



MIS231S1Q5H466

Int.Step 12-72VDC, RS485, 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 0.18 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.Step 12-72VDC, RS485, AbsC-L, 4xM12. 17pF:8xDIO/AI+RS422+RS485 8pF:RS485 5pF:485, High Resolution: 409.600 step/rev. ±0.01 RPM, Programmable (incl. current, position & velocity), C-L + Absolute multi-turn encoder. 4096 CPR ± 5242 Revs, Ø6.35x20 mm Round Shaft: IP42Motor: IP42, 56.4x103 mm Holding Torque: 0.97 NmMax. 177.00 WRadial Connector12-72 VDC		
Manufacture	JVL	Motor type	Integrated Stepper - Rotating
Motor resolution	409600	Encoder type	H4: H2 incr+absSingleturn and H3 serial/absMultiturn
Speed [Rpm]	3000.00	Power Peak [W]	177.00
Flange size	NEMA 23 - 57x57mm	Shaft size - Front [mm]	6.35 mm
Running torque [Nm]	0.97	Rated Winding current [A]	6.0
Holding torque [Nm]	0.97	Connectivity: Without module	RS485
Integrated PLC	Yes	PLC no. of DI/DO/AI	8
Closed loop	Yes	STO connector	No
Integrated gear	No	Gear ratio	
Brake	External brake option	Protection House/Shaft	
Shaft Double	No	Main supply [V]	12-72



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General information

Main supply UL [V]	12-60	Voltage type - Main	DC
Control voltage (CVI/O+) [VDC]	7-28	Control Voltage for UL recognized	7-30 VDC 150 mA + max 500 mA for user outputs
Weight net [kg]	0.99	MTBF 100% [Year]	13
Weight gross [kg]	1.11	MTBF 30% [Year]	15
Software	MacTalk		
CE Marked	Yes		
CE picture	CE-mark.JPG		
Approval - ROHS-3	Yes		
Rohs picture	RoHS-3.jpg		
Approval UL	Yes. Recognized	UL Installation	Read more in usermanual about UL precautions
UL picture	cRUus_E516423_MIS17_23_UL.png		

Ambient Temperature range [°C]:

Maximum Installation Altitude [m]:

Max. Amb. Temperature range - Torque derating:

- Power Derating every 1000m over 1000m [%]:

Motion Information:

Velocity Precision [+/-ppm]

Acceleration / Deceleration Range [Rpm/s]

Electronic Gearing Ratio [Range / Resolution]

Tariff no 85015100

Velocity Resolution [Rpm]

Acceleration / Deceleration Range [Rpm/s]

Country Of Origin DK

Tariff no US



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Mechanical information

Paint type

Dimension pdf MIS23_S_T - Dimensions.jpg

Motor length [mm] 103 **Motor width [mm]** 56.4

Motor height [mm] 88.1

Protection house IP42 **Protection shaft** IP42

Flange Rear No

Flange Type Front

Flange Type Rear

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 Thickness [mm] **Flange material** Aluminium

Shaft Double No

Shaft Type Output Round

Shaft Type Rear

Shaft size - Front [mm] 6.35 mm

Shaft size - Rear -

Shaft length Front [mm] 20.0

Shaft length Rear [mm]

Shaft material Stainless steel AISI303 **Shaft Key included** Key NOT included

Shaft Key Dimension -

Integrated gear No

Gear ratio

Gear efficiency [%] < - **Gear backlash [ArcMin]** -

Brake External brake option **Brake - Go ON time [ms]** -

Brake Holding torque [Nm] - **Brake - Go OFF time [ms]** -

Rotor inertia [kgcm²] 0.3 **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°

CAD 2D [PDF] Download **CAD 3D [STEP]** Download

CAD 2D [DWG] No **CAD 3D [DWG]** No

CAD 3D [EASM] Download **CAD 3D [IGES]** No

Datasheet - pdf **CAD file page** Link

User Manual Download **WEB page** Link

Approval UL Yes. Recognized **UL Installation** Read more in usermanual about UL precautions

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



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Mechanical information

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	Inviromental 2	IEC 60068-2-6, Test Fc. Vibration test
Inviromental 3	IEC 60068-2-2, Test Bd. covers temperaturerise/dry heat	Inviromental 4	IEC 60068-2-78, Perm. moisture/Damp heat, steady state
REACH SVHC document	REACH-SVHC Statement	Low voltage Directive	LVD conformity with EU standard: EN IEC 62368-1:2020/A11:2020
No Dual Use	Read more here		
Duty Cycle	Max Duty Cycle [%]		
Dutycycle UL	Read more in usermanual about UL precautions		
Front bearing type	6000ZZ	Rear bearing type	6000ZZ
Axial Load Max: Typical Term	Axial load Max Typical is a run of 10.800.000 revolutions at indicated load	Axial Load Max: Long Term	Axial load Max Long is a run of 1.440.000.000 revolutions at indicated load
Axial Load Max: Typical [N] (Bearing)	377	Axial Load Max: Long [N] (Bearing)	314
AXIAL_LOAD_GRAPH	MIS231_Axial.jpg		
Radial Load Max Typical Term:	Radial load Max Typical is a run of 10.800.000 revolutions at indicated load	Radial Load Max Long Term:	Radial load Max Long is a run of 1.440.000.000 revolutions at indicated load
Radial Load Max: Typical [N] (Bearing)	346	Radial Load Max: Long [N] (Bearing)	282
Radial_load_graph	MIS231_Radial.jpg		
Radial load distance [mm]	10	Axial play [mm]	
Axial play force [N]		Shaft Seal	



