

LASCON®
LPC04 Laser Process Controller



10kHz

High Speed pyrometer measurement
and
Closed Loop temperature control

Typical Applications

Laser hardening
Laser cladding LMD and Wire based
Laser annealing
Laser soldering and brazing
Laser plastic welding

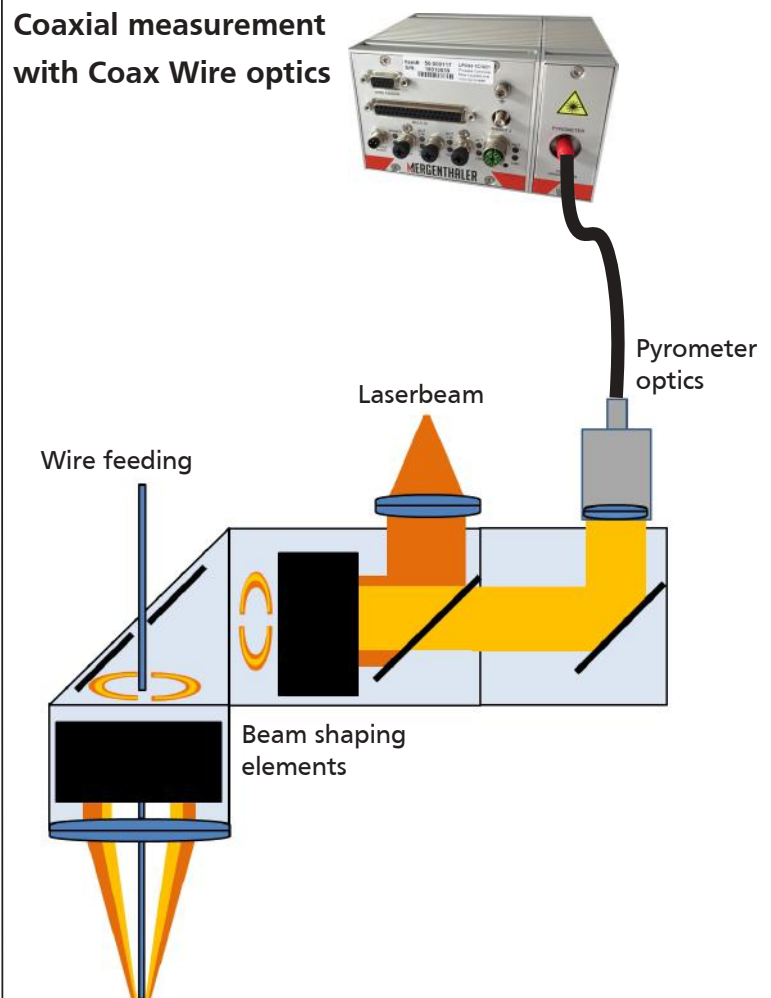
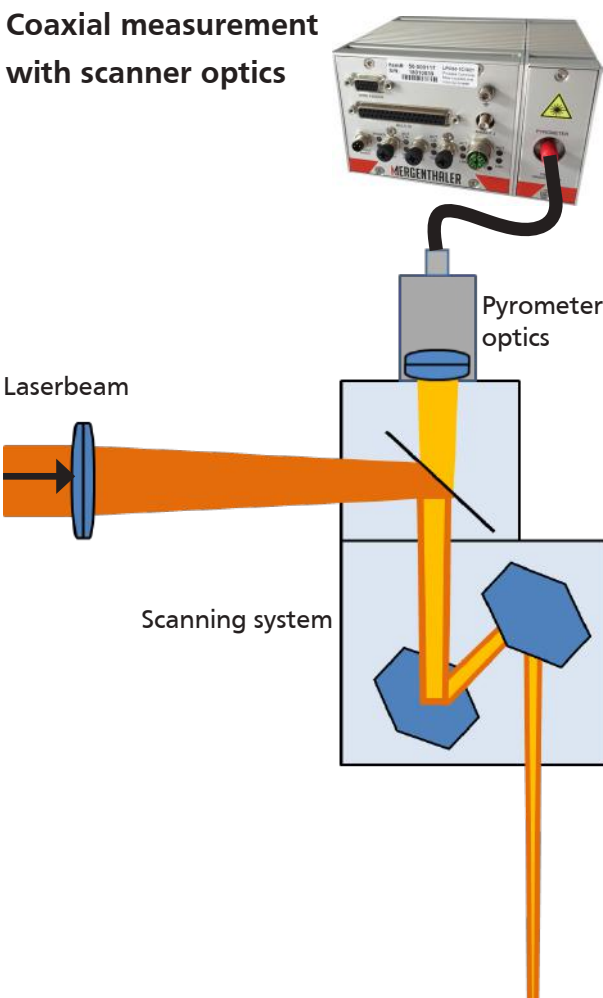
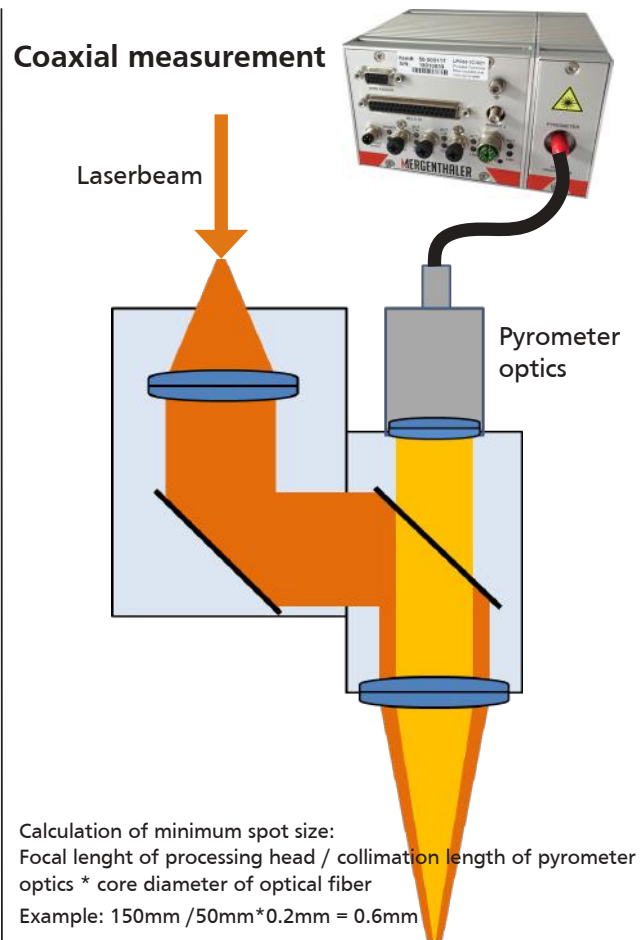
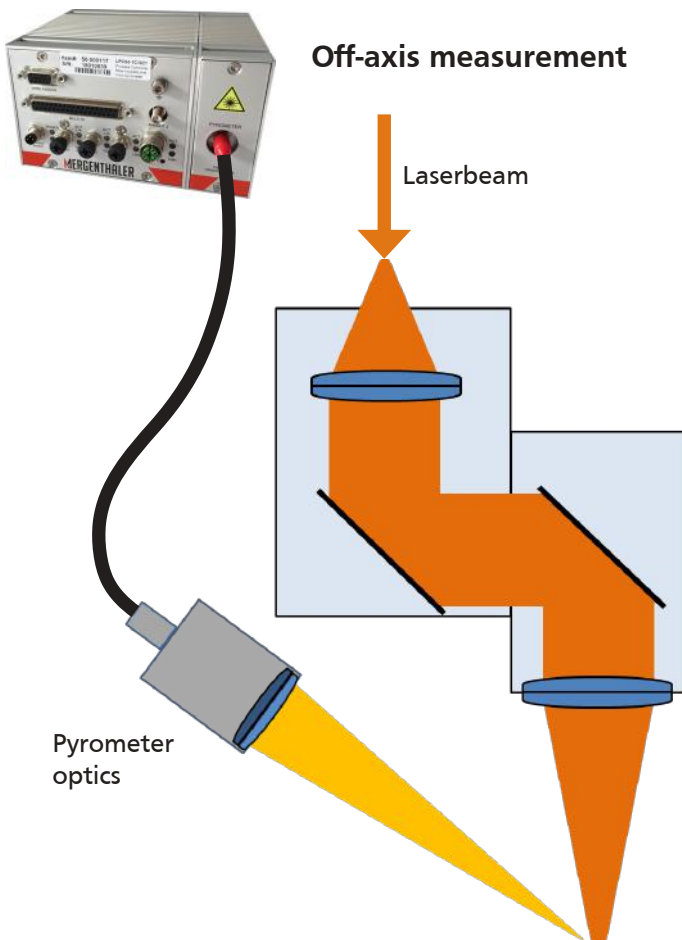
Temperature ranges from
100°C to 2200°C

