

### Model Number

**JVM42H**

Heavy-duty encoder

### Features

- **Sturdy construction**
- **Highly shock / vibration and soiling resistant**
- **Increased shaft load capacity**
- **CAN bus with SAE J1939 protocol**
- **Stainless steel housing**
- **IP69K**
- **Very small housing**

### Description

This absolute rotary encoder provides a position value corresponding to the shaft position on its integrated J1939 interface. The rugged miniature encoders are based on magnetic sampling.

## Technical data

### General specifications

Detection type	magnetic sampling
Device type	Multiturn absolute encoder

### Nominal ratings

Linearity error	± 0.35 °
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### Indicators/operating means

LED green	Power on
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### Electrical specifications

Operating voltage $U_B$	10 ... 30 V DC
Output code	binary code
Code course (counting direction)	adjustable

### Interface

Interface type	J1939
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### Resolution

Single turn	12 Bit
Multiturn	up to 15 Bit
Overall resolution	up to 27 Bit

Transfer rate	250 kBit/s
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Cycle time	500 µs
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Standard conformity	ISO 11898
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### Connection

Connector	M12 connector, 5 pin
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Cable	2 m fixed cable, 5-wire, screened
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### Standard conformity

Degree of protection	IEC/EN 60529
Climatic testing	DIN EN 60068-2-3, 95 %, no moisture condensation
Emitted interference	EN 61000-6-4:2007
Noise immunity	EN 61000-6-2:2005
Shock resistance	DIN EN 60068-2-27, 300 g, 6 ms
Vibration resistance	DIN EN 60068-2-6, 30 g, 55 ... 2000 Hz

### Ambient conditions

Operating temperature	-40 ... 85 °C (-40 ... 185 °F)
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Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
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Relative humidity	98 %, no moisture condensation
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### Mechanical specifications

Flange	servo flange 42 mm with 4 x Threading M4
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Shaft dimensions $\varnothing \times l$	10 mm x 20 mm
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Degree of protection	IP65 / IP67 / IP68 / IP69k
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### Material

Housing	Stainless steel 1.4404 / AISI 316L
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Flange	Stainless steel 1.4404 / AISI 316L
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Shaft	Stainless steel 1.4412 / AISI 440B
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Mass	approx. 350 g
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Rotational speed	max. 6000 min <sup>-1</sup>
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Moment of inertia	30 gcm <sup>2</sup>
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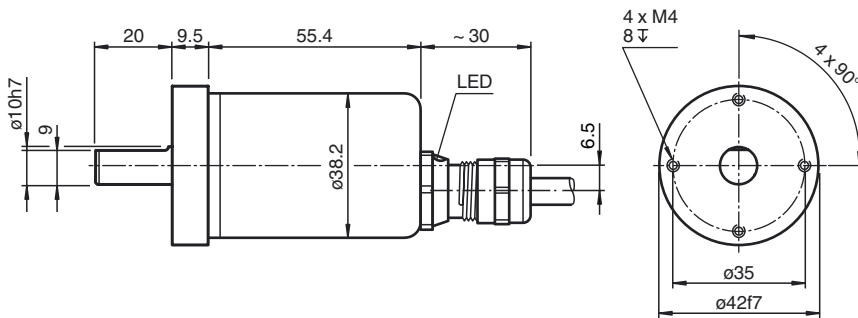
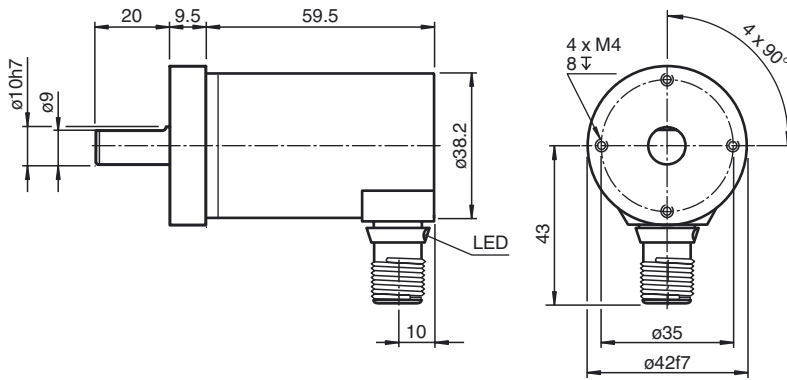
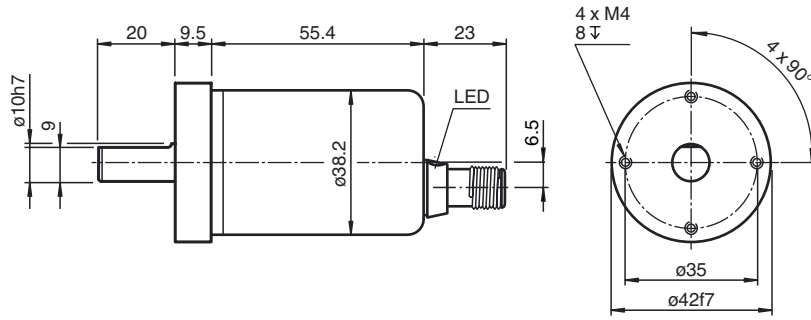
Starting torque	< 5 Ncm
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### Shaft load

