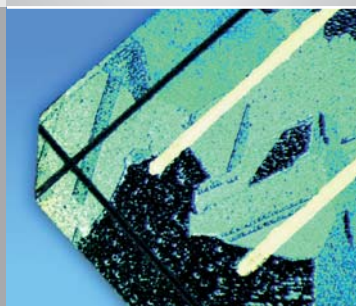


PowerLine F Series

Fiber lasers for a wide
range of micro and
marking applications



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PowerLine F 20/30/50 Series

Laser systems optimized for micro and marking applications

The PowerLine F is an innovative fiber laser with different integration stages. The lasers are available in different configuration levels: as pure OEM beam source, in combination with a supply unit including a main supply unit and a safety shutter, as well as a laser beam source and ready-to-use marking system.

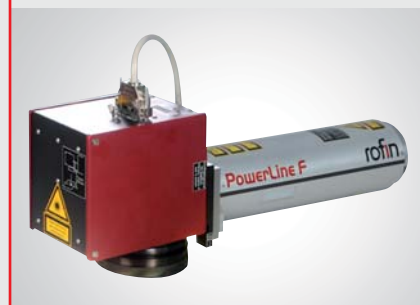
The 20 watts and 30 watts pulsed fiber lasers from ROFIN deliver 1 mJ pulse energy with a fast turn-on time and high peak power over a wide range of repetition rates. This maximizes production throughput and process capability. With its single-mode beam quality, the fiber laser can produce ultra-fine, crisp marks every time.

The PowerLine F 50 is operated in pulse mode at frequencies from 50 kHz to 200 kHz. The emitted average laser power can be set using the fiber amplifier. The PowerLine F 50 is perfectly suitable for high-speed marking, scribing, edge isolation, structuring and cutting applications.

The space-efficient design of the PowerLine F series facilitates integration into existing production environments. A flexible optical fiber connects the very compact laser head with the supply unit where the laser beam is being generated. The diode-pumped laser source excels in high diode life and allows efficient operation with minimum maintenance and with reduced total operating costs.

Your benefits

- low total operating costs
- different power ranges
- suitable for marking, scribing, edge isolation, structuring and cutting
- various integration stages



PowerLine F



PowerLine FL

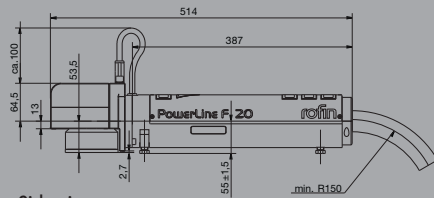


PowerLine FL OEM

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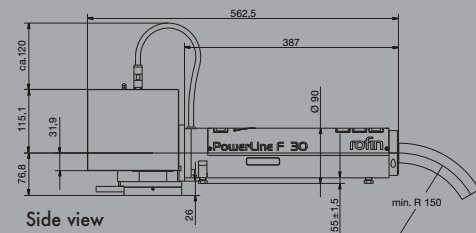
	PowerLine F 20	PowerLine F 30	PowerLine F 50
Laser head			
Wavelength, typ. (nm):	1064	1064	1064
Power range (W):	20	30	50
Pulse frequency (kHz):	20 - 100	30 - 100	50 - 200
Laser dimensions:	length 387, Ø 90	length 387, Ø 90	length 594, Ø 100
Laser weight (kg):	approx. 5.5	approx. 5.7	approx. 8.6
Ingress protection:	IP 54	IP 54	IP 54
Marking unit			
Field size (mm):	120 x 120	120 x 120	120 x 120
Focal distance (mm):	160 (other on request)	160 (other on request)	160 (other on request)
Galvo dimensions (W x D x H, mm):	100 x 77 x 77.5	167 x 118 x 200	167 x 118 x 200
Galvo weight (kg):	approx. 2.2	approx. 4.3	approx. 4.3
Ingress protection:	IP 54	IP 54	IP 54
Supply unit and PC (19")			
Supply unit dimensions (W x D x H, mm):	19" x 460 x 3 rack units	19" x 460 x 3 rack units	19" x 460 x 3 rack units
Supply unit weight (kg):	approx. 23.5	approx. 23.5	approx. 23.5
PC dimensions (W x D x H, mm):	19" x 479 x 2 rack units	19" x 479 x 2 rack units	19" x 479 x 2 rack units
PC weight (kg):	10	10	10
Software:	Windows XP, embedded, DVD RW, USB 2.0, LAN	Windows XP, embedded, DVD RW, USB 2.0, LAN	Windows XP, embedded, DVD RW, USB 2.0, LAN
Power supply:	115 - 240 VAC, +/-10% VAC, 50/60Hz	115 - 240 VAC, +/-10% VAC, 50/60Hz	115 - 240 VAC, +/-10% VAC, 50/60Hz
Power consumption supply unit (VA+PC):	approx. 330	approx. 390	approx. 470
Ingress protection:	IP 20	IP 20	IP 20
Operating temperature °C:	15 - 35	15 - 35	15 - 35
Air flow 19" unit (m³/h):	approx. 170	approx. 170	approx. 190
Air flow 19" PC (m³/h):	approx. 80	approx. 80	approx. 80

