

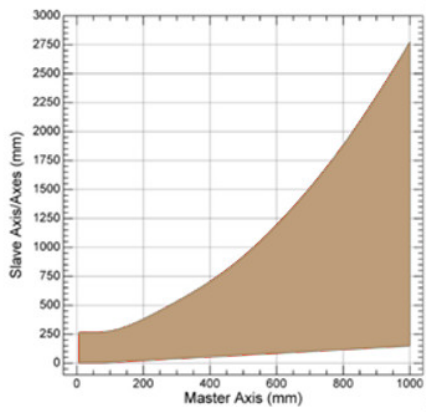
Displacement Measuring Interferometer

1010623

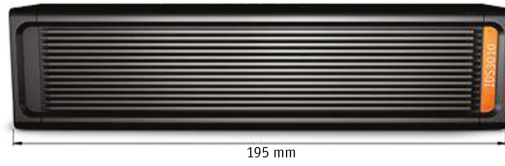
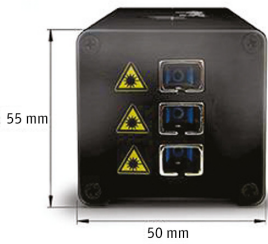


Technical Specifications

| | |
|---|---|
| Sensor | |
| number of sensor axes | 3 |
| working distance | 0...5000 mm (depending on sensor head, up to 30 meter on request) |
| sensor resolution [pm] | 1 |
| max. target velocity [m/s] | 2 |
| measurement bandwidth | 10 MHz |
| long-term laser wavelength accuracy | ± 50 ppb (3 years) |
| short-term laser frequency stability | ± 10 ppb (0 - 60 hours; k=2) |
| signal stability (WD: 77 mm) | 0.110 nm (2 s) |
| expected lifetime | 10 years |
| Modes of Operation | |
| measurement mode | displacement |
| remote operation | integrated webserver |
| output signal: displacement measurement | laser light (IR) |
| output signal: alignment laser | laser light (VIS) |
| sensor alignment | via integrated webserver |
| sensor initialization | via integrated webserver |
| factory resetable | via GPIO connector |
| Working Conditions | |
| controller | ambient conditions |
| sensor heads | depending specifications |
| ECU | ambient conditions |
| Interfaces | |
| analog interfaces | sin/cos (real time), linear analog (real time, optional) |
| digital interfaces | AquadB, HSSL (real time) |
| real-time interface bandwidth [MHz] | up to 25 |
| interface bandwidth field bus systems | depending on field bus system |
| resolution sin/cos (inc.) | freely assignable; 1 pm - 2 ²⁴ pm |
| resolution AquadB (inc.) | freely assignable |
| resolution HSSL (abs.) [bit] | 8 - 48 |
| resolution field bus systems | depending on implemented protocol |
| Controller Hardware | |
| chassis | 55 x 52 x 195 mm ³ |
| weight | 730 g |
| power supply | 12 VDC |
| power consumption [W] | 8 |
| laser source (measurement laser) | DFBlaser (class1) |
| laser output power (measurement laser) [μW] | max. 400 |
| laser wavelength (measurement laser) [nm] | 1530.371 |
| laser source (alignment laser) | fiber-coupled laser diode |
| laser output power (alignment laser) [mW] | < 0,5 |
| laser wavelength (alignment laser) [nm] | 650 |
| Accessories | |
| Accessories | IDSH sensor heads, IDSECU, IDSMF single mode fibers, FVFT vacuum feedthroughs |
| Software Drivers | |
| web browser | no software drivers necessary as all functionality is accessible via Ethernet and C#-DLLs |



The working distances are limited on the dependency of the used axis. Depending on the master axis' working distance (defined via integrated webservice or DLL function), the working distances of the remaining axes are restricted to the range showing on the figure (see left).



- ① GPIO (General Purpose Input/Output)
- ② Main Power
- ③ Ethernet
- ④ Real-Time Interfaces
- ⑤ ECU
- ⑥ CanOPEN