turn absolute encoder cable with battery connection lead wires	
Cable types	Fixed installation	Flexible installation	Fixed installation	Flexible installation
Insulation material	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Outer jacket	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Recommended drive types	SV630/SV660/SV670/SV680 1 AC / 3 AC 200~240V		SV630/SV660/SV670/SV680 1 AC / 3 AC 200~240V	
Recommended motor types	MS1H1 and MS1H4 type motor,power range 0.05kW~1kW		MS1H1 and MS1H4 type motor,power range 0.05kW~1kW	
Cable model	S6-L-P114-3.0-INT (Front outlet) S6-L-P114-5.0-INT (Front outlet) S6-L-P114-10.0-INT (Front outlet) S6-L-P115-3.0-INT (Rear outlet) S6-L-P115-5.0-INT (Rear outlet) S6-L-P115-10.0-INT (Rear outlet)	S6-L-P114-3.0-T-INT (Front outlet) S6-L-P114-5.0-T-INT (Front outlet) S6-L-P114-10.0-T-INT (Front outlet) S6-L-P115-3.0-T-INT (Rear outlet) S6-L-P115-5.0-T-INT (Rear outlet) S6-L-P115-10.0-T-INT (Rear outlet)	S6-L-P124-3.0-INT (Front outlet) S6-L-P124-5.0-INT (Front outlet) S6-L-P124-10.0-INT (Front outlet) S6-L-P125-3.0-INT (Rear outlet) S6-L-P125-5.0-INT (Rear outlet) S6-L-P125-10.0-INT (Rear outlet)	S6-L-P124-3.0-T-INT (Front outlet) S6-L-P124-5.0-T-INT (Front outlet) S6-L-P124-10.0-T-INT (Front outlet) S6-L-P125-3.0-T-INT (Rear outlet) S6-L-P125-5.0-T-INT (Rear outlet) S6-L-P125-10.0-T-INT (Rear outlet)
No. of cores × conductor cross section	$4x0.13mm^2$		$4x0.13mm^2+2x0.32mm^2$	
Colour of wire cores	PS+: Gray, PS-: Pink, +5V: White, 0V: Brown		PS+: Gray, PS-: Pink, +5V: White, 0V: Brown, DC+: Yellow, DC-: Green	
Degree of protection motor side (When mated and locked)	IP67		IP67	
Certifications	CE,UKCA,UL,cURus,RoHS		CE,UKCA,UL,cURus,RoHS	
Test voltage	AC 500V		AC 500V	
Conductor DC resistance (20°C Ω/ km)	⩽ 130		⩽ 130(2P)+ ⩽ 59.4(1P)[1]	
Insulation resistance (20°C MΩ/ km)	⩾ 10		⩾ 10	
Load capacity（Ambient temperature 30°C，single wiring in the air）	2.8A		2.8A(2P) +4.1A(1P)[1]	
Smallest bending radius	5xOuter diameter	10xOuter diameter	5xOuter diameter	10xOuter diameter
Number of bending cycles	Fixed installation applications	Drag chain applications: 10 million	Fixed installation applications	Drag chain applications: 10 million
Tensile load for permanently installed cable, max.	$50N/mm^2$ (7252 lbf/in^2)	/	$50N/mm^2$ (7252 lbf/in^2)	/
Tensile load for moving cable, max.	/	$20N/mm^2$ (2901 lbf/in^2)	/	$20N/mm^2$ (2901 lbf/in^2)
Motor-side connector	Terminal connector（Options of direction: front or rear outlet）		Terminal connector（Options of direction: front or rear outlet）	
Outer diameter of the cable sheath	Φ6.0±0.2 mm		Φ6.1±0.3 mm	
Sheilding coverage ratio	⩾ 85% Continuous mesh screen		⩾ 85% Continuous mesh screen	
Color of the cable sheath	Color green RAL6018		Color green RAL6018	
Operating temperature on the surface	-20° C ~+80 ° C		-20° C ~+80 ° C	
Type of insulation	CFC/silicone-free		CFC/silicone-free	
Flame-retardant	UL VW-1, EN 60332-1-1 to 1-3		UL VW-1, EN 60332-1-1 to 1-3	
Oil resistance	UL758 60°C x168h, EN 60811-2-1		UL758 60°C x168h, EN 60811-2-1	
Commodity code (For China export)	8544422100		8544422100	
Estimated mass (Including connector)	· 3m length: 196g · 5m length: 302g · 10m length: 569g		· 3m length: 207g · 5m length: 318g · 10m length: 595g	

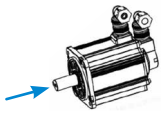
Note：[1] P - Twisted pair cable.

