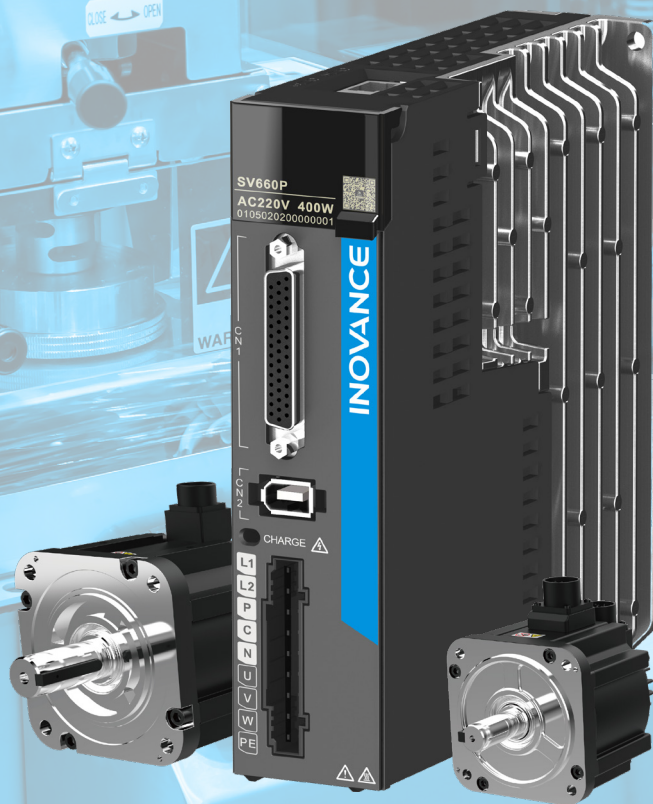


SV660P - Single-Axis Pulse Servo Drive

Performance and flexibility in a compact footprint

- User friendly installation
- Easy set-up and tuning
- CANopen (C) and CANlink (A) variants also available

CANlink **CANopen**



SV660P/C/A

Product family overview

Product variants:

SV660P - pulse control variant

Pulse interface for position control (4 MHz maximum input frequency).

SV660C - CANopen variant

Compliant with CiA 402 device profile (IEC 61800-7-201/301), supporting several operation modes.

SV660A - CANlink variant

Uses the Inovance proprietary protocol, in combination with Inovance controller products.

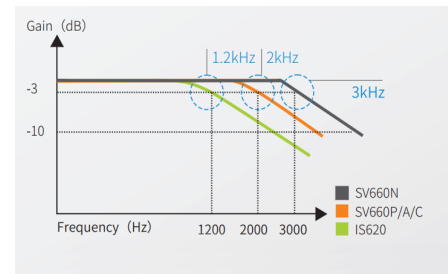
| CiA 402 operation modes | |
|----------------------------------|--|
| 0-Speed mode | |
| 1-Position mode | |
| 2-Torque mode | |
| 3-Speed mode<->Torque mode | |
| 4-Position mode<->Speed mode | |
| 5-Position mode<->Torque mode | |
| 6-Position<->speed<->Torque mode | |

Modes 3-6 can be changed on the fly

Speed loop bandwidth*

A speed loop response bandwidth of 2 kHz gives significantly improved performance compared to the previous generation of Inovance products.

Speed loop response graph



| | SV660 |
|--------------------------|---------|
| Carrier frequency | 12 kHz |
| Current loop cycle time | 62.5 μs |
| Speed loop cycle time | 125 μs |
| Position loop cycle time | 250 μs |

*Please note: The phrase 'speed loop bandwidth' refers to the highest frequency speed command change that the servo system can respond to.

Built-in RS232 port (for PC connection) and RS485 port (Modbus RTU communication protocol)

- 23 bit feedback encoder
- Multi-position control
- IP20 rating
- All 200 V models can be supplied from single phase 200 V

High resolution feedback encoder

23 bit serial single/multi-turn absolute encoder provides 8,388,608 pulses within one mechanical turn. Multi-turn absolute information can be also saved at power down, avoiding the need to perform machine homing at every power-up.

Short output winding

Standard, built-in, short output winding ensures safe braking if the drive is unexpectedly disabled – even in the case of a failure in the motor holding brake.



Robust and reliable – designed for harsh environments

Isolated cooling channel prevents dust contamination of internal electrical components. Conformally coated PCBs are resistant to 3S2 and 3C3 environments (acc. to IEC 60721-3-3), providing further protection.

Reduced panel size

SV660 offers a compact footprint and increased power density, with an average 30% smaller footprint than the previous generation.

