



MAC141-F1GRAA

Int.Servo.AC 134WS1 0.48Nm IP42 Inc STO



General information

Description

Int.Servo.AC 134WS1 0.48Nm IP42 Inc STO , WxHxL: 59x59x172 mm. 2700 RPM @ 48VDC - 1350 RPM @ 24VDC. 0.48 Nm/1.59 Nm, IP42, Incremental magnetic 8192 CPR , Next Gen MiniMAC: built-in ePLC™ and advanced Ethernet support when using Ex4 and Ex41 modules, 12-48 V nom. Peak 58 V, Ethernet Ready, Color: Black, Ø6.35x20.5 mm D-shape, incl. M8 4pin hardware STO connector, NB! STO: Not yet approved by TUV

Manufacture	JVL	Motor type	Integr. AC-servo - Rotating
Motor power [W]	134	Power Peak [W]	402
Duty Cycle	S1	Max Duty Cycle [%]	100
Continuous Torque	0.48	Peak torque [Nm]	1.59
Main supply [V]	12-48	Voltage type - Main	DC
Speed [Rpm]	2700	Connectivity: Without module	RS232
Encoder type	Abs. Singleturn Encoder	Encoder [Counts/rev]	8192
Fan mounted	No	Brake	External brake option
Integrated gear	No	Gear ratio	-
Integrated PLC	Yes	STO connector	Yes
Approval TÜV - STO	No	Approval - UL	No
PLC no. of AIN	2	PLC no. of DI	-
PLC no. of DIO	-	PLC no. of DO	2
Multifunction IOs	2		
Flange size	59x59	Protection house	IP42
Shaft size - Front [mm]	6.35mm	Protection shaft	IP42
Color	Black	Paint type	



MAC141-F1GRAA

Int.Servo.AC 134WS1 0.48Nm IP42 Inc STO

General information

**Ambient Temperature
range [°C]:**

**Maximum Installation
Altitude [m]:**

**Max. Amb. Temperature
range - Torque derating:**

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

**Weight net
[kg]** 1.32

Country Of Origin DK

**Weight gross
[kg]** 1.43

Tariff no 85012000

Tariff no US



MAC141-F1GRAA

Int.Servo.AC 134WS1 0.48Nm IP42 Inc STO

Mechanical information

Motor type	Integr. AC-servo - Rotating	Color	Black
Rotor inertia [kgcm ²]	0.227	Max inertia factor	20
Encoder type	Abs. Singleturn Encoder	Encoder [Counts/rev]	8192
Precision Motor - Absolute [Deg -/+]	0.065	Precision Motor - Max Load [Deg -/+]	
Precision Motor - Repeatability [Deg -/+]	0.033		
Brake	External brake option	Brake - Go ON time [ms]	-
Brake Holding torque [Nm]	-	Brake - Go OFF time [ms]	-
Radial load [N]	75	Radial load distance [mm]	20
Axial load [N]	15		
Axial play [mm]	+/-0.05	Axial play force [N]	xxx
Front bearing type	608ZZ	Rear bearing type	607ZZ
Integrated gear	No	Gear ratio	-
Gear efficiency [%]	< -	Gear backlash [ArcMin]	-
Motor length [mm]	172.0	Motor width [mm]	59.0
Motor height [mm]	59.0	Protection house	IP42
Customer Sealing	Standard		
Flange size	59x59	Mounting holes front [mm]	5.2
Motor diameter center front [mm]	38.1	Bolt circle diameter front [mm]	66.6
Flange material	Aluminium painted Black	Flange Thickness [mm]	
Shaft Key included	-	Shaft Key Dimension	-
Shaft size - Front [mm]	6.35mm	Protection shaft	IP42
Shaft length Front [mm]	20.5	Shaft material	Steel
Approval - ROHS-3	Yes	Approval - UL	No
Approval TÜV - STO	No	Approval - ATEX	No
CAD 2D [PDF]	Download	CAD 3D [STEP]	Download
CAD 2D [DWG]	No	CAD 3D [DWG]	No

