



MIS232R3JPH466

Int.StepH 12-72VDC, , AbsC-L

ServoStep MIS is a series of integrated stepper motors with servo control (closed-loop) and up to 3000 RPM.

It consists of NEMA 17..23..34..43 size motors with holding torques from 0.36 Nm up to 25 Nm. All motors are programmable and have 8 I/O points (each can be DI or DO or AI).

Options include:

- incremental (semi-absolute) encoder*). absolute multiturn encoder
- brake module*)
- radial or axial*) connectors
- CANopen
- Ethernet interface w/built-in switch for easy daisy-chaining and all protocols (Profinet. EtherNet/IP. EtherCAT. Sercos. ModbusTCP/UDP. Powerlink).
- Wireless versions are also possible: WLAN or BlueTooth.
- Special shaft versions include double shaft and hollow shaft. contact JVL to learn which combinations are possible.
- Higher IP versions are also available. *) Depending of other options



General information

Description	Int.StepH 12-72VDC, , AbsC-L, M23 JVL connector. Profinet . P can be replaced with S: Sercos , C: Ethercat, L: Powerling, I: ethernetIP, P:Profinet, M:ModbusTCP, , High Resolution: 409.600 step/rev. ±0.01 RPM, Programmable (incl. current, position & velocity), C-L + Abs Multiturn Enc. 4096 CPR ± 5242 Revs, ø10x20 mm Round, Shaft: IP42, Motor: IP42, 56.4x124 mm Holding Torque: 2.53 Nm Axial Connector 12-72 VDC Mechanical Power: 316 W, Isolated from earth		
Manufacture	JVL	Motor type	Integrated Stepper - Rotating
Motor resolution	409600	Encoder type	H4: H2 incr+absSingleturn and H3 serial/absMultiturn
Integrated PLC	Yes	PLC no. of DI/DO/AI	8
Closed loop	Yes	STO connector	No
Integrated gear	No	Gear ratio	
Brake	No	Speed [Rpm]	3000.00
Connectivity: Without module		Power Peak [W]	316.00
Flange Type Front		Protection House/Shaft	
Shaft size - Front [mm]	10.0 mm		
Running torque [Nm]	2.53	Rated Winding current [A]	6.0
Main supply [V]	12-72	Voltage type - Main	DC



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General information

Control voltage (CVI/O+) [VDC]	7-28	Holding torque [Nm]	2.53
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Shaft Double	No
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Weight net [kg]	1.36	MTBF 100% [Year]	13
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Weight gross [kg]	1.48	MTBF 30% [Year]	15
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Software	MacTalk
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CE Marked	Yes
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Approval - ROHS-3	Yes
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Approval UL	No
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Tariff no	85015100	Country Of Origin	DK
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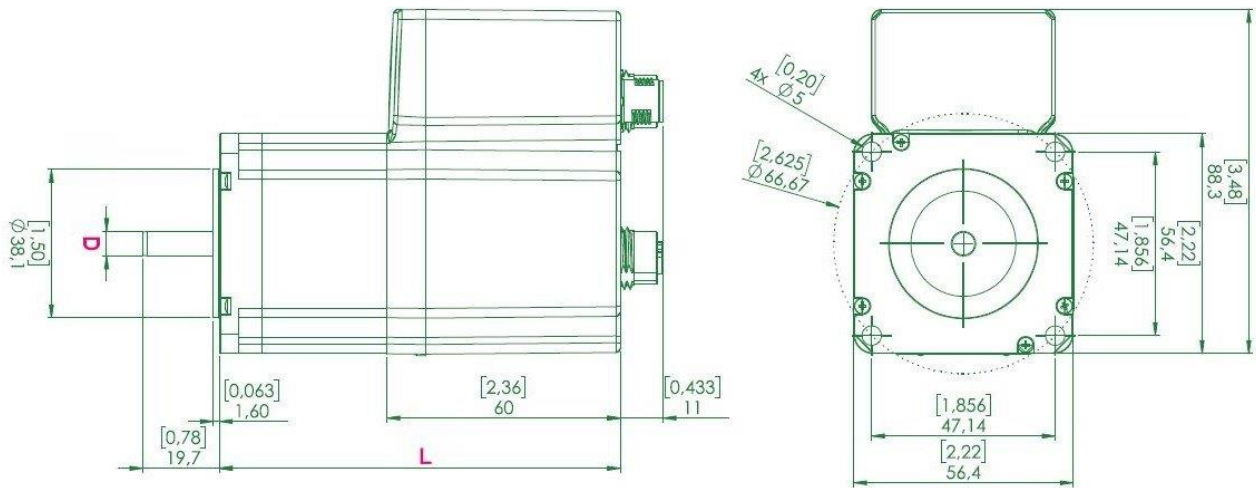
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Mechanical information

