



- Inductive measurement technology
- Magnetic field resistant
- Touchless measurement
- Status LED
- Versatile mounting
- 1 μm resolution
- 500 Hz high update rate
- Shock and vibration resistance
- Analog, SSI, CANopen, RS-232 or RS-485 interface
- IP67 protection class

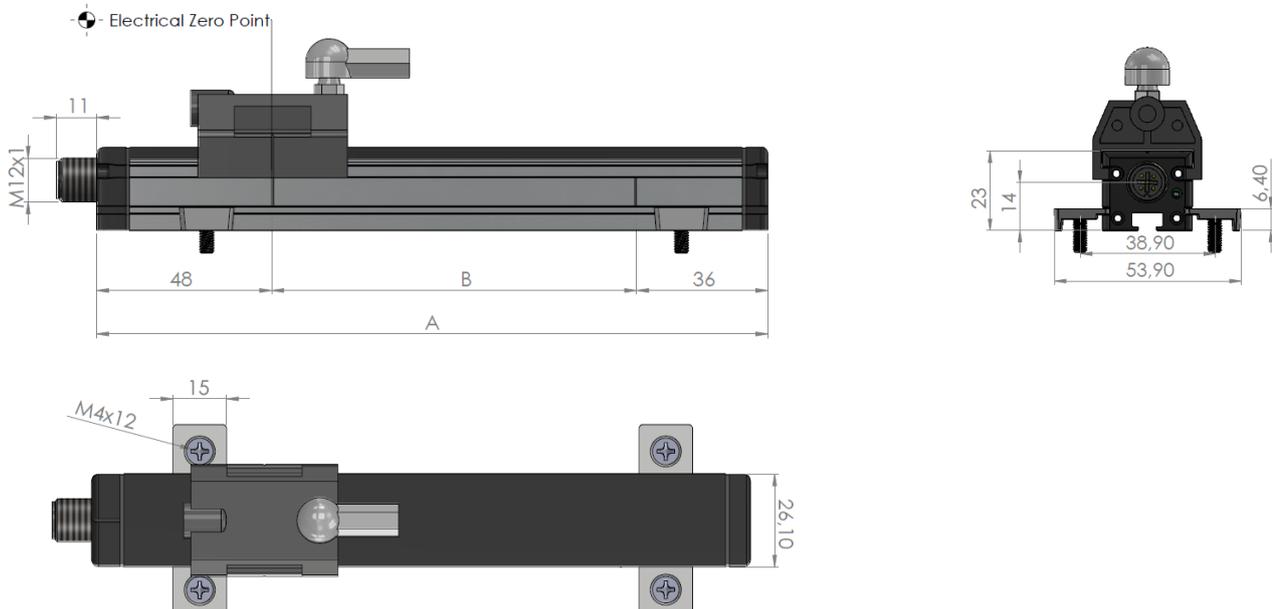
The working principle of ILT-10 series inductive linear position sensors depends on the RLC coupling between the positioning element and the sensor. An output signal is provided according to the position of the positioning element. Thanks to the touchless working principle, they are long-lasting since there are no factors such as wear and tear.

They offer wide temperature tolerance, high repeatability, resolution and linearity. They work stably for a long time without being affected by electromagnetic fields. They are used in applications such as manufacturing engineering, plastic injection molding, textile, packaging, sheet metal working, woodwork, automation technology.

MECHANICAL DATA

Housing Length (A)	B + 84 mm
Electrical Stroke (B)	Between 100 mm... 500 mm in steps of 50 mm Between 500 mm... 1000 mm in steps of 100 mm
Protection Class	IP67
Life	Mechanically unlimited
Mechanical Fixing	Adjustable (movable) mounting feet
Operating Temperature	-40°C...+70°C
Storage Temperature	-40°C...+70°C
Material	Position Marker: POM Housing: Anodized aluminum

MECHANICAL DIMENSIONS (mm)



