

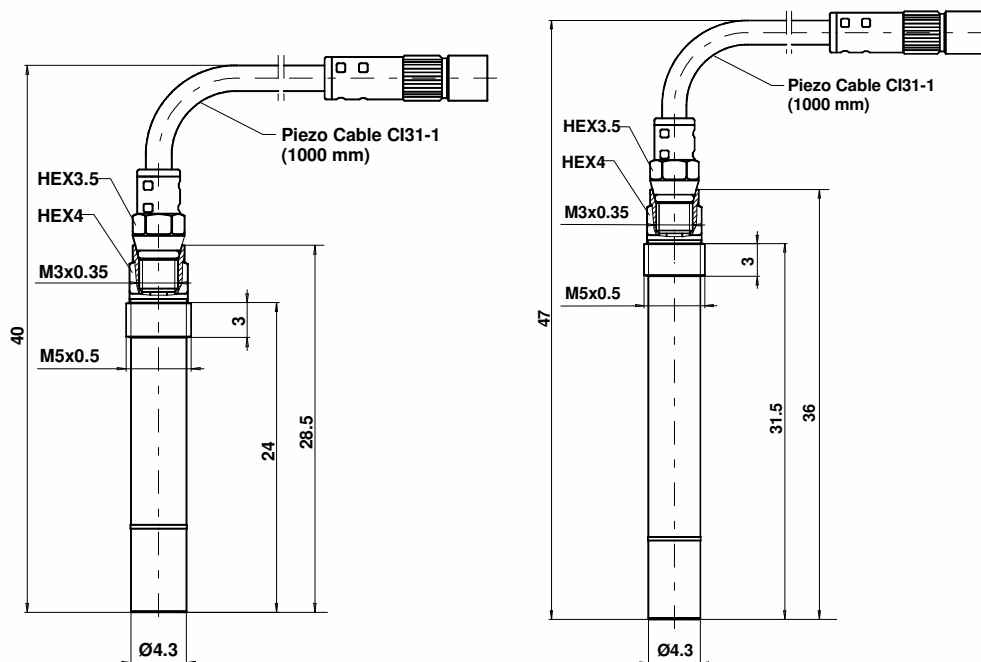
## Sensors



## GH13Z-24 / GH13Z-31

M5 Pressure Measuring Probe  
Art. Nr. TIGG0929A.01 / TIGG0930A.01

The pressure measuring probe GH13Z is designed for installation into the spark plug adapter ZF43. Because of the virtually flush installation, it enables combustion pressure measurements with the highest signal quality up to a maximum pressure of 250 bar. This sensor even makes knock detection by means of detecting knock oscillations of higher modes possible.



Dimensions GH13Z-24

Dimensions GH13Z-31

## GH13Z-24 / GH13Z-31 Pressure Measuring Probe

## Standard Specifications

Measuring Range	0...250 bar (3625 psi), 25 Mpa
Lifetime	> 10 <sup>8</sup> load changes
Overload	300 bar (4350 psi), 30 MPa
Sensitivity (nominal)	15 pC/bar (1.03 pC/psi), 150 pC/MPa
Linearity	< ±0.3 % FSO
Natural Frequency	115 kHz
Acceleration Sensitivity	< 0.001 bar/g
Shock Resistance	> 2000 g
Operating Temperature Range	up to 400°C (750°F)
Thermal Sensitivity Shift	20...400°C (68°F...750°F) <±2% 200..300°C (392°F..572°F) <±0,5%
Insulation Resistance at 20°C (68°F)	> 10 <sup>13</sup> Ω
Capacitance	7 pF
Mass (without Cable)	2,5 g (GU13Z-24); 3,2 g (GU13Z-31)
Mounting Torque	1,5 Nm (for Adaptor refer to drawings)

## Thermodynamic Specifications

Cyclic Temperature Drift (1300 rpm/7 bar)	< ±0.5 bar
<b>Load Change Drift</b>	
Max. Zero-line Gradient dp/dt	< 1 mbar/ms
Permanent Zero-line Deviation	±7 bar
IMEP-Stability	< 3%

## Accessories

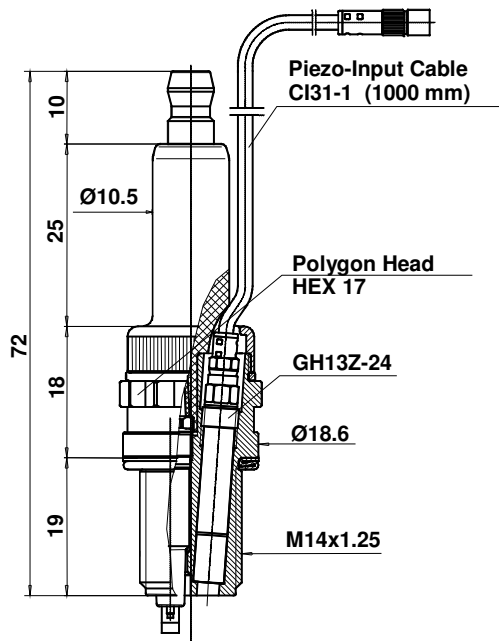
Cables and Couplings	CI31-1, CC31, E124-10
Cable-Mounting Tool	TC01, TC31
Adaptor*	ZF43
Mounting Tool	TS21 (TT21, TT02)
Extra Accessories	PH01, PH03, SF01

\* Details see data sheet of spark plug adaptor ZF43

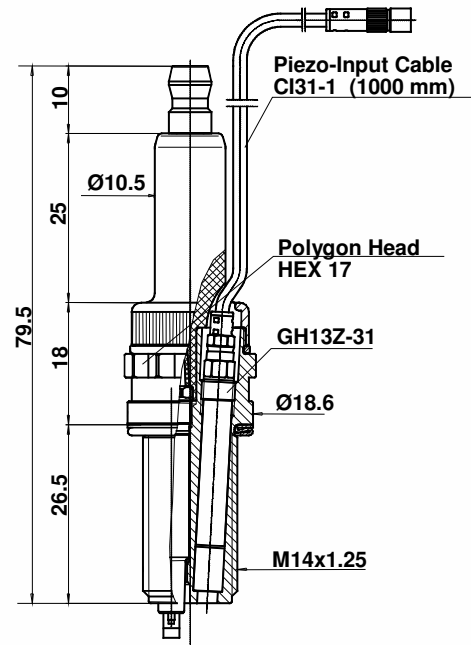
## GH13Z-24 / GH13Z-31 Pressure Measuring Probe

### Scope of Supply

- 1 Pressure Measuring Probe GH13Z-24 or GH13Z-31
- 1 Piezo-Input cable CI31-1, with Coupling CC31 fitted
- 2 Spare O-rings for cable
- 1 Protection cap
- 1 Calibration sheet
- 1 Specification sheet
- 1 Brief description



Mounting Torque ZF43 = 20 Nm



Mounting Torque ZF43 = 20 Nm

GH13Z-24,  
Installation by means of Spark  
Plug Adaptor ZF43 flat seat,  
thread length 19 mm

GH13Z-31,  
Installation by means of Spark  
Plug Adaptor ZF43 flat seat,  
thread length 26.5 mm (1")