



DUV60E-LMS30-5M

DUV60

MEASURING WHEEL ENCODERS



KEMPSTON
CONTROLS

Detailed technical data

Performance

Linear resolution	0.25 mm/pulse
Pulses per revolution	600
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⁾

Electrical data

Electrical interface	4.75 V ... 30 V, HTL
Connection type	Detachable 5 meter cable (pre-wired to TITAN system)
Operating power consumption (no load)	≤ 120 mA
Power consumption max. without load	≤ 1.25 W
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)

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.

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)
Working 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.

Mechanical data

Measuring wheel circumference	300 mm
Measuring wheel surface	O-ring NBR70 ¹⁾
Spring arm design	Spring tension, under-belt flange mount
Mass	0.9 kg ²⁾
Encoder material	
Shaft	Stainless steel
Flange	Aluminum
Housing	Aluminum
Cable	PVC
Spring arm mechanism material	
Spring element	Spring steel
Measuring wheel, spring arm	Aluminum
Yoke	Aluminum
Counterweight	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 ³⁾
Recommended pretension	20 mm ³⁾
Max. permissible working area for the spring (continuous operation)	± 10 mm

¹⁾ The surface of a measuring wheel is subject to wear. This depends on contact pressure, acceleration behavior in the application, traversing speed, measurement surface, mechanical alignment of the measuring wheel, temperature, and ambient conditions. We recommend you regularly check the condition of the measuring wheel and replace as required.

²⁾ Based on an encoder with a plug connector output and urethane rollers, no mounting necessary (arm mount).

³⁾ Only applies to variants with spring arm mounting.

PIN assignment

View of M12 male device connector on encoder