Motor Type	Length (L) ±2.0 [0.0787]	Shaft dia. (D) +0 / -0.013mm[0.000512]
MIS231Q...	103 [4.06]	6.35 [0.25]
MIS232Q...	124 [4.88]	6.35 [0.25]
MIS234Q...	161 [6.34]	10.0 [0.3937]
MIS231R...	103 [4.06]	6.35 [0.25]
MIS232R...	124 [4.88]	10.0 [0.3937]

[] = Inches

This drawing covers only motor type MIS23xQ and MIS23xR with radial connectors



Motor length [mm]	124.0	Motor width [mm]	56.4
Motor height [mm]	88.3	Protection house	IP42
Protection house	IP42	Protection shaft	IP42
Flange Type Front		Flange Type Rear	No
Motor diameter center front [mm]	38.1	Motor diameter center rear [mm]	
Bolt circle diameter front [mm]	66.6	Bolt circle diameter front [mm]	
Mounting holes front [mm]	5 mm	Mounting holes rear [mm]	
Flange material	Aluminium	Flange Thickness [mm]	
Shaft Type Output	Round	Shaft Double	No
Shaft size - Front [mm]	10.0 mm	Shaft Type Rear	
Shaft length Front [mm]	19.7	Shaft size - Rear	-
Shaft material	Stainless steel AISI303	Shaft length Rear [mm]	
Shaft Key included	Key NOT included	Shaft Key Dimension	-
Front bearing type	6000ZZ	Rear bearing type	6000ZZ
Radial load [N]	346	Radial load distance [mm]	10



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Mechanical information

Axial load [N]	377		
Axial play [mm]		Axial play force [N]	
Integrated gear	No	Gear ratio	
Gear efficiency [%]	-	Gear backlash [ArcMin]	-
Brake	No	Brake - Go ON time [ms]	-
Brake Holding torque [Nm]	-	Brake - Go OFF time [ms]	-
Rotor inertia [kgcm²]	0.48	Max inertia factor	40
Precision Motor - Absolute [Deg]	0.35	Precision Motor - Max Load [Deg]	
Precision Motor - Repeatability [Deg]	0.15	Step angle [°/full step]	1.8°
2D [PDF]	No	2D [DWG]	No
3D [DWG]	No	3D [EASM]	No
3D [IGES]	No	3D [STEP]	No
Datasheet - pdf		CAD file page	Link
User Manual	Download	WEB page	Link
Approval UL	No	STO connector	No
Approval - ATEX	No	Approval TÜV - STO	No
Oil resistant			
Temperature ambient [°C]	0...40 °C and 0...70 °C with derating of performance		
Temperature storage	-40...70 °C		
Humidity working	5...93% non-condensing		
Vibration	5-25 Hz: +/-1.6mm, 25-500Hz: 4G, 1.0 oct./min		
Shock	15G, 30ms. 6 x 1000 cycles in +/-X, +/-Y, +/-Z		
Withstand Voltage	500 VDC between earth and supply ground		
EMC in general	EMC Directive DIR2014/30/EU		
EMC Emission	EN61800-3 / EN61000-6-3 / EN61000-6-4 all 2. environment		
EMC Immunity	En IEC 61800-3 / EN61000-6-1 all 2. environment		
Safety in general	LVD DIR2014/35/EU / EL61800 - USA and Canada only MIS34x products are pending		
Safety wo STO	EN60950-1		
Safety w STO	EN60950-1 / EN61508-1/-2 SIL3 / ISO13849-1/-2 / ISO62061 / EN61800-5-1/-2		
Inviromental	IEC 60068-2-27, Test Ea. Shock test		
	IEC 60068-2-6, Test Fc. Vibration test		
	IEC 60068-2-2, Test Bd. covers temperaturerise/dry heat		
	IEC 60068-2-78, Perm. moisture/Damp heat, steady state		
REACH SVHC document			
Low voltage Directive			
No Dual Use			

