



MAC800-D5-FAAJ

Int.ServoAC 746WS1 2.38Nm IP55 Abs

MAC motor® is a series of integrated (all-in-one) servo motors with shaft power from 46 W to 4500 W. +400 W and new F-series (50..140 W) are programmable through ePLC (embedded-PLC). Choose between a large number of control modules.

Options include:

- Absolute Multiturn Encoder (incremental encoder is standard)
- Built-in Brake or Brake module (MABxx)
- Ethernet module w/built-in Switch for easy daisy-chaining and all protocols (Profinet, EtherNet/IP, EtherCAT, SERCOS, ModbusTCP/UDP, Powerlink)
- Wireless modules are also available: WLAN or BlueTooth
- CANopen, Devicenet or Profibus or ePLC modules
- Serial communication modules, RS232 and/or RS485
- High IP versions are also available (IP 65..66..67)
- Food or Medico types in Stainless Steel IP69K

Unique Ethernet functionality: use MacTalk® (PC software) to change freely between all the different Ethernet protocols, you don't need several different types on stock – ONE is enough.



General information

Description	Int.ServoAC 746WS1 2.38Nm IP55 Abs , WxHxL: 80x120x209 mm. 3000 RPM. 100% Duty Cycle. 2.38 Nm RMS / 6.8 Nm Peak, IP55 w/brake, Single 8192 CPR / Absolute multiturn ±8178 revs, Color: Black, Ø19x40 mm with Keyway 6x6x30 mm		
Manufacture	JVL	Motor type	Integr. AC-servo - Rotating
Motor power [W]	746	Power Peak [W]	2238
Duty Cycle	S1	Max Duty Cycle [%]	100
Continuous Torque	2.38	Peak torque [Nm]	6.8
Main supply [V]	115, 230	Voltage type - Main	AC
Speed [Rpm]	3000	Connectivity: Without module	RS232 - 5VDC, Modbus RTU
Encoder type	Abs. Multiturn Encoder +/- 8178 rev.	Encoder [Counts/rev]	8192
Fan mounted	Yes	Brake	Internal brake
Integrated gear	No	Gear ratio	-
Integrated PLC	Yes	STO connector	No
Approval TÜV - STO	No	Approval - UL	Approved
PLC no. of AIN	2	PLC no. of DI	-
PLC no. of DIO	-	PLC no. of DO	2



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General information

Multifunction IOs	2		
Flange size	80x80	Protection house	IP55
Shaft size - Front [mm]	19.00mm	Protection shaft	IP55
Color	Black	Paint type	
		TOM_007	
Ambient Temperature range:		Max. Amb. Temperature range - Torque derating:	
Maximum Installation Altitude:		Max. Installation Altitude - Power Derating every 1000m:	
TOM_008		TOM_009	
Weight net [kg]	3.70	Weight gross [kg]	3.85
Country Of Origin	DK	Tariff no	85015220
Tariff no US			



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Mechanical information

Motor type	Integr. AC-servo - Rotating	Color	Black
Rotor inertia [kgcm ²]	1.13	Max inertia factor	20
Encoder type	Abs. Multiturn Encoder +/- 8178 rev.	Encoder [Counts/rev]	8192
Precision Motor - Absolute [Deg -/+]	0.04	Precision Motor - Max Load [Deg -/+]	
Precision Motor - Repeatability [Deg -/+]	0.04		
Brake	Internal brake	Brake - Go ON time [ms]	16
Brake Holding torque [Nm]	3.25	Brake - Go OFF time [ms]	44
Radial load [N]	180	Radial load distance [mm]	20
Axial load [N]	110		
Axial play [mm]	xxx	Axial play force [N]	xxx
Front bearing type	xxx	Rear bearing type	xxx
Integrated gear	No	Gear ratio	-
Gear efficiency [%]	< -	Gear backlash [ArcMin]	-
Motor length [mm]	209	Motor width [mm]	84.0
Motor height [mm]	120.0	Protection house	IP55
Customer Sealing	Standard		
Flange size	80x80	Mounting holes front [mm]	5.5
Motor diameter center front [mm]	70.0	Bolt circle diameter front [mm]	90.0
Flange material		Flange Thickness [mm]	
Shaft Key included	Key included on shaft	Shaft Key Dimension	6x6x30
Shaft size - Front [mm]	19.00mm	Protection shaft	IP55
Shaft length Front [mm]	40.0	Shaft material	Steel
Approval - ROHS-3	Yes	Approval - UL	Approved
Approval TÜV - STO	No	Approval - ATEX	No
CAD 2D [PDF]	Download	CAD 3D [STEP]	Download
CAD 2D [DWG]	No	CAD 3D [DWG]	No

