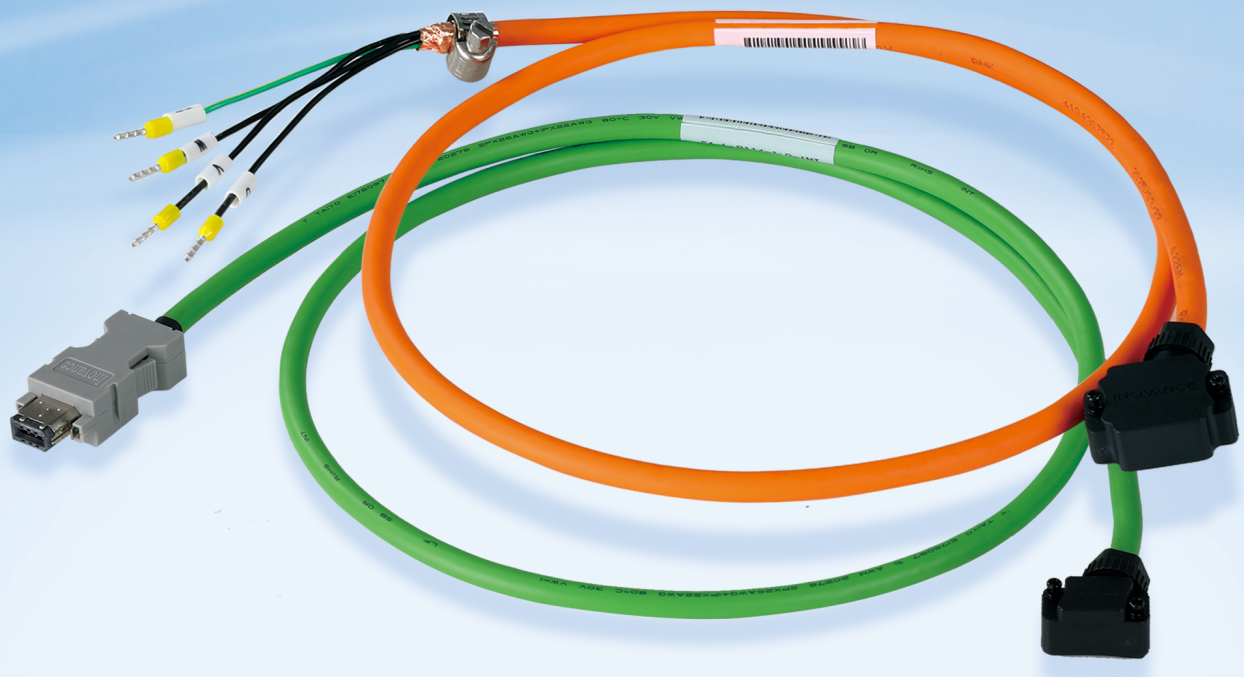
INOVANCE

# S6-L-INT Series
# Servo Connection Cable

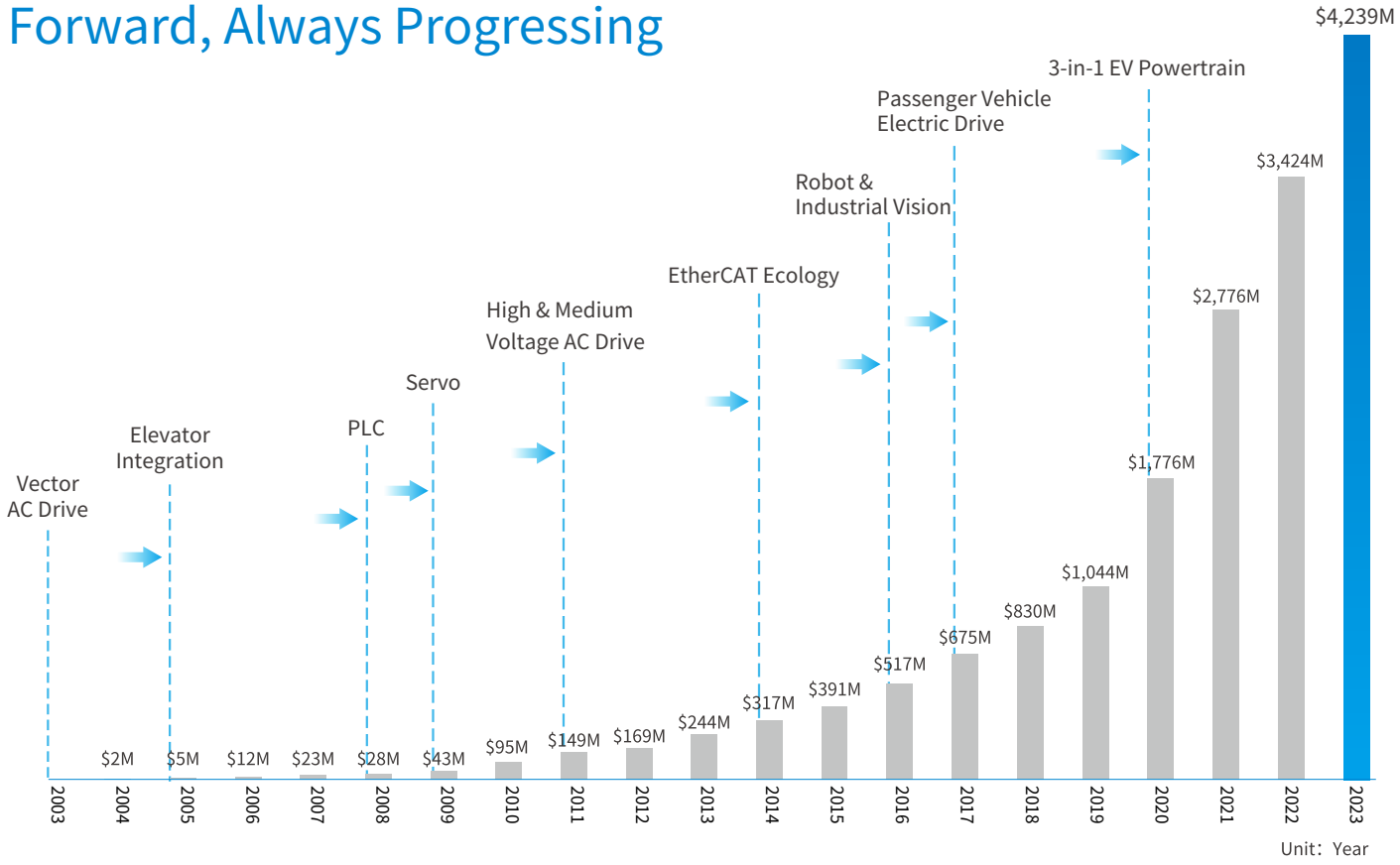



# About Inovance

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

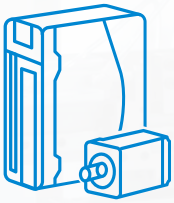
**IPO:2010**
Shenzhen, China

**20,000**
employees

**Global**
network of offices and distributors

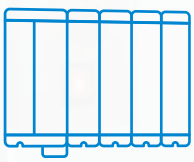
**$4.2+bn**
revenues in 2023

## Servo System



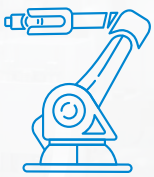
**4,500,000+**
sets delivered in 2023

## AC Drive



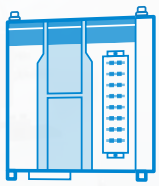
**2,20,000+**
sets delivered in 2023

## 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

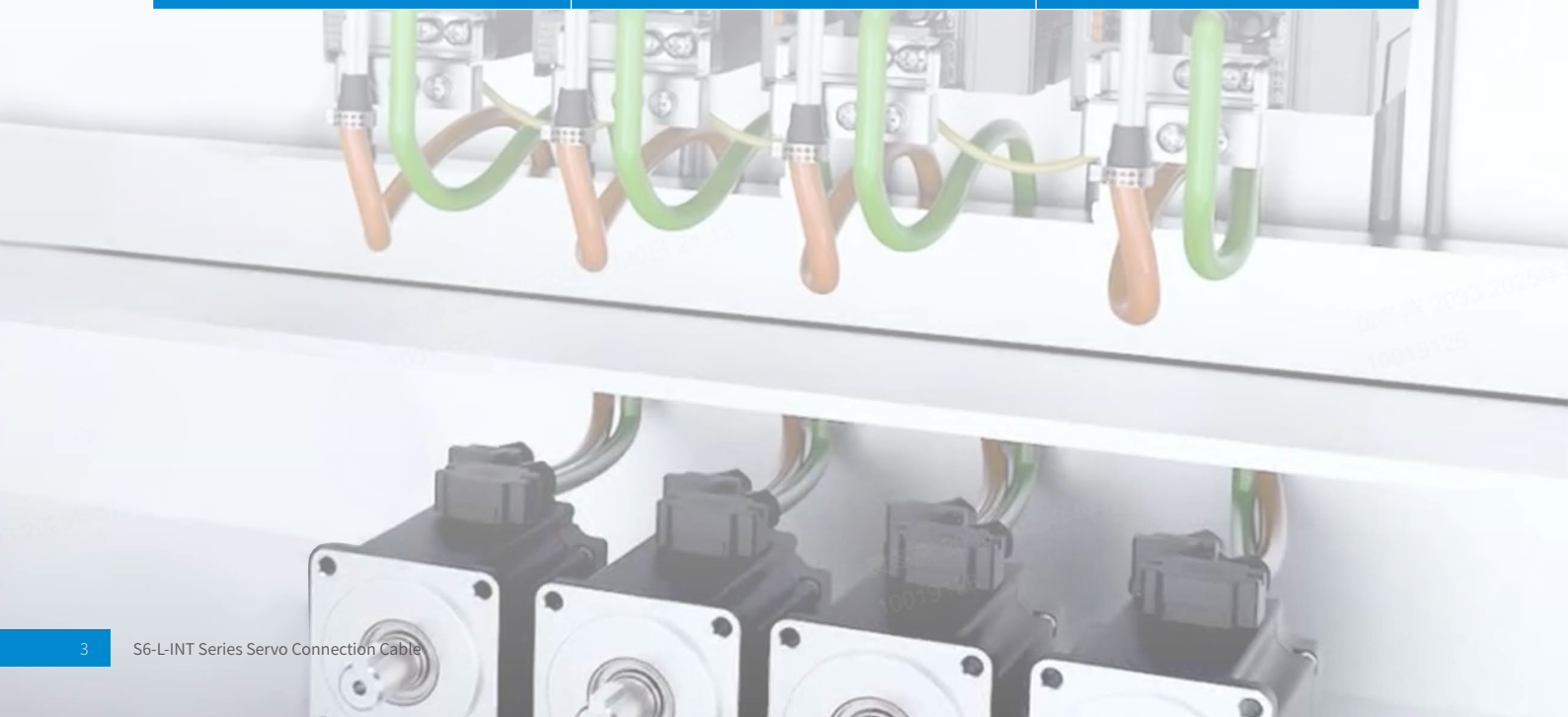
| | | |
|---|---|---|
| ① Servo system power cable<br>B: With brake<br>M: Without brake | ③ Applicable power of the motor<br>0: Frame sizes 40/60/80<br>1: Frame sizes 100/130/180<br>2: Frame size 180 (motors of 4.4kW and above) | ⑤ Cable length (m)<br>3.0: 3<br>5.0: 5<br>10.0: 10 |