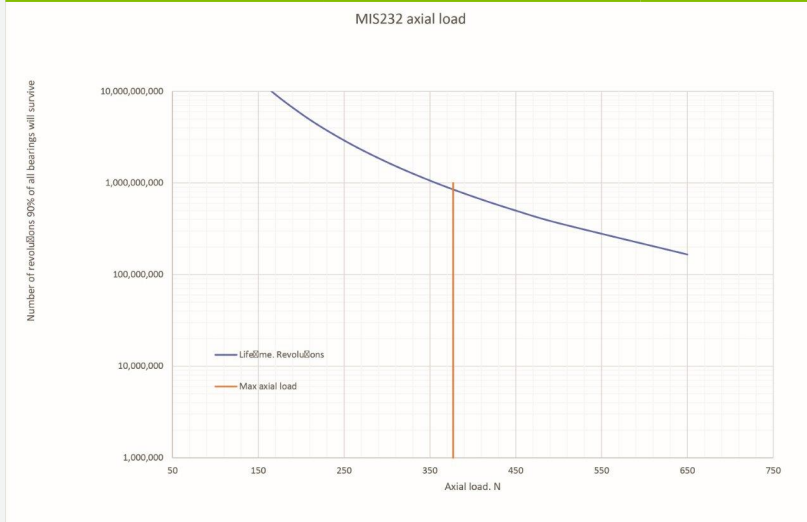


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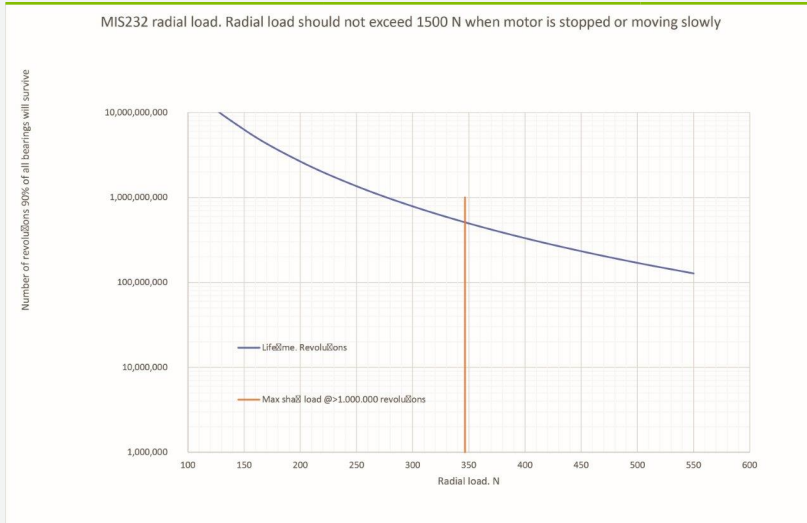
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Mechanical information

Duty Cycle		Max Duty Cycle [%]	
Axial Load Typical [N]	377	Axial Load Long [N]	314



Radial Load Typical [N]	346	Radial Load Long [N]	312
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Load typical term	Load Long term
Shaft Seal	



