CRM1 – CRYO ROTARY MOTOR 1



Features

- Endless rotation
- Integrated scanner functionality
- High torque output
- Compact and robust design
- 20 mK to 375K, vacuum compatible
- Materials: stainless steel, phosphor bronze
- Non-magnetic moving parts
- Position feedback option -COE
- COE has no blind spots, 360 degrees range

Description / Applications

The Cryo Rotary Motor 1 (CRM1) is a rotational drive with high torque output. An optical encoder can be fitted for closed loop control. In contrast to typical resistive based sensors, it has no blind spots and can measure over 360 angular degrees. The moving parts are made from non-magnetic phosphor bronze to minimize interaction with external magnetic fields.

Specifications

General info	
Type of motion	Rotational
Dimensions	See drawings below
Operational environmental conditions	20 mK to 375 K, ambient to UHV
Weight	170 g, -COE adds 10 g
Stepping motion	
Travel range	Endless
Velocity @ 300 K	30 deg/s
Velocity @ 4 K	6 deg/s
Scanning motion	
Scanning range @ 300 K	2,5 mrad
Scanning range @ 4 K	0,5 mrad
Minimal step size	nrad
Drive voltage @ 300 K	-30 V to 120 V
Drive voltage @ 4 K	-30 V to 120 V
Forces and load capacity	
Driving torque	15 Nmm
Load capacity, vertical rotation axis	200 g
Materials	
Main body	Stainless steel 316L, phosphor bronze
Piezo actuator	Low voltage multilayer, ceramic insulated
Model specific information	
-COE	Cryo Optical Encoder, 850 pulses per revolution
-V, -HV or -UHV	Level of vacuum compatibility, see the glossary on the homepage for details
Electronics CPSC	
Controller Base Cabinet	CAB
Driver for stepping and scanning	CADM
Position readout	OEM

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Ordering Information

Available Models

CRM1-V	Cryo Rotary Motor 1
CRM1-COE-V	Cryo Rotary Motor 1-Cryo Optical Encoder

Available Options

-HV	Upgrade to High Vacuum compatibility
-UHV	Upgrade to Ultra High Vacuum compatibility