| ② Connector type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

## Encoder cable model

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

① ② ③ ④ ⑤ ⑥ ⑦

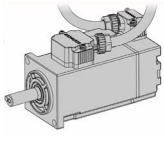
| | | |
|---|---|---|
| ① Servo system encoder cable<br>② Connector type at drive side<br>1: 1394 Connector (6pin plug) | ④ Connector type at motor sider<br>1: 9-core aviation connector<br>4: Specified connector for FS 40/60/80mm motor (front outlet)<br>5: Specified connector for FS 40/60/80mm motor (rear outlet) | ⑥ Special requirements<br>Null: Non-flexible<br>T: Flexible cables ⩾ 10 million bendings |
| ③ Encoder<br>1: Communication-type incremental encoder<br>2: Multi-turn absolute encoder | ⑤ Cable length(m)<br>3.0: 3m<br>5.0: 5m<br>10.0: 10m | ⑦ Version<br>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<br>1 AC / 3 AC 200~240V | | SV630/SV660/SV670/SV680<br>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)<br>S6-L-M107-5.0-INT (Front outlet)<br>S6-L-M107-10.0-INT (Front outlet)<br>S6-L-M108-3.0-INT (Rear outlet)<br>S6-L-M108-5.0-INT (Rear outlet)<br>S6-L-M108-10.0-INT (Rear outlet) | S6-L-M107-3.0-T-INT (Front outlet)<br>S6-L-M107-5.0-T-INT (Front outlet)<br>S6-L-M107-10.0-T-INT (Front outlet)<br>S6-L-M108-3.0-T-INT (Rear outlet)<br>S6-L-M108-5.0-T-INT (Rear outlet)<br>S6-L-M108-10.0-T-INT (Rear outlet) | S6-L-B107-3.0-INT (Front outlet)<br>S6-L-B107-5.0-INT (Front outlet)<br>S6-L-B107-10.0-INT (Front outlet)<br>S6-L-B108-3.0-INT (Rear outlet)<br>S6-L-B108-5.0-INT (Rear outlet)<br>S6-L-B108-10.0-INT (Rear outlet) | S6-L-B107-3.0-T-INT (Front outlet)<br>S6-L-B107-5.0-T-INT (Front outlet)<br>S6-L-B107-10.0-T-INT (Front outlet)<br>S6-L-B108-3.0-T-INT (Rear outlet)<br>S6-L-B108-5.0-T-INT (Rear outlet)<br>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,<br>PE：Green/yellow-striped | | U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped,<br>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<br>· 5m length: 337g<br>· 10m length: 641g | | · 3m length: 223g<br>· 5m length: 348g<br>· 10m length: 662g | |

