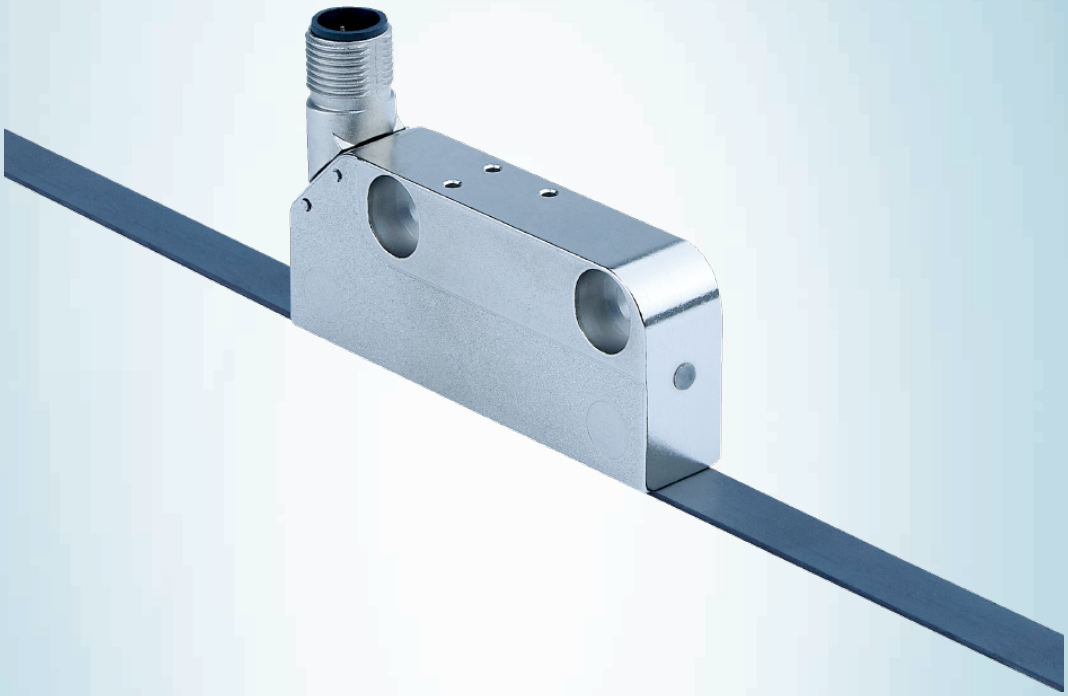
Product data sheet



ETL70-0KA4

STL/ETL70

LINEAR MOTOR FEEDBACK SYSTEMS

SICK
Sensor Intelligence.

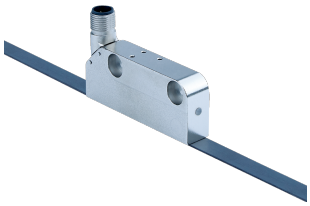


Illustration may differ

Ordering information

Type	Part no.
ETL70-0KA4	1116913

Magnetic tape not included with delivery

Other models and accessories ➜ www.sick.com/STL_ETL70

Detailed technical data

Features

Items supplied	Magnetic tape not included with delivery

Safety-related parameters

$MTTF_D$ (mean time to dangerous failure)	86 years (EN ISO 13849) [1]

[1] 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 60 °C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

Performance

Measuring range	0 mm ... 16,384 mm
Resolution	1 µm
Length of period	2 mm
Traversing speed	4.5 m/s up to which the absolute position can be reliably produced
Repeatability	< 1 µm
Max. reading distance	0.8 mm

Interfaces

Communication interface	HIPERFACE DSL®

Electrical data

Supply voltage	7 V DC ... 12 V DC
Current consumption	< 200 mA
Connection type	Male connector, M12, 4-pin, universal [1]
Status display	RGB LED
MTTFd: mean time to dangerous failure	86 years (EN ISO 13849) [2]

[1] The universal connection is rotatable so that it is possible to position the conector 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 60 °C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

Mechanical data

Dimensions	See dimensional drawing
Scope of delivery	Magnetic tape not included with delivery
Read head material	Zinc diecast

Ambient data

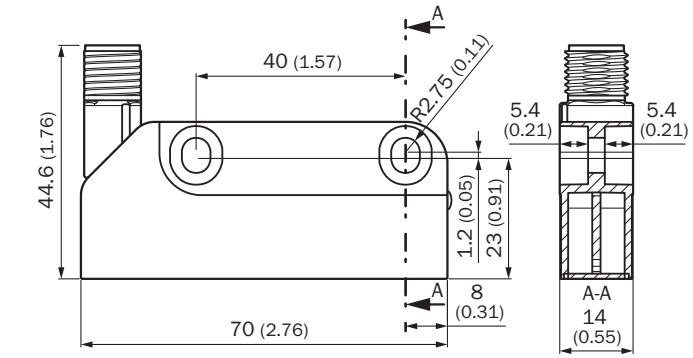
EMC	According to EN 61000-6-2 and EN 61000-6-3 [1]
Enclosure rating	IP67, with mating connector inserted (IEC 60529)
Operating temperature range	–30 °C ... +85 °C
Storage temperature range	–40 °C ... +85 °C, without package
Permissible relative humidity	100 %, condensation permitted
Resistance to shocks	500 m/s², 11 ms (EN 60068-2-27)
Resistance to vibration	100 m/s², 10 Hz ... 2,000 Hz (EN 60068-2-6)

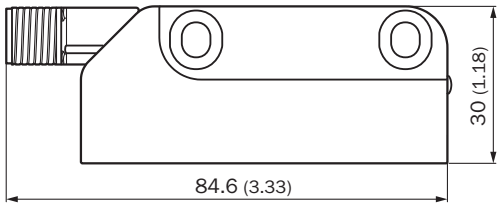
[1] According to the listed standards, EMC is guaranteed if the motor feedback system is connected to the central grounding point of the motor controller via a cable shield and the encoder housing lays over a large area of the motor potential. If other shielding concepts are used, users must perform their own test.