Easy installation and fast commissioning

Pluggable connectors for both signal and power allow avoidance of wiring mistakes. Fine tuning is possible using the STune and ETune software functions, which are both designed for use in applications with small load inertia changes:

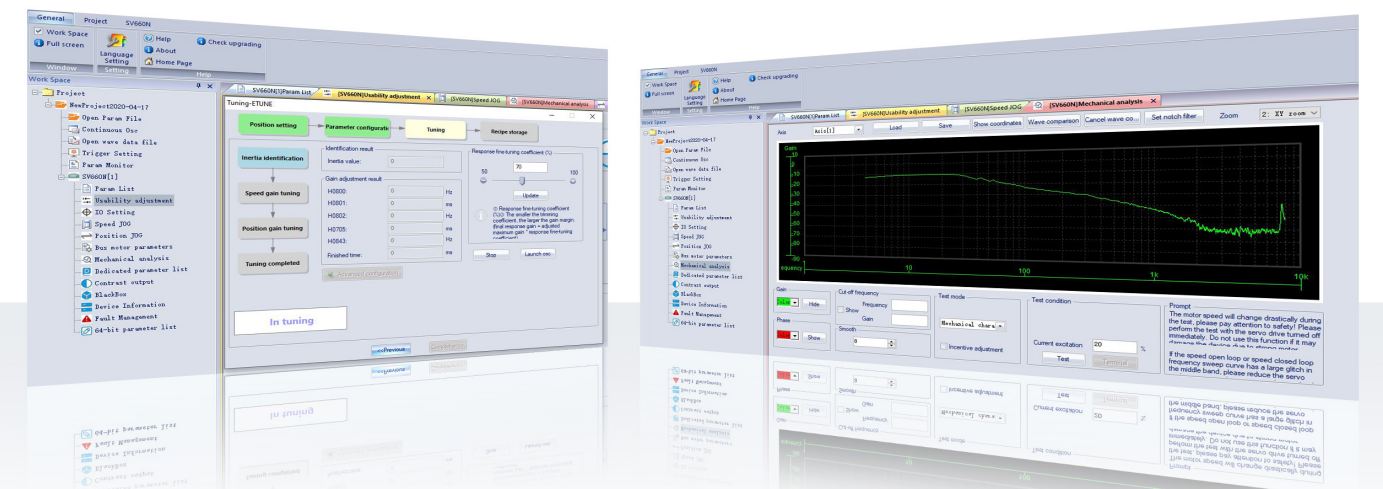
- STune obtains the gains using a calculation based on the set stiffness level
- ETune automatically adjusts the optimal gain parameters of the servo drive to deliver the best performance

Easy cloning of drive parameters

Parameters of all SV660 drives in a machine can be cloned in one go using the commissioning software.

Guided PC commissioning software with advanced wizard

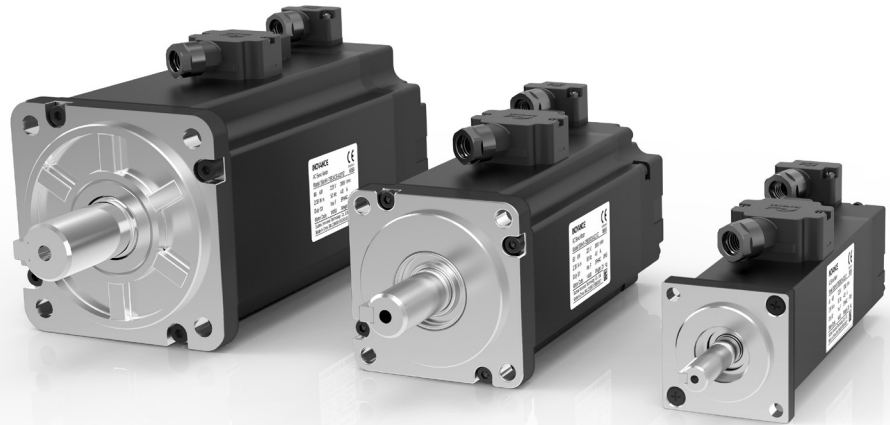
- Graphical user interface means specialist skills not needed for commissioning
- Software included free of charge
- Optional communication cable (S6-L-T00-3.0) required