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Connector information

Connector 1 label	PWR	Connector 1	M12 5-pin male A-coded
Connector 2 label	CN2	Connector 2	M12 5-pin female A-coded
Connector 3 label	CN3	Connector 3	M12 8-pin female A-coded
Connector 4 label	CN4	Connector 4	M12 17-pin female A-coded
Connector 1 RS485	No	Connector 2 RS485	Yes
Connector 3 RS485		Connector 4 RS485	Yes
Motor connectors	connector_mis23stq5.jpg		
Picture CN1	MIS340_CN1_PWR.jpg		
Picture CN2	MIS340_CN2_RS485.jpg		
Picture CN3	MIS340_CN3_IO_RS485.jpg		
Picture CN4	MIS340_CN4.jpg		
Connector STO	No		
Picture STO Con	-		



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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]	69.00
Supply Volt 3 [V]	48	Power Peak 3 [W]	137.00
Supply Volt 4 [V]	72	Power Peak 4 [W]	177.00
Holding torque [Nm]	0.97	Running torque [Nm]	0.97
Detent torque [Nm]			
Picture torque curve	MIS231STorqueVsSpeed.jpg		



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Electrical information

Main supply [V]	12-72	Main supply Min-Max [V]	7-90
Main supply UL [V]	12-60	Main supply Max UL [V]	7-60
Rated motor current [A]	5.2	Control voltage (CVI/O+) [VDC]	7-28
Control Voltage (CVI) Min-Max [VDC]	7-30	Control Voltage for UL recognized	7-30 VDC 150 mA + max 500 mA for user outputs
CVI current wo Ethernet and output (12/24VDC) [mA]	165/95	Current Ethernet option (12/24VDC) [mA]	-
Current brake option [mA]	-	Current for 1 Dig. output - 350 max [mA]	
Max current CVI [A]			
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
Dig. Input impedans	30 Kohm	Counter frequency max	12MHz
Standard used		Standard used 2	
Resistance [Ohm]		Induction	[mH]



