

CET.5000 Relay

CABLE EXTENSION TRANSDUCER

Absolute measuring length up to 5 m



L.4 - DS0011 R02 CET.5000 Relay 15/12/2025



CHARACTERISTICS

- Measuring range up to 5 m
- Trigger threshold settable by the user
- Compact size
- High protection level and wide temperature range



ADVANTAGES

- The measuring length suitable for every application
- Reliability and long service life for outdoor applications
- Designed for harsh environmental conditions
- Hall effect technology



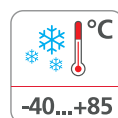
IP67
High protection level



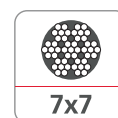
Shock/vibration resistant



Reverse polarity protection



-40...+85
Wide temp. range



7x7
7x7 stainless steel rope



Relay
Relay output



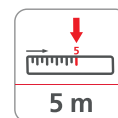
500.000
Ultra durable



Directive 2011/65/EU



EU conformity



5 m
Max. length: 5 m

The company reserves the right to make any kind of design or functional modification at any moment without prior notice.

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PRODUCT DESCRIPTION

CET.5000 is a robust, high-performance, wire cable pull transducer with relay output, designed for industrial applications and featuring high quality and durability.

Excellent repeatability, high IP rating, shock and vibration resistance and electromagnetic immunity makes this transducer suitable for mobile hydraulic applications such as: agricultural vehicles, earth moving machines, construction equipment, articulated arm cranes and aerial work platforms.



Agricultural machinery



Construction



Earth moving



Handling and lifting

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PRODUCT CODE

ORDER CODE⁽¹⁾ ▶ CET. _ _ _ ^a . _ ^b . _ _ ^c . _ _ ^d . _ ^e

a Measurement range
5000 ◀ = 5 m

b Power supply range
2 ◀ = 9 ... 30 V DC

c Output type
8 ◀ = Relay

d Connections
1 ◀ = Male flange connector M12, 5-pin
2 ◀ = Male connector M12, 5-pin, PUR cable 30cm

e Options
X ◀ = None

(1) Not all combinations can be ordered. Please contact TSM for confirmation before placing an order.

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TECHNICAL SPECIFICATION

Measuring range	5m
Measuring wire	AISI304 steel wire with nylon coating \varnothing 0.9 mm
Wire fastening	Eyelet Inner diameter \varnothing 8 mm Outer diameter \varnothing 15 mm Height 5 mm
Wire pull-out max speed	1 m/s
Cable transducer linearity (Ta = 25°C)	± 0.5 % FS
Hysteresis	20 mm (factory setting)
Pull-in force	typ. 2 N (pull-in force reduced at low temperatures)
Pull-out force	typ. 8 N
Life cycles (Ta = 25°C) (*)	500.000
Drum circumference	245 mm
Housing	Glass fiber reinforced polycarbonate
Protection class (Electronics compart.)	IP67 (acc. to EN 60529)
Temperature range	-40°C ... +85°C
Weight approx.	0.5 kg
Shock resistance	acc. to EN 60068-2-27 50 G, 11 ms, 100 shocks per axis Axis : X, Y, Z
Vibration resistance	acc. to EN 60068-2-6 10 ... 500 Hz, 10g, 2h per axis Axis : X, Y, Z

ELECTRICAL CHARACTERISTICS

Power supply range	9 ... 30 V DC
Output signal	1x Dry contact SPST (N.O.)
Current consumption	12V \leq 40mA (with relay coil energized) 24V \leq 35mA (with relay coil energized)
Max. switching voltage	48 VDC/VAC
Max. switching current	1.5 A
Max. switching power	30 W
Endurance @ 30 VDC, 1 A (resistive), 25 °C, 1 Hz	$> 1 \times 10^5$ operations
Electromagnetic compatibility	acc. to EN 61000-6-2, EN 61000-6-4
EU Conformity	EMC directive 2014/30/EU RoHS directive 2011/65/EU + 2015/863/EU

(*) Specified for 20–80% FS operating cycles.

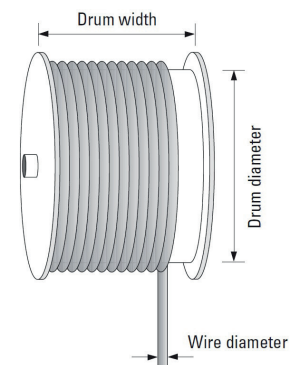
OPERATING PRINCIPLE

Construction

The core of a draw wire sensor is a bearings mounted drum on which a wire rope is wound. The unwinding of the rope drives the rotation of the drum, thus the linear displacement of the rope is converted into an angular displacement of the drum. By measuring the angle of the drum, the linear displacement of the wire is detected.

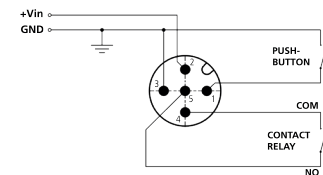
Caution

Exceeding the maximum extension length of the draw wire will lead to damage to the wire and the mechanics.



SWITCHING FUNCTION

The switching function consists in closing the N.O. dry contact when a preset length threshold is exceeded. The trigger threshold can be user-set by means of a self-learning function of the sensor. To do that, simply unwind the rope to the required length and connect the Pin 1 (CFG IN) to the ground (GND) for a few seconds.



On request, a dedicated tool is available (Order code: 9T100017 - INT.TASTO.1). To set the threshold value, simply press the button for 2s. The green led indicates the status of the relay.

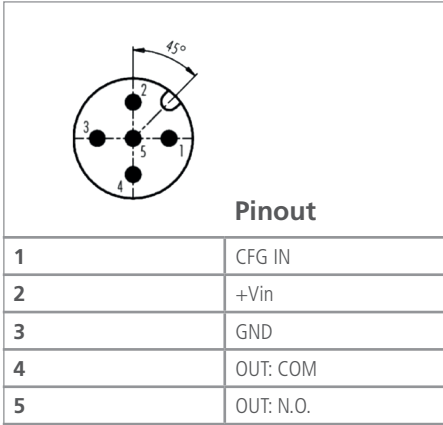


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ELECTRICAL CONNECTION M12 X 5 PINS



DIMENSIONS [mm]

