

## LPMS 02 Laser-Parallelism-Measuring-System



### Characteristics:

- High resolution (1 $\mu$ m)
- Fast and easy installation
- Higher reproducible accuracy of measurements compared to conventional techniques.
- Simultaneous verification of angular and axial deviations.
- One system only required to calculate four reference points.
- Mobile, solid execution.

### Short description

The Laser-measuring system for parallelism, LPMS 02 has been developed especially for the accurate verification of the parallelism of the mould holding plates of mid size and large injection moulding machines. It is used during factory acceptance tests and maintenance to ascertain the correct tolerances. This increases the life expectancy of the injection mould machines. The system is equally suitable for similar equipment in other industrial sectors where the measurement of relative errors in parallelism is a requirement.

The System is designed to be a reliable, easy to use tool in an industrial environment. Due to it's compactness, the LPMS 02 is suitable for service and maintenance crews.

The system consists of a laser sender LPMS 02 S, a receiver LPMS 02 E and the control unit LPMS 02 B. The control unit has a numerical dial and a LC- display for value indication and step by step operator instructions. It is connected to the receiver by cable. This allows system control where the access is restricted. The receiver LPMS 02 E is attached directly to the measuring surface by activation of the electric magnets. The required 24V power supply is taken from the supplied adapter.

The sender LPMS 02 S is attached to the secondary surface by an integrated, manually operated constant magnet. The laser is a visible red semiconductor laser, set at an eye safe optical output. During the measurement cycle, the sender is supplied by it's build in rechargeable accumulator. This eliminates the need of disturbing power supply cables. The accumulators can be recharged using the power adapter of the receiver unit.

### Technical data "System"

LPMS 02	Laser-parallelism-measurement system	
Operating temperature <sup>1)</sup>	0 ... +50	°C
Storage temperature	-10 ...+70	°C
Reactive humidity permissible <sup>2)</sup>	< 95	%

Unless indicated otherwise, the data is accurate at ambient room temperature and normal operating conditions

1) Temperature of the sender / receiver

2) Non condensing!

### Technical data Receiver

LPMS 02 E	Receiver	
Operating voltage	24 ± 10%	VDC
Max. power consumption	1.25	A
resolution	1	µm
Max. accuracy	10	µm
Typical warm up time	< 5	min.
Class of protection	IP65	-
Weight	2.5	kg
Adhesion of electric magnets	2 × 300	N

Unless indicated otherwise, the data is accurate at ambient room temperature and normal operating conditions

1) Depending on the dimensions of the measured plates!

### Technical data Sender

LPMS 02 S	Sender	
Operating voltage	24 ± 10%	VDC
Max. power consumption	0.6	A
Nominal operating current <sup>1)</sup>	< 80	mA
Typical capacity of accumulators (NiMH)	550	mAh
Optical laser power	< 1	mW
Laser class	2	-
Typical laser wavelength	685	nm
Typical warm up time	< 5	min.
Typical modulation frequency	8	kHz
Class of protection	IP65	-
Weight	1.3	kg
Adhesion of magnets	1 × 200	N

Unless indicated otherwise, the data is accurate at ambient room temperature and normal operating conditions

1) Fully discharging

### Technical data mains adapter

LPMS 02 N	Mains adapter	
Primary voltage (U <sub>IN</sub> )	100 ... 240	VAC
Primary frequency	47 ... 63	Hz
Secondary voltage (U <sub>Out</sub> )	24 ± 10%	V
Max. output current	1.25	A
Weight	0.3	kg

Unless indicated otherwise, the data is accurate at ambient room temperature and normal operating conditions

## Dimensions