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Communication information

Software	MacTalk	Connector 2 RS485	Yes
Connectivity: Without module	RS485	Connector 3 RS485	
		Connector 4 RS485	Yes
Motor connectors	connector_mis23stq5.jpg		
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 flexibility	Wire [mm2]	Connector 1 LED
WI1000-M12F5T02N	Connector 1	M12 5-pin female A-coded - 180° Straight	Power/Motor/com	5	2
M12 Shl Cable 2m 5 pin Fem 0°, Power		Open Ended - n/a	Standard	0.32	No
WI1000-M12F5T05N	Connector 1	M12 5-pin female A-coded - 180° Straight	Power/Motor/com	5	5
M12 Shl Cable 5m 5 pin Fem 0°, Power		Open Ended - n/a	Standard	0.32	No
WI1000-M12F5T1.2N	Connector 1	M12 5-pin female A-coded - 180° Straight	Power/Motor/com	5	1.2
M12 Shl Cable 1.2m 5 pin Fem 0°, Power		Open Ended - n/a	Standard	0.32	No
WI1000-M12F5T10N	Connector 1	M12 5-pin female A-coded - 180° Straight	Power/Motor/com	5	10
M12 Shl Cable 10m 5 pin Fem 0°, Power		Open Ended - n/a	Standard	0.32	No
WI1000-M12F5T10R	Connector 1	M12 5-pin female A-coded - 180° Straight	Power/Motor/com	5	10
M12 Shl Cable 10m 5 pin Fem 0°, Power, High-flex		Open Ended - n/a	Cable Chains - 2D	0.34	No
WI1000-M12F5T20N	Connector 1	M12 5-pin female A-coded - 180° Straight	Power/Motor/com	5	20
M12 Shl Cable 20m 5 pin Fem 0°, Power		Open Ended - n/a	Standard	0.32	No
WI1000-M12F5TLT0185	Connector 1	M12 5-pin female A-coded - 180° Straight	Power/Motor/com	5	3
M12 shl Cable 3m 5 pin female 0°,PW SPEC		- n/a	Standard	0.32	No
WI1000-M12F5TM5T1.5N	Connector 1	M12 5-pin female A-coded - 180° Straight	Power/Motor/com		1.5
M12 A Code Shl Cable 1.5m 5 pin Female/Male 0° Pow		- n/a			No
WI1000-M12F5V05N	Connector 1	M12 5-pin female A-coded - 90° Angled	Power/Motor/com	5	5
M12 Shl Cable 5m 5 pin Fem 90°, Power		Open Ended - n/a	Standard	0.32	No
WI1000-M12F5V05R	Connector 1	M12 5-pin female A-coded - 90° Angled	Power/Motor/com		5
M12 Shl Cable 5m 5 pin Fem 90°, Power, 3D		- n/a			No
WI1000-M12F5V10N	Connector 1	M12 5-pin female A-coded - 90° Angled	Power/Motor/com	5	10
M12 Shl Cable 10 m 5 pin Fem 90°, Power		Open Ended - n/a	Standard	0.32	No
WI1000-M12F5V20N	Connector 1	M12 5-pin female A-coded - 90° Angled	Power/Motor/com	5	20
M12 Shl Cable 20m 5 pin Fem 90°, Power		Open Ended - n/a	Standard	0.32	No
WI1000-M12F5W05N	Connector 1	M12 5-pin female A-coded - 90° Angled	Power/Motor/com	5	5
M12 Shl Cable 5m LED 5p Fem 90°, Power <50V		Open Ended - n/a	Standard	0.32	LED
WI1000-M12F5W10N	Connector 1	M12 5-pin female A-coded - 90° Angled	Power/Motor/com	5	10
M12 Shl Cable 10m LED 5 p Fem 90°, Power <50V		Open Ended - n/a	Standard	0.32	LED
WI1000-M12F5W15N	Connector 1	M12 5-pin female A-coded - 90° Angled	Power/Motor/com	5	15
M12 Shl Cable 15m LED 5 p Fem 90°, Power <50V		Open Ended - n/a	Standard	0.32	LED
WI1000-M12F5W20N	Connector 1	M12 5-pin female A-coded - 90° Angled	Power/Motor/com	5	20
M12 Shl Cable 20m LED 5 p Fem 90°, Power <50V		Open Ended - n/a	Standard	0.32	LED
WI1000-M12F5WF5W20N	Connector 1	M12 5-pin female A-coded - 90° Angled	Power/Motor/com	5	20
M12 shl cab 20m LED 5 pin female 90',Pow <50V		M12 5-pin female A-coded - n/a	Standard	0.32	LED
WI1005-M12F5TF5T03P	Connector 1	M12 5-pin female A-coded - 180° Straight	Communication		3
M12 Cab 3m, 5p Fem - 5p Fem twistedPair		M12 5-pin female A-coded - n/a		0.32	No
WI1005-M12F5TM5T2.0N	Connector 1	M12 5-pin female A-coded - 180° Straight	Communication		2
M12 cable 2m, 5 pin female - 5pin male		M12 5-pin male A-coded - n/a	Standard	0.32	No
WI1008-M12F5AG1	Connector 1	M12 5-pin female A-coded - 90° Angled	CANopen/DeviceNet		20
M12 Con 5p Fem 90° Spring Ø4-8mm cable		Open Ended - n/a			No
WI1008-M12F5SS1	Connector 1	M12 5-pin female A-coded - 180° Straight	CANopen/DeviceNet	n/a	Connector
M12 Con 5p Fem 0° Solder assembly		- n/a	n/a	n/a	No
WI1008-M12F5TG1	Connector 1	M12 5-pin female A-coded - 180° Straight	CANopen/DeviceNet	n/a	Connector
M12 Con 5p Fem 0° Spring Shield+B222		- n/a	n/a	n/a	No
WI1008-M12F5VG1	Connector 1	M12 5-pin female A-coded - 90° Angled	CANopen/DeviceNet	n/a	Connector
M12 Con 5p Fem 90° Spring Shield		- n/a	n/a	n/a	No
WI1025-M12F5AF5AM5A	Connector 1	M12 5-pin female A-coded - 90° Angled		5	
M12 T-Con 2x Fem 5 p + 1x Male 5 p		M12 5-pin female A-coded - n/a	Standard	0.32	No
WI1025-M12F5AM5A	Connector 1	M12 5-pin female A-coded - 90° Angled		5	
M12 Cabinet Feed-through F5p-M5p		M12 5-pin male A-coded - n/a	Standard	0.32	No
WI1025-M12F5AM5AF5A	Connector 1	M12 5-pin female A-coded - 90° Angled		5	
M12 T-Con Fem 5p+ Male 5p + Fem 5p NoSh		M12 5-pin male A-coded - n/a	Standard	0.32	No
WI1025-M12F5VM5VF5V	Connector 1	M12 5-pin female A-coded - 90° Angled		5	
M12 Shl Y-Con 1xMale 5p + 2x Fem 5p CAN		M12 5-pin male A-coded CAN - n/a	Standard	0.32	No
WI1000-M12M5A05N	Connector 2	M12 5-pin male A-coded - 90° Angled	Power/Motor/com	5	5