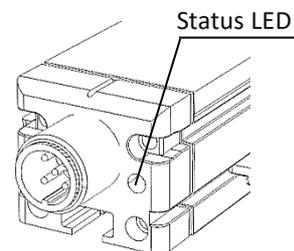
ANALOG INTERFACE

Electrical Specifications

Electrical stroke (B)	Between 100 mm... 500 mm in steps of 50 mm Between 500 mm... 1000 mm in steps of 100 mm
Output Signal	0-10V, 0.5-4.5V, 0-5V, 0-20 mA, 4-20 mA
Number of channel	1
Update rate	500 Hz max.
Signal propagation delay	2, 3, 4, 5, 6, 8, 10 ms (according to filter selection)
Resolution	16 bit
Absolute Linearity	$\leq \pm \%0.025$ FS (min. $\pm 100 \mu\text{m}$) (when the signal propagation delay is 10 ms)
Reproducibility	$< \pm \%0.012$ FS (when the signal propagation delay is 10 ms)
Supply voltage	15...33VDC
Supply voltage ripple	$\leq \%10$ Vss
Power consumption (w/o load)	0.5W
Overvoltage protection	33 VDC
Reverse polarity protection	Yes, up to supply voltage max
Short circuit protection	Yes (outputs, GND and supply voltage), Up to 12V

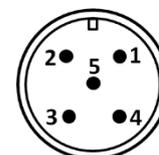
LED Function

Led Color	Description
Off	Sensor is not working – No supply
Green	Sensor is working – Position marker is within measuring range
Blue flash (1 sn)	Sensor is working - Position marker is outside of measuring range ($\pm 6\text{mm}$ max)
Red flash (1 sn)	Sensor is working - Position marker is outside of measuring range
Red fast flash (100 ms)	Sensor error



Electrical Connection

Analog Voltage	Analog Current	Cable	M12 / 5 pin male connector
+V	+V	Red	Pin 1
Vout	N/C	Yellow	Pin 2
GND	GND	Black	Pin 3
N/C	Iout	Green	Pin 4
Prog	Prog	Pink	Pin 5



Analog Output Settings

Blue or green LED flashes every second in normal operating condition.

Prog pin (pin5) and GND (pin3) are short-circuited for 10 seconds. The LED starts to flashes as blue and programming mode is entered.

Step 1 - Setting the starting point: After the position marker is brought to the desired starting point, Prog pin (pin5) and GND (pin3) are short-circuited for 1 second and the minimum analog value (4mA/0V) is set. In this case, the LED lights up blue for 2 seconds and then proceed to step 2.

Step 2 – Setting the end point: After the position marker is brought to the desired end point, Prog pin (pin5) and GND (pin3) are short-circuited for 1 second. Thus, the max analog value (20mA / 10V) is set and the programming mode is exited.

Return to Factory Settings:

In step 1, if the Prog pin (pin5) and GND (pin3) are short-circuited for 5 seconds, the factory settings will be restored (start 4mA / 0V, end 20mA / 10V).

In step 2, if the Prog pin (pin5) and GND (pin3) are short-circuited for 5 seconds, the factory settings will be restored (start 20mA / 10V, end 4mA / 0V).

Note: After the analog output settings are finished, the Prog pin must be left connected to + V.

Order Code

Model	ILT10	-	XXXX	-	XX	-	XX	-	XXXX
Filter Selection	<p>10 : 10ms (standard)</p> <p>*For others see Electrical specifications/signal propagation delay</p>								
Electrical Connection	<p>S13M : M12/5 pin male connector</p>								

Measuring Lengths (stroke)

Different measuring lengths from 100 mm to 1000 mm

*Measuring length can be selected between 100 mm... 500 mm in 50 mm steps, between 500 mm... 1000 mm in 100 mm steps.

Electrical Interface

V: 0-10V
V1: 0-5V
V3: 0.5-4.5V
A: 4-20 mA
A0: 0-20 mA

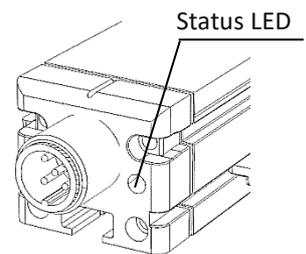
SSI INTERFACE

Electrical Specifications

Electrical stroke (B)	Between 100 mm... 500 mm in steps of 50 mm Between 500 mm... 1000 mm in steps of 100 mm
Protocol	SSI 24 and 25 bit (ask for others)
Process data area	Bit 0... Bit 19
Inputs	RS422
Monofloptime (tm)	20 µs
Encoding	Gray, Binary
Update rate	500 Hz (depends on the filter)
Resolution (LSB)	Selectable between 1...1000 µm
Signal propagation delay	2, 3, 4, 5, 6, 8, 10 ms (according to filter selection)
Reproducibility	< ± %0.012 FS (when the signal propagation delay is 10 ms)
Absolute Linearity	≤ ± %0.025 FS (min. ± 100 µm) (when the signal propagation delay is 10 ms)
Supply voltage	8...33 VDC
Supply voltage ripple	≤ %10 Vss
Power consumption (w/o load)	0.5W
Overvoltage protection	33 VDC
Reverse polarity protection	Yes, up to supply voltage max
Short circuit protection	Yes (outputs, GND and supply voltage up to 7V)
Ohmic load at outputs	>120Ω
Max. Clock rate	1 MHz