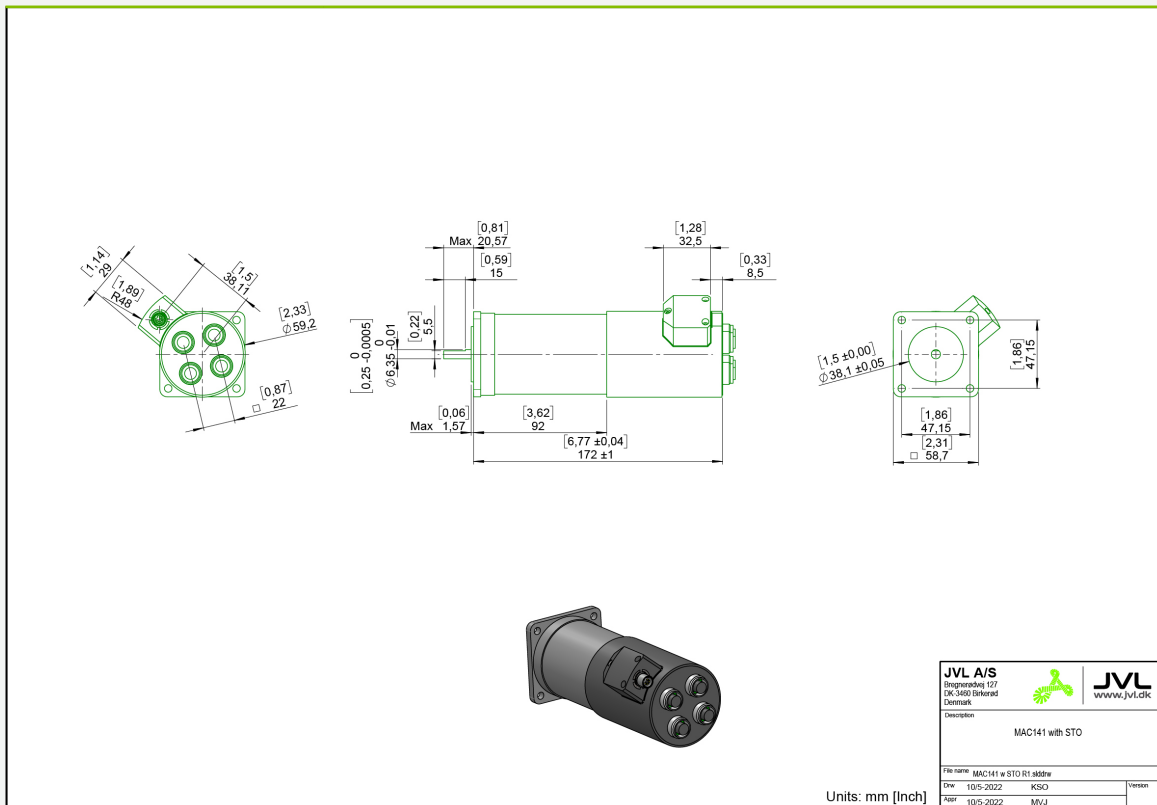


MAC141-F1GRAA

Int.Servo.AC 134WS1 0.48Nm IP42 Inc STO

Mechanical information

CAD 3D [EASM]	No	CAD 3D [IGES]	Download
Datasheet - pdf	Yes	User Manual	Download
REACH SVHC document	Download	Low voltage Directive	EU Declarations of Conformity
No Dual Use	Read more here		



Units: mm [Inch]