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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 flexibility	Wire [mm2]	Connector 1 LED
M12 cable 5m, 5 pin male 90°, COM2/ B4		Open Ended - n/a	Standard	0.32	No
WI1000-M12M5T05N	Connector 2	M12 5-pin male A-coded - 180° Straight	Power/Motor/com	5	5
M12 Shl Cable 5m 5 p Male 0°, COM		Open Ended - n/a	Standard	0.32	No
WI1000-M12M5T20N	Connector 2	M12 5-pin male A-coded - 180° Straight	Power/Motor/com	5	20
M12 Shl Cable 20m 5 p Male 0°, COM		Open Ended - n/a	Standard	0.32	No
WI1000-M12M5TF5T.5N	Connector 2	M12 5-pin male A-coded - 180° Straight	Power/Motor/com	5	0.5
M12 Shl Cable .5m 5p Male 0° to 5p Fem 0		M12 5-pin female A-coded - n/a	Standard	0.32	No
WI1000-M12M5TF5T01N	Connector 2	M12 5-pin male A-coded - 180° Straight	Power/Motor/com	5	1
M12 Shl Cable 1m 5p Male 0° to 5p Fem 0°		M12 5-pin female A-coded - n/a	Standard	0.32	No
WI1000-M12M5TF5T02N	Connector 2	M12 5-pin male A-coded - 180° Straight	Power/Motor/com	5	2
M12 Shl Cable 2m 5p Male 0° to 5p Fem 0°		M12 5-pin female A-coded - n/a	Standard	0.32	No
WI1000-M12M5TF5T02T	Connector 2	M12 5-pin male A-coded - 180° Straight	Power/Motor/com	5	2
M12 Cable 2m 5pM 0° to 5pF 0° twisted, power c		M12 5-pin female A-coded - n/a	Standard	0.32	No
WI1000-M12M5TF5T03N	Connector 2	M12 5-pin male A-coded - 180° Straight	Power/Motor/com	5	3
M12 Shl Cable 3m 5p Male 0° to 5p Fem 0°		M12 5-pin female A-coded - n/a	Standard	0.32	No
WI1000-M12M5V05N	Connector 2	M12 5-pin male A-coded - 90° Angled	Power/Motor/com	5	5
M12 Shl Cable 5m 5 p Male 90°, COM		Open Ended - n/a	Standard	0.32	No
WI1000-M12M5V20N	Connector 2	M12 5-pin male A-coded - 90° Angled	Power/Motor/com	5	20
M12 Shl Cable 20m 5 p Male 90°, COM		Open Ended - n/a	Standard	0.32	No
WI1005-M12M5STR6	Connector 2	M12 5-pin male A-coded - 180° Straight	Communication	n/a	Connector
M12 5-pin male A Code Resistor RS485		n/a - n/a	n/a	n/a	No
WI1005-M12M5TF5T.2N	Connector 2	M12 5-pin male A-coded - 180° Straight	Communication		0.2
M12 Cab 0.2m, 5p Mal - 5p Fem, RS485 .Std cable		M12 5-pin male A-coded - n/a	Standard	0.32	No
WI1005-M12M5TM5T01N	Connector 2	M12 5-pin male A-coded - 180° Straight	Communication		1
M12 Cab 1m, 5p Mal - 5p Mal, RS485. Std cable		M12 5-pin male A-coded - n/a	Standard	0.32	No
WI1008-M12M5AC1	Connector 2	M12 5-pin male A-coded - 90° Angled	CANopen/DeviceNet	n/a	Connector
M12 Con 5p Male 90° Screw PG7 for cable		- n/a	n/a	n/a	No
WI1008-M12M5AG1	Connector 2	M12 5-pin male A-coded - 90° Angled	CANopen/DeviceNet	n/a	Connector
M12 Con 5p Male 90° Spring Ø4-8mm cable		- n/a	n/a	n/a	No
WI1008-M12M5SC1	Connector 2	M12 5-pin male A-coded - 180° Straight	CANopen/DeviceNet	n/a	Connector
M12 Con 5p Male 0° Screw PG7 cable		- n/a	n/a	n/a	No
WI1008-M12M5SS1	Connector 2	M12 5-pin male A-coded - 180° Straight	CANopen/DeviceNet	n/a	Connector
M12 Con 5p Male 0° Solder assembly		- n/a	n/a	n/a	No
WI1008-M12M5STR4	Connector 2	M12 5-pin male A-coded - 180° Straight	CANopen/DeviceNet	n/a	Connector
M12 Con 5-pin male A Code Resistor CAN		- n/a	n/a	n/a	No
WI1008-M12M5TC1	Connector 2	M12 5-pin male A-coded - 180° Straight	CANopen/DeviceNet	n/a	Connector
M12 Con 5p Male A-coded Screw Shield		- n/a	n/a	n/a	No
WI1008-M12M5TG1	Connector 2	M12 5-pin male A-coded - 180° Straight	CANopen/DeviceNet	n/a	Connector
M12 Con 5p Male 0° Spring Shield		- n/a	n/a	n/a	No
WI1008-M12M5VG1	Connector 2	M12 5-pin male A-coded - 90° Angled	CANopen/DeviceNet	n/a	Connector
M12 Con 5p Male 90° Spring Shield		- n/a	n/a	n/a	No
WI1025-M12M5AF5AF8A	Connector 2	M12 5-pin male A-coded - 90° Angled		5	
M12 T-Con Male 5 p + Fem 5 p + 1 Fem 8 p		M12 5-pin male A-coded - n/a	Standard	0.32	No
WI1025-M12M5VM5VF5V	Connector 2	M12 5-pin male A-coded - 90° Angled		5	
M12 Shl Y-Con 2xMale 5p + 1xFem 5p RS485		M12 5-pin male A-coded - n/a	Standard	0.32	No
RS485-M12-1-5-5	Connector 2 RS485	-			
RS485 M12-5pin DSub, 5m, straight		-			
RS485-M12-6-3-5	Connector 2 RS485	-			
RS485 Prg Cable, 6xSMC75/MIS, 3m-0.3m		-			
WI1000-M12M8T02N	Connector 3	M12 8-pin male A-coded - 180° Straight	Power/Motor/com	8	2
M12 Shl Cable 2m 8 p Male 0° COM1/Ext IO		Open Ended - n/a	Standard	0.32	No
WI1000-M12M8T05N	Connector 3	M12 8-pin male A-coded - 180° Straight	Power/Motor/com	8	5
M12 Shl Cable 5m 8 p Male 0° COM1/Ext IO		Open Ended - n/a	Standard	0.32	No
WI1000-M12M8T20N	Connector 3	M12 8-pin male A-coded - 180° Straight	Power/Motor/com	8	20
M12 Shl Cable 20m 8 p Male 0° COM1/ExtIO		Open Ended - n/a	Standard	0.32	No