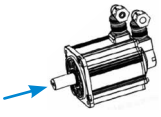
Note：[1] Motor with power 50W, the power cables must select the rear outlet model as shown on the right. This is to prevent the mounting flange face from be disturbed by the power cable. For detailed cable model selection, please refer to the servo drive and servo motor selection guide files.



# 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<br>1 AC / 3 AC 200~240V and 3 AC 380V~480V | | SV630/SV660/SV670/SV680<br>1 AC / 3 AC 200~240V and 3 AC 380V~480V | |
| Recommended motor types | **MS1H2 motors rated power ⩽ 3kW or<br>MS1H3 motors rated power ⩽ 1.8kW** | | **MS1H2 motors rated power ⩽ 3kW or<br>MS1H3 motors rated power ⩽ 1.8kW** | |
| Cable model | S6-L-M111-3.0-INT<br>S6-L-M111-5.0-INT<br>S6-L-M111-10.0-INT | S6-L-M111-3.0-T-INT<br>S6-L-M111-5.0-T-INT<br>S6-L-M111-10.0-T-INT | S6-L-B111-3.0-INT<br>S6-L-B111-5.0-INT<br>S6-L-B111-10.0-INT | S6-L-B111-3.0-T-INT<br>S6-L-B111-5.0-T-INT<br>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,<br>PE：Green/yellow-striped | | U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped,<br>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<br>· 5m length: 855g<br>· 10m length: 1536g | | · 3m length: 719g<br>· 5m length: 1081g<br>· 10m length: 1987g | |

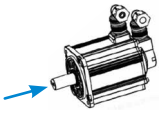
Note：[1] The cable outlet direction on the motor right when viewed from motor shaft end side.



# 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<br>3 AC 200~240V and 3 AC 380V~480V | | SV630/SV660/SV670/SV680<br>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<br>S6-L-M011-5.0-INT<br>S6-L-M011-10.0-INT | S6-L-M011-3.0-T-INT<br>S6-L-M011-5.0-T-INT<br>S6-L-M011-10.0-T-INT | S6-L-B011-3.0-INT<br>S6-L-B011-5.0-INT<br>S6-L-B011-10.0-INT | S6-L-B011-3.0-T-INT<br>S6-L-B011-5.0-T-INT<br>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,<br>PE：Green/yellow-striped | | U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped,<br>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<br>· 5m length: 855g<br>· 10m length: 1536g | | · 3m length: 719g<br>· 5m length: 1081g<br>· 10m length: 1987g | |

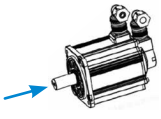
Note：[1] The cable outlet direction on the motor right when viewed from motor shaft end side.



# 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<br>3 AC 200~240V and 3 AC 380V~480V | | SV630/SV660/SV670/SV680<br>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<br>S6-L-M112-5.0-INT<br>S6-L-M112-10.0-INT | S6-L-M112-3.0-T-INT<br>S6-L-M112-5.0-T-INT<br>S6-L-M112-10.0-T-INT | S6-L-B112-3.0-INT<br>S6-L-B112-5.0-INT<br>S6-L-B112-10.0-INT | S6-L-B112-3.0-T-INT<br>S6-L-B112-5.0-T-INT<br>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,<br>PE：Green/yellow-striped | | U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped,<br>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<br>· 5m length: 855g<br>· 10m length: 1536g | | · 3m length: 719g<br>· 5m length: 1081g<br>· 10m length: 1987g | |

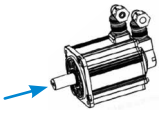
Note：[1] The cable outlet direction on the motor right when viewed from motor shaft end side.