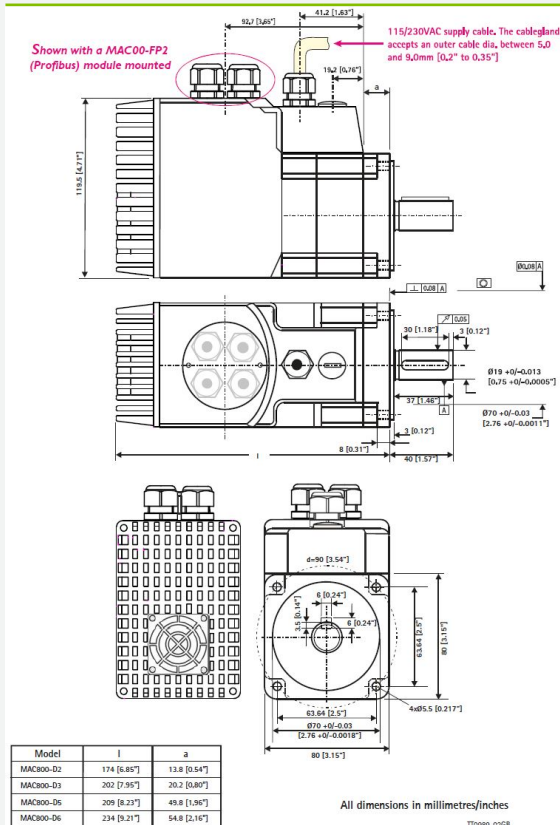


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Mechanical information

CAD 3D [EASM]	No	CAD 3D [IGES]	No
Datasheet - pdf	Yes	User Manual	Download
REACH SVHC document	Download	Low voltage Directive	LVD conformity with EU standard: EN 61800-3
No Dual Use	Read more here		



Shaft Seal

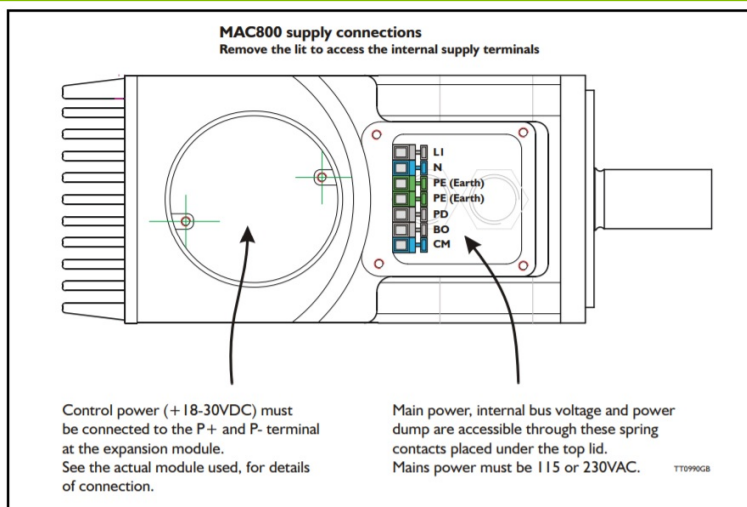


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Connector information

Motor connectors



Connector Power

PG12 - Internal terminal

Connector Power Supplier

Connector Power direction

Straight

PDO Connector Type

PG12 - Internal terminal

Connector PDO Supplier

Connector STO

No

Expansion connector

Generation 1 and 2



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Torque, force and Power information

