

LP1 ACCU-LASERPRO™ - NON-CONTACT OPTICAL ENCODER



FEATURES

The LP1 Accu-LaserPro is a high accuracy programmable non-contact slip-free optical speed sensor. Unlike measuring wheels or other mechanical processes, the laser-based system achieves a higher measuring accuracy and does not damage material. The LP1 can take over a trigger function and provide a start pulse as an output for marking devices as soon as the defined increment value has been reached.

- Adjustable encoder output A/B up to 120 pulses/mm
- Reverse lock A/B channel for temporary backward motion
- Input correction factor for adjusting exact distances
- Two freely programmable trigger outputs push/pull, NPN and PNP output with reversible signal level
- Trigger and sequential trigger up to 6500 mm distance
- Trigger block for freely adjustable distance
- Standstill threshold (start/stop threshold) to filter out startup/shutdown ramps when starting up products (foils, etc.) and micro-vibrations in the movement pattern of products.
- Output for signal reversal on change of direction (traversing axes)
- Two mutually monitoring sensors (failure, contamination)

COMMON APPLICATIONS

Web Tension Control, Paper Monitoring, Glue Dispensing, Linear Material Monitoring, Cut-to-Length, Conveyor Systems, Ink Jet Printing, Laser Printing, Labeling, Document Handling, Winding Machines, Extrusion Lines, Coating Machines, Laminating Machines.

LP1 ACCU-LASERPRO™ ORDERING GUIDE¹

Contact Customer Service for questions about the product. Blue indicates price adder.

Model	Electrical Specifications			Environmental Specifications		
LP1-01						
LP1-01 Encoder Kit	Pulses/mm User Defined in software	INPUT VOLTAGE 5 to 30 VDC	CONNECTOR TYPE M8 6-pin	OPERATING TEMPERATURE -10° to 60° C	SEALING IP54	CERTIFICATION CE Marked

NOTES:

1) The only option that is configurable is the Mount Option. Pulses/mm is not configured at the factory but is defined by the user in the Accu-LaserPro™ software.

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LP1 SPECIFICATIONS

Electrical

Input Voltage	5 to 30 VDC
Input Current	40 mA (at 12 VDC)
Analog Output Type	HTL/TTL - 10nF/150kHz
Sampling Rate	0.9 ms
Response Time	3.6 ms
Wave Length	850 nm
Accuracy	±0.3%*
Laser Type	Class 1
Output Trigger	PNP / NPN /Push-Pull
Output Error	PNP
EMC / CE	Immunity per EN 61000-6-2: 2019 Emissions per EN 61000-6-4: 2019

Mechanical

Speed	0.5 up to 135 m/min. 2,250 mm/sec **
Acceleration	<8g
Measuring Distance	15 mm up to 60 mm
Connectors	M8 6-pin (data) Micro-USB (programming port)
Housing	Aluminum
Weight	55 grams

Environmental

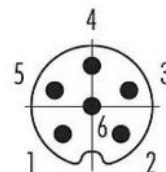
Operating Temp	-10°C to 60°C
Sealing	IP54, Housing non-encapsulated

WIRING TABLE

For mating cables, refer to wiring table provided with the cable.

Function	M8 6-pin
+VDC	1
TR1	2
GND	3
TR2 / ERR / DIR	4
ENC A	5
ENC B	6

M8 PINOUT DRAWING



LP1 ORDER GUIDE DETAILS

Part Number	Included Items
LP1-01 Encoder Kit	LP1 Speed Sensor M3x12 screws x 2 Flat Plate Angle Plate Micro USB Cable PN: 075261
LP1HD-01 Heavy Duty Mounting Bracket	Heavy Duty Mounting Bracket With Screws & Washers

