

## VD991451

### ROTARY ENCODERS • ENCODERS

A rotary encoder is a device that converts a rotary motion into a digital output signal, which can be processed on a subsequent evaluation electronics. All of our encoders operate according to the principle of optical scanning. Inside the device there is a pulse disc on which is – depending on the encoder - a unique (absolute) or repetitive (incremental) line graduation, which is scanned by an optical system. The turning of the encoder shaft causes rotation of the pulse disc, which results in a corresponding sampling signal of the optical system. This is finally implemented by an integrated electronics in encoder-specific output signals (e.g. multi-turn, RS422 etc.). For professional installation in many applications, shaft couplings or resilient bases for mounting brackets or flanges are used. In addition, the encoder shaft can be equipped with measuring wheels or pinions in various designs and sizes. Typical applications include the angle measurement on bending machines, length measuring of belt systems or speed measurement on winding systems.

#### MECHANICAL DATA

Ambient temperature	-25 °C ... 100 °C
Axial load capacity of shaft	20 N
Degree of protection (IP)	IP54
Encoder size	58
Housing material	Aluminium
Max. rotation speed	10000 UpM
Moment of inertia	14.5 gcm <sup>2</sup>
Radial load capacity of the shaft	40 N
Sensor diameter	58 mm
Sensor length	60 mm
Shaft diameter	6 mm ... 6 mm
Shock resistance, acceleration	200 g
Shock resistance, pulse time	6 ms
Torque	0.02 Nm
Type of encoder shaft	Full shaft
Version	Incremental encoder
Vibration resistance, acceleration	10 g
Vibration resistance, frequency	2000 Hz
Weight	0.25 kg

#### ELECTRICAL DATA

Encoder signal outputs	A+B+0
Impulse rate per revolution	1500 ... 1500
Max. no. of pulses	1500
Max. output current	20 A
Max. output frequency	150000 Hz
No-load current	30 mA

**ELECTRICAL DATA**

Number of pins	12
Physical measurement principle	Optic
Programmable	No
Reverse polarity protection	Yes
Shaft length	10
Short-circuit-proof	Yes
Standard for interfaces	RS-422
Supply voltage	5 V ... 5 V
Track B inverted	Yes
Type of electrical connection	Connector M23
Voltage type	DC

**OTHER DATA**

Relative air humidity	95 %
Single-turn encoder	Yes

**DIMENSIONAL DRAWING****INSTALLATION**

Mounting / Installation may only be carried out by a qualified electrician!

**DISPOSAL****SAFETY WARNINGS**

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information!