SV660P/C/A Selection Chart

| Power supply voltage | Motor base speed (RPM) | Motor maximum speed (RPM) | Motor power (W) | Motor rated torque (N·m) | Motor peak torque (N·m) | Motor frame size (mm) | Rotor inertia (0.0001x kg·m ²) | MS1 motor type | SV660x type Where "x" can be the P (pulse), C (CANopen) or A (CANlink) variants | SV660x rated current (A) | SV660x peak current (A) | Size | Dimensions H x W x D (mm) | Connector kit |
|----------------------|------------------------|---------------------------|-----------------|--------------------------|-------------------------|-----------------------|--|----------------------|---|--------------------------|-------------------------|------|---------------------------|---------------|
| 1PH 220 V | 3000 | 6000 | 50 | 0.16 | 0.56 | 40X40 | 0.026 | MS1H1-05B30CB-A330Z | SV660xS1R6I-INT | 1.6 | 5.80 | A | 170X40X150 | S6-C22 |
| | 3000 | 6000 | 100 | 0.32 | 1.12 | 40X40 | 0.041 | MS1H1-10B30CB-A330Z | SV660xS1R6I-INT | 1.6 | 5.80 | A | 170X40X150 | S6-C22 |
| | 3000 | 6000 | 200 | 0.64 | 2.24 | 60X60 | 0.207 | MS1H1-20B30CB-A331Z | SV660xS1R6I-INT | 1.6 | 5.80 | A | 170X40X150 | S6-C22 |
| | 3000 | 6000 | 400 | 1.27 | 4.46 | 60X60 | 0.376 | MS1H1-40B30CB-A331Z | SV660xS2R8I-INT | 2.8 | 10.10 | A | 170X40X150 | S6-C22 |
| | 3000 | 6000 | 400 | 1.27 | 4.46 | 60X60 | 0.657 | MS1H4-40B30CB-A331Z | SV660xS2R8I-INT | 2.8 | 10.10 | A | 170X40X150 | S6-C22 |
| | 3000 | 6000 | 550 | 1.75 | 6.13 | 80X80 | 1.06 | MS1H1-55B30CB-A331Z* | SV660xS5R5I-INT | 5.5 | 16.90 | B | 170X50X173 | S6-C22 |
| | 3000 | 6000 | 750 | 2.39 | 8.36 | 80X80 | 1.38 | MS1H1-75B30CB-A331Z | SV660xS5R5I-INT | 5.5 | 16.90 | B | 170X50X173 | S6-C22 |
| | 3000 | 6000 | 750 | 2.39 | 8.36 | 80X80 | 2 | MS1H4-75B30CB-A331Z | SV660xS5R5I-INT | 5.5 | 16.90 | B | 170X50X173 | S6-C22 |
| 1/3 PH 220 V | 1500 | 3000 | 850 | 5.39 | 13.50 | 130X130 | 13.3 | MS1H3-85B15CB-A331Z | SV660xS7R6I-INT | 7.6 | 23.00 | C | 170X55X173 | S6-C29 |
| | 3000 | 6000 | 1000 | 3.18 | 9.12 | 80X80 | 1.75 | MS1H1-10C30CB-A331Z* | SV660xS7R6I-INT | 7.6 | 23.00 | C | 170X55X173 | S6-C22 |
| | 3000 | 6000 | 1000 | 3.18 | 11.10 | 80X80 | 1.75 | MS1H1-10C30CB-A331Z* | SV660xS012I-INT | 11.6 | 32.00 | D | 170X80X183 | S6-C22 |
| | 3000 | 6000 | 1000 | 3.18 | 9.54 | 100X100 | 1.87 | MS1H2-10C30CB-A331Z* | SV660xS7R6I-INT | 7.6 | 23.00 | C | 170X55X173 | S6-C29 |
| | 1500 | 3000 | 1300 | 8.34 | 20.85 | 130X130 | 17.8 | MS1H3-13C15CB-A331Z | SV660xS012I-INT | 11.6 | 32.00 | D | 170X80X183 | S6-C29 |
| | 3000 | 5000 | 1500 | 4.9 | 14.70 | 100X100 | 2.46 | MS1H2-15C30CB-A331Z | SV660xS012I-INT | 11.6 | 32.00 | D | 170X80X183 | S6-C29 |
| 3 PH 400 V | 3000 | 6000 | 1000 | 3.18 | 9.54 | 100X100 | 1.87 | MS1H2-10C30CD-A331Z | SV660xT5R4I-INT | 5.4 | 14.00 | C | 170X55X173 | S6-C29 |
| | 3000 | 5000 | 1500 | 4.9 | 14.70 | 100X100 | 2.46 | MS1H2-15C30CD-A331Z | SV660xT5R4I-INT | 5.4 | 14.00 | C | 170X55X173 | S6-C29 |
| | 3000 | 5000 | 2000 | 6.36 | 19.10 | 100X100 | 3.06 | MS1H2-20C30CD-A331Z | SV660xT8R4I-INT | 8.4 | 20.00 | D | 170X80X183 | S6-C29 |
| | 3000 | 5000 | 2500 | 7.96 | 19.12 | 100X100 | 3.65 | MS1H2-25C30CD-A331Z | SV660xT8R4I-INT | 8.4 | 20.00 | D | 170X80X183 | S6-C29 |
| | 3000 | 5000 | 2500 | 7.96 | 23.90 | 100X100 | 3.65 | MS1H2-25C30CD-A331Z | SV660xT012I-INT | 11.9 | 29.75 | D | 170X80X183 | S6-C29 |
| | 3000 | 5000 | 3000 | 9.8 | 29.16 | 130X130 | 7.72 | MS1H2-30C30CD-A331Z | SV660xT012I-INT | 11.9 | 29.75 | D | 170X80X183 | S6-C29 |
| | 3000 | 5000 | 3000 | 9.8 | 29.40 | 130X130 | 7.72 | MS1H2-30C30CD-A331Z | SV660xT017I-INT | 16.5 | 41.25 | E | 250X90X230 | S6-C29 |
| | 3000 | 5000 | 4000 | 12.6 | 37.80 | 130X130 | 12.1 | MS1H2-40C30CD-A331Z | SV660xT017I-INT | 16.5 | 41.25 | E | 250X90X230 | S6-C29 |
| | 3000 | 5000 | 5000 | 15.8 | 40.91 | 130X130 | 15.4 | MS1H2-50C30CD-A331Z | SV660xT017I-INT | 16.5 | 41.25 | E | 250X90X230 | S6-C29 |
| | 3000 | 5000 | 5000 | 15.8 | 47.60 | 130X130 | 15.4 | MS1H2-50C30CD-A331Z | SV660xT021I-INT | 20.8 | 52.12 | E | 250X90X230 | S6-C29 |
| | 1500 | 3000 | 850 | 5.39 | 13.50 | 130X130 | 13.3 | MS1H3-85B15CD-A331Z | SV660xT3R5I-INT | 3.5 | 11.00 | C | 170X55X173 | S6-C29 |
| | 1500 | 3000 | 1300 | 8.34 | 20.85 | 130X130 | 17.8 | MS1H3-13C15CD-A331Z | SV660xT5R4I-INT | 5.4 | 14.00 | C | 170X55X173 | S6-C29 |
| | 1500 | 3000 | 1800 | 11.5 | 28.75 | 130X130 | 25 | MS1H3-18C15CD-A331Z | SV660xT8R4I-INT | 8.4 | 20.00 | D | 170X80X183 | S6-C29 |
| | 1500 | 3000 | 2900 | 18.6 | 37.20 | 180X180 | 55 | MS1H3-29C15CD-A331Z | SV660xT012I-INT | 11.9 | 29.75 | D | 170X80X183 | S6-C39 |
| | 1500 | 3000 | 4400 | 28.4 | 71.10 | 180X180 | 88.9 | MS1H3-44C15CD-A331Z | SV660xT017I-INT | 16.5 | 41.25 | E | 250X90X230 | S6-C39 |
| | 1500 | 3000 | 5500 | 35 | 87.60 | 180X180 | 107 | MS1H3-55C15CD-A331Z | SV660xT021I-INT | 20.8 | 52.12 | E | 250X90X230 | S6-C39 |
| | 1500 | 3000 | 7500 | 48 | 117.63 | 180X180 | 141 | MS1H3-75C15CD-A331Z | SV660xT026I-INT | 25.7 | 64.25 | E | 250X90X230 | S6-C39 |