Features

Autonomous working system
Ethernet connection
EtherCAT® connection
Industrial I/O ports
Flexible process script programming

Process visualisation
Process documentation
Real time data storage
Open programmable architecture
Compact and easy to integrate

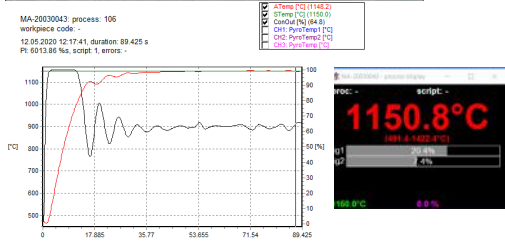
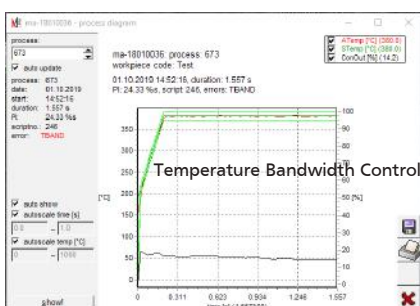
Beamway Options



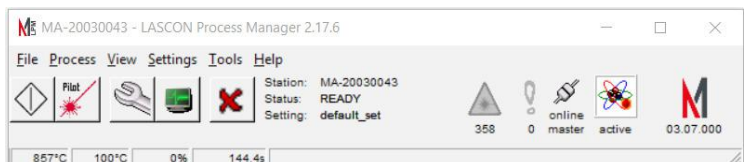
Technical Data

LASCON® Controller		
	Single color pyrometer	2 color (ratio) pyrometer
Temperature ranges:	100°C up to 2200°C	200°C up to 2200°C
Spectral range:	1.65µm - 2µm / 1,65- 2,5µm*	1.65 - 2µm divided into two channels
Accuracy (e=1, t90=1s, T=25°C):	< 1500°C: 0.3% +/- 2K	< 1500°C: 0.5% +/- 2K
Repeatability:	0.1% +/- 1K	
Resolution:	0.1°C	
Response time:	100µs, adjustable	
Emissivity:	adjustable 0.01 to 1	independent (see literature)
Analog output:	0-10V (16Bit), (configurable via Software)	
Power supply:	24V DC, 2A max.	
Sighting:	laser targeting coaxial with pyrometer measurement	
Interface:	Ethernet, EtherCAT (Q4, 2019)	
IO terminal :	6 analog IN, 3 analog OUT, 16 digital IN, 8 digital OUT (24V) (configurable via Software)	
Data storage:	internal, 500.000 processes, 255 process control scripts	
Software:	including LASCON® software package for measurement and closed loop control, storage and visualisation of measurement, calibration of pyrometer	
Optical fiber length:	3m, 5m, 10m, 20m, 30m (special lenghts on request)	
Ambient temperature:	controller 40°C, optical head 60°C	
Dimensions:	controller: 144 x 125 x 82mm, Optics: dia 30.6mm, lenght 100mm	
CE label:	according to EU directives for electromagnetic immunity	
Conformity:	the RoHS Directive 2011/65/EU of 2011-06-08 with supplement from 2015-03-31 is fulfilled	
*low temperature version		
Any optical part installed in the beamway for coaxial measurement can affect given technical data		