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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 flexibility	Wire [mm2]	Connector 1 LED
WI1000-M12M8T20R M12 Shl Cable 20m 8 p Male 0° 2D cable chain	Connector 3	M12 8-pin male A-coded - 180° Straight - n/a	Power/Motor/com		20 No
WI1000-M12M8TF4LT186 M12 shl cable5m, M12 M8, M8 F4 0° IO	Connector 3	M12 8-pin male A-coded - 180° Straight M12 4-pin female A-coded - n/a	Power/Motor/com	8 0.32	5 No
WI1000-M12M8TLT0184 M12 shl cable5m, 8 pin male 0° IO SPEC	Connector 3	M12 8-pin male A-coded - 180° Straight M12 4-pin female A-coded - n/a	Power/Motor/com	8 0.32	5 No
WI1000-M12M8V05N M12 Shl Cable 5m 8 p Mal 90° COM1/ExtIO	Connector 3	M12 8-pin male A-coded - 90° Angled Open Ended - n/a	Power/Motor/com Standard	8 0.2	5 No
WI1000-M12M8V20N M12 Shl Cable 20m 8 p Mal 90° COM1/ExtIO	Connector 3	M12 8-pin male A-coded - 90° Angled Open Ended - n/a	Power/Motor/com Standard	8 0.2	20 No
WI1005-M12M8QM5V.3N M12 Shl Cab 0.3m 8p Mal 5p Mal 90° RS485 twisted	Connector 3	M12 8-pin male A-coded - 90° Angled M12 5-pin male A-coded - n/a	Communication Standard		0.3 No
WI1005-M12M8S10N M12 Shl Cable 10m, 8 p Male MAC00-B41 twisted	Connector 3	M12 8-pin male A-coded - 180° Straight Open Ended - n/a	Communication Standard	8 0.32	10 No
WI1005-M12M8STR5 M12 8-pin male A Code Resistor RS485	Connector 3	M12 8-pin male A-coded - 180° Straight n/a - n/a	Communication n/a	n/a 0.32	Connector No
WI1005-M12M8TF8T01N M12 Shl Cab 1m 8p Male 0° to 8p Female 0° 2x4pair	Connector 3	M12 8-pin male A-coded - 180° Straight M12 8-pin female A-coded - n/a	Communication Standard	8 0.32	1 No
WI1005-M12M8TF8T20N M12 Shl Cab 20m 8p Male 8p Female 0° 2x4p twisted	Connector 3	M12 8-pin male A-coded - 180° Straight M12 8-pin female A-coded - n/a	Communication	8 0.32	20 No
WI1005-M12M8TM5T.3N M12 Shl Cab 0,3 m 8p Male 5p Male 0° RS485 twisted	Connector 3	M12 8-pin male A-coded - 180° Straight M12 5-pin male A-coded - n/a	Communication Standard	5 0.32	0.3 No
WI1005-M12M8TM5T.5N M12 Shl Cab 0,5 m 8p Male 5p Male 0° RS485 twisted	Connector 3	M12 8-pin male A-coded - 180° Straight M12 5-pin male A-coded - n/a	Communication Standard	5 0.32	0.5 No
WI1005-M12M8TM5T05N M12 Shl Cab 5m 8p Male 5p Male 0° RS485 twisted	Connector 3	M12 8-pin male A-coded - 180° Straight M12 5-pin male A-coded - n/a	Communication Standard	5 0.32	5 No
WI1005-M12M8VM5V.5N M12 Shl Cab 0.5m 8pMale 5pMale 90° RS485 twisted	Connector 3	M12 8-pin male A-coded - 90° Angled M12 5-pin male A-coded - n/a	Communication Standard	5 0.32	0,5 No
WI1005-M12M8VM5V03N M12 Shl Cab3m 8p Male 5p Male 90° RS485 twisted	Connector 3	M12 8-pin male A-coded - 90° Angled M12 5-pin male A-coded - n/a	Communication Standard	5 0.32	3 No
WI1005-M12M8VM5V10N M12 Shl Cab10m 8p Male 5p Male 90° RS485 twisted	Connector 3	M12 8-pin male A-coded - 90° Angled M12 5-pin male A-coded - n/a	Communication Standard	5 0.32	10 No
WI1005-M12M8VM5V20N M12 Shl Cab20m 8p Male 5p Male 90° RS485 twisted	Connector 3	M12 8-pin male A-coded - 90° Angled M12 5-pin male A-coded - n/a	Communication Standard	5 0.32	20 No
WI1008-M12M8SC1 M12 Con 8p Male 0° Screw Ø4-8mm cable	Connector 3	M12 8-pin male A-coded - 180° Straight - n/a	CANopen/DeviceNet n/a	n/a n/a	Connector No
WI1008-M12M8SS1 M12 Con 8p Male 0° Solder assembly	Connector 3	M12 8-pin male A-coded - 180° Straight - n/a	CANopen/DeviceNet n/a	n/a n/a	Connector No
WI1008-M12M8TC1 M12 Con 8p Male 0° Screw Shield	Connector 3	M12 8-pin male A-coded - 180° Straight - n/a	CANopen/DeviceNet n/a	n/a n/a	Connector No
WI1008-M12M8TS1 M12 Con 8p Male 0° Solder Shield	Connector 3	M12 8-pin male A-coded - 180° Straight - n/a	CANopen/DeviceNet n/a	n/a n/a	Connector No
WI1009-M12M8Q1.2N M12 Shl Cable 1.2m 8p Male 90° 4P twisted	Connector 3	M12 8-pin male A-coded - 90° Angled Open Ended - n/a	Basic I/O, Com Standard	8 0.32	1.2 No
WI1009-M12M8V05N M12 Shl Cable 5m 8 p Male 90° 4P twisted	Connector 3	M12 8-pin male A-coded - 90° Angled Open Ended - n/a	Basic I/O, Com Standard	8 0.32	5 No
WI1009-M12M8V20N M12 Shl Cable 20m 8 p Male 90° 4P twisted	Connector 3	M12 8-pin male A-coded - 90° Angled Open Ended - n/a	Basic I/O, Com Standard	8 0.32	20 No
WI1005-M12M17SAA01 M12 17-pin male Axis 1 Without wire	Connector 4	M12 17-pin male A-coded - 180° Straight n/a - n/a	Communication n/a	n/a n/a	Connector No
WI1005-M12M17SAA01W M12 17-pin male Axis 1, with wire 1,2m	Connector 4	M12 17-pin male A-coded - 180° Straight n/a - n/a	Communication n/a	n/a n/a	Connector No
WI1005-M12M17SAA02 M12 17-pin male Axis 2 Without wire	Connector 4	M12 17-pin male A-coded - 180° Straight n/a - n/a	Communication n/a	n/a n/a	Connector No
WI1005-M12M17SAA03	Connector 4	M12 17-pin male A-coded - 180° Straight	Communication	n/a	Connector

