

INOVANCE

ISMG Servo Motor

for energy saving servo pump applications

High overload capacity

IPM (Interior Permanent Magnet) rotor structure, with excellent electromagnetic performance

CE

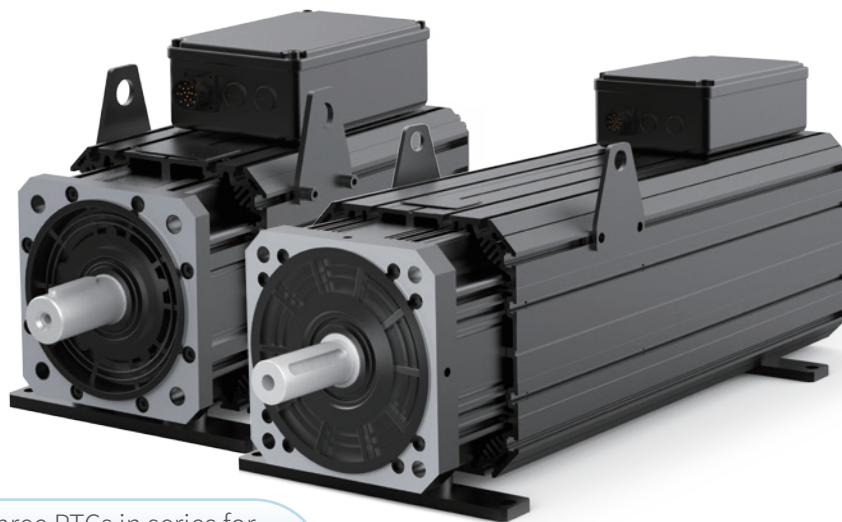
Reduced iron and copper losses, higher efficiency and improved cooling

Robust resolver feedback

Higher efficiency keeps motor cool during operation, and reduces the risk of demagnetization

Forced ventilation

Three PTCs in series for consistent temperature protection. KTY for precise temperature monitoring.



Product ordering code

ISM G1 - 95C 15C D - R1 A 1 F A

①

②

③

④

⑤

⑥

⑦

⑧

⑨

⑩

① **Product series:**
ISM: ISM series
servo motor

② **Flange size (mm):**
G1: 200 x 200
G2: 266 x 266

③ **Rated Power (W)**
C: x 100
D: x 1000

④ **Rated speed (rpm)**
C: x 100
D: x 1000

⑤ **Voltage class**
B: 220 V
D: 380 V

⑥ **Encoder type**
A3: 23-bit absolute
R1: Resolver

⑦ **Shaft connection**
3: Keyed + tapped hole
A: Keyed + tapped hole
IPM rotor structure

⑧ **Brake, gear, oil seal**
1: Oil seal
4: Oil seal + brake

⑨ **Customised feature**
F: Forced ventilation

⑩ **Version**
A: Version A

Servo motor specifications

Series		ISMG1														
Model	ISMG1-xxxxxxx-yyyFA	95C15CD	11D17CD	12D20CD	14D15CD	16D17CD	18D20CD	17D15CD	20D17CD	23D20CD	22D15CD	24D17CD	28D20CD	30D15CD	34D17CD	41D20CD
Frame size [mm]		200 x 200														
Length [mm]		375			410			445			480			550		
Rated voltage [V]		380														
Rated frequency [Hz]		100	113.33	133.33	100	113.33	133.33	100	113.33	133.33	100	113.33	133.33	100	113.33	133.33
Rated speed [RPM]		1,500	1,700	2,000	1,500	1,700	2,000	1,500	1,700	2,000	1,500	1,700	2,000	1,500	1,700	2,000
Back EMF [V]		318.2	309.1	303	303	309.1	323.2	303	300.5	303	318.2	309.1	303	303	309.1	323.2
Rated power [kW]	S1	7.9	8.9	10.5	11.8	13.4	15.7	14.5	16.4	19.3	18.1	20.5	24.1	23.6	26.7	31.4
	S4	9.5	11	12	14	16	18	17	20	23	22	24	28	30	34	41
Rated current [A]	S1	15.4	18.1	21.6	24.4	27.1	30.4	29.9	34.1	39.8	35.5	41.5	49.8	48.7	54.2	60.7
	S4	18.5	21.7	26	29.2	32.5	36.4	35.7	40.7	47.6	41.7	48.7	58.4	63.3	70.4	78.9
Rated torque [Nm]	S1	50			75			92			115			150		
	S4	60			90			110			135			195		
Peak torque [Nm]		130			180			230			280			380		
Inertia [10 ⁻³ kg·m²]		7.5			9			10.5			12			15		
Mass [kg]		45.2			51.9			59			66			79.8		
Poles		8														

