



INOVANCE SV660P Single Axis Pulse Servo Drive Owner's Manual

[Home](#) » [INOVANCE](#) » INOVANCE SV660P Single Axis Pulse Servo Drive Owner's Manual 

Contents

- [1 INOVANCE SV660P Single Axis Pulse Servo Drive](#)
- [2 Product family overview](#)
- [3 Speed loop response graph](#)
- [4 SV660P/C/A Selection Chart](#)
- [5 Documents / Resources](#)
 - [5.1 References](#)
- [6 Related Posts](#)

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INOVANCE 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 are also available

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

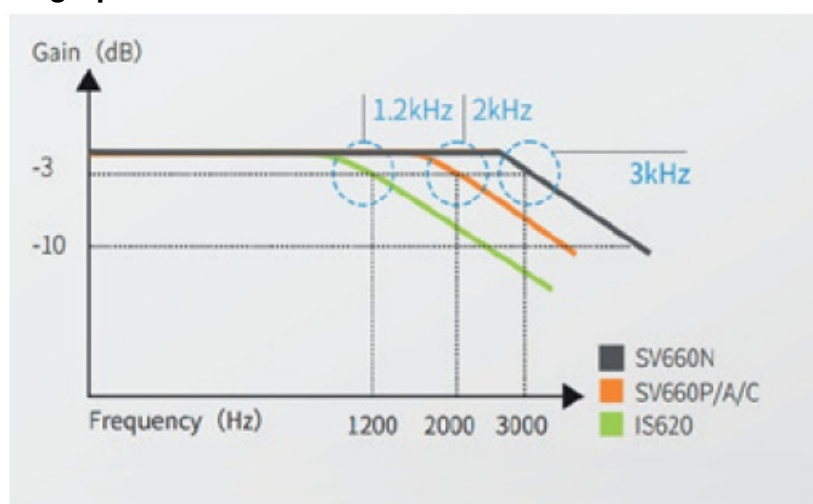
- (IEC 61800-7-201/301), supporting several operation modes.
- **SV660A – CANlink variant**
- Uses the Inovance proprietary protocol, in combination with Inovance controller products.

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

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

SV660	
Carrier frequency	12 kHz
Current loop cycle time	62.5 μ s
Speed loop cycle time	125 μ s
Position loop cycle time	250 μ s

Speed loop response graph



- **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

An 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:

- stone obtains the gains using a calculation based on the set stiffness level
- iTunes 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 with an advanced software wizard

A graphical user interface means specialist technical skills are not required for drive commissioning, freeing up

skilled engineering personnel for other tasks.



SV660P/C/A Selection Chart

P s v u o p w e l r y e o l t a g	M b s a o s t e o r (R p P e M e d)	M m s o a t x o i m r u m (R p P e M e d)	M p o w e r (W)	M r t a o t r e t o d o r (N o r m a l i z e d)	p M t e o a t o r (N o r m a l i z e d)	M f r a m e s i z e (mm)	(R i n o o e t r i o a l x kg· 0 m 0 2)	MS1 motor typ e	SW(Vh6e6r 0e"x txy"pce aAnNboepet hne) P opruAls(eC) A, NCI(iCnk) variants	Sr ca Vt 6e 6d 0x (A u) r r e n t	Spc Ve a6k 60x (Au)r r e n t	Si ze	DHixm Wenxs Dions (mm)	Ckiot nnect or
	30 00	6000	50	0.16	0.56	40X40	0.026	MS1H1-05B30 CB-A330Z	SV660xS1R 6I-INT	1.6	5.80	A	170X40 X150	S6-C 22
	30 00	6000	100	0.32	1.12	40X40	0.041	MS1H1-10B30 CB-A330Z	SV660xS1R 6I-INT	1.6	5.80	A	170X40 X150	S6-C 22
	30 00	6000	200	0.64	2.24	60X60	0.207	MS1H1-20B30 CB-A331Z	SV660xS1R 6I-INT	1.6	5.80	A	170X40 X150	S6-C 22
	30 00	6000	400	1.27	4.46	60X60	0.376	MS1H1-40B30 CB-A331Z	SV660xS2R 8I-INT	2.8	10.10	A	170X40 X150	S6-C 22