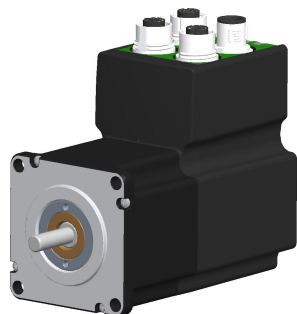
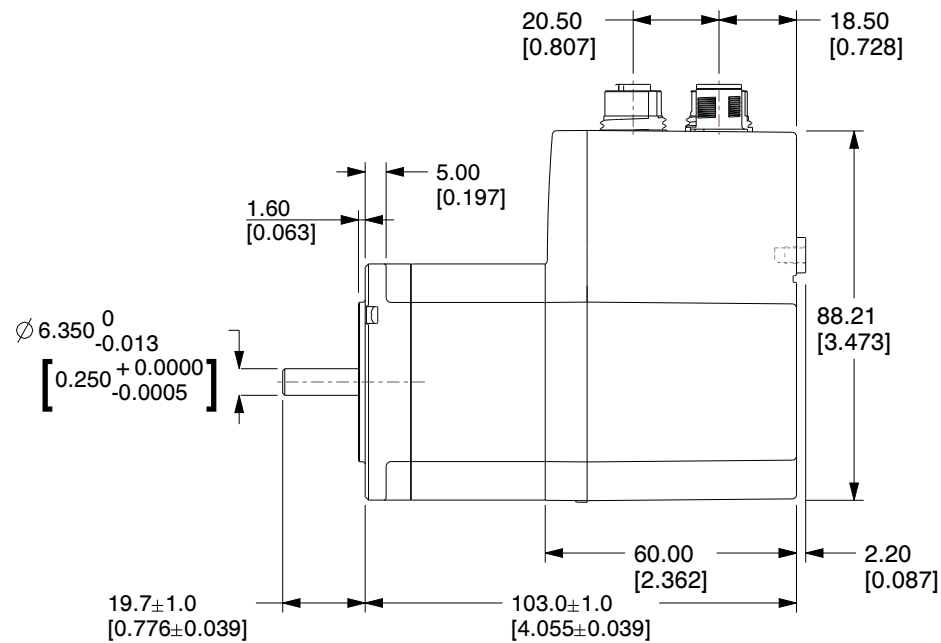


