

## VD58A766

### 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 ... 85 °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                      | 65 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 | 10000 ... 10000 |
| Max. no. of pulses          | 10000           |
| 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             |
| Supply voltage                 | 4.75 V ... 30 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!