RMS torque
[Nm] 2.38

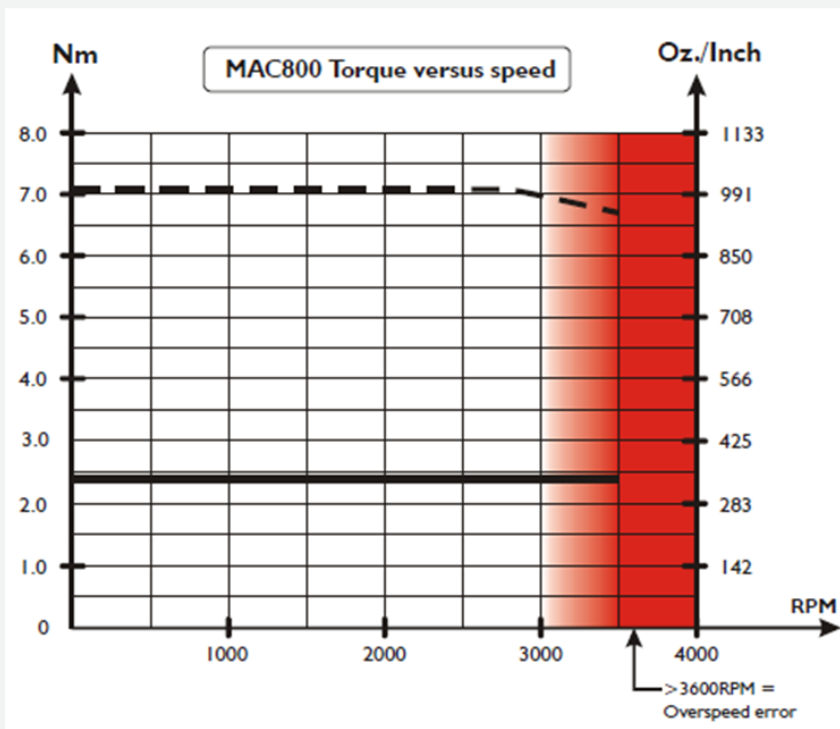
Peak torque
[Nm] 6.8

Supply Volt 1
[V] 1x115

Supply Volt 2
[V] 1x230

Supply Volt 3
[V]

Supply Volt 4
[V]





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Electrical information

Main supply [V]	115, 230	Main supply Min-Max [V]	90-260
Voltage type - Main	AC	Main Voltage possible	1x115VAC, 1x230VAC
Inrush current -Main max [A]		Inrush special	No
Recommended fuse	115VAC: FRN-R-15 Cooper Bussmann inc. 230VAC: T10A@230VAC type gG, Do or Dz.	P- isolated from Earth (Low Voltage ground (P-) isolated from housing)	No
Bus Supply Voltage Min [V]		Busvoltage Overvoltage limit [VDC]	467V
Power Dump Voltage Active Level [V]		Internal Power-Dump Resistance [Ohm]	68
Internal Power-Dump Power [W]	9	PD connection - Int/Ext	Int/Ext PD in Parallel
External Power-Dump Resistance Minimum value [Ohm]	33	External Power-Dump Max Current [A]	100
Control voltage (CVI/O+) [VDC]	18-28	Control Voltage (CVI) Min-Max [VDC]	18-30
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]	
MTBF 100% [Year]	-	MTBF 30% [Year]	-