MIS231S1Q5H466

Int.Step 12-72VDC, RS485, AbsC-L

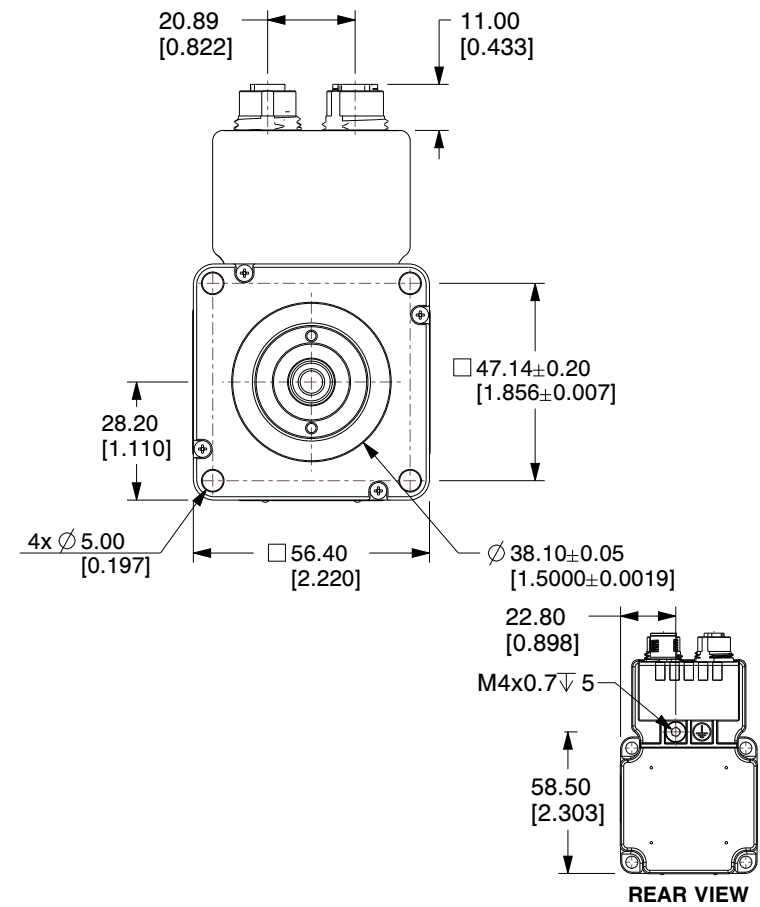
Cable information

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 flexibility	Wire [mm2]	Connector 1 LED
M12 17-pin male Axis 3 Without wire		n/a - n/a	n/a	n/a	No
WI1005-M12M17SAA04	Connector 4	M12 17-pin male A-coded - 180° Straight	Communication	n/a	Connector
M12 17-pin male Axis 4 Without wire		n/a - n/a	n/a	n/a	No
WI1005-M12M17SAA05	Connector 4	M12 17-pin male A-coded - 180° Straight	Communication	n/a	Connector
M12 17-pin male Axis 5 Without wire		n/a - n/a	n/a	n/a	No
WI1005-M12M17SAA06	Connector 4	M12 17-pin male A-coded - 180° Straight	Communication	n/a	Connector
M12 17-pin male Axis 6 Without wire		n/a - n/a	n/a	n/a	No
WI1005-M12M17SAA06W	Connector 4	M12 17-pin male A-coded - 180° Straight	Communication	n/a	Connector
M12 17-pin male Axis 6 with wire 1,2m		n/a - n/a		n/a	No
WI1005-M12M17SAA07	Connector 4	M12 17-pin male A-coded - 180° Straight	Communication	n/a	Connector
M12 17-pin male Axis 7 Without wire		n/a - n/a	n/a	n/a	No
WI1005-M12M17SAA08	Connector 4	M12 17-pin male A-coded - 180° Straight	Communication	n/a	Connector
M12 17-pin male Axis 8 Without wire		n/a - n/a	n/a	n/a	No
WI1005-M12M17SAA09	Connector 4	M12 17-pin male A-coded - 180° Straight	Communication	n/a	Connector
M12 17-pin male Axis 9 Without wire		n/a - n/a	n/a	n/a	No
WI1005-M12M17SAA10	Connector 4	M12 17-pin male A-coded - 180° Straight	Communication	n/a	Connector
M12 17-pin male Axis 10 Without wire		n/a - n/a	n/a	n/a	No
WI1008-M12M17SR1	Connector 4	M12 17-pin male A-coded - 180° Straight	CANopen/DeviceNet	n/a	Connector
M12 Con 17p Male 0° Metal housing 5.4-8.2mm cable		- n/a	n/a	n/a	No
WI1009-M12M17T01N	Connector 4	M12 17-pin male A-coded - 180° Straight	Basic I/O, Com	17	1
M12 Shl Cable 1m 17p Mal 0° MISxx,Ex41 twisted		Open Ended - n/a	Standard	0.061	No
WI1009-M12M17T05N	Connector 4	M12 17-pin male A-coded - 180° Straight	Basic I/O, Com	17	5
M12 Shl Cable 5m 17p Mal 0° MISxx,Ex41 twisted		Open Ended - n/a	Standard	0.061	No
WI1009-M12M17T10R	Connector 4	M12 17-pin male A-coded - 180° Straight	Basic I/O, Com	17	5
M12 Shl Cable 10m 17p Mal 0° MISxx,Ex41 twisted		Open Ended - n/a	Robotic - 3D	0.061	No
WI1009-M12M17T20N	Connector 4	M12 17-pin male A-coded - 180° Straight	Basic I/O, Com	17	20
M12 Shl Cable 20m 17p Mal 0° MISxx,Ex41 twisted		Open Ended - n/a	Standard	0.061	No