Included Software



Process Manger Software (LPM) Windows® operating system



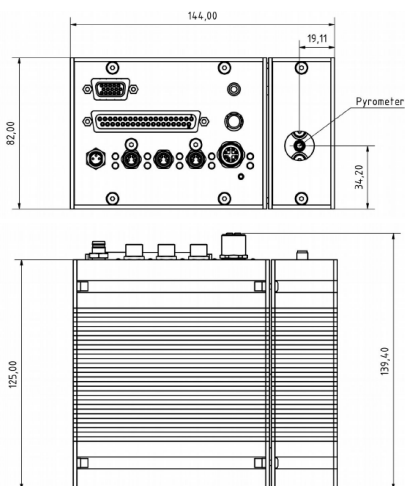
- Adjustment of all pyrometer and controller parameters
- Providing variety of control commands and functions for script
- Storage capacity up to 500.000 processes and 255 scripts
- Process visualization, automatical data export in csv format
- Free configuration of Multi I/O interface
- Pyrometer calibration inside the application
- Access rights management with password protection

Order Code

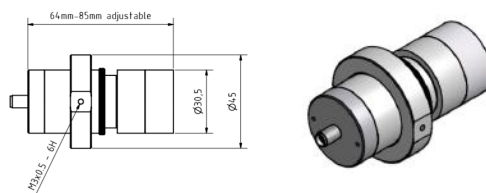
Order Code	Item (more on request)
50-000118	LPC04-2C-X; LASCON Process Controller with built in fiber coupled 2 color pyrometer (10kHz)
50-000242	LPC04-1C-X; LASCON Process Controller with built in fiber coupled 1 color infrared pyrometer (10kHz)
50-000318	LPC04-2CDC-X; LASCON Process Controller with built in fiber coupled 2 color pyrometer (10kHz)
50-000243	LPC04-1C-X; LASCON Process Controller with built in fiber coupled 1 color infrared pyrometer (10kHz) Low Temperature
50-000834	Optical fiber cable, metal armored, core dia. 200 µm, length 3m
50-000253	Optical fiber cable, metal armored, core dia. 200 µm, length 5m
50-000254	Optical fiber cable, metal armored, core dia. 200 µm, length 10m
50-000255	Optical fiber cable, metal armored, core dia. 200 µm, length 20m
50-000998	Optical fiber cable, metal armored, core dia. 200 µm, length 30 m
50-000661	Optical fiber cable, metal armored, core dia. 400 µm, length 3 m
500-625	Optical fiber cable, metal armored, core dia. 400 µm, length 5 m
500-298	Optical fiber cable, metal armored, core dia. 400 µm, length 10 m
500-573	Optical fiber cable, metal armored, core dia. 400 µm, length 20 m
500-705	Optical fiber cable, metal armored, core dia. 400 µm, length 30 m
500-536	Optical head, diameter=30,6 mm f=50 mm, with laser blocking filter
500-529	Optical head, diameter=30,6 mm f=150 mm, with laser blocking filter
xxx-xxx	Custom specific optical head : same price as standard heads
500-629	High Temperature Filter HT
500 - 438	Additional pyrometer calibration
50-000122	Power supply, Input 90-260VAC, Out 24V 2.0A for LASCON Controller only

Dimensions

LPC04



Pyrometer optics



Length of the optics may differ due to requirements regarding working distance and spot size.



You are solely responsible for selecting the appropriate product for your application, validating and testing your application, and ensuring your application meets applicable standards, and any other safety, security, or other requirements.
Data are subject to be changed without notice.

ultimate laser processing

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