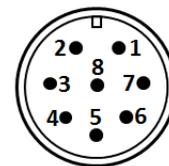
LED Function

Led Color	Description
Off	Sensor is not working – No supply
Green	Sensor is working – Position marker is within measuring range
Blue flash (1 sn)	Sensor is working - Position marker is outside od measuring range (±6mm max)
Red flash (1 sn)	Sensor is working - Position marker is outside od measuring range
Red fast flash (100 ms)	Sensor error



Electrical Connection

Signal	Cable	M12 / 8 pin male connector
Clk+	White	Pin 1
Data+	Yellow	Pin 2
Clk-	Blue	Pin 3
N/C	N/C	Pin 4
Data-	Green	Pin 5
GND	Black	Pin 6
Besleme Voltaji	Red	Pin 7
N/C	N/C	Pin 8



Order Code

Model	Resolution	Electrical Interface	Electrical Conenction
ILT10 - XXXX - XXXX - XX - XXX - XXX - XXXX	Selectable between 1...1000 µm	SSI : SSI	S14M : M12/8 pin male connector
Measuring Lengths (stroke)	Filter Selection	Output Signal	
Different measuring lengths from 100 mm to 1000 mm *Measuring length can be selected between 100 mm... 500 mm in 50 mm steps, between 500 mm... 1000 mm in 100 mm steps.	10 : 10ms (standard) *For others see Electrical specifications/signal propagation delay	24G : SSI 24 bit, Gray 25G : SSI 25 bit, Gray 24B : SSI 24 bit, Binary 25B : SSI 25 bit, Binary *Ask for others.	

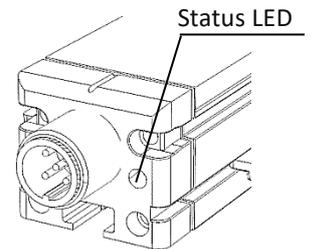
CANopen INTERFACE

Electrical Specifications

Measured variables	Position, speed and temperature
Electrical stroke (B)	Between 100 mm... 500 mm in steps of 50 mm Between 500 mm... 1000 mm in steps of 100 mm
Measuring range speed	0...5 m/s
Protocol	CANopen protocol to CiA DS-301 V4.2.0, Device profile DS-406 V3.2
Programmable parameter	nod-id, baud-rate
Node-ID	1...127 (default 127)
Baud rate	10 ... 1000 kBaud
Update rate (output)	500 Hz
Position resolution	1 µm min.
Speed resolution	10 µm/s min.
Signal propagation delay	2, 3, 4, 5, 6, 8, 10 ms (according to filter selection)
Reproducibility	< ± %0.012 FS (when the signal propagation delay is 10 ms)
Absolute Linearity	≤ ± %0.025 FS (min. ± 100 µm) (when the signal propagation delay is 10 ms)
Supply voltage	8...33 VDC
Supply voltage ripple	≤ %10 V _{ss}
Power consumption (w/o load)	0.5W
Overvoltage protection	33 VDC
Reverse polarity protection	Yes, up to supply voltage max
Short circuit protection	Yes (outputs, GND and supply voltage max.)
Termination resistance	No (optional internal 120 Ω load resistance)

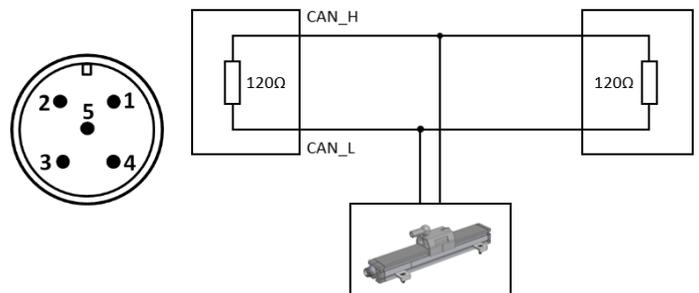
LED Function

Led Color	Description
Off	Sensor is not working – No supply
Green	Sensor is working – Position marker is within measuring range
Blue flash (1 sn)	Sensor is working - Position marker is outside of measuring range (±6mm max)
Red flash (1 sn)	Sensor is working - Position marker is outside of measuring range
Red fast flash (100 ms)	Sensor error



