



DUV60E-Z4KZWAZAS04

DUV60

MEASURING WHEEL ENCODERS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
DUV60E-Z4KZWAZAS04	1090465

Other models and accessories → www.sick.com/DUV60

Detailed technical data

Features

Special device	✓
Specialty	MS 6-pin connector at the end of a 500 mm cable, DIP switches pre-set to HTL output
Standard reference device	DUV60E-D4KKWADA, 1090501

Performance

Pulses per revolution	1 ... 1500 ¹⁾
Resolution in pulses/mm	0.125 mm/pulse to 304.8 mm/pulse (type-dependent)
Measuring step	90° electric/pulses per revolution
Measuring step deviation	± 18°, / pulses per revolution
Error limits	Measuring step deviation x 3
Duty cycle	0.5 ± 5 %
Initialization time	< 5 ms ²⁾

¹⁾ Available pulses per revolution see type code.

²⁾ Valid positional data can be read once this time has elapsed.

Interfaces

Communication interface	Incremental
Communication Interface detail	HTL
Parameterising data	DIP switch, selectable output

Electrical data

Operating power consumption (no load)	120 mA
Connection type	Cable, 8-wire, universal, 500 mm ¹⁾
Pulses per revolution	✓
Output voltage	✓
Direction of rotation	✓
Power consumption max. without load	≤ 1.25 W
Supply voltage	4.75 V ... 30 V

¹⁾ The universal connection is rotatable so that it is possible to position the connector in the radial or axial direction.

²⁾ This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 40°C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

Load current max.	≤ 30 mA, per channel
Maximum output frequency	60 kHz
Reference signal, number	1
Reference signal, position	180°, electric, gated with A
Reverse polarity protection	✓
Short-circuit protection of the outputs	✓
MTTFd: mean time to dangerous failure	275 years (EN ISO 13849-1) ²⁾

¹⁾ The universal connection is rotatable so that it is possible to position the connector in the radial or axial direction.

²⁾ This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 40 °C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

Mechanical data

Spring arm design	Without mount
Mass	0.9 kg ¹⁾
Shaft	Stainless steel
Flange	Aluminum
Housing	Aluminum
Cable	PVC
Spring element	Spring steel
Measuring wheel, spring arm	Aluminum
Start up torque	0.5 Ncm
Operating torque	0.4 Ncm
Operating speed	1,500 min ⁻¹
Bearing lifetime	3.6 x 10 ⁹ revolutions
Maximum travel/deflection of spring arm	40 mm ²⁾
Recommended pretension	20 mm ²⁾
Max. permissible working area for the spring (continuous operation)	± 10 mm

¹⁾ Based on an encoder with a plug connector output and urethane rollers, no mounting necessary (arm mount).

²⁾ Only applies to variants with spring arm mounting.

Ambient data

EMC	According to EN 61000-6-2 and EN 61000-6-3
Enclosure rating	IP65 ¹⁾
Permissible relative humidity	90 % (condensation of the optical scanning not permitted)
Operating temperature range	-30 °C ... +70 °C
Storage temperature range	-40 °C ... +75 °C

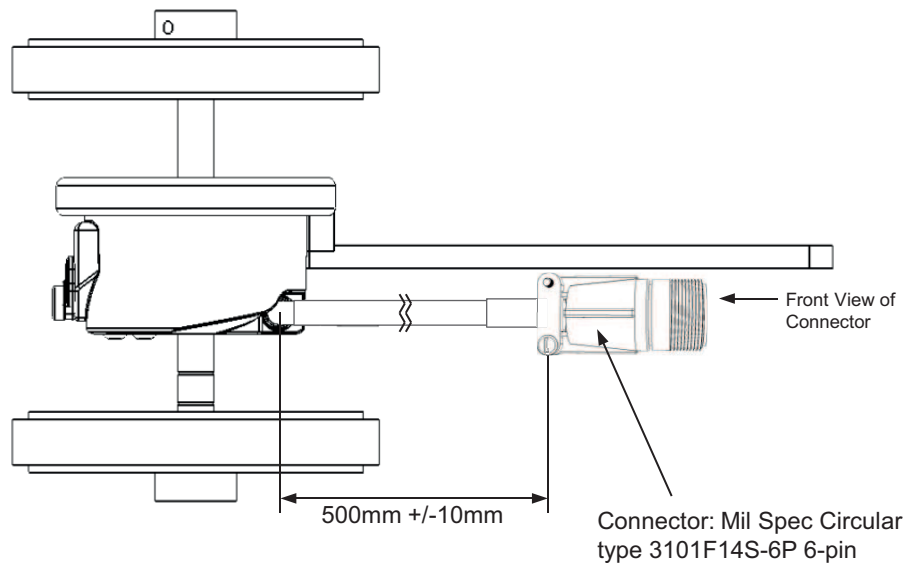
¹⁾ When the mating connector is installed and the DIP switch door is sealed with the encoder housing.

Classifications

ECl@ss 5.0	27270501
ECl@ss 5.1.4	27270501
ECl@ss 6.0	27270590

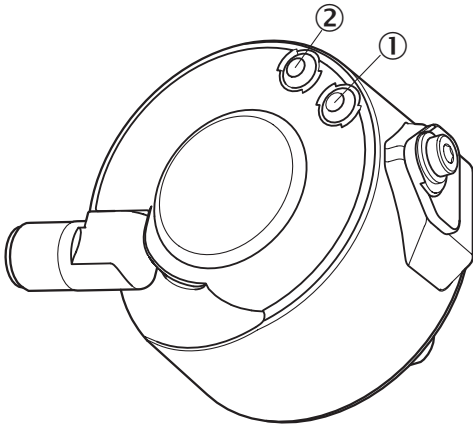
ECI@ss 6.2	27270590
ECI@ss 7.0	27270501
ECI@ss 8.0	27270501
ECI@ss 8.1	27270501
ECI@ss 9.0	27270501
ECI@ss 10.0	27270790
ECI@ss 11.0	27270707
ETIM 5.0	EC001486
ETIM 6.0	EC001486
ETIM 7.0	EC001486
UNSPSC 16.0901	41112113

Dimensional drawing (Dimensions in mm (inch))



Adjustments

Status indicator LED



- ① Signal
- ② Fault/Power

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com