



DISPLACEMENT MONITORING  
MILLIMETRIC SCALE RESOLUTION  
HIGH QUALITY

The 3DeMoN laser system was designed to enable accurate and contactless distance measurements. Ideal to measure hot or inaccessible surfaces.

### Description

The **3DeMoN** laser system was designed to enable accurate and contactless distance measurements using the reflection of a laser beam.

It is a modular system including electronics, power supply, data communications devices and control software able to automatically and continuously monitor millimetric scale movements.

It also allows to measure hot or inaccessible surfaces, in harsh industrial environments or open air.

The **3DeMoN** laser is an optical system that measures the flight time of a Class II visible red laser light beam, thus precisely calculating the distance between the module and any kind of surface. For distances above 50 - 65m, the use of a reflective surface is recommended. Also the view finder accessory becomes mandatory to accurately track the reflective target position.

By connecting the module through an Ethernet protocol converter to a PC, the software configuration tool allows to set different measurement parameters into the module control electronics, to give remote commands and to store measured data.

Analog and digital configurable outputs make the **3DeMon** easily integrable in many automated

### Key Features

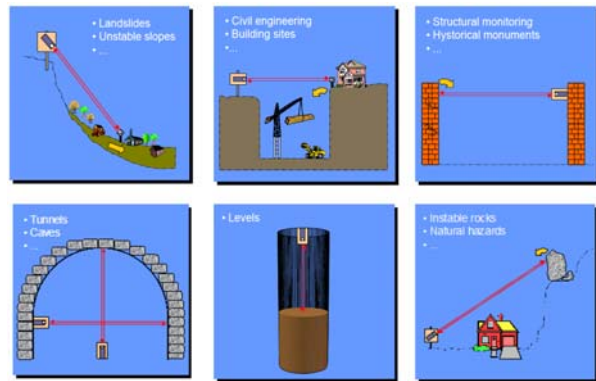
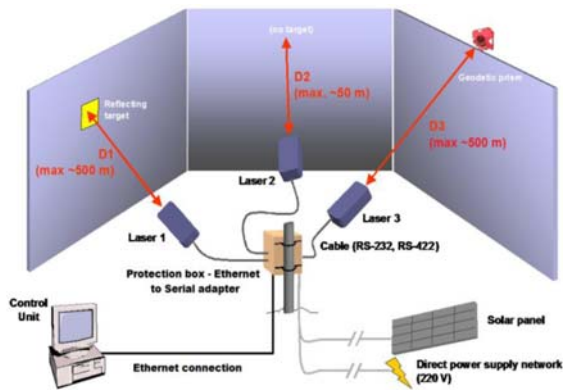
- Millimetric scale resolution
- Measurement ranges from 0.05 to 150m and from 0.5 to 500m
- Serial interface (RS232 and RS422)
- Up to 10 laser distance meters on a single RS422 line
- Displacement monitoring
- Automatic, continuous and autonomous operation
- Flexible and re-configurable
- Quick installation
- 4 LEDs for status signaling
- Wide range power supply (9...30VDC)
- Optional: internal heater

### Applications

- Monitoring of building construction sites
- Historical monuments maintenance
- Risk management in case of natural hazards
- Civil engineering structures
- Measurement of liquid levels

### Specifications

Laser	Laser class II (<0.95mW)
Accuracy	± 1.5mm
Repeatability (typical)	± 0.4mm
Resolution	0.1mm
Operating temperature / humidity	-10°C to +50°C (optional extended temperature range -40°C to +50°C) at 95% RH
Applicable standards	IP-65
Measurement ranges	0.05m to 150m or 0.5 to 500m (with high reflective surface target)
Power supply	9...30VDC
Dimensions (L x W x H)	150 x 80 x 55mm
Connection interfaces	Serial interface RS232 or RS422 implemented by a standard Ethernet converter)



### Ordering Information

- Please specify the required measurement range (up to 150m or 500m), the operating temperature range (standard or extended) and all the needed accessories such as reflective target, view finder, RS422 connection cable, etc.

### Optional Accessories

- Starter kit (power supply, cables, view finder, reflective target)
- Optical view finder for accurate target tracking
- Different lengths and types of serial cables
- Ferrites