Laser head and galvo PowerLine F 20



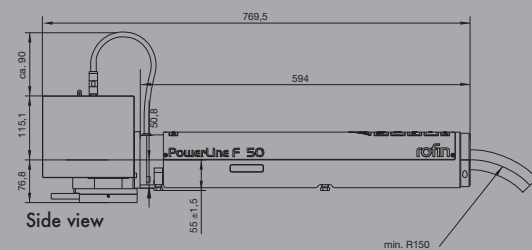
Side view

Laser head and galvo PowerLine F 30



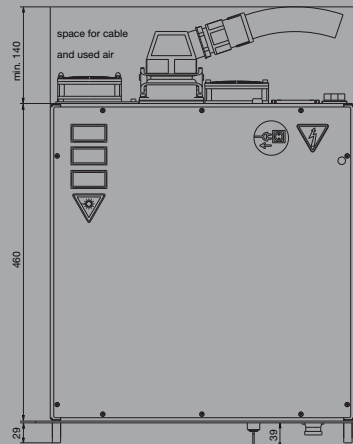
Side view

Laser head and galvo PowerLine F 50

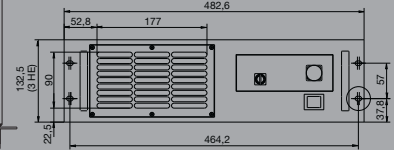


Side view

Supply unit PowerLine F 20/30/50

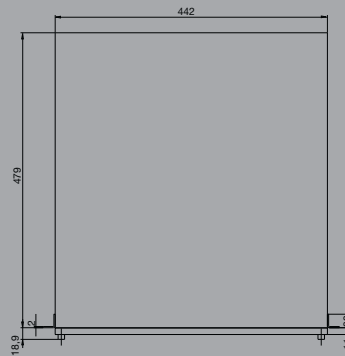


Top view

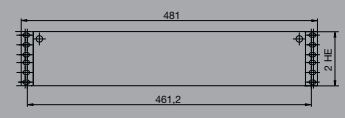


Front view

PC PowerLine F 20/30/50



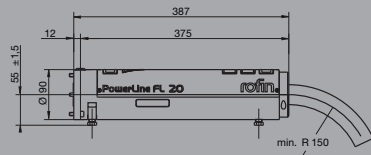
Top view



Front view

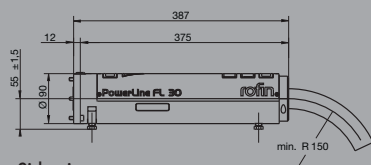
	PowerLine FL 20	PowerLine FL 30	PowerLine FL 50
Laser head			
Wavelength, typ. (nm):	1064	1064	1064
Power range (W):	20	50	50
Pulse frequency (kHz):	20 - 100	30 - 100	50 - 200
Laser dimensions:	length 387, Ø 90	length 387, Ø 90	length 594, Ø 100
Laser weight (kg):	approx. 5.5	approx. 5.7	approx. 8.6
Ingress protection:	IP 54	IP 54	IP 54
Supply unit (19")			
Supply unit dimensions (W x D x H, mm):	19" x 460 x 3 rack units	19" x 460 x 3 rack units	19" x 460 x 3 rack units
Supply unit weight (kg):	approx. 23.5	approx. 23.5	approx. 23.5
Power supply:	115 - 240 VAC, +/-10% VAC, 50/60Hz	115 - 240 VAC, +/-10% VAC, 50/60Hz	115 - 240 VAC, +/-10% VAC, 50/60Hz
Power consumption supply unit (VA):	approx. 230	approx. 290	approx. 370
Ingress protection:	IP 20	IP 20	IP 20
Operating temperature °C :	15 - 35	15 - 35	15 - 35
Air flow 19" unit (m ³ /h):	approx. 170	approx. 170	approx. 190