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Connector information

Connector 1 label

Connector 1

Connector 2 label

Connector 2

Connector 3 label

Connector 3

Connector 4 label

Connector 4

Connector 1 RS485

Connector 2 RS485

Connector 3 RS485

Connector 4 RS485

Connector STO

No

Picture STO Con

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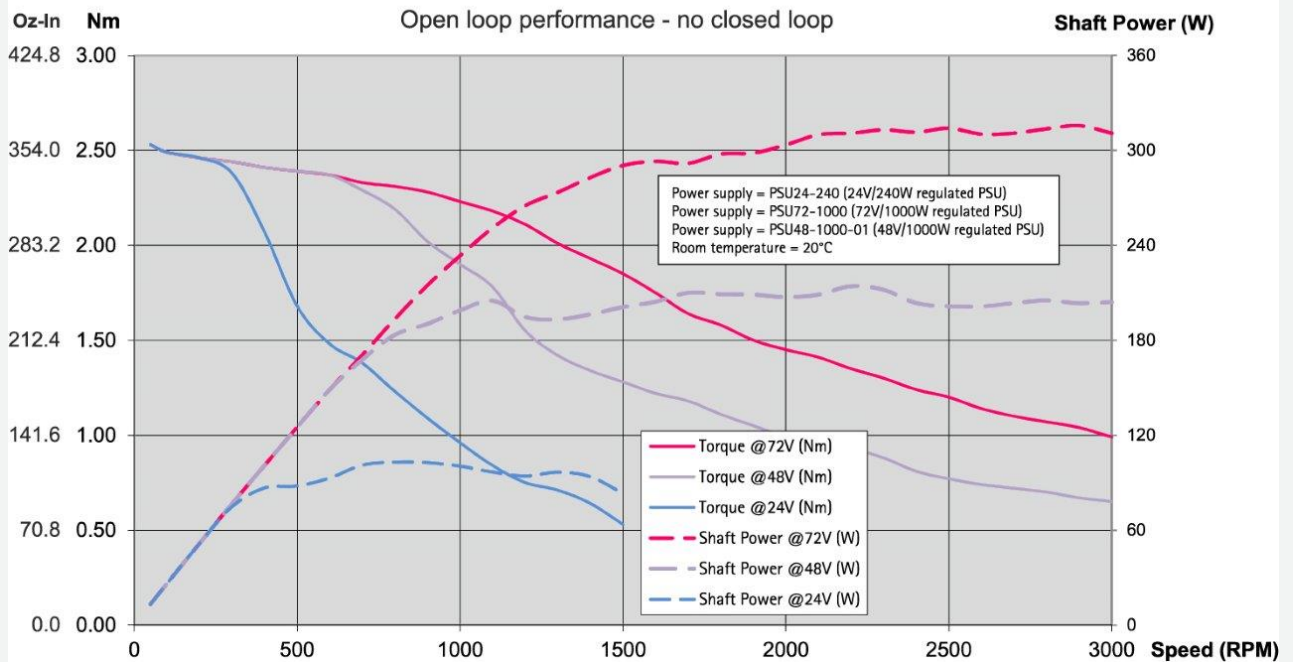
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Torque, force and Power information

Supply Volt 1 [V]		Power Peak 1 [W]	
Supply Volt 2 [V]	24	Power Peak 2 [W]	103.00
Supply Volt 3 [V]	48	Power Peak 3 [W]	209.00
Supply Volt 4 [V]	72	Power Peak 4 [W]	316.00
Holding torque [Nm]	2.53	Running torque [Nm]	2.53
Detent torque [Nm]	0.068		

MIS232T motor torque and shaft power versus speed





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Int.StepH 12-72VDC, , AbsC-L

Electrical information

Main supply [V]	12-72	Main supply Min-Max [V]	7-90
Rated motor current [A]	6.2		
Control voltage (CVI/O+) [VDC]	7-28	Control Voltage (CVI) Min-Max [VDC]	7-30
CVI current wo Ethernet and output (12/24VDC) [mA]		Current Ethernet option (12/24VDC) [mA]	
Current brake option [mA]	-	Current for 1 Dig. output - 350 max [mA]	
Max current CVI [A]			
Dig. Input impedans	30 Kohm	Counter frequency max	12MHz
MTBF 30% [Year]	15	MTBF 100% [Year]	13
Motor resolution	409600	Encoder type	H4: H2 incr+absSingleturn and H3 serial/absMultiturn
Encoder Resolution (H2) H2 - 4096 Singleturn AbsEnc - Semi multiturn			
Encoder Resolution (H3)	H3 - 1024 Multiturn AbsEnc	Encoder revolutions	+/-5242
PLC no. of DI/DO/AI	8	Analogue voltage	0-5VDC 12bit
Standard used		Standard used 2	
Resistance [Ohm]		Induction [mH]	



JVL A/S | Bregnerødvej 127 | DK-3460 Birkerød | Denmark | Tel. (+45) 4582 4440 | www.jvl.dk | sales@jvl.dk

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Communication information

Software

MacTalk

Connector 2 RS485

Connectivity:

Without module

Connector 3 RS485

Connector 4 RS485

e-PLC Files

Ethernet, PLC demo files



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Cable information

Item number	Mount on	Cable con 1 +Con 1 angle	Cable application	Wires no totally	Cable length [m]
Item description		Cable con 2 +Con 2 angle	Cable flexibilty	Wire [mm2]	Connector 1 LED