

Datasheet



General Features

Absolute optical scale, available in a single piece or in modular version for large machines (up to 30.040 mm of measuring length). Absolute linear encoder for CNC machine tools.

- DRIVE-CLiQ serial interface, for a direct connection to Siemens CNCs
- Resolutions up to 0.1 μm
Accuracy grade $\pm 5 \mu\text{m}$
- Application in various industrial fields such as machine tools, vertical lathes, gantry machines, laser/plasma cutting machines, robotics, automation, etc.
- Stainless steel grating, integral with the machine guide, for an excellent accuracy at any temperature
- Rigidly bound modules, for a perfect seal against liquids and environmental dirty, unaltered over time
- Wide alignment tolerances
- Pressurization from both sides of the scale and/or from the transducer



Technical Characteristics

Measuring support	stainless steel grating		
Grating pitch	240 μm		
Linear thermal expansion coefficient	10.6 x 10 ⁻⁶ °C ⁻¹		
Serial interface	Siemens DRIVE-CLIQ		
Resolution absolute measure	1 – 0.1 μm		
Accuracy grade	± 5 μm *		
Measuring length ML in mm	from 640 to 30.040 mm, with steps of 200 mm Modules length: 1.200, 1.400, 1.600, 1.800, 2.000 mm		
Max. traversing speed	120 m/min		
Max. acceleration	30 m/s ²		
Required moving force	≤ 15 N		
Vibration resistance (EN60068-2-6)	≤ 100 m/ s ² [55 ÷ 2.000 Hz]		
Shock resistance (EN60068-2-27)	≤ 300 m/s ² [11 ms]		
Protection class (EN 60529)	IP 53 standard, IP 64 pressurized		
Operating temperature	0 °C ÷ 50 °C		
Storage temperature	-20 °C ÷ 70 °C		
Relative humidity	20 % ÷ 80 % (not condensed)		
Reading block sliding	by ball bearings 		
Connector	male M12 8 pins		
Electrical protections	inversion of polarity and short circuits		
Weight	1.7 kg + 3.5 kg/m		

* The declared accuracy grade of $\pm X \mu\text{m}$ is referred to a measuring length of 1 m.

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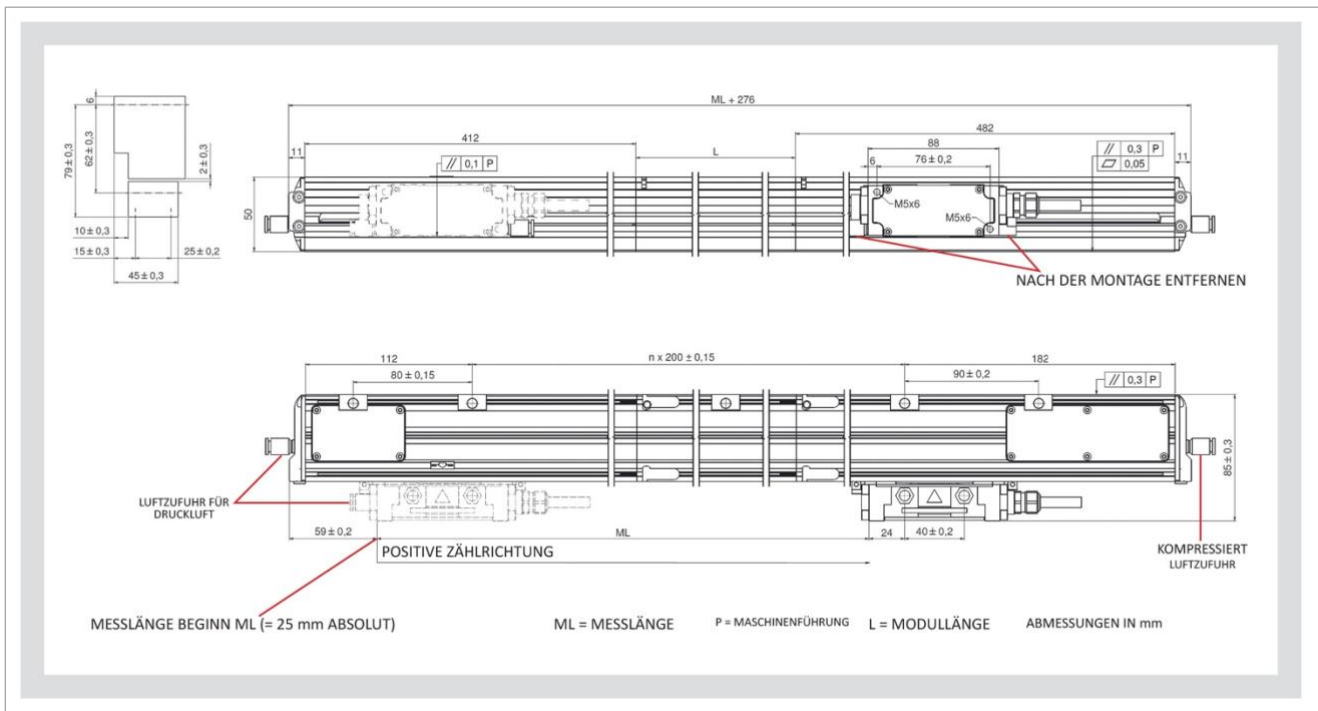
Electrical Characteristics

- Reading devices with light emitter and an array receiving photodiodes.
- Serial protocol Siemens DRIVE-CLIQ.
- Electrical protection against polarity inversion and short circuits on output ports.
- CABLE:
 - PUR external sheath
 - standard length 0.5 m
 - male connector M12 8 Pin

Mechanical Characteristics

- Rugged and heavy **PROFILE** made of anodized aluminum. Dimensions 50 x 58.5 mm.
- **SPRING SYSTEM** for misalignment compensation and self-correction of mechanical hysteresis.
- Non-extendible **SEALING LIPS** along the sliding side of the reader head, fixed at the lateral ends.
- Pressurizable **READER HEAD**, consisting of tie rod and reading block, with fully-protected place for electronic boards.
- **READING BLOCK** sliding through ball bearings.
- Die-cast **TIE ROD**, with nickel surface treatment.
- Absolute stainless steel **GRATING**, protected by the scale housing.
- **GASKETS** between modules for a full protection in mechanical joints.
- **FULL POSSIBILITY** to disassemble and reassemble it.
- Possibility of direct **SERVICE**.

Dimensions



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Ordering Code

Model	GVS 908	-	D1A	-	3240	-	V	-	D1	-	M0.5/S	-
Scale type, resolution												
D1	= 0.1 µm											
D01	= 0.01 µm											
A	= absolute											
Measuring length [mm]												
3.240	= max. measuring length											
30.040	= max. measuring length											
Power supply												
V	=											
Output signals												
D1	= DRIVE-CLIQ											
Cable length, cable type												
Mnn	= length in m											
M0.5	= 0.5 m (standard)											
S	= PUR cable											
Special, pressurization												
No cod. = standard												
SPnn	= special nn											
PR	= pressurized											

Without prior notice, the products may be subject to modifications that the Manufacturer reserves to introduce as deemed necessary for their improvement.