# 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<br>3 AC 200~240V and 3 AC 380V~480V | | SV630/SV660/SV670/SV680<br>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<br>S6-L-M022-5.0-INT<br>S6-L-M022-10.0-INT | S6-L-M022-3.0-T-INT<br>S6-L-M022-5.0-T-INT<br>S6-L-M022-10.0-T-INT | S6-L-B022-3.0-INT<br>S6-L-B022-5.0-INT<br>S6-L-B022-10.0-INT | S6-L-B022-3.0-T-INT<br>S6-L-B022-5.0-T-INT<br>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,<br>PE：Green/yellow-striped | | U：Black 1, V：Black 2, W：Black 3, PE：Green/yellow-striped,<br>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<br>· 5m length: 1434g<br>· 10m length: 2690g | | · 3m length: 1074g<br>· 5m length: 1666g<br>· 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<br>1 AC / 3 AC 200~240V | | SV630/SV660/SV670/SV680<br>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)<br>S6-L-P114-5.0-INT (Front outlet)<br>S6-L-P114-10.0-INT (Front outlet)<br>S6-L-P115-3.0-INT (Rear outlet)<br>S6-L-P115-5.0-INT (Rear outlet)<br>S6-L-P115-10.0-INT (Rear outlet) | S6-L-P114-3.0-T-INT (Front outlet)<br>S6-L-P114-5.0-T-INT (Front outlet)<br>S6-L-P114-10.0-T-INT (Front outlet)<br>S6-L-P115-3.0-T-INT (Rear outlet)<br>S6-L-P115-5.0-T-INT (Rear outlet)<br>S6-L-P115-10.0-T-INT (Rear outlet) | S6-L-P124-3.0-INT (Front outlet)<br>S6-L-P124-5.0-INT (Front outlet)<br>S6-L-P124-10.0-INT (Front outlet)<br>S6-L-P125-3.0-INT (Rear outlet)<br>S6-L-P125-5.0-INT (Rear outlet)<br>S6-L-P125-10.0-INT (Rear outlet) | S6-L-P124-3.0-T-INT (Front outlet)<br>S6-L-P124-5.0-T-INT (Front outlet)<br>S6-L-P124-10.0-T-INT (Front outlet)<br>S6-L-P125-3.0-T-INT (Rear outlet)<br>S6-L-P125-5.0-T-INT (Rear outlet)<br>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<br>· 5m length: 302g<br>· 10m length: 569g | | · 3m length: 207g<br>· 5m length: 318g<br>· 10m length: 595g | |

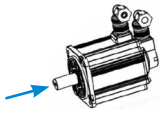
Note：[1] P - Twisted pair cable.