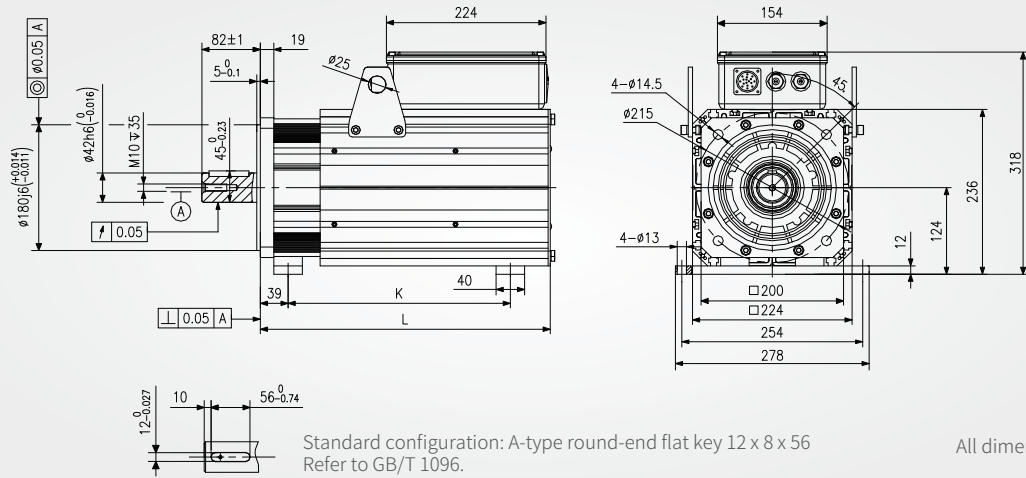
Series		ISMG2														
Model	ISMG2-xxxxxxx-yyyFA	31D15CD	36D17CD	42D20CD	42D15CD	48D17CD	57D20CD	52D15CD	60D17CD	70D20CD	60D15CD	68D17CD	80D20CD	80D15CD	91D17CD	11E20CD
Frame size [mm]		266 x 266														
Length [mm]		525			575			625			675			775		
Rated voltage [V]		380														
Rated frequency [Hz]		100	113.33	133.33	100	113.33	133.33	100	113.33	133.33	100	113.33	133.33	100	113.33	133.33
Rated speed [RPM]		1,500	1,700	2,000	1,500	1,700	2,000	1,500	1,700	2,000	1,500	1,700	2,000	1,500	1,700	2,000
Back EMF [V]		318.2	309.1	303	303	309.1	323.2	303	300.5	303	318.2	309.1	303	303	343.4	323.2
Rated power [kW]	S1	26.7	30.3	35.6	36.1	40.9	48.2	44.8	50.7	59.7	53.4	60.5	71.2	69.1	78.3	92.1
	S4	31	36	42	42	48	57	52	60	70	60	68	80	80	91	110
Rated current [A]	S1	52.5	61.4	73.6	74.7	83	93.1	94.1	107.5	125.6	104.9	122.7	147.2	142.9	142.9	178.1
	S4	61.7	72.2	86.6	87.7	97.5	109.3	110.6	126.4	147.6	118.8	139	166.7	165.6	165.6	206.5
Rated torque [Nm]	S1	170			230			285			340			440		
	S4	200			270			335			385			510		
Peak torque [Nm]		330			440			550			660			825		
Inertia [10 ⁻³ kg·m²]		29.6			36.8			43.4			50			64		
Mass [kg]		122			141.3			158.4			175.4			217		
Poles																

