

# Multiline GII

## Technical Data / Spezifikation

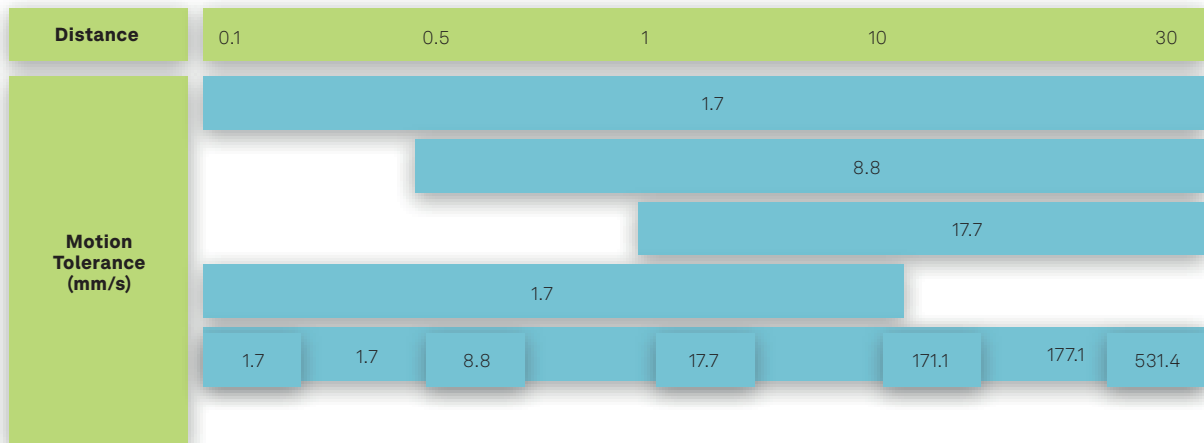
Performance parameter	Value and unit	Comment
Distance measurement uncertainty U95%	0.5 µm/m	air temperature measurement with $U_{95\%} = 0.3 \text{ K}$ required
Measurement distance	0.1 - 30 m	longer distances on request
Number of channels	4 - 124	more channels on request
Standard fiber length per channel	20 m	other length on request
Maximum fiber length per channel	7000 m	power loss 0,4 dB per 1000 m
Duration measurement shot	0.1 - 1 s	depending on measured distance
Sampling rate during measurement shot	Up to 125 MHz	
Repetition rate (shot to shot)	> 1 s	Depending on measurement length, number of channels and computing power
Motion tolerance (maximum permissible displacement speed during measurement)	75 mm/s	single channel 0.4 m - 30 m (Synchronous measurement of channels with different length see table)
<b>Uncertainties for laser Compensations</b>		
Air temperature measurement U95%	0.3 K	Base station on electronic
Air pressure measurement U95%	1 hPa	Base station on electronic
Air humidity measurement U95%	2 % RH	Base station on electronic
Air temperature measurement by additional wireless sensor (optional)	0.1 K	multiple wireless sensors per channels possible
<b>Laser safety</b>		
Maximum output infrared (1550 nm)	< 50 µW	invisible
Maximum output red (640 nm)	< 500 µW	for alignment
Laser safety class	2 M	eye safe without protection
<b>Operation conditions</b>		
Temperature range electronics	5 °C – 45 °C	
Temperature range sensors	-10 °C – 60 °C	other temperatures on request
Vacuum application of sensors	optional	
Supply voltage	110 V to 220 V	
Power consumption	~ 500 W	depending on the configuration
<b>Dimensions and masses</b>		
Collimator L	Ø 23 mm x 44 mm	
Collimator M	Ø 11 mm x 25 mm	
Reflector M	Ø 11 mm x 7 mm	
Laser unit	483 x 365 x 267   ca. 15 kg	19" rack compatible   3 height units
Receiver S (4 to 16 measurement channels)	483 x 381 x 45   ca. 10 kg	19" rack compatible   1 height units
Receiver M (4 to 52 measurement channels)	483 x 381 x 89   ca. 15 kg	19" rack compatible   2 height units
Receiver L (4 to 124 measurement channels)	483 x 381 x 356   ca. 20 kg	19" rack compatible   8 height units

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**Appendix - Motion tolerance in detail:**

	Shortest Line in group [m]	Longest line in group [m]	Motion tolerance [mm/s]	Measurement interval [ms]
Motion tolerance in detail	0.1	30	3.3	100
	0.5	30	16.8	100
	1	30	33.6	100
	0.1	10	3.5	100
	0.5	10	17.7	100
	1	10	35.4	100
	0.1	0.1	3.5	100
	0.5	0.5	17.7	100
	10	10	354	100
	30	30	921	100

	Shortest Line in group [m]	Longest line in group [m]	Motion tolerance [mm/s]	Measurement interval [ms]
Motion tolerance in detail	0.1	30	1.7	200
	0.5	30	8.8	200
	1	30	17.7	200
	0.1	10	1.7	200
	0.5	10	8.8	200
	1	10	17.7	200
	0.1	0.1	1.7	200
	0.5	0.5	8.8	200
	10	10	171.1	200
	30	30	531.4	200



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