

DI...

Interrogators for optical strain gages (SG)

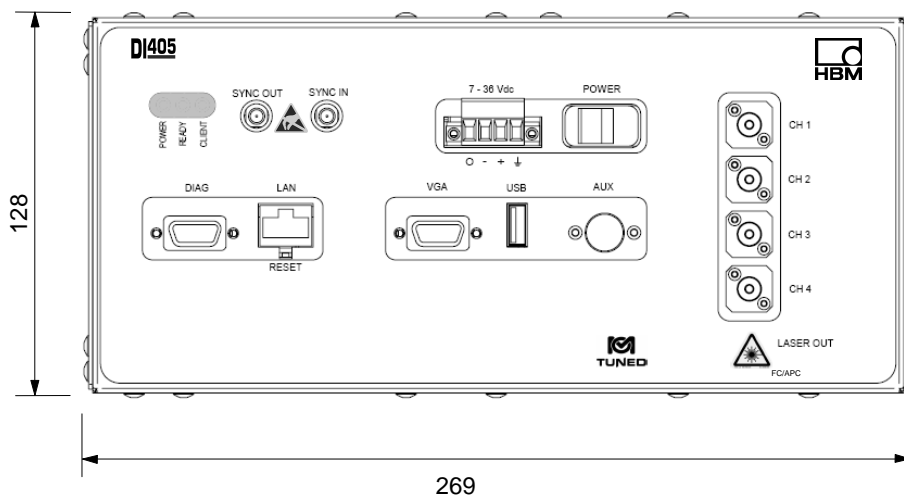


Special features

- For dynamic data acquisition with sampling rates up to 1000 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:: DI101; DI105; DI110; DI405; DI410



Housing depth: 132

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

Specifications

DI...

| Type | | DI101 | DI105 | DI110 | DI405 | DI410 |
|---|-----------------|--|-------------|-------------|-------------|-----------------|
| Number of optical sensor chains that can be connected | | 1 | 1 | 1 | 4 | 4 ¹⁾ |
| Wavelength range (Measuring range) | nm | 1510...1590 | 1510...1590 | 1510...1590 | 1510...1590 | 1510...1590 |
| Wavelength variation per 10 K | pm | < 2 | | | | |
| Repeatability ²⁾ | pm | 1 resp. 0.05 with averaging of 1000 measuring values | | | | |
| Dynamic range | dB | 25 (adaptable amplification) | | | | |
| Sampling rate | 1/s | 100 | 500 | 1000 | 500 | 1000 |
| Max. data transmission rate | 1/s | 50000 | | | | |
| 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 | +12 (+7...+36) via power pack | | | | |
| Power pack | V _{AC} | 100...240 (with 47...63 Hz) | | | | |
| Power consumption | W | typ. 25, max. 50 | | | | |
| Interface | | Ethernet (TCP-IP) | | | | |
| Weight, approx. | kg | 2.5 | | | | |

¹⁾ expandable to 8 or 16 channels via Multiplexer 1-M408 or 1-M416

²⁾ NIST Technical Note 1297, 1994

Modifications reserved.

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