S1 operating mode (continuous duty): Operation with constant load with a duration long enough to reach thermal steady-state condition

S4 operating mode (periodic intermittent duty with influence on the start-up process): Sequence of identical duty cycles without thermal steady-state being reached. Each cycle is composed of a significant starting time, a period of operation at constant load and a period de-energized and at rest. ISMG series motors comply with S4 25%

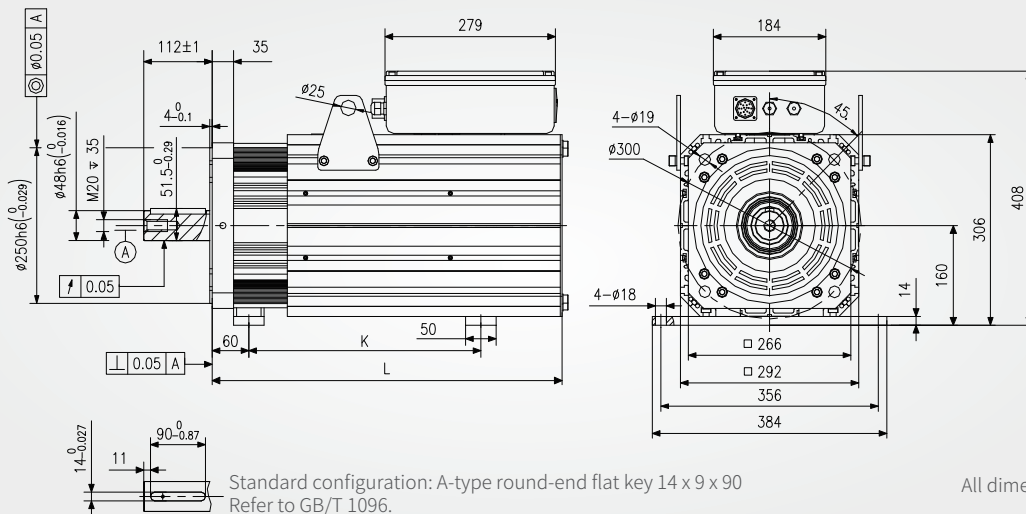
Servo motor dimensions

ISMG1 (200 x 200)



Motor model	ISMG1-95C15CD-yyyFA	ISMG1-14D15CD-yyyFA	ISMG1-17D15CD-yyyFA	ISMG1-22D15CD-yyyFA	ISMG1-30D15CD-yyyFA
	ISMG1-11D17CD-yyyFA	ISMG1-16D17CD-yyyFA	ISMG1-20D17CD-yyyFA	ISMG1-24D17CD-yyyFA	ISMG1-34D17CD-yyyFA
	ISMG1-12D20CD-yyyFA	ISMG1-18D20CD-yyyFA	ISMG1-23D20CD-yyyFA	ISMG1-28D20CD-yyyFA	ISMG1-41D20CD-yyyFA
K	285	312	354	396	471
L	375	410	445	480	550

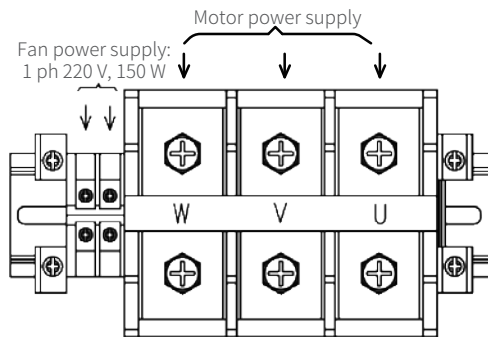
ISMG2 (266 x 266)



