PRODUCT DATASHEET

Rotary Encoder

Optical Rotary Incremental Encoder

PRODUCT OVERVIEW

The Rotary Encoder is an electromechanical position sensor that converts angular shaft rotation into corresponding electrical signals. It provides accurate and repeatable feedback for position, direction, and speed measurement in industrial and motion control applications.

OPERATING PRINCIPLE

The encoder operates by generating electrical pulses in response to shaft rotation. The output signals are produced using optical or magnetic sensing elements, where incremental or absolute position data is derived based on the encoder type.

SCOPE

This document defines the technical, electrical, mechanical, and environmental specifications of the Rotary Encoder used for precise angular position and speed feedback in control and automation systems.

SPECIFICATIONS

#	Description	Parameters
1	Resolution	**100 to 5000 ppr**
2	Output channels	**A, B, Z or $\bar{A}$, A, $\bar{B}$, B, $\bar{Z}$, Z**
3	Output type	**Push-pull, TTL Linedriver, HTL Linedriver**
4	Supply voltage	**5 VDC or 8–24 VDC or 5–24 VDC**
5	Power consumption (without load)	**< 40 mA (24 VDC)**
6	Cable	**2.5 m (standard), 5-wire + shield (push-pull) / 8-wire + shield (Linedriver)**
7	Max. permissible shaft loading, radial	**100 N, 60 N**
8	Max. speed	**3,500 rpm**
9	Shaft diameter	**Ø6 – 8 mm**
10	Shaft material	**Stainless steel**
11	Case diameter	**Ø50 mm**
12	Case material	**Aluminium and painted steel**
13	IP degree	**IP 54**
14	Operating temperature	**-20 °C ... +80 °C**
15	Storage temperature	**-30 °C ... +90 °C**