

OPTICAL SPEED SENSOR

152M - 1 MHz

APPLICATIONS

- Sensor recommended for torque measurements, turbocharger balancing
- Tip-Timing analysis on turbine blades; NVH analysis on turbochargers
- Analogue output for additional post-processing, data integration in models, simulations



WORKING DISTANCE

Diffuse reflection (function encoding and Albedo) $0.5 \text{mm} < \mathbf{D} < 10 \text{mm}$ (black and white stripes)

Through-beam >30mm micro optic

ELECTRICAL SPECIFICATIONS

| Transmitters | LED near IR+ visible |
|--|--|
| Supply voltage | From 9 to 30Vcc |
| Average current consumption (12Vcc) | 120 mA |
| Possible inrush current / Duration | >1 Amp. / <10 microsec. |
| Receiver (sensible to the light) | High-speed Photodiode |
| Switching Frequency | 0< F <1 MHz |
| Switching time (10 - 90%) | Rise time < 35 nanosec. Fall time < 35 nanosec. |
| Sensor Setting / Power Adjustment / Option | Potentiometer ¾ tour / Additional washers / Remote Potentiometer via SMB |
| Connection / Optional | 3x 1m cables: 2 BNC+1 power supply cable / Additional output on SMA |
| Standard Output / Options | TTL 5Vcc + Analog from 500 mV to 5Vcc / Analogue & Analogue DC null via SMA |
| Output control | Blue LED + top of fibre visible light patented concept |
| Amplifier Operating temperature | From -10 °C To +70°C |
| Protection | Temporary short-cut |

MECHANICAL SPECIFICATIONS

Box Anodized AU4G, standard in black

Mass 150 gr

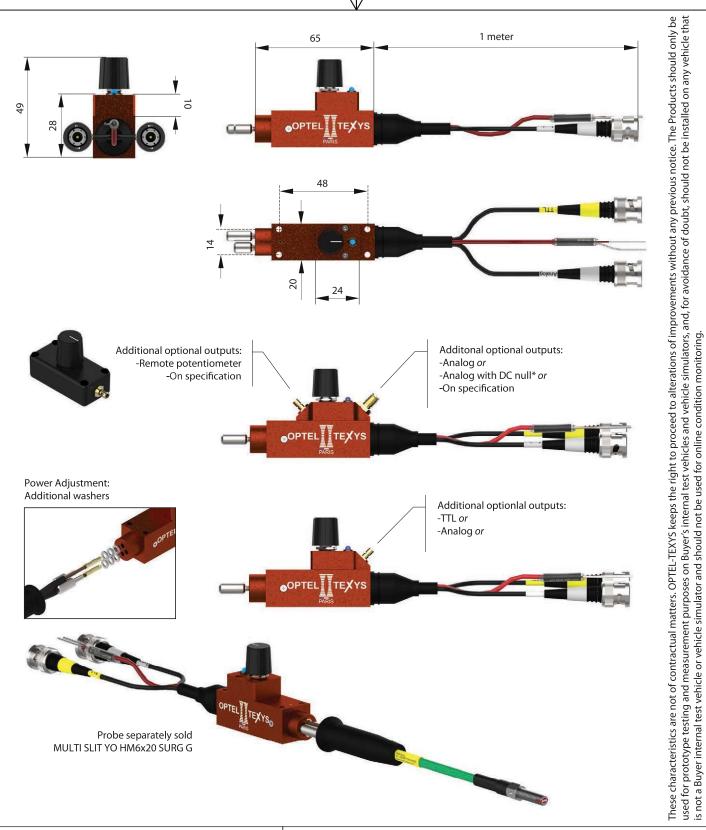
Dimension, Fixation 14X48 mm, 4 x holes Ø 3mm

RECOMMENDED PROBES

| Diffuse reflection standard / slit ending fibre probe | Multi YO / Multi SLIT YO |
|---|----------------------------|
| Through-beam standard / slit ending fibre probe | Multi FFO / Multi SLIT FFO |
| Standard temperature Range | Long life: -5°C to +80°C |
| Limit temperature Range | Limits: -50°C to +120°C |
| High Temperature probe | On Specification |

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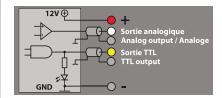




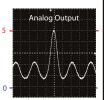
Advanced Sensing Systems for Analysis of Rotation Equipment

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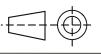






Material

Anodized aluminium



20210215

Reference

152 M