Classifications

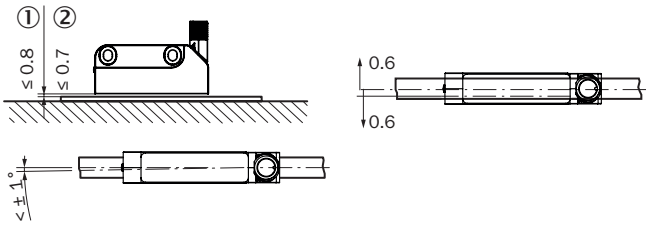
ECLASS 5.0	27270705
ECLASS 5.1.4	27270705
ECLASS 6.0	27270705
ECLASS 6.2	27270705
ECLASS 7.0	27270705
ECLASS 8.0	27270705
ECLASS 8.1	27270705
ECLASS 9.0	27270705
ECLASS 10.0	27270705
ECLASS 11.0	27270705
ECLASS 12.0	27273902
ETIM 5.0	EC002544
ETIM 6.0	EC002544
ETIM 7.0	EC002544
ETIM 8.0	EC001486
UNSPSC 16.0901	41111613

Dimensional drawing (Dimensions in mm (inch))





Position tolerance



① Without cover strip
② With cover strip

Recommended accessories

Other models and accessories ➜ www.sick.com/STL_ETL70

	Brief description	Type	Part no.
Magnets			
	Magnetic tape length: 1.08 m, magnetic tape width: 10 mm, magnetic tape material: 17410 hard ferrite 9/28 P, substrate tape material: stainless steel, period length 2 mm, operating temperature range: –20 °C ... 100 °C, storage temperature range: –30 °C ... 100 °C, temperature coefficient: (11 ± 1) µm/K/m	BTL70-01000	6078482
	Magnetic tape length: 3.08 m, magnetic tape width: 10 mm, magnetic tape material: 17410 hard ferrite 9/28 P, substrate tape material: stainless steel, period length 2 mm, operating temperature range: –20 °C ... 100 °C, storage temperature range: –30 °C ... 100 °C, temperature coefficient: (11 ± 1) µm/K/m	BTL70-03000	6078485

	Brief description	Type	Part no.
	Magnetic tape length: 4.08 m, magnetic tape width: 10 mm, magnetic tape material: 17410 hard ferrite 9/28 P, substrate tape material: stainless steel, period length 2 mm, operating temperature range: –20 °C ... 100 °C, storage temperature range: –30 °C ... 100 °C, temperature coefficient: (11 ± 1) µm/K/m	BTL70-04000	6078486
	Magnetic tape length: 6.08 m, magnetic tape width: 10 mm, magnetic tape material: 17410 hard ferrite 9/28 P, substrate tape material: stainless steel, period length 2 mm, operating temperature range: –20 °C ... 100 °C, storage temperature range: –30 °C ... 100 °C, temperature coefficient: (11 ± 1) µm/K/m	BTL70-06000	6078487
	Magnetic tape length: 8.08 m, magnetic tape width: 10 mm, magnetic tape material: 17410 hard ferrite 9/28 P, substrate tape material: stainless steel, period length 2 mm, operating temperature range: –20 °C ... 100 °C, storage temperature range: –30 °C ... 100 °C, temperature coefficient: (11 ± 1) µm/K/m	BTL70-08000	6078488
	Magnetic tape length: 10.08 m, magnetic tape width: 10 mm, magnetic tape material: 17410 hard ferrite 9/28 P, substrate tape material: steel, period length 2 mm, operating temperature range: –20 °C ... 100 °C, storage temperature range: –30 °C ... 100 °C, temperature coefficient: (11 ± 1) µm/K/m	BTL70-10000	6078489
	Magnetic tape length: 12.08 m, magnetic tape width: 10 mm, magnetic tape material: 17410 hard ferrite 9/28 P, substrate tape material: steel, period length 2 mm, operating temperature range: –20 °C ... 100 °C, storage temperature range: –30 °C ... 100 °C, temperature coefficient: (11 ± 1) µm/K/m	BTL70-12000	6078490
	Magnetic tape length: 14.08 m, magnetic tape width: 10 mm, magnetic tape material: 17410 hard ferrite 9/28 P, substrate tape material: steel, period length 2 mm, operating temperature range: –20 °C ... 100 °C, storage temperature range: –30 °C ... 100 °C, temperature coefficient: (11 ± 1) µm/K/m	BTL70-14000	6078491
	Magnetic tape length: 16.5 m, magnetic tape width: 10 mm, magnetic tape material: 17410 hard ferrite 9/28 P, substrate tape material: steel, period length 2 mm, operating temperature range: –20 °C ... 100 °C, storage temperature range: –30 °C ... 100 °C, temperature coefficient: (11 ± 1) µm/K/m	BTL70-16300	6078492
Nuts and screws			
	Mounting kit for SIL2 applications for safe and easy mounting of the TTK70S; 2x titan cylinder screws, 2x galvanized steel lock washers, 2x washers, 2x female connectors	BEF-MK-S12	2105618

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:

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