# 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 GUIDE[1]

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.



1-800-366-5412 | encoder.com | sales@encoder.com

# LP1 ACCU-LASERPRO™ - NON-CONTACT OPTICAL ENCODER

## 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<br>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)<br>Micro-USB (programming port) |
| Housing | Aluminum |
| Weight | 55 grams |

### Environmental

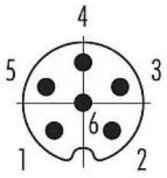
| | |
|---|---|
| Operating Temp | -10°C to 60°C |
| Sealing | IP54, Housing non-encapsulated |

## 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**<br>**Encoder Kit** | LP1 Speed Sensor<br>M3x12 screws x 2<br>Flat Plate<br>Angle Plate<br>Micro USB Cable PN: 075261 |
| **LP1HD-01**<br>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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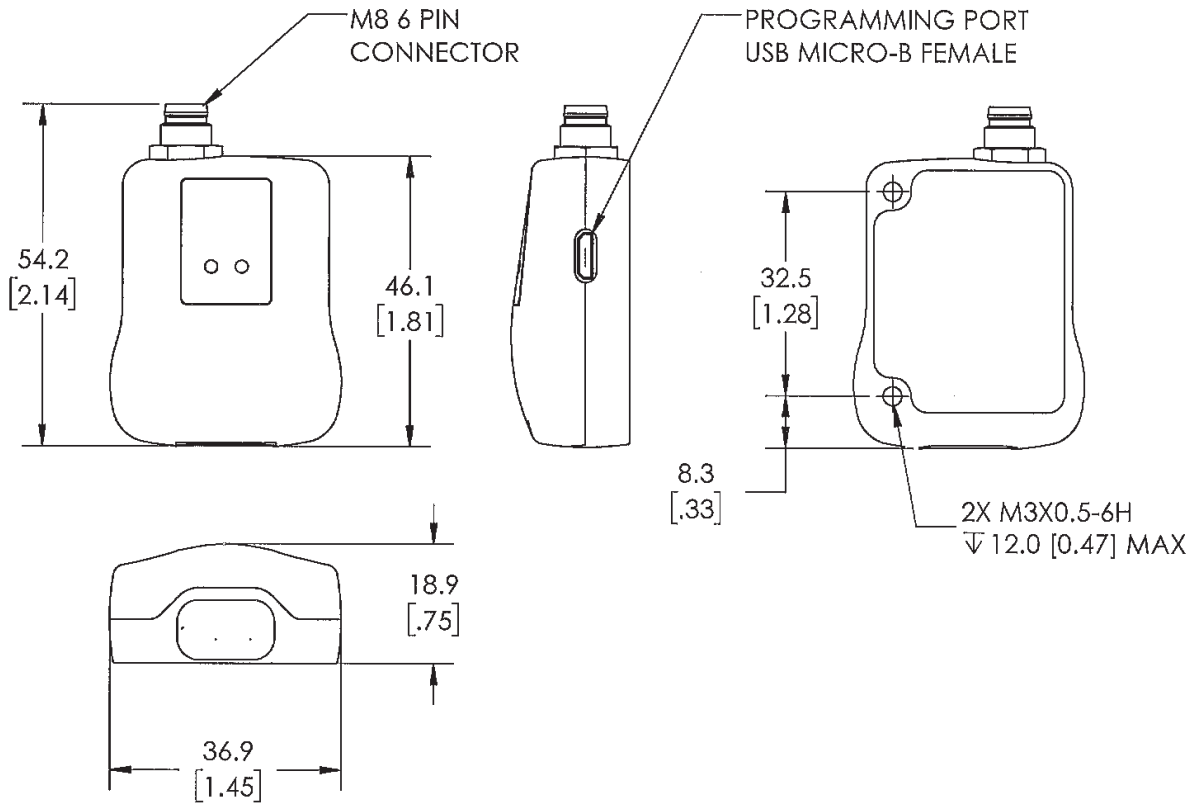
# LP1 ACCU-LASERPRO™ - NON-CONTACT OPTICAL ENCODER

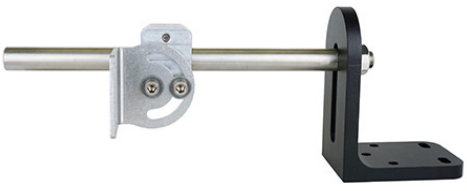
## LP1 ACCU-LASERPRO™ DRAWINGS




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

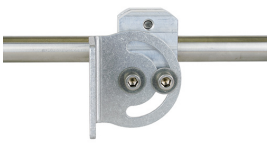
## LP1 ACCESSORIES

LP1 Heavy Duty Mounting Bracket: #LP1HD-01

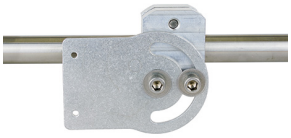


Complete Bracket with Flat Plate

Split Block



Angle Plate on Split Block



Flat Plate on Split Block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