Shaft Seal

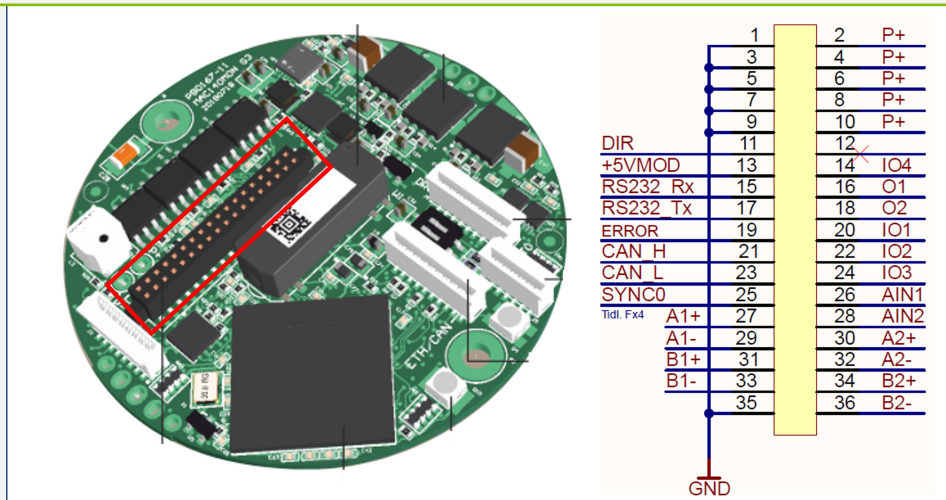


MAC141-F1GRAA

Int.Servo.AC 134WS1 0.48Nm IP42 Inc STO

Connector information

Motor connectors



Connector Power

Molex 2-pin Power

Connector Power Supplier

Connector Power direction

Straight

PDO Connector Type

No

Connector PDO Supplier

Connector STO

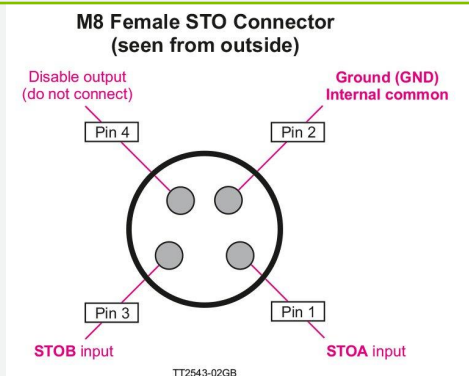
M8 4-pin female A-coded

Picture of STO

"STO" (X0) connector M8 - 4 pin male connector				
Signal name	Description	Pin no.	JVL Cable W1010-M08M4TxxP	Isolation group (see note)
STOA	STO channel A	1	Brown	1
GND	Ground for the STO signals	2	Inner screen	1
STOB	STO channel B	3	Black	1
24V out	DO NOT CONNECT !	4	(do not exist)	1

Connector housing/metal is connected to earth and at JVL supplied cables also to the cable screen.

Picture STO Con



Expansion connector

Generation 2

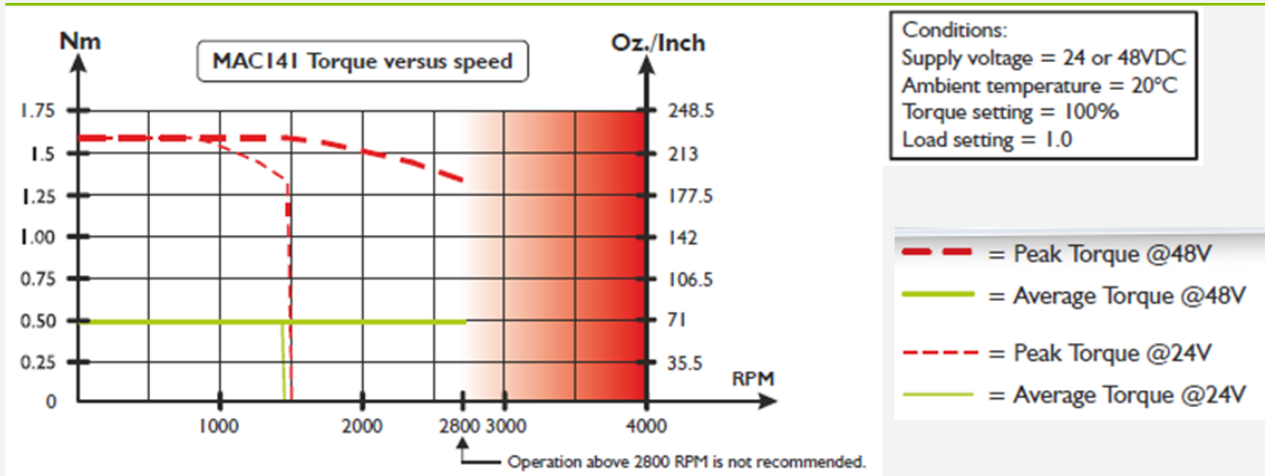


MAC141-F1GRAA

Int.Servo.AC 134WS1 0.48Nm IP42 Inc STO

Torque, force and Power information

RMS torque [Nm]	0.48	Peak torque [Nm]	1.59
Supply Volt 1 [V]	12	Velocity max 1 [Rpm]	700
Supply Volt 2 [V]	24	Velocity max 2 [Rpm]	1400
Supply Volt 3 [V]	48	Velocity max 3 [Rpm]	2800
Supply Volt 4 [V]		Velocity max 4 [Rpm]	





