

TECHNICAL DATASHEET

Absolute encoder AD38 for High performance SM



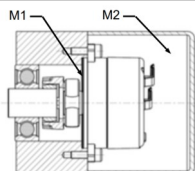
- Mechanical MT absolute encoder for high performance motion control
- Standard mounting depth 36.8 mm with 55/40mm tether
- 1:10 9mm cone hollow shaft design, compatible with mainstream market solutions
- ST solution up to 24 bits and MT up to 12 bits
- Integrated motor temperature sensor input interface PT1000/KTY
- Wide operating temperature
- Maximum continuous speed up to 10,000 rpm
- Provide OEM data areas for storing motor parameters and encoder electronic nameplate (EDS)

ACURO®
drive



TECHNICAL DATA mechanical

Outside diameter	37.5 mm
Bore size	9 mm 1:10 cone hollow shaft
Mounting depth	36.8 ± 1mm
Mounting of housing	Tether 55mm/40mm
Shaft end/housing IP	IP40/IP40
Axial endplay of mounting shaft	±0.5 mm
Radial runout of mating shaft	TIR 0.05 mm
Max. speed	10,000 rpm
Starting torque typ.	≤ 1 Ncm
Moment of inertia	1.05 x 10 ⁻⁶ kgm ²
Vibration resistance (DIN EN 60068-2-6)	300 m/s ² (10 ... 2000 Hz)
Shock resistance (DIN EN 60068-2-27)	2,000 m/s ² (6 ms)
Maximum angular acceleration	2.5 x 10 ⁵ rad/sec ²
Shaft/housing material	Stainless steel/engineering plastics
Weight	approx. 70 g (MT)
Connection	8 pole PCB connector with 0.5m cable
Storage temperature	-30° C ... +80° C (due to packaging)
Operating temperature(M1)	-40° C ... +115° C
Environment temperature(M2)	-40° C ... +105° C @ 6,000 rpm -40° C ... +100° C @ 8,000 rpm -40° C ... + 95° C @ 10,000 rpm



Version: V2.1-EN

Issue Date: 2021/11/26



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 Scan code to pay attention to Hengstler official number

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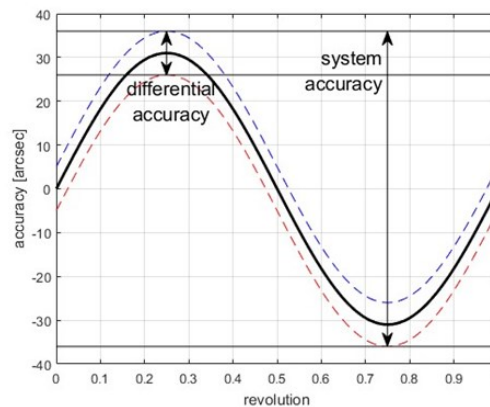
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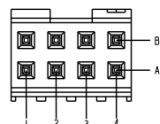
TECHNICAL DATA electrical

General design	as per EN IEC 61010-1, protection class III, contamination level 2, overvoltage class II
Supply voltage	5VDC \pm 10%
Power consumption	< 1 W
ST resolution	24 bits (Number of pulses 2048)
MT resolution	12 bits mechanical gearbox (lifetime maintenance free)
EMC	As per IEC 61326-1 industrial application environment
electrostatic (ESD)	Refer to IEC61000-4-2 for test levels and methods
Fast Transient Pulse (Burst)	Refer to IEC61000-4-4 for test levels and methods
Surge (Surge)	Refer to IEC61000-4-5 for test levels and methods
Output interface	RS422 compatible
Communication protocol	Pure Digital BISS-C (optional temperature data expansion)
Temperature sensor	PT 1000 (\pm 3K) , KTY (\pm 5K)
Electronic nameplate (EDS)	512 Bytes Data storage space
OEM Storage area	7 k Bytes Used to store OEM motor data
Absolute accuracy typ.	\pm 27"
Repositioning Accuracy	Max. \pm 5"