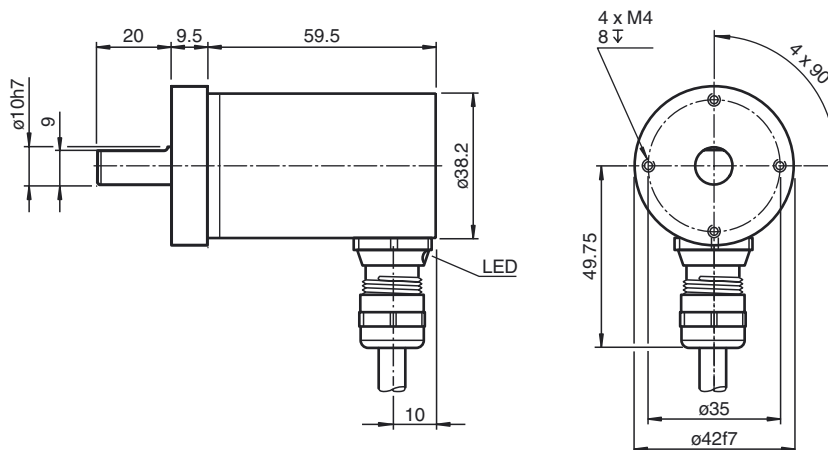
Axial	270 N
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Radial	270 N
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Dimensions



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**Electrical connection**

Signal	Wire end	5-pin, M12 x 1 connector
CAN GND	green	1
+V <sub>S</sub>	red	2
GND	yellow	3
CAN-High	white	4
CAN-Low	brown	5
Shielding	Shielding	Housing
Pinout		

Release date: 2014-07-02 15:40 Date of issue: 2014-07-02 t168182\_eng.xml

**Example of the transmit commands**

Command	Identifier	Data	Comments
Read request Direction	18EA2000	01 EF 00 00 00 00 00 00	
Read request Node	18EA2000	08 EF 00 00 00 00 00 00	
Write Direction	00EF2000	01 01 00 00 00 FF FF FF (CCW increase position)	When you change direction it will give you a different positional value. You will then need to set your preset value.
Write PRESET	00EF2000	04 A8 61 00 00 FF FF FF (value 25.000)	The preset value should be received at positional value 18FFAA20.
Write Save	00EF2000	FA 73 61 76 65 FF FF FF	The settings saved in non-volatile memory