MAC141-F1GRAA

Int.Servo.AC 134WS1 0.48Nm IP42 Inc STO

Electrical information

Main supply [V]	12-48	Main supply Min-Max [V]	10-58
Voltage type - Main	DC	Main Voltage possible	
Input Voltage Frequency			
Inrush current -Main max [A]		Inrush special	No
Recommended fuse	T10A	P- isolated from Earth (Low Voltage ground (P-) isolated from housing)	No
Bus Supply Voltage Min [V]		Busvoltage Overvoltage limit [VDC]	60V
Power Dump Voltage Active Level [V]		Internal Power-Dump Resistance [Ohm]	
Internal Power-Dump Power [W]		PD connection - Int/Ext	None
External Power-Dump Resistance Minimum value [Ohm]		External Power-Dump Max Current [A]	
Control voltage (CVI/O+) [VDC]	12-28	Control Voltage (CVI) Min-Max [VDC]	12-30
PLC no. of DI	-	PLC no. of DO	2
PLC no. of DIO	-	PLC no. of AIN	2
Analogue voltage	-/+10VDC, -/+11bit	Multifunction IOs	2
Multifunction Nom. level [V]		Multifunction Maximum level [V]	
Multifunction Low trigger level [V]		Multifunction High trigger level [V]	
Resistance [Ohm]		Induction [mH]	
Temperature Error [°C]			