WI1009-M12M17TF17T.5	Connector 4	M12 17-pin male A-coded - 180° Straight	Basic I/O, Com	17	0.5
M12 Shl Cable.5m Male17p0°-Female 17p0° twist pair		M12 17-pin female A-coded - n/a	Standard	0.061	No
WI1009-M12M17TF17T01	Connector 4	M12 17-pin male A-coded - 180° Straight	Basic I/O, Com	17	1
M12 Shl Cable 1m Male17p0°-Female 17p0° twist pair		M12 17-pin female A-coded - n/a	Standard	0.061	No
WI1009-M12M17TF17T02	Connector 4	M12 17-pin male A-coded - 180° Straight	Basic I/O, Com	17	2
M12 Shl Cable 2m Male17p0°-Female 17p0° twist pair		M12 17-pin female A-coded - n/a	Standard	0.061	No
WI1009-M12M17TF17T04	Connector 4	M12 17-pin male A-coded - 180° Straight	Basic I/O, Com	17	4
M12 Shl Cable 4m Male17p0°-Female 17p0° twist pair		M12 17-pin female A-coded - n/a	Standard	0.061	No
WI1009-M12M17V05N	Connector 4	M12 17-pin male A-coded - 90° Angled	Basic I/O, Com	17	5
M12 Shl Cable 5m 17p Mal 90° MISxx,Ex41 twisted		Open Ended - n/a	Standard	0.061	No
WI1009-M12M17V05R	Connector 4	M12 17-pin male A-coded - 90° Angled	Basic I/O, Com		5
M12 Shl Cable 5m 17p Mal 90° MISxx,Ex41 twisted		- n/a	Robotic - 3D		No
WI1009-M12M17V10N	Connector 4	M12 17-pin male A-coded - 90° Angled	Basic I/O, Com	17	10
M12 Shl Cable 10m 17p Mal 90° MISxx,Ex41 twisted		Open Ended - n/a	Standard	0.061	No
WI1013-M12M17TF4T.4N	Connector 4	M12 17-pin male A-coded - 180° Straight		4	0.45
M12 17pM, 0.45m M8-4pF Shl for MAB MIS		M08 4-pin female - n/a	Standard	0.13	No
WI1013-M12M17TF4TXAA	Connector 4	M12 17-pin male A-coded - 180° Straight			0.45/2
M12 17pM, 0.45m M8-4pF Shl for MAB + 2m cable MIS		M08 4-pin female - n/a	Standard		No
RS485-M12-1-5-17	Connector 4 RS485	-			
RS485 M12-17pin DSub, 5m v1.1		-			



NOTES:

1. Operation Modes : Passive, Position, Gear, Velocity.
2. Tolerance for torque and power is $\pm 10\%$.
3. Shaft - AISI 303 Stainless steel.
4. Front Bearing: 3202-2RS Double row angular contact.
5. Encoder Type: Internal, magnetic, absolute multiturn Closed loop ready.
Resolution per rev.: Displayed: 409600 counts - internal: 4096 counts.



REAR VIEW

JVL A/S
Bregnerødvej 127
DK-3460 Birkerød
Denmark

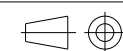


PART NUMBER:

MIS231S1Q5H466

PART DESCRIPTION:

Integrated Stepper Motor



A4

SCALE	NTS
UNIT	MM [Inch]

Unless specifically stated otherwise, this drawing is the property of JVL A/S and no feature embodied herein may be disclosed except as previously authorized