

PowerLine F Series

Cost-Effective Laser Markers

PowerLine F laser markers combine an infrared fiber laser, a high performance scanner and beam delivery optics, drive electronics, and powerful control software to yield a fast, flexible, and cost-effective marking platform. They feature a compact, modular design, and are built to customer specification utilizing a wide choice of laser sources. This makes them an effective solution for producing high-visibility marks in numerous applications on metals, plastics and other organics. Their proprietary software supports a number of sophisticated functions, including 3D marking, and enables marking of variable data (bar codes, serial numbers).



FEATURES

- Air-cooled
- Controlled by customer supplied PC, PLC, or fieldbus
- 19" rack-mount control electronics
- Versatile configuration options
- Low operating cost

APPLICATIONS

- Marking of Organic Materials and Metals
- Engraving
- On-the-Fly Marking
- Label Marking and Kiss Cutting
- SmartMap3D Freeform Marking
- High-Precision Marking

Specifications	PowerLine F 20-1064	PowerLine F 30-1064	PowerLine F 50-1064	PowerLine F100-1064	PowerLine F 20-1064 Varia	PowerLine F 50-1064 Varia
Laser Type	Fiber					
Wavelength (nm)	1064					
Average Power (W)	19	28	47	95	19	47
Pulse Energy (mJ)	<0.95					
Frequency Range (kHz)	20 to 100	30 to 100	50 to 200	5.1 to 200	2 to 4000	2 to 4000 ¹
Pulse Width (ns)	100 (at 20 kHz)	100 (at 30 kHz)	120 (at 50 kHz)	100 (at 100 kHz)	1.5 to 350	1.5 to 350
M ²	<2.0					
Beam Diameter (mm)	7.5 ±1.5	7.5 ±1.5	5.0 ±1.0	5.0 ±1.0	5.0 ±1.0	5.0 ±1.0
Cable between Laser Head and Supply Unit ² (m)	2.6					
Weight (kg)						
Laser Head	7.5 / 4.5 ³	7.5 / 4.5 ³	7.5	7.5	7.5	7.5
Supply Unit	22	22	25	27	21	25
Fiber Laser Type	Yb-doped fiber laser					
Cooling	Air cooling. Ambient operating temperature: +15 to +35°C					
Scanners	Range of scanners for general marking, on-axis alignment, high-precision marking (digital encoder)					
Optical z-axis	Yes (option)					
Marking Field Size	Between 60 mm x 60 mm and to 600 mm x 600 mm depending on f-Theta objective					
Positioning Help Laser	Standard housing: Yes / Short housing: No					
Physical Dimensions	Physical dimensions and working distance of the laser marker depend on the detailed configuration. Please refer to the technical drawing.					
Mounting of Laser Marker	Horizontal, vertical, and upside-down mounting is possible					
Supply Unit	19" rack mount unit, height: 3 rack units (PowerLine F 100-1064: 4 rack units)					
Interfaces (PLC control)	Parallel interface (digital I/Os). Encoder devices can be connected to differential I/Os.					
Interfaces ⁴ (PC control)	LAN (TCP/IP), RS-232 ⁵					
Fieldbus Control ⁶	Profinet IO					
Variable Data	Keyboard input, local file (lot file), barcode reader, via LAN (TCP/IP) 4, Matrix objects					
Standard Software	Visual Laser Marker (VLM), Visual Marking Controller (VMC2), Laser Console, RCU.exe					
Marking Objects	Vector graphics, text, logos, ring, bitmap, banding					
Barcodes	GS1 DataBar, Code 39, Code 128, EAN8, EAN13, UPC-A, UPC E, Book Lan and others					
2D Codes	ECC200, Code 49, Micro-PDF417 and other data matrix and QR codes					
Optional Software Features	MJC (Marker Job Control), HK (Host Coupling), Marking-on-the-Fly (MoF), SmartMap3D, CAD Extension, AI, PDF, and PS Import, SECS/GEM					
OS-Single Board PC	Windows 10					
Certificates	PowerLine F laser markers are certified according to the following international standards: EN 60825-1:2014, EN 55011:2009/A1:2010, EN 61000-6-4:2007, EN 61000-6-2:2005, EN 61000-3-2:2014, EN 61000-3-3:2013, 47 CRF Part 18 ICES-003 Issue 4:2004 and fulfill the CDRH (radiation) standard.					