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Communication information

Software	MacTalk
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Connectivity: Without module	RS232 - 5VDC, Modbus RTU e-PLC Files
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Connectivity: Gen. 1 modules	Yes
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Connectivity: Gen. 2 modules	Yes
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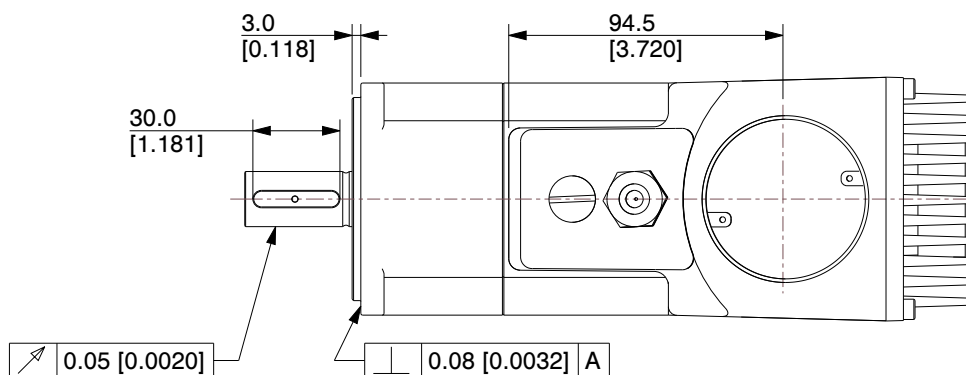
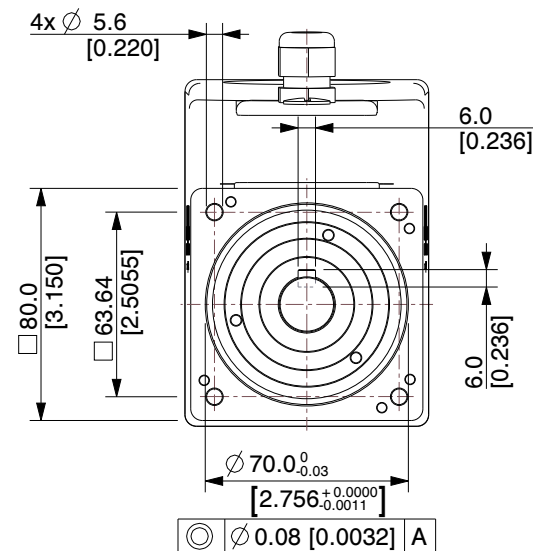
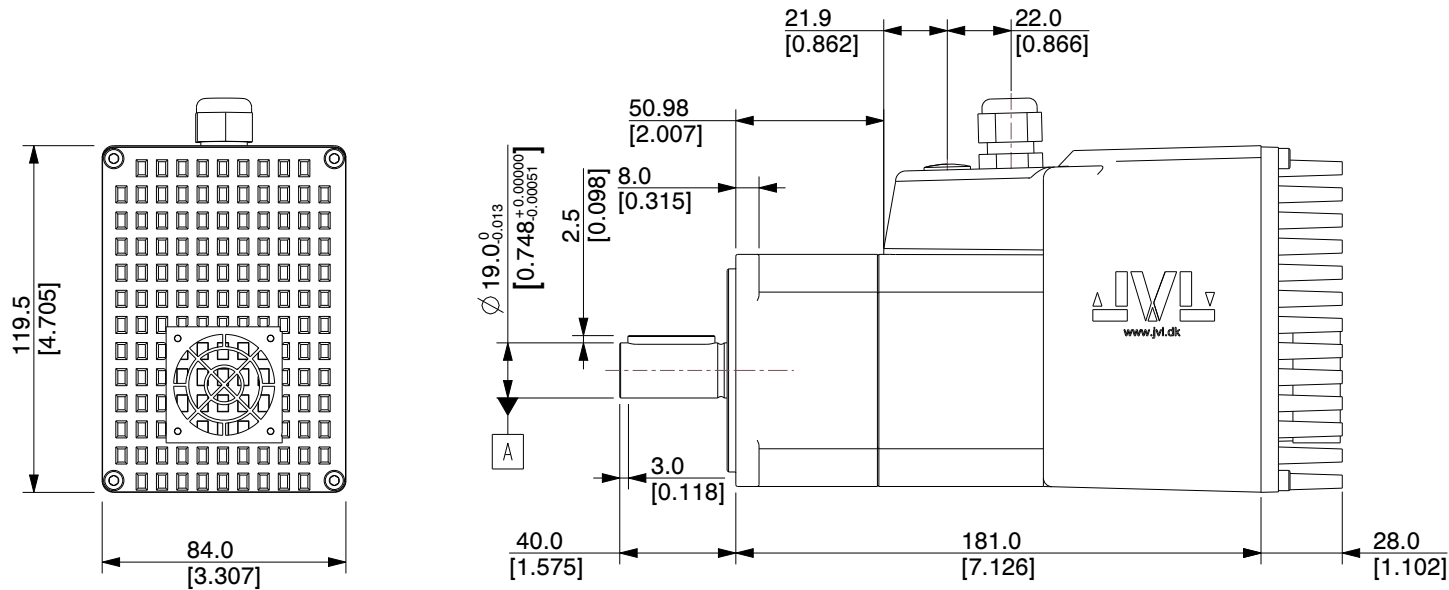


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Cable information

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



NOTES:
1. Encoder Type: Absolute multiturn 4096 Rev. Single 8192 CPR

JVL A/S Bregnerødvej 127 DK-3460 Birkerød Denmark					
PART NUMBER: MAC800-D5-FAAJ					
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					