1P H 22 0 V	30 00	6000	40 0	1. 27	4.4 6	60X6 0	0.6 57	MS1H4-40B30 CB-A331Z	SV660xS2R 8I-INT	2. 8	10. 10	A	170X40 X150	S6-C 22
	30 00	6000	55 0	1. 75	6.1 3	80X8 0	1.0 6	MS1H1-55B30 CB-A331Z*	SV660xS5R 5I-INT	5. 5	16. 90	B	170X50 X173	S6-C 22
	30 00	6000	75 0	2. 39	8.3 6	80X8 0	1.3 8	MS1H1-75B30 CB-A331Z	SV660xS5R 5I-INT	5. 5	16. 90	B	170X50 X173	S6-C 22
	30 00	6000	75 0	2. 39	8.3 6	80X8 0	2	MS1H4-75B30 CB-A331Z	SV660xS5R 5I-INT	5. 5	16. 90	B	170X50 X173	S6-C 22
	15 00	3000	85 0	5. 39	13. 50	130X 130	13. 3	MS1H3-85B15 CB-A331Z	SV660xS7R 6I-INT	7. 6	23. 00	C	170X55 X173	S6-C 29
1/3 PH 22 0 V	30 00	6000	10 00	3. 18	9.1 2	80X8 0	1.7 5	MS1H1-10C30 CB-A331Z*	SV660xS7R 6I-INT	7. 6	23. 00	C	170X55 X173	S6-C 22
	30 00	6000	10 00	3. 18	11. 10	80X8 0	1.7 5	MS1H1-10C30 CB-A331Z*	SV660xS01 2I-INT	11 .6	32. 00	D	170X80 X183	S6-C 22
	30 00	6000	10 00	3. 18	9.5 4	100X 100	1.8 7	MS1H2-10C30 CB-A331Z	SV660xS7R 6I-INT	7. 6	23. 00	C	170X55 X173	S6-C 29
	15 00	3000	13 00	8. 34	20. 85	130X 130	17. 8	MS1H3-13C15 CB-A331Z	SV660xS01 2I-INT	11 .6	32. 00	D	170X80 X183	S6-C 29
	30 00	5000	15 00	4. 9	14. 70	100X 100	2.4 6	MS1H2-15C30 CB-A331Z	SV660xS01 2I-INT	11 .6	32. 00	D	170X80 X183	S6-C 29
	30 00	6000	10 00	3. 18	9.5 4	100X 100	1.8 7	MS1H2-10C30 CD-A331Z	SV660xT5R 4I-INT	5. 4	14. 00	C	170X55 X173	S6-C 29
	30 00	5000	15 00	4. 9	14. 70	100X 100	2.4 6	MS1H2-15C30 CD-A331Z	SV660xT5R 4I-INT	5. 4	14. 00	C	170X55 X173	S6-C 29

3 P
H
40
0 V

30 00	5000	20 00	6. 36	19. 10	100X 100	3.0 6	MS1H2-20C30 CD-A331Z	SV660xT8R 4I-INT	8. 4	20. 00	D	170X80 X183	S6-C 29
30 00	5000	25 00	7. 96	19. 12	100X 100	3.6 5	MS1H2-25C30 CD-A331Z	SV660xT8R 4I-INT	8. 4	20. 00	D	170X80 X183	S6-C 29
30 00	5000	25 00	7. 96	23. 90	100X 100	3.6 5	MS1H2-25C30 CD-A331Z	SV660xT01 2I-INT	11 .9	29. 75	D	170X80 X183	S6-C 29
30 00	5000	30 00	9. 8	29. 16	130X 130	7.7 2	MS1H2-30C30 CD-A331Z	SV660xT01 2I-INT	11 .9	29. 75	D	170X80 X183	S6-C 29
30 00	5000	30 00	9. 8	29. 40	130X 130	7.7 2	MS1H2-30C30 CD-A331Z	SV660xT01 7I-INT	16 .5	41. 25	E	250X90 X230	S6-C 29
30 00	5000	40 00	12 .6	37. 80	130X 130	12. 1	MS1H2-40C30 CD-A331Z	SV660xT01 7I-INT	16 .5	41. 25	E	250X90 X230	S6-C 29
30 00	5000	50 00	15 .8	40. 91	130X 130	15. 4	MS1H2-50C30 CD-A331Z	SV660xT01 7I-INT	16 .5	41. 25	E	250X90 X230	S6-C 29
30 00	5000	50 00	15 .8	47. 60	130X 130	15. 4	MS1H2-50C30 CD-A331Z	SV660xT02 1I-INT	20 .8	52. 12	E	250X90 X230	S6-C 29
15 00	3000	85 0	5. 39	13. 50	130X 130	13. 3	MS1H3-85B15 CD-A331Z	SV660xT3R 5I-INT	3. 5	11. 00	C	170X55 X173	S6-C 29
15 00	3000	13 00	8. 34	20. 85	130X 130	17. 8	MS1H3-13C15 CD-A331Z	SV660xT5R 4I-INT	5. 4	14. 00	C	170X55 X173	S6-C 29
15 00	3000	18 00	11 .5	28. 75	130X 130	25	MS1H3-18C15 CD-A331Z	SV660xT8R 4I-INT	8. 4	20. 00	D	170X80 X183	S6-C 29
15 00	3000	29 00	18 .6	37. 20	180X 180	55	MS1H3-29C15 CD-A331Z	SV660xT01 2I-INT	11 .9	29. 75	D	170X80 X183	S6-C 39

15 00	3000	44 00	28 .4	71. 10	180X 180	88. 9	MS1H3-44C15 CD-A331Z	SV660xT01 7I-INT	16 .5	41. 25	E	250X90 X230	S6-C 39
15 00	3000	55 00	35	87. 60	180X 180	107	MS1H3-55C15 CD-A331Z	SV660xT02 1I-INT	20 .8	52. 12	E	250X90 X230	S6-C 39
15 00	3000	75 00	48	117 .63	180X 180	141	MS1H3-75C15 CD-A331Z	SV660xT02 6I-INT	25 .7	64. 25	E	250X90 X230	S6-C 39

- **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.



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Documents / Resources

	INOVANCE SV660P Single Axis Pulse Servo Drive [pdf] Owner's Manual SV660P, Single Axis Pulse Servo Drive, SV660P Single Axis Pulse Servo Drive, Axis Pulse Servo Drive, Pulse Servo Drive, Servo Drive, Drive
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References

-  [Inovance – Industrial Automation: Home](#)