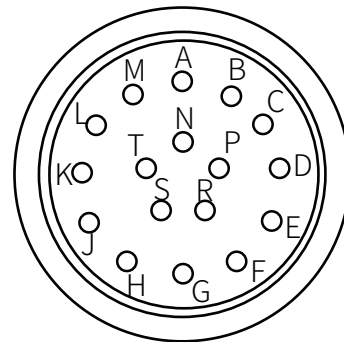
Motor model	ISMG2-31D15CD-yyyFA	ISMG2-42D15CD-yyyFA	ISMG2-52D15CD-yyyFA	ISMG2-60D15CD-yyyFA	ISMG2-80D15CD-yyyFA
	ISMG2-36D17CD-yyyFA	ISMG2-48D17CD-yyyFA	ISMG2-60D17CD-yyyFA	ISMG2-68D17CD-yyyFA	ISMG2-91D17CD-yyyFA
	ISMG2-42D20CD-yyyFA	ISMG2-57D20CD-yyyFA	ISMG2-70D20CD-yyyFA	ISMG2-80D20CD-yyyFA	ISMG2-11E20CD-yyyFA
K	360	370	476	476	583
L	525	575	625	675	775

Wiring diagram

Terminals of main circuit



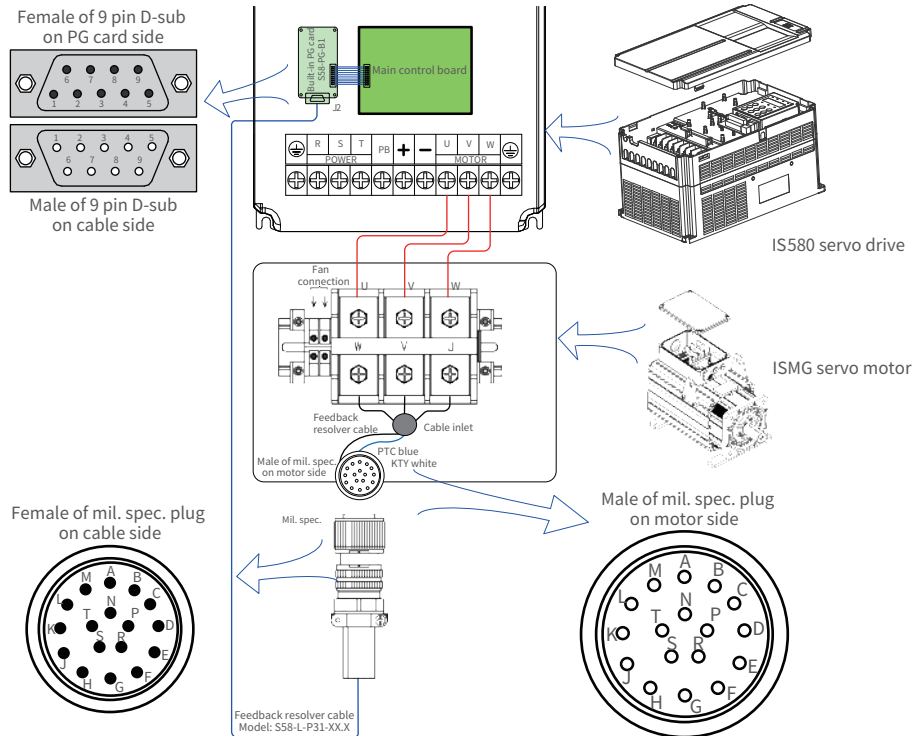
17P mil. spec. plug on motor side



Resolver cable -
Model: S58-L-P31-XX.X
Standard lengths (m):
3.0, 6.0, 8.0, 12.0 & 15.0

17P Aviation plug	A	B	C	D	E	F	G	H	L	K	J
DB9 connector	1	2	3	4	5	9	7	8	6		Housing
Signal definition	REF-	REF+	Cos+	Cos-	Sin+	Sin-	PTC-M	PTC-N	KTY-N	KTY-M	Shielding
Wire colour	Yellow/white	Red/white	Red	Black	Yellow	Blue	Brown	Orange	Grey		Shielding
Remark	Twisted pair		Twisted pair		Twisted pair			KTY, PTC common			

ISMG servo motor connection diagram with IS580 servo drive



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

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

Turkey-Istanbul
Tel: +90 (216) 706 17 89
sales.tr@inovance.eu

South Korea-Seoul
Tel: +82 2 3489 8850
sales.kr@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, Pune,
Coimbatore, Hyderabad, Vadodara, Jaipur
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