

# PowerLine F Twin Series

## Cost-effective Twin Laser Markers

PowerLine F Twin sub-systems comprise two separate fiber-based laser markers, both controlled through a single hardware and software interface. This essentially doubles throughput, without increasing operational complexity, since the marker appears to be a single laser sub-system to the user. The Twin concept is particularly effective when marking bar codes and serial codes on large numbers of small parts, because both lasers mark simultaneously and asynchronously. PowerLine F Twin markers are based on high-performance scanners and optics, so that mark quality and precision are not sacrificed for speed. These markers can be controlled by PC and PLC.

### FEATURES & BENEFITS

- Very high marking speed
- Air-cooled
- High-quality scanners and optics
- Simple integration interfaces
- Controlled by customer supplied PC or PLC
- 19" rack-mount control electronics
- Versatile configuration options
- Low operating cost

### APPLICATIONS

- Semiconductor IC Marking
- Marking of large objects
- Marking multiple small objects
- Serialization Marking



SPECIFICATIONS	PL F 20-1064 T	PL F 30-1064 T	PL F 50-1064 T	PL F 20 Varia T	PL F 50 Varia T
Laser Type	Fiber				
Wavelength, typical (nm)	1064				
Average Power (W)	2 x 19	2 x 28	2 x 47	2 x 19	2 x 47
Pulse Energy (mJ)	<0.95				
Frequency Range (kHz)	20 to 100	30 to 100	50 to 200	2 to 1000	2 to 1000 <sup>1</sup>
Pulse Width (ns)	100 (at 20 kHz)	100 (at 30 kHz)	120 (at 50 kHz)	4 to 200 <sup>1</sup>	1 to 120 <sup>1</sup>
M <sup>2</sup>	<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
Cable Between Laser Head and Supply Unit <sup>2</sup> (m)	2.6	2.6	2.6	1.65	1.65
Weight (kg)					
Laser Head	2 x 7.5	2 x 7.5	2 x 7.5	2 x 7.5	2 x 7.5
Supply Unit	2 x 22	2 x 22	2 x 25	2 x 21	2 x 25
Fiber Laser Type	2 x Yb-doped fiber lasers				
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 <sup>3</sup>	Yes (option)				
Marking Field Size	Between 160 mm x 280 mm and to 240 mm x 360 mm depending on f-Theta objectives				
Positioning Help Laser	Yes				
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 or vertical				
Supply Unit	Two 19" rack mount units (master / slave), height: 2 x 3 rack units				
Interfaces					
PLC Control	Parallel interface (digital and differential I/Os)				
PC Control	LAN (TCP/IP), RS-232 <sup>5</sup>				
Variable Data	Keyboard input, local file (lot file), barcode reader, via LAN (TCP/IP) <sup>4</sup> , 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, BookLan 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), 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.				

<sup>1</sup> Pulse width is selectable. Pulse width is set in the factory based on customer specification. It cannot be modified by the user. Available frequency range of the PowerLine F 50 Varia depends on selected pulse width.

<sup>2</sup> The fiber laser module is mounted inside the supply unit. The fiber link between marker head and laser module cannot be unplugged.

<sup>3</sup> Both FFMs are adjusted individually but must focus on the same plane. No real-time focus adjustment. SmartMap3D is not supported.

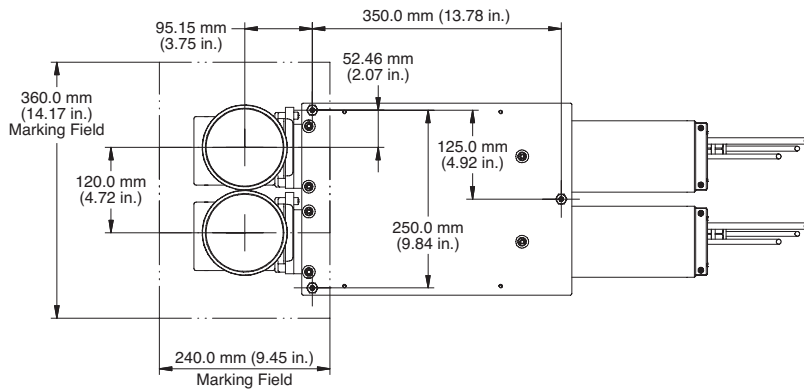
<sup>4</sup> Requires Host Coupling HK, Marker Job Control (MJC) or SECS/GEM software feature.

<sup>5</sup> Requires an RS-232-to-USB-adaptor.

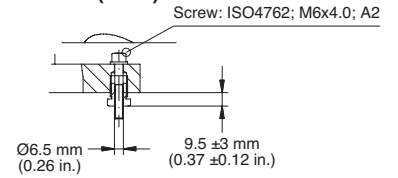
## MECHANICAL SPECIFICATIONS

### PowerLine F Twin

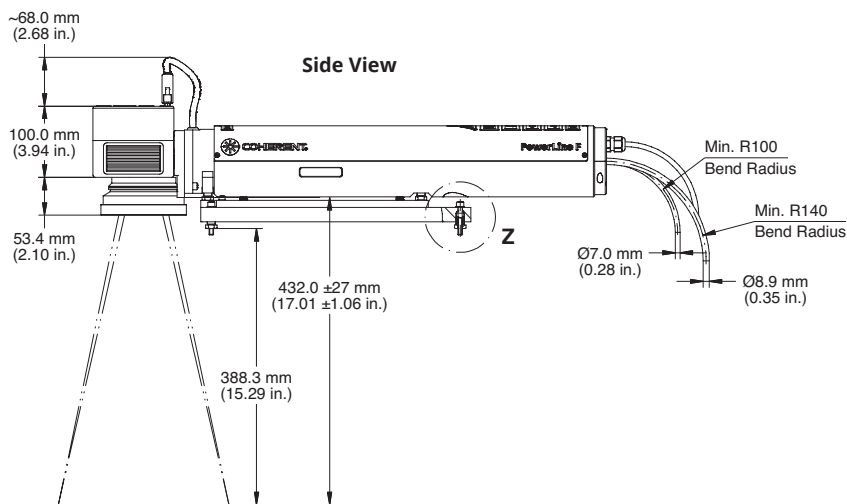
Top View



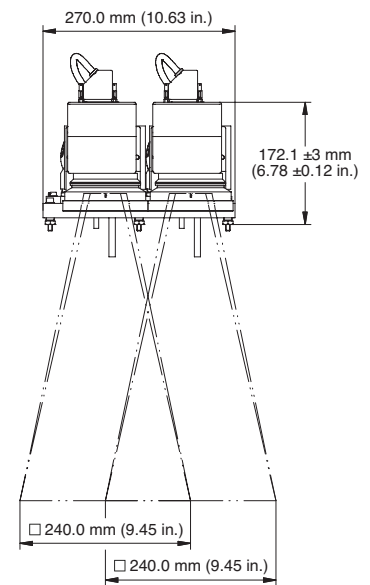
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Side View



Front View



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all PowerLine F Twin Lasers. For full details of this warranty coverage, please refer to the Service section at [www.coherent.com](http://www.coherent.com) or contact your local Sales or Service Representative.  
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