ELECTRICAL CONNECTIONS

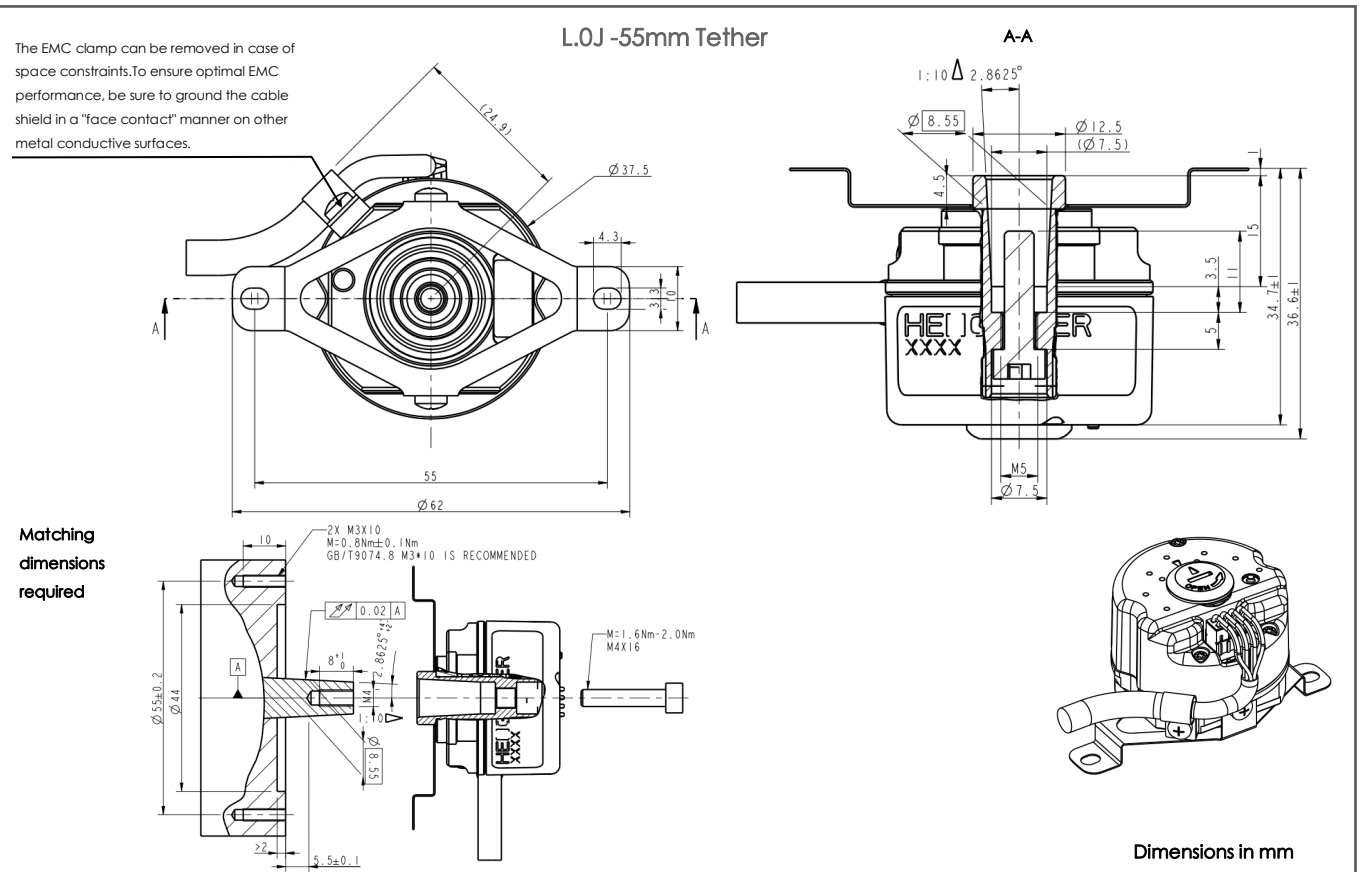
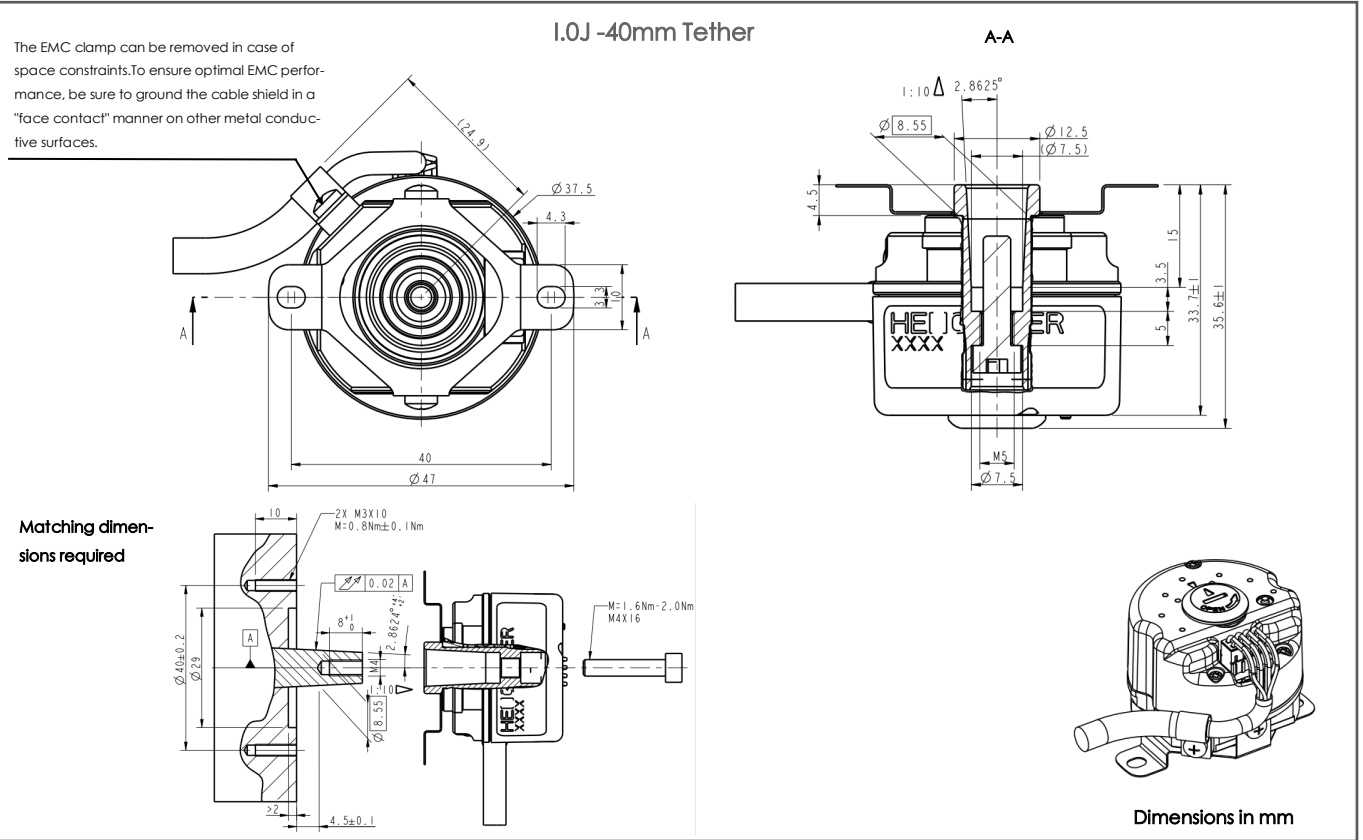
PIN	Color	Signal	PIN	Color	Signal
1A	violet	Temp+	1B	violet/black	Temp-
2A	green/black	DATA-	2B	green	DATA+
3A	blue/black	CLOCK-	3B	blue	CLOCK+
4A	red	UB+	4B	black	GND



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DIMENSIONED DRAWINGS



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ORDERING INFORMATION

Type	Resolution	Supply voltage	Flange, Protection, Shaft	Interface	Connection
<input type="text"/>	/ <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
AD38	0024 24 Bit ST 1224 12 Bit MT+ 24 Bit ST	A 5 VDC	I.OJ Spring tether 40mm, IP40, 9 mm 1:10 cone hollow shaft L.OJ Spring tether 55mm, IP40, 9 mm 1:10 cone hollow shaft	BE BiSS-C BT BiSS-C + Motor winding tempera- ture * BT type is required to drive protocol matching	B 8 pole PCB connector +0.5m cable