Accessories

AKM1	Accessory Kit Mechanical 1
AKE1	Accessory Kit Electrical 1

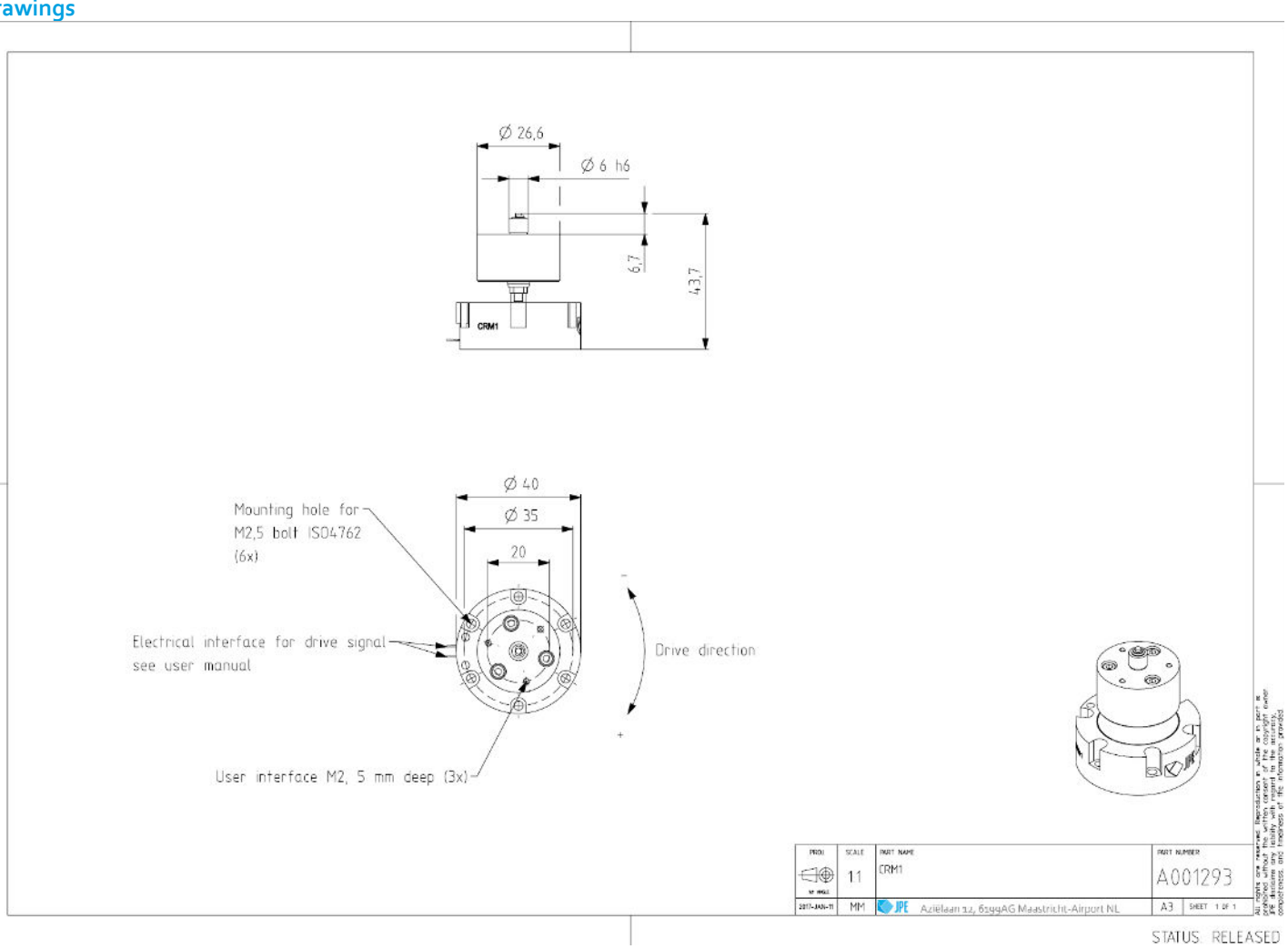
Mechanical and electrical information

Download 3D step files and manuals from:
https://www.jpe-innovations.com/cryo-nano-products/

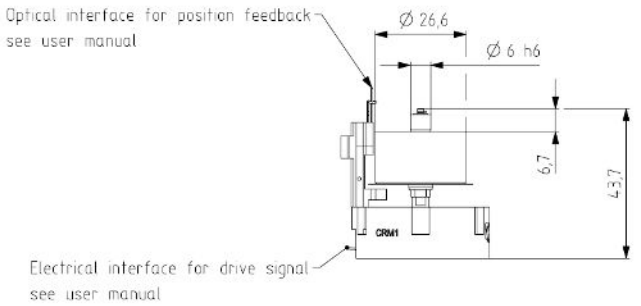
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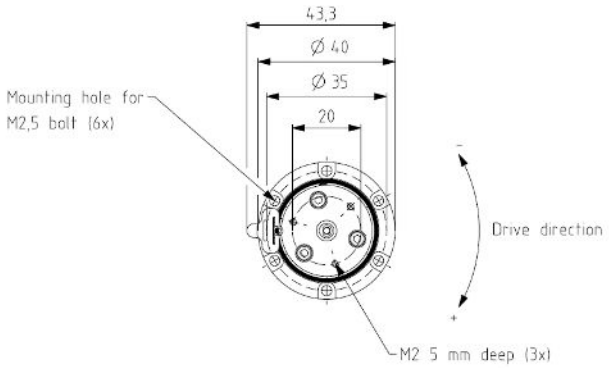
For quotations, specials, or engineering services, please contact us at:
https://www.jpe-innovations.com/contact/

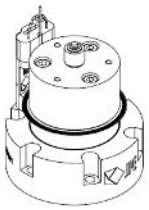
Drawings



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PROJ	SCALE: 11	PART NAME: CRM1-COE	PART NUMBER: A001217
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