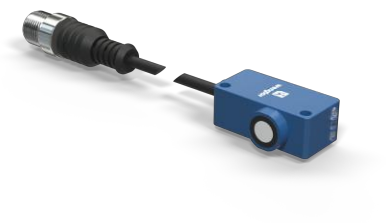
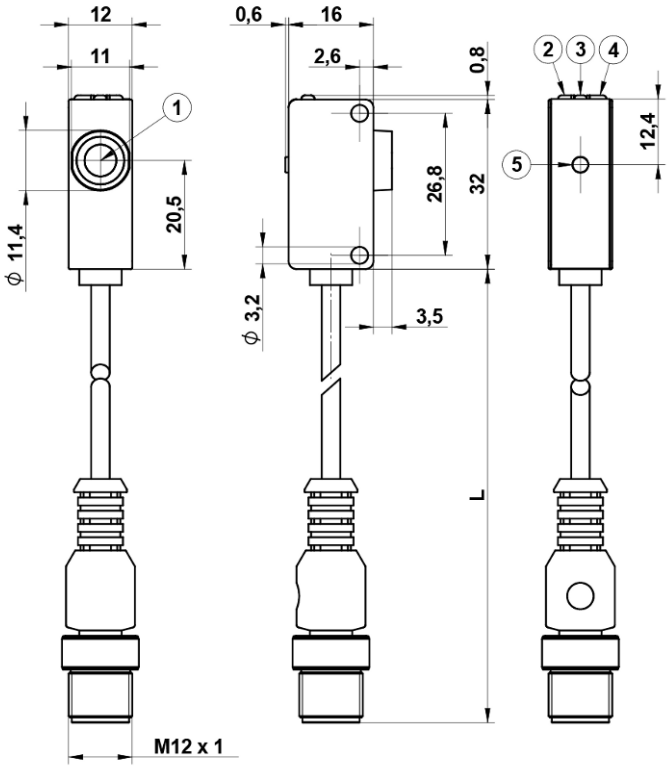
wenglor
the innovative family

Technical Data
U1KT003
Distance Sensor





Symbol	Key
1	Active surface
2	Switching status indicator O1
3	Power LED
4	Switching status indicator O2
5	Teach-in button

EN

Dimensions in mm
Subject to change without notice
Version
www.wenglor.com

Technical data

Ultrasonic Data	
Working range, reflex sensor	30...400 mm
Working range, through-beam sensor	30...800 mm
Setting Range	30...400 mm
Reproducibility maximum	4 mm
Linearity Deviation	4 mm
Resolution	0.5 mm
Ultrasonic Frequency	325 kHz
Opening Angle	< 12 °
Service Life (T = +25 °C)	100000 h
Switching Hysteresis	1 % *

Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 20 mA
Switching frequency, reflex sensor	30 Hz
Switching frequency, through-beam sensor	70 Hz
Response time, reflex sensor	17 ms
Response time, through-beam sensor	8 ms
Temperature Range	-30...60 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 2.5 V
Switching Output/Switching Current	100 mA
Synchronous Mode	up to 40 sensors
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Lockable	yes
Interface	IO-Link V1.1
Data Storage	yes
Protection Class	III

Mechanical Data	
Setting Method	IO-Link Teach-in (for switching output)
Housing Material	Plastic, PC Plastic, PC/ABS
Sensing face	Epoxy resin/glass bubble mixture Plastic, PC/ABS Plastic, PU
Degree of Protection	IP68
Connection Type	1 plug with cable
Connection	M12 × 1; 4-pin
Cable length (L)	200 mm
Cable Jacket Material	Plastic, PUR

Safety-relevant Data	
MTTFd (EN ISO 13849-1)	1106.71 a

General Data	
Scope of delivery	1 × initial start-up instructions 1 × sensor

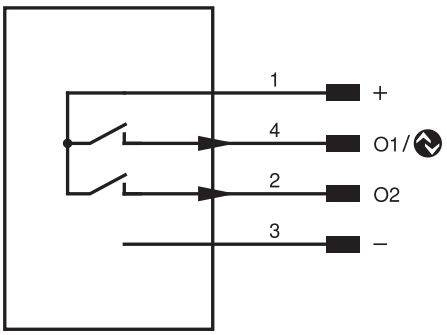
Adjustable parameters	
Output	NPN PNP Error Output
Circuit	NC NC/NO NO
Other parameters	Filter Adjustable sonic cone Through-beam mode Adjustable sensor mode Synchronous mode Teach mode

All other parameters can be found in the product documentation.

* Referring to the switching distance, at least 2 mm.

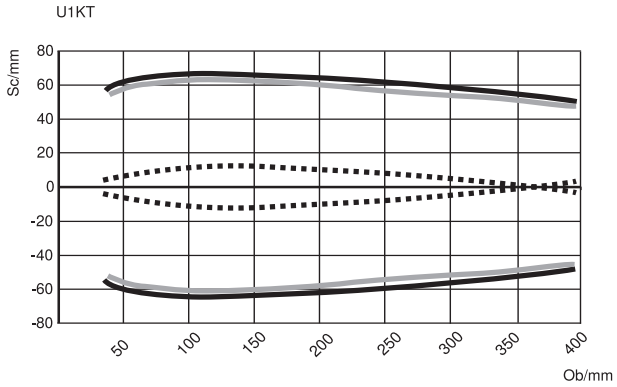
BMECat data	
eCl@ss 5.1.4	27-27-08-04 Ultrasonic distance sensor
eCl@ss 6.x	27-27-08-04 Ultrasonic distance sensor
eCl@ss 7.0	27-27-08-04 Ultrasonic distance sensor
eCl@ss 7.1	27-27-08-04 Ultrasonic distance sensor
eCl@ss 8.x	27-27-08-04 Ultrasonic distance sensor
eCl@ss 10.0.1	27-27-08-04 Ultrasonic distance sensor

Technical illustrations



Pin	Pin function	Polarity	Circuit
1	Supply Voltage +		
2	Switching Output 2	PNP	NO
3	Supply voltage 0 V		
4	Switching Output 1 IO-Link	PNP	NO

Illustration 1: Characteristic response curve



Characteristic curves show the position of the center or the front edge of the measured object (100 × 100 mm plate) at the time of switching.

Ob = Object

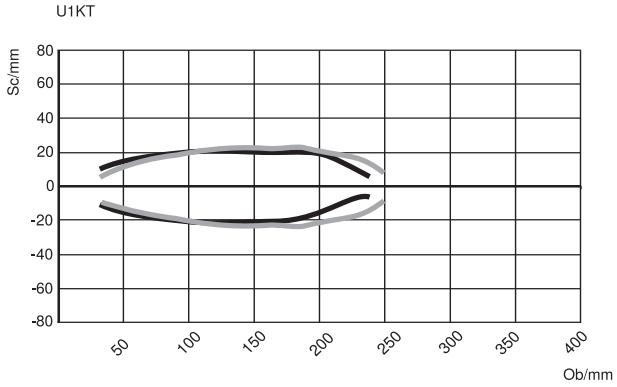
Sc = Sonic cone width

— Standard sonic cone (center of the measured object)

— Narrow sonic cone (center of the measured object)

▪▪▪ Standard sonic cone (front edge of the measured object)

Illustration 2: Characteristic response curve



Characteristic curves show the position of the center or the front edge of the measured object (Ø 25 mm rod) at the time of switching.

Ob = Object

Sc = Sonic cone width

— Standard sonic cone (center of the measured object)

— Narrow sonic cone (center of the measured object)