*Brake option not available.
All MS1 motors are CE certified and UL listed.
For detailed motor dimension data please contact your local Inovance representative or refer to the IS620 brochure.



For more information, please contact our local offices.

International Offices

- Germany-Stuttgart**
 Tel: +49 (0) 7144 8990
 sales.de@inovance.eu
- Italy-Milano**
 Tel: +39 (0) 2268 22318
 sales.it@inovance.eu
- France-Bordeaux**
 Tel: +33 (0) 5594 01050
 sales.fr@inovance.eu
- Turkey-Istanbul**
 Tel: +90 (216) 706 17 89
 info@inovance.eu

- South Korea-Seoul**
 Tel: +82 (0) 10 7428 5732
 info@inovance.eu
- India**
Head Office Chennai
 Tel: +91 (0) 44 4380 0201
Ahmedabad
 Tel: +91 (0) 79 4003 4274
Mumbai
 Tel: +91 (0) 22 4971 5883
New Delhi
 Tel: +91 (0) 11 4165 4524
Sales Network in Kolkata, Bengaluru, Jaipur
 Coimbatore, Hyderabad, Pune, Vadodara
 Email: info@inovance.ind.in

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

For other country distributors, contact the Hong Kong office.

Inovance Technology Companies
 Shenzhen Inovance Technology Co. Ltd.
 Suzhou Inovance Technology Co. Ltd.

INOVANCE
www.inovance.eu