Encoder Cables With Aviation Connector

S6-L***-INT Aviation connector type for MS1 series of frame size 100mm/130mm/180mm motors				
Product pictures exmp				
Cable category	Single-turn absolute encoder cable		Multi-turn absolute encoder cable with battery connection lead wires	
Cable types	Fixed installation	Flexible installation	Fixed installation	Flexible installation
Insulation material	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Outer jacket	PVC	Special elastomer PVC	PVC	Special elastomer PVC
Recommended drive types	SV630/SV660/SV670/SV680 1 AC / 3 AC 200~240V and 3 AC 380V~480V		SV630/SV660/SV670/SV680 1 AC / 3 AC 200~240V and 3 AC 380V~480V	
Recommended motor types	MS1H2 motors rated power 0.85kW~7.5kW		MS1H2 motors rated power 0.85kW~7.5kW	
Cable model	S6-L-P111-3.0-INT S6-L-P111-5.0-INT S6-L-P111-10.0-INT	S6-L-P111-3.0-T-INT S6-L-P111-5.0-T-INT S6-L-P111-10.0-T-INT	S6-L-P121-3.0-INT S6-L-P121-5.0-INT S6-L-P121-10.0-INT	S6-L-P121-3.0-T-INT S6-L-P121-5.0-T-INT S6-L-P121-10.0-T-INT
No. of cores × conductor cross section	4x0.13mm²		4x0.13mm² + 2x0.32mm²	
Colour of wire cores	PS+: Gray, PS-: Pink, +5V: White, 0V: Brown		PS+: Gray, PS-: Pink, +5V: White, 0V: Brown, DC+: Yellow, DC-: Green	
Degree of protection motor side (When mated and locked)	IP67		IP67	
Certifications	CE,UKCA,UL,cURus,RoHS		CE,UKCA,UL,cURus,RoHS	
Test voltage	AC 500V		AC 500V	
Conductor DC resistance (20°C Ω/ km)	⩽ 130		⩽ 130(2P) + ⩽ 59.4(1P)[1]	
Insulation resistance (20°C MΩ/ km)	⩾ 10		⩾ 10	
Load capacity (Ambient temperature 30°C, single wiring in the air)	2.8A		2.8A(2P) + 4.1A(1P)[1]	
Smallest bending radius	5xOuter diameter	10xOuter diameter	5xOuter diameter	10xOuter diameter
Number of bending cycles	Fixed installation applications	Drag chain applications: 10 million	Fixed installation applications	10 million
Tensile load for permanently installed cable, max.	50N/mm² (7252 lbf/in²)	/	50N/mm² (7252 lbf/in²)	/
Tensile load for moving cable, max.	/	20N/mm² (2901 lbf/in²)	/	20N/mm² (2901 lbf/in²)
Motor-side connector	Aviation connector (360° adjustable cable routing [1])		Aviation connector (360° adjustable cable routing [1])	
Outer diameter of the cable sheath	Φ6.0±0.2 mm		Φ6.1±0.3 mm	
Sheilding coverage ratio	⩾ 85% Continuous mesh screen		⩾ 85% Continuous mesh screen	
Color of the cable sheath	Color green RAL6018		Color green RAL6018	
Operating temperature on the surface	-20° C ~+80 ° C		-20° C ~+80 ° C	
Type of insulation	CFC/silicone-free		CFC/silicone-free	
Flame-retardant	UL VW-1, EN 60332-1-1 to 1-3		UL VW-1, EN 60332-1-1 to 1-3	
Oil resistance	UL758 60°C x168h, EN 60811-2-1		UL758 60°C x168h, EN 60811-2-1	
Commodity code (For China export)	8544422100		8544422100	
Estimated mass (Including connector)	· 3m length: 344g · 5m length: 450g · 10m length: 717g		· 3m length: 355g · 5m length: 465g · 10m length: 742g	

Note: [1] P - Twisted pair cable.

