

SI...

Interrogators for optical strain gages (SG)

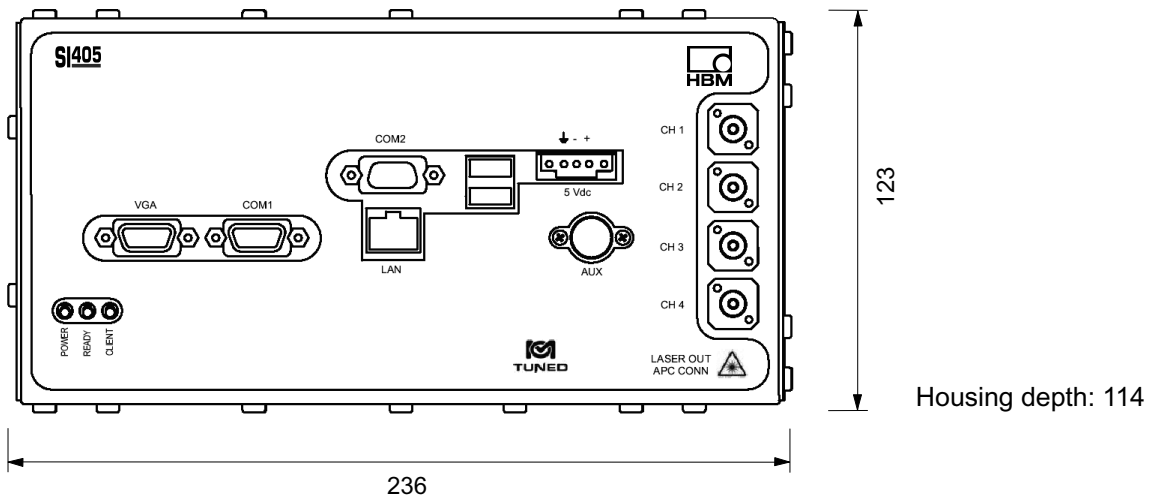


Special features

- For static data capture with measuring rates up to 10 1/s
- Excellent precision and long term stability
- Measuring range (spectrum) from 1510...1590 nm
- Multiplexer can be connected to increase number of optical sensor chains
- Setup and data transfer through Ethernet interface
- Fast, tunable laser frequency generator
- Traced to NIST (National Institute of Standards and Technology)

Dimensions (in mm; 1 mm= 0.03937 inches)

Instrument designation: SI101; SI105; SI401; SI405; SI410



View of a unit with four connectors for the optical sensor chains

Specifications

SI...

Type		SI101	SI105	SI401	SI405	SI410
Number of optical sensor chains that can be connected		1	1	4 ¹⁾	4 ¹⁾	4
Wavelength range (Measuring range)	nm	1520...1570	1510...1590	1510...1590	1510...1590	1528...1568
Absolute zero error ²⁾	pm	10				
Wavelength variation per 10 K	pm	< 2				
Repeatability ³⁾ with 1 measurement/s	pm	0,5				
Dynamic range	dB	40	30	50	30	30
Sampling rate	1/s	1	5	1	5	10
Optical connector sockets		FC/APC				
Ambient conditions						
Nominal temperature range	°C [°F]	0...+50 [+32...+122]				
Ambient humidity range	% rel. h.	0...80, non-condensing				
Storage temperature range	°C [°F]	-20...+70 [-4...+158]				
Storage humidity range	% rel. h.	0...95, non-condensing				
Electrical connection values						
Supply voltage	V	+5 via power pack				
Power pack	V _{AC}	100...240 (with 47...63 Hz)				
Power consumption	W	typ. 18, max. 30				
Interface		Ethernet (TCP-IP)				
Weight, approx.	kg	2				

¹⁾ expandable to 8 or 16 channels via Multiplexer 1-M408 or 1-M816

²⁾ absolute zero error, relating to NIST reference wavelength (NIST = National Institute of Standards and Technology, USA)

³⁾ NIST Technical Note 1297, 1994

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