Laser head PowerLine FL 20



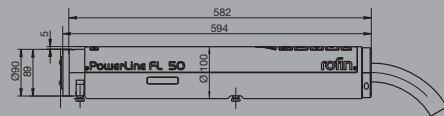
Side view

Laser head PowerLine FL 30



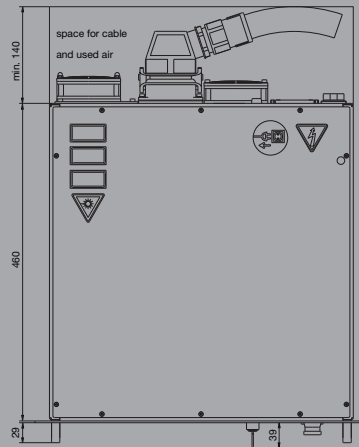
Side view

Laser head PowerLine FL 50

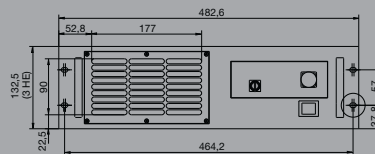


Side view

Supply unit PowerLine FL 20/30/50



Top view



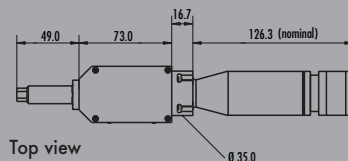
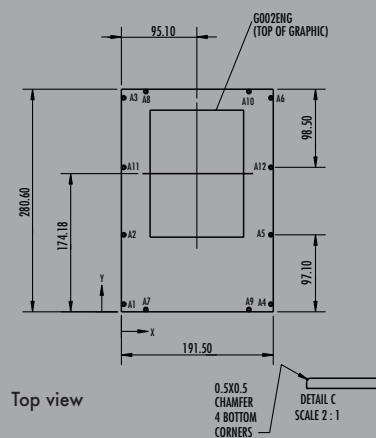
Front view

PowerLine FL OEM 20/30

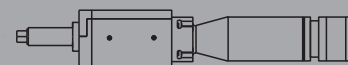
Laser	
Wavelength, typ. (nm):	1064
Power range (W):	20, 30
Pulse frequency (kHz):	20 - 100/30 - 100
Dimensions supply unit (W x D x H):	215 x 284 x 95
Weight (kg):	approx. 5.7
Power supply (V):	24 +/-1
Current consumption @ 24 VDC (A):	< 8 (PowerLine FL OEM 20); < 10 (PowerLine FL OEM 30)
Ingress protection:	IP 20

Different integration stages from laser beam source to ready-to-use fiber laser marker.

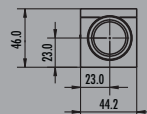
Laser PowerLine FL OEM 20/30



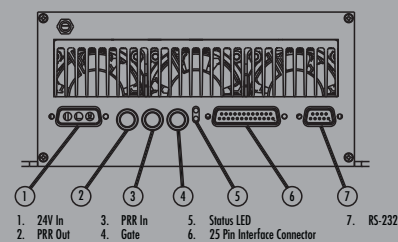
Top view



Side view

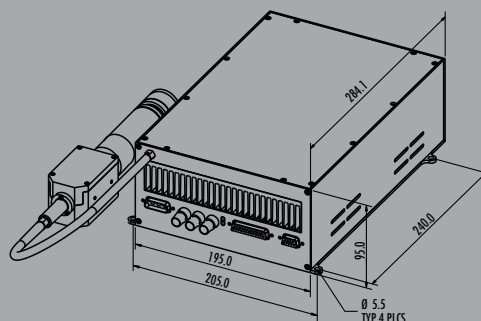


Front view



Rear view

1. 24V In
2. PRR Out
3. PRR In
4. Gate
5. Status LED
6. 25 Pin Interface Connector
7. RS-232



Overview

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MACRO