[2] The cable outlet direction on the motor right when viewed from motor shaft end side.



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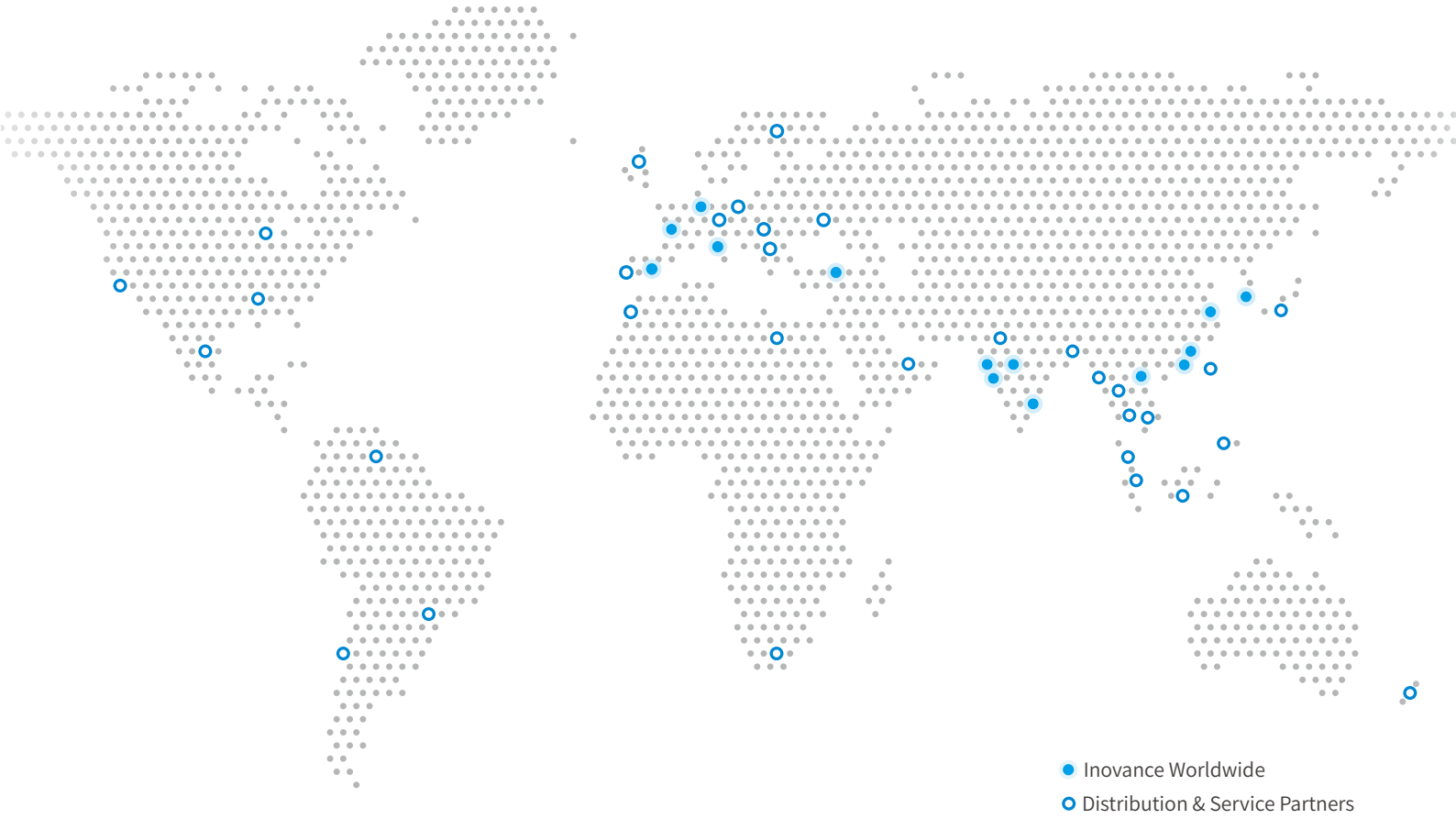

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