MAC141-F1GRAA

Int.Servo.AC 134WS1 0.48Nm IP42 Inc STO

Communication information

Software	MacTalk
-----------------	---------

Connectivity: Without module	RS232
---	-------

e-PLC Files

Connectivity: Gen. 2 modules	Yes
---	-----

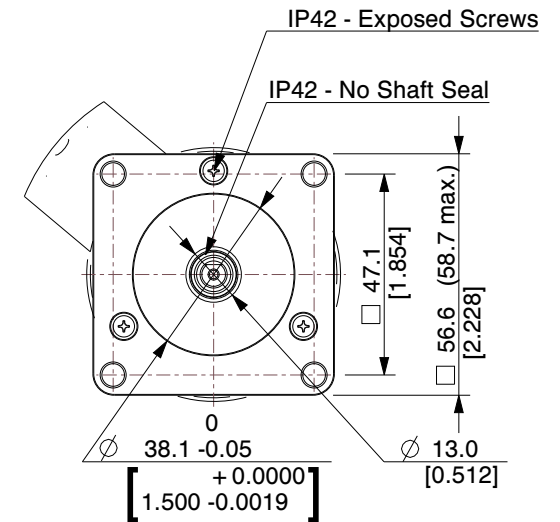
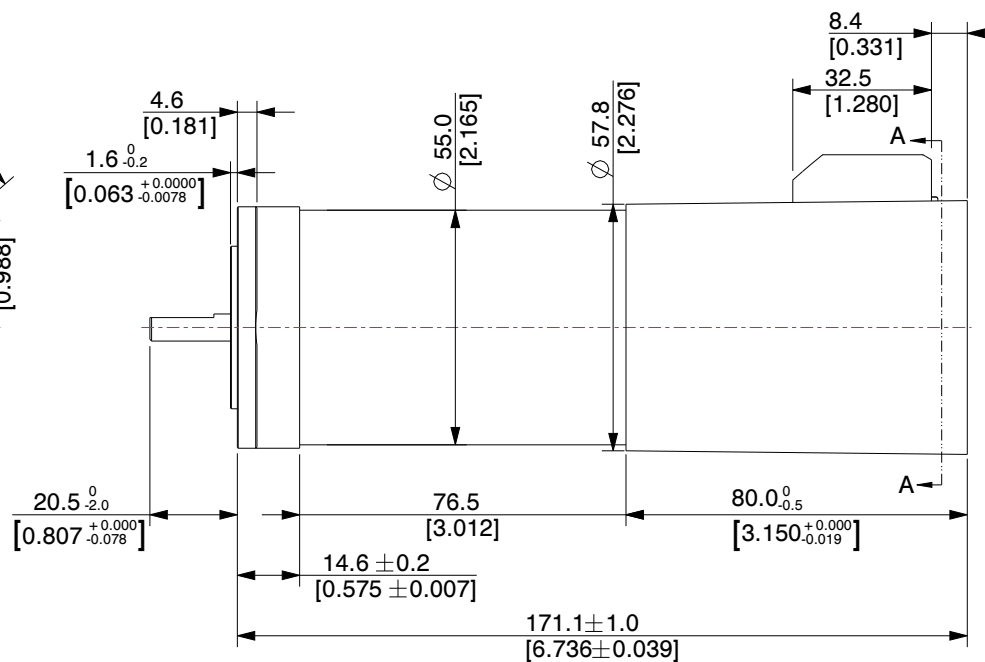
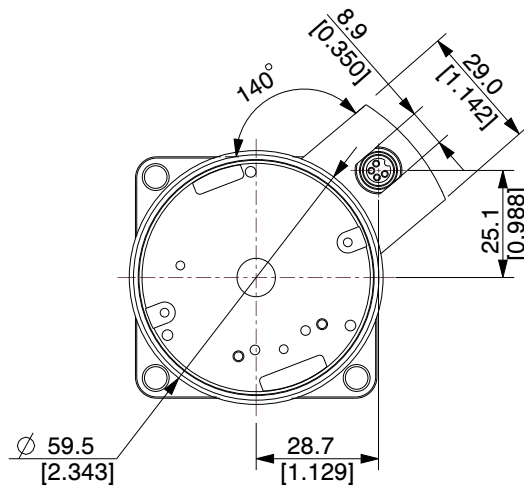
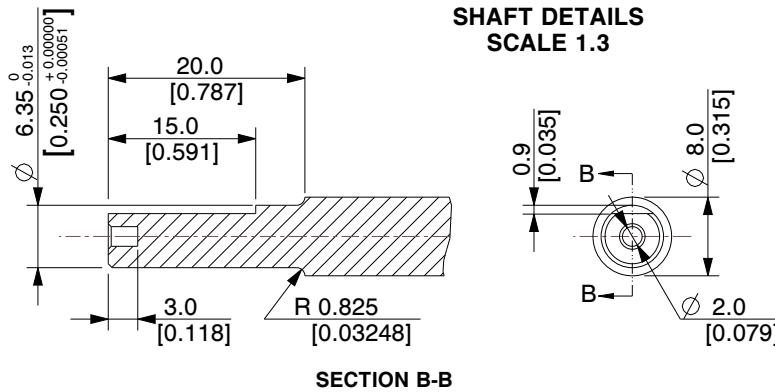
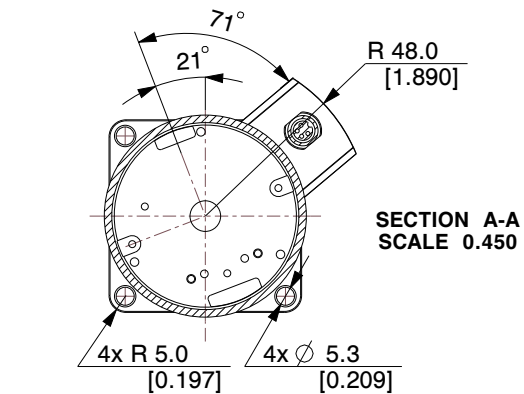


