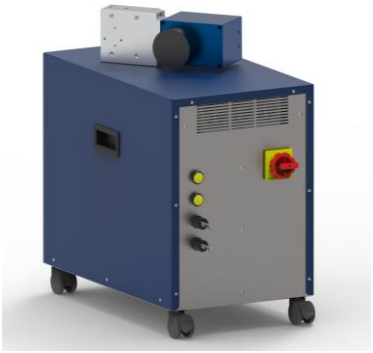
Marking laser BLM OEM

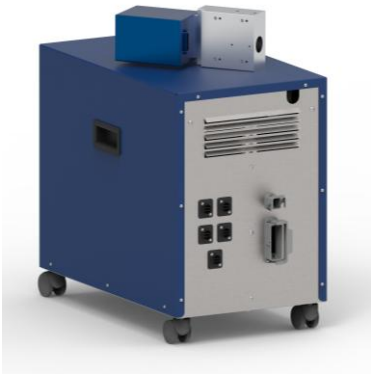
Technical data sheet

Product description

The BORRIES OEM fibre laser module with a wavelength of 1064 nm is a compact and powerful marking system for industrial applications. It consists of a laser head with deflection unit, control electronics, and user-friendly software. Thanks to its modular design, the system is ideally suited for direct integration into production lines. Users can customise the setup to ensure optimal performance across various production environments. Depending on the application, different marking field sizes from 100 x 100 mm to 300 x 300 mm are available, allowing the system to be precisely matched to different component sizes and marking areas.



3D representation of OEM laser, front view



3D representation of OEM laser, rear side

Technical Highlights

- Various marking field sizes available:
  100 x 100 mm bis 300 x 300 mm
- Compact fibre laser module with high beam quality
- Modular design for customer-specific adaptions
- Maximum pulse energy up to 2 mJ @ 500 ns
- Pulse frequencies up to 4000 kHz
- Adjustable pulse widths from 2 to 500 ns
- Integrated safety features within the BORRIES enclosure
- Efficient air cooling for low maintenance requirements
- Flexible integration into production systems

Application Areas

The OEM fibre laser ist suitable for a wide range of materials and industries:

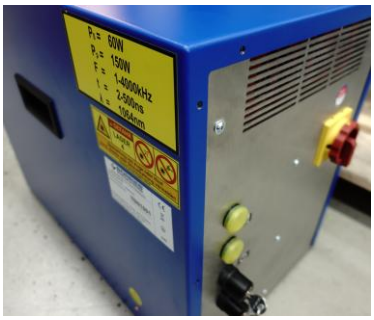
Materials: Metals, plastics, foils, ceramics, steel, castings

Industries: Automotive, electronics, medical technology, mechanical engineering, aerospace, steel industry

Function Description

The system is based on a state-of-the-art pulsed fibre laser source with a wavelength of 1064 nm. The laser beam is transmitted via a 3-metre optical fibre and optimised through a collimator, beam expander and output isolator. This enables precise focusing and uniform beam distribution for maximum marking quality.

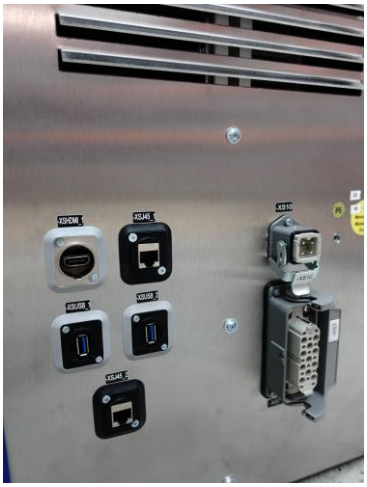
Thanks to its excellent beam quality, the laser is capable of permanently marking a wide range of materials – from metals to plastics. Its modular design allows for application-specific configuration. The system operates with high energy efficiency, low maintenance and outstanding reliability – even under demanding production conditions.



Laser control

Control & Software

Control is provided via an integrated electronic unit. The pre-installed BORRIES LaserEditor enables intuitive layout design – including plain text, barcodes, DataMatrix codes and QR codes. Various file formats such as DXF, PLT and many more are supported for import.



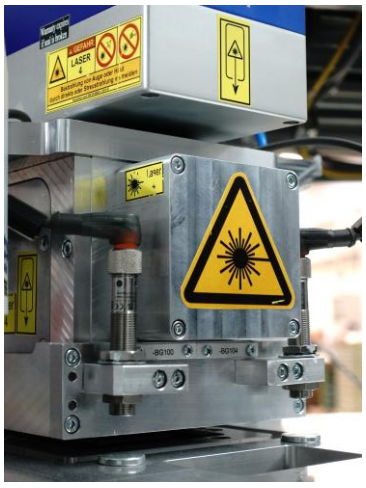
Interfaces Laser control

Interfaces & Integration

The BLM OEM system is designed for smooth integration into existing production lines. The following industrial interfaces are available:

- PLC connection
- Ethernet
- Profinet
- Ethernet/IP

These interfaces ensure seamless communication with higher-level control systems – whether via PLC or industrial PC. This accelerates commissioning and provides maximum flexibility in system integration.



Laser module in protective housing

Customised Solution & Service

In addition to OEM marking solutions for integration, BORRIES also develops and manufactures tailor-made special-purpose machines – precisely according to customer specifications. Our experienced team provides expert advice, project support and comprehensive service in the field of laser technology.

Technical Specification

Parameter	Details
Laser class	Class 4
Wavelength	1064 nm
Laser operation mode	Pulsed
Power output	Application-specific (30 to 300 W)
Marking field	Standard 120 x 120 mm, other sizes available
Pulse frequency	1 – 4000 kHz
Frequency at nominal power	30 – 4000 kHz
Max. pulse energy	2 mJ @ 500 ns
Fibre length	3 m
Cooling method	Air-cooled
Safety system	Integrated safety circuit for emergency stop and safety door loop, certified safety relay integrated in the control unit
Interfaces	PLC, Ethernet, Profinet, Ethernet/IP
Power consumption @ 20° C	500 W
Dimensions (control unit)	677,5 x 366 x 541 mm (L x W x H)
Dimensions (laser unit)	approx. 500 x 120 x 146 mm (L x W x H)
Net weight	38 Kg

Advantages and Cost Efficiency

- Supports common industrial interfaces: PLC, Ethernet, Profinet, Ethernet/IP
- Easy integration into existing control system
- High adaptability for automated production environments
- Energy-efficient air cooling reduces operating costs
- High-precision marking with adjustable pulse width
- Robust design minimises maintenance requierements
- Suitable for a wide range of industrial applications

Contact und Support

For further information and technical support, our team will be happy to assist you.

BORRIES Markier-Systeme GmbH
Tel.: +49 7127 97 97 0
E-Mail: vertrieb@borries.com Web: www.borries.com

Subject to technical changes.