LP1 MOUNT PLATES



Flat Plate
#140150



Angle Plate
#140151

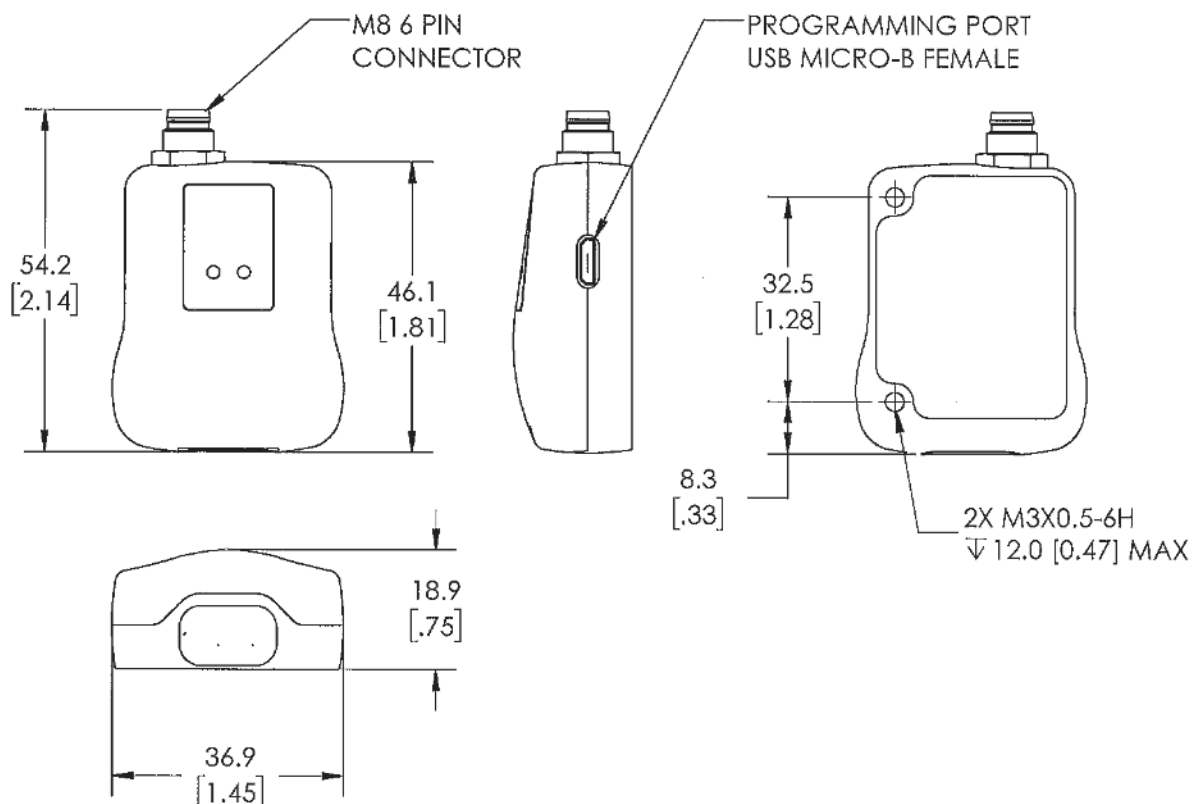
Note:

* Error limit for the systematic measurement error according to DIN 1319-1: 1995. Valid between 1 m/min up to 120 m/min. Below 40 m/min the deviation will be lower. Regular adjustment is required.

** Depending on the material, the value may be better or worse. Top speed is for shiny metallic surfaces and the lowest maximum speed is for white-matte paper.

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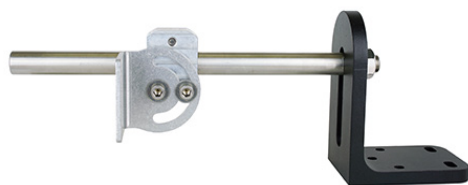
LP1 ACCU-LASERPRO™ DRAWINGS



Primary dimensions are in mm, secondary dimensions SI units [inches] in brackets for reference only.
All dimensions have a tolerance of ± 0.25 mm unless otherwise specified.

LP1 ACCESSORIES

LP1 Heavy Duty Mounting Bracket: #LP1HD-01



Complete Bracket with Flat Plate



Split Block



Angle Plate on Split Block



Flat Plate on Split Block