MAC141-F1GRAA

Int.Servo.AC 134WS1 0.48Nm IP42 Inc STO

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
WI1010-M08M4STO	Connector STO	M8 4-pin male A-coded - n/a	STO	4	Connector
M8 STO Disable plug for MIS17/23/34/43		- n/a	n/a	0.2	
WI1010-M08M4T03P	Connector STO	M8 4-pin male A-coded - 180° Straight	STO	4	3
M8 STO 4Pin Male 0° Con Shl Yel 3m 1xcon		Open Ended - n/a	Standard	0.2	No
WI1010-M08M4T05P	Connector STO	M8 4-pin male A-coded - 180° Straight	STO	4	5
M8 STO 4Pin Male 0° Con Shl Yel 5m 1xcon		Open Ended - n/a	Standard	0.2	No
WI1010-M08M4T1.5P	Connector STO	M8 4-pin male A-coded - 180° Straight	STO		1.5
M8 STO 4Pin Male 0° Con Shl Yel 1.5 m 1xcon, PA014		- n/a	Standard		No
WI1010-M08M4T15P	Connector STO	M8 4-pin male A-coded - 180° Straight	STO	4	15
M8 STO 4Pin Male 0° Con. shl. Yel 15m 1xCon		Open Ended - n/a	Standard	0.2	No
WI1010-M08M4T20P	Connector STO	M8 4-pin male A-coded - 180° Straight	STO	4	20
M8 STO 4P Male 0° Con. shl. Yel 20m		Open Ended - n/a	Standard	0.2	No
WI1010-M08M4TF3T.3P	Connector STO	M8 4-pin male A-coded - 180° Straight	STO		0.3
M8 STO shl cable Male 4 pin to Female 3 pin.		M08 3-pin female A-coded - n/a	Standard		No
WI1010-M08M4TM4T10P	Connector STO	M8 4-pin male A-coded - 180° Straight	STO	4	10
M8 STO 4P Male 0°/4P Male 0° shl. Yel10m 2xCon		M08 4-pin male A-coded - n/a	Standard	0.2	No
WI1010-M08M4TM4T20P	Connector STO	M8 4-pin male A-coded - 180° Straight	STO	4	20
M8 STO 4P Male 0°/4P Male 0° shl. Yel20m 2xCon		M08 4-pin male A-coded - n/a	Standard	0.2	No
WI1010-M08M4V05P	Connector STO	M8 4-pin male A-coded - 90° Angled	STO	4	5
M8 STO 4Pin Male 90° Con. shl. Yel 5m 1xCon HIGH F		Open Ended - n/a	Standard	0.2	No
WI1010-M08M4V05X	Connector STO	M8 4-pin male A-coded - 90° Angled	STO	4	5
M8 STO 4Pin Male 90° shl. Yel 5m 1xCon HighFlex2D3D		Open Ended - n/a	Standard	0.2	No
WI1010-M08M4V10P	Connector STO	M8 4-pin male A-coded - 90° Angled	STO	4	10
M8 STO 4Pin Male 90° Con. shl. Yel 10m 1xCon		Open Ended - n/a	Standard	0.2	No
WI1010-M08M4VF4T01P	Connector STO	M8 4-pin male A-coded - 90° Angled	STO	4	1
M8 STO 4P Male 90°/4P Fem 0° shl. yel 1m 2xCon		M08 4-pin female A-coded - n/a	Standard	0.2	No
WI1010-M08M4VF4T02P	Connector STO	M8 4-pin male A-coded - 90° Angled	STO	4	2
M8 STO 4P Male 90°/4P Fem 0° shl. yel 2m 2xCon		M08 4-pin female A-coded - n/a	Standard	0.2	No
WI1010-M08M4VF4T03P	Connector STO	M8 4-pin male A-coded - 90° Angled	STO	4	3
M8 STO 4P Male 90°/4P Fem 0° shl. yel 3m 2xCon		M08 4-pin female A-coded - n/a	Standard	0.2	No
WI1010-M08M4VM4V10P	Connector STO	M8 4-pin male A-coded - 90° Angled	STO	4	10
M8 STO 4P Male 90°/4P Male 90° shl. Yel 10m 2xCon		M08 4-pin male A-coded - n/a	Standard	0.2	No
WI1010-M08M4VM4V20P	Connector STO	M8 4-pin male A-coded - 90° Angled	STO	4	20
M8 STO 4P Male 90°/4P Male 90° shl. Yel 20m 2xCon		M08 4-pin male A-coded - n/a	Standard	0.2	No



NOTES:
1. Encoder Type: Incremental magnetic 8192 CPR

JVL A/S Bregnerødvej 127 DK-3460 Birkerød Denmark				 www.jvl.dk	
PART NUMBER:					
MAC141-F1GRAA					
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					