Electrical Connection

Signal	Cable	M12 / 5 pin male connector
CAN SHIELD	CAN SHIELD	Pin 1
Supply Voltage	Red	Pin 2
GND	Black	Pin 3
CAN_H	Yellow	Pin 4
CAN_L	Green	Pin 5



Order Code

Model		Electrical Interface				
ILT10	-	XXXX	-	X	-	XXXX

Measuring Lengths (stroke)

Different measuring lengths from 100 mm to 1000 mm

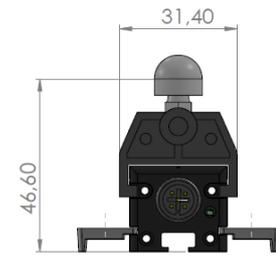
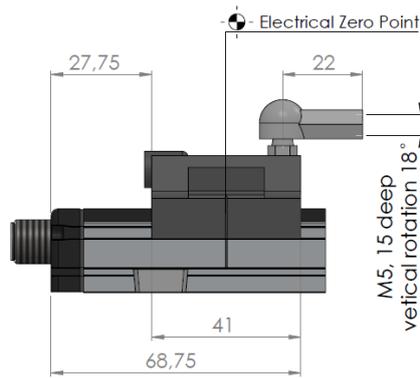
*Measuring length can be selected between 100 mm... 500 mm in 50 mm steps, between 500 mm... 1000 mm in 100 mm steps.

Electrical Connection

S13M : M12/5 pin male connector

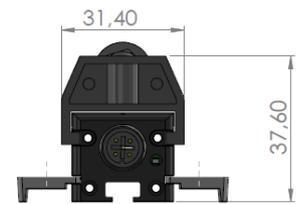
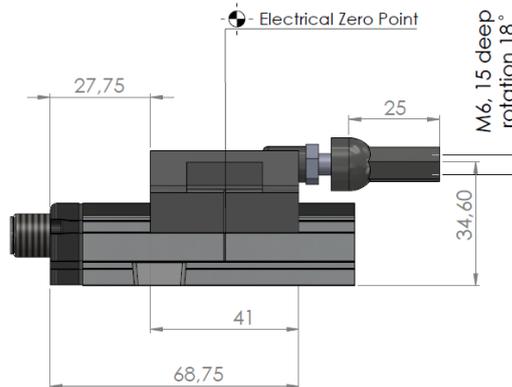
POSITION MARKER SELECTION

GPM-U (Guided and Top Joint)



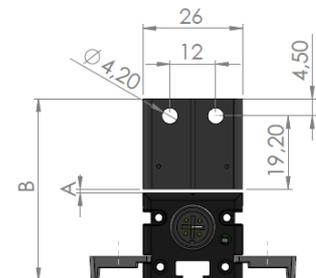
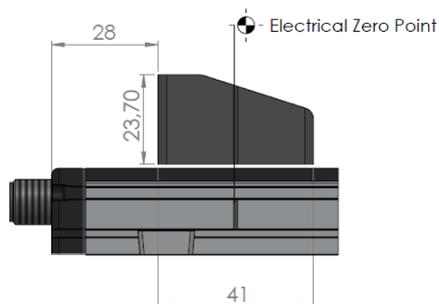
	GPM-6-U	GPM-10-U
Stroke Used	100 ... 600 mm	700 ... 1000 mm
Housing Material	POM	
Joint Material	Igumid G / iglide® L280 (W300)	
Weight	~20 gr	

GPM-Y (Guided and Side Joint)



	GPM-6-Y	GPM-10-Y
Stroke Used	100 ... 600 mm	700 ... 1000 mm
Housing Material	POM	
Joint Material	Igumid G / iglide® L280 (W300)	
Weight	~22 gr	

FPM (Floating and independent)



	FPM-6	FPM-10
Stroke Used	100 ... 600 mm	700 ... 1000 mm
Working Distance (A)	0,3 mm	
Mounting Dimension (B)	47 mm	
Perm. Lateral offset	± 0,5 mm	
Housing Material	POM	
Weight	~23 gr	