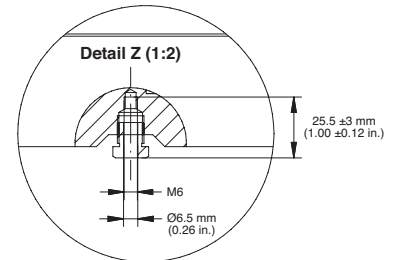
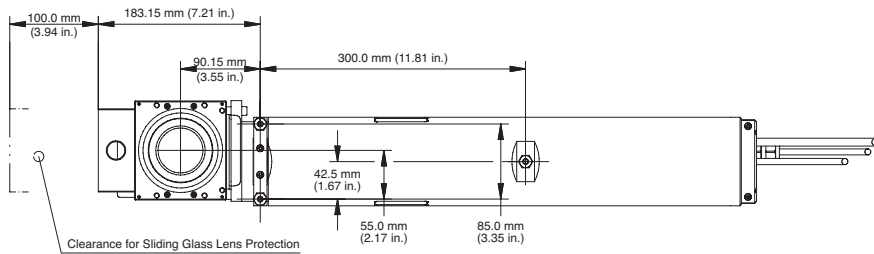
Notes:

1. Pulse width is selectable. PowerLine F 50 Varia: Available frequency range depends on selected pulse width.
2. The fiber laser module is mounted inside the supply unit. The fiber link between marker head and laser module cannot be unplugged.
3. Weight of PowerLine F 20-1053 and PowerLine F 30-1064 with short housing.
4. Requires Host Coupling (HK), Marker Job Control (MJC), or SECS/GEM software feature.
5. Requires an RS-232-to-USB-adaptor.
6. The fieldbus interface is provided by a fieldbus coupler. The fieldbus coupler is connected to the supply unit by Fast Ethernet connection.

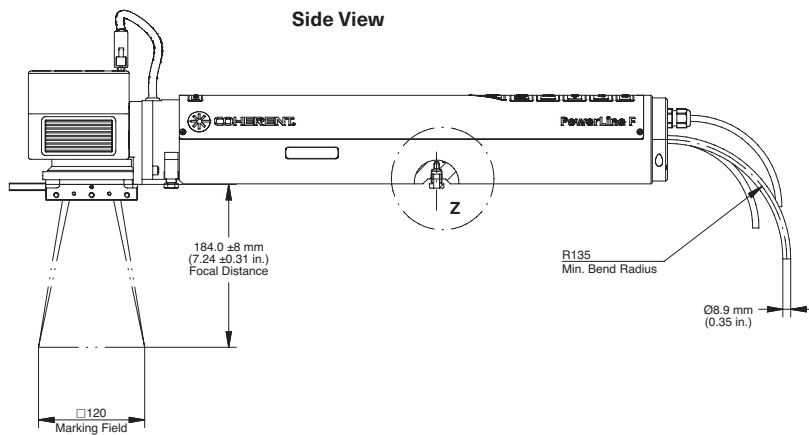
Mechanical Specifications

PowerLine F 20-1064 / 30-1064 / 50-1064 / 100-1064 / 20 Varia / 50 Varia

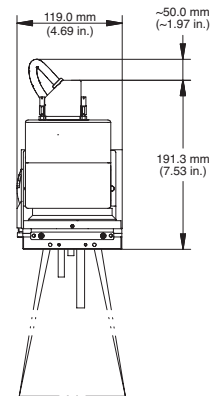
Bottom View



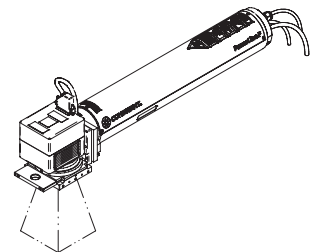
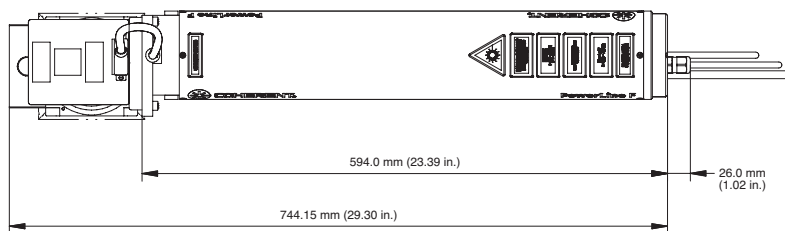
Side View



Front View



Top View



Mechanical Specifications

PowerLine F 20-1064 / 30-1064 (short housing / no positioning laser)