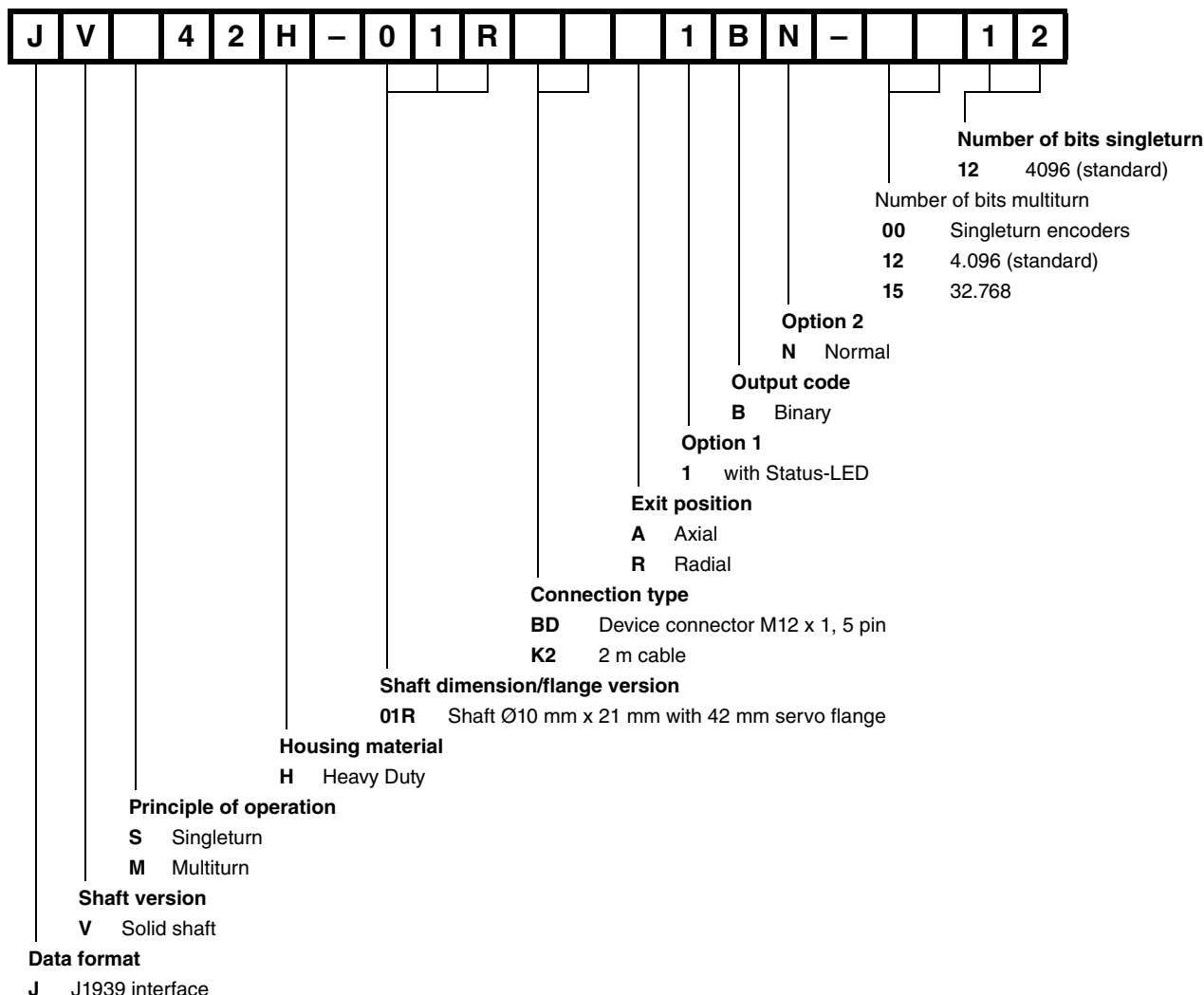
If you change the node number, you will need to cycle power (after you save your settings) for the node number to change. Once you cycle power, you will need to enter the new node number in your identifier. You can confirm everything is saved in non-volatile memory by cycling power.

**Receive:**

18FFAA20: Positional and speed data

18EA2000: Read response

**Order code**



Release date: 2014-07-02 15:40 Date of issue: 2014-07-02 1168182\_eng.xml