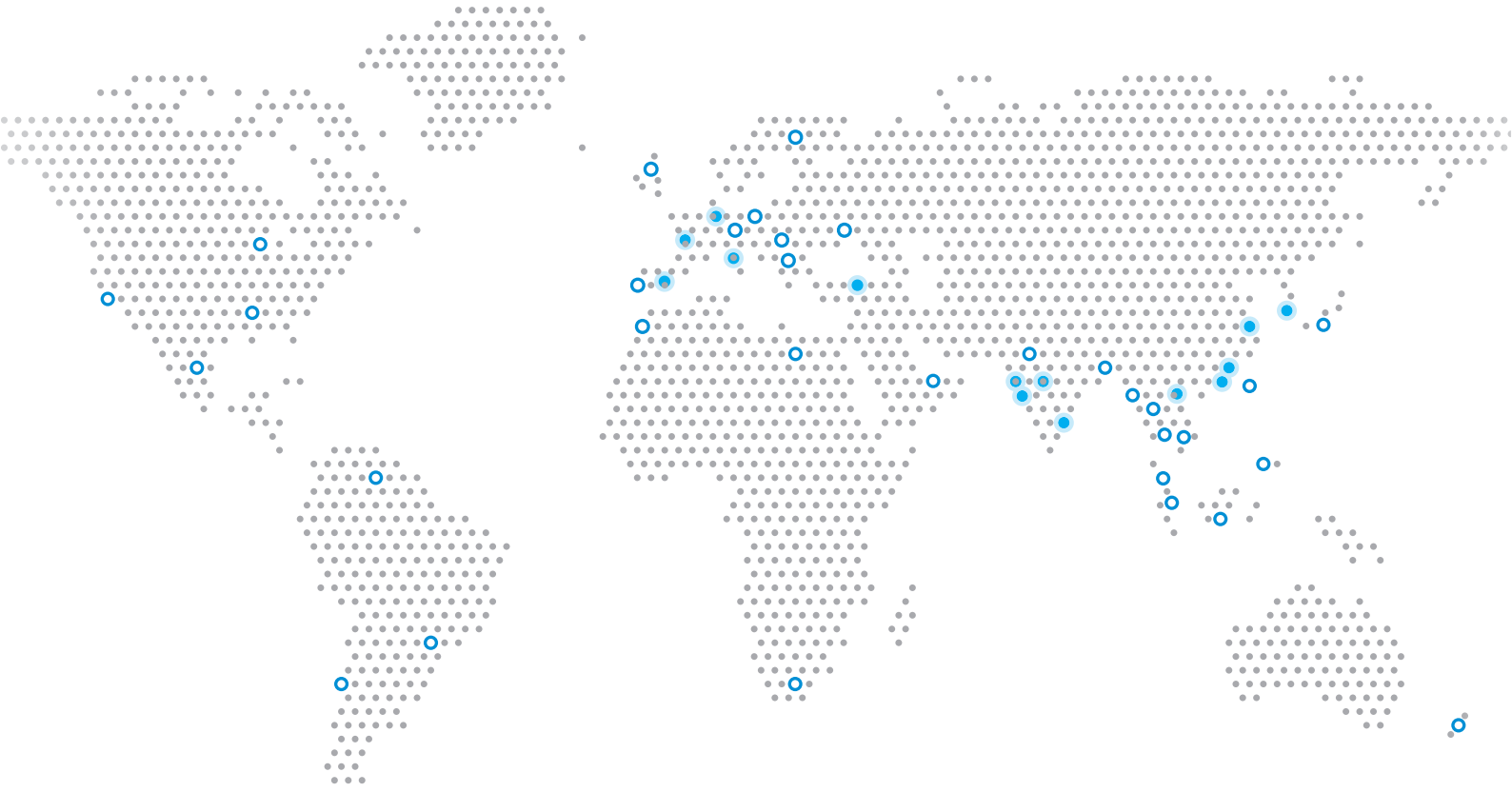
# Encoder Cables With Aviation Connector

| 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<br>1 AC / 3 AC 200~240V and 3 AC 380V~480V | | SV630/SV660/SV670/SV680<br>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<br>S6-L-P111-5.0-INT<br>S6-L-P111-10.0-INT | S6-L-P111-3.0-T-INT<br>S6-L-P111-5.0-T-INT<br>S6-L-P111-10.0-T-INT | S6-L-P121-3.0-INT<br>S6-L-P121-5.0-INT<br>S6-L-P121-10.0-INT | S6-L-P121-3.0-T-INT<br>S6-L-P121-5.0-T-INT<br>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<br>· 5m length: 450g<br>· 10m length: 717g | | · 3m length: 355g<br>· 5m length: 465g<br>· 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.






## Advancing industrial technology, for a better world

# www.inovance.eu

## Enquires: info@inovance.ind.in

**Shenzhen Inovance Technology Co., Ltd.**
**Suzhou Inovance Technology Co. Ltd.**
4000-300124
info@inovance.com
service@inovance.com

**Hong Kong SAR**
**International Export Office**
+852 2751 6080
info@inovance.eu

INOVANCE
FOLLOW US

**Germany-Stuttgart**
+49 (0) 7144 8990
sales.de@inovance.eu

**France-Bordeaux**
+33 (0) 5594 01050
sales.fr@inovance.eu

**Spain-Barcelona**
+34 93 504 94 48
sales.es@inovance.eu

**Italy-Milano**
+39 (0) 2268 22318
sales.it@inovance.eu

**Turkey-Istanbul**
+90 (216) 466 7600
sales.tr@inovance.eu

**South Korea-Seoul**
+82 (0) 10 7428 5732
sales.kr@inovance.eu

**India**
Head Office Chennai | +91 (0) 44 4380 0201
Ahmedabad | +91 (0) 79 40034274
Mumbai | +91 (0) 22 4516 6255
Noida | +91 (0) 120 402 8235
Hyderabad | +91 (0) 40 4951 6431
Surat | +91 93846 65692
Sales Network
Kolkata, Bengaluru, Pune, Coimbatore, Visakhapatnam, Vadodara, Jaipur
info@inovance.ind.in