

PRELIMINARY



Cylinder Pressure Sensor Z01

Sensors

KEY FEATURES

- Based on KMW in-house developed and manufactured thin-film sensing elements
- Packaged in a robust high-grade stainless-steel housing
- Sensor and signal processing electronics connected via stainless-steel armoured cable
- For permanent installation on-engine or for use with portable devices for periodic monitoring of cylinder pressure
- Suitable for applications in engine R&D, power and cogeneration plants, aboard ships and boats and on locomotives and compressor sets
- Configuration and diagnosis via optional software package for CAN

TECHNICAL DATA

- Measuring range: 0...300 bar
- Overload: 400 bar
- Bursting pressure: 1600 bar
- Installation torque: 25 Nm
- Temperature range membrane: -40 ... +400 °C / -40 ... 752 °F
- Cable length: ca. 100 cm, other lengths on request
- M10 x 1 or M14 x 1.25 male threads for insertion into cylinder head bores

Kaufbeurer Mikrosysteme Wiedemann GmbH

Am Bärenwald 2
87600 Kaufbeuren

+49 8341 9505-0
info@kmw-mikrosysteme.de
www.kmw-ms.com

TECHNICAL DATA

Z01-M10 / Z01-M14

Pressure range	0 ... 300 bar, R, others on request
Overload	400 bar
Bursting pressure	1600 bar
Installation torque	25 Nm
Voltage supply U_{VCC}	9 ... 32 V
Current consumption	130 mA @ 12 V, 65 mA @ 24 V
Output signal	4 ... 20 mA (3-wire technology, CAN possible)
Electrical connection	M12 connector 5-pole
Measurement deviation	< 1,0 % FS (-40 ... +200 °C / -40 ... 392 °F)
3dB-cut-off frequency	40 kHz
Temperature range sensor	-40 ... 250 °C / -40 ... 482 °F
Temperature range diaphragm	-40 ... 400 °C / -40 ... 752 °F
Temperature range electronics	-40 ... +70 °C / -40 ... 158 °F
Ingress protection (IP) class	IP67
Diameter protective metal hose	6 mm
Flame protection	Yes
Cable length	100 ± 1 cm, other lengths on request

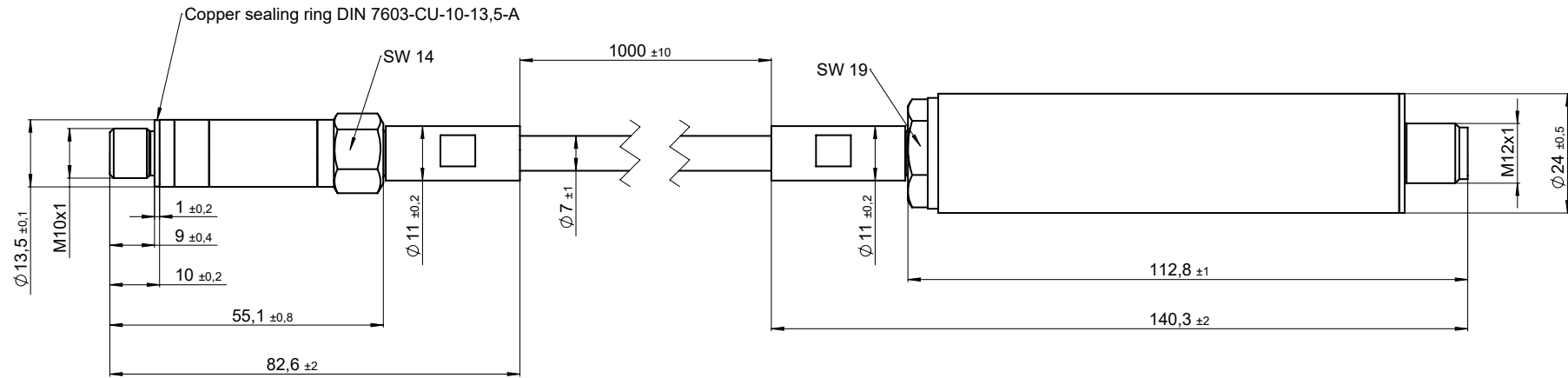
Z01-M10

Z01-M14

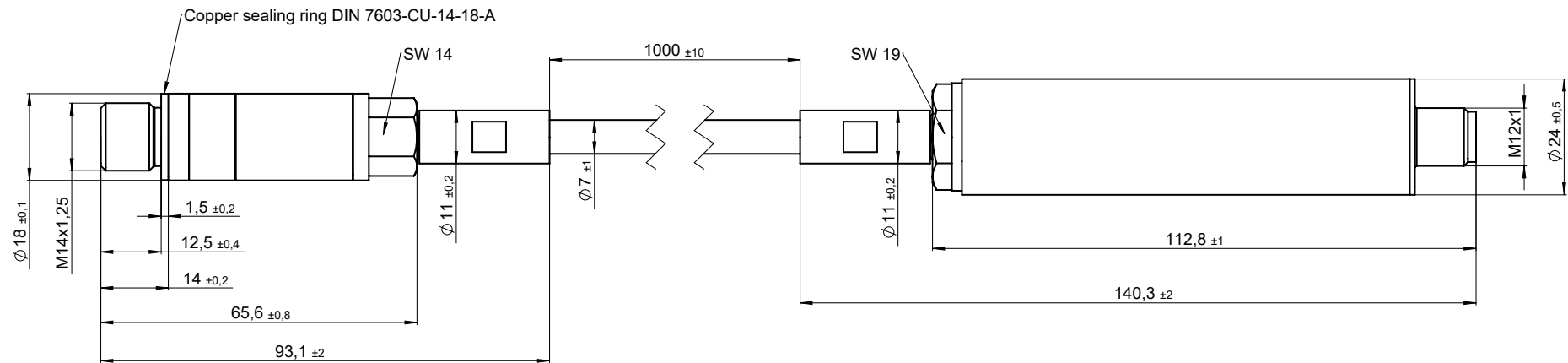
Wrench size sensor	14 mm	14 mm
Pressure connection	M10x1	M14x1,25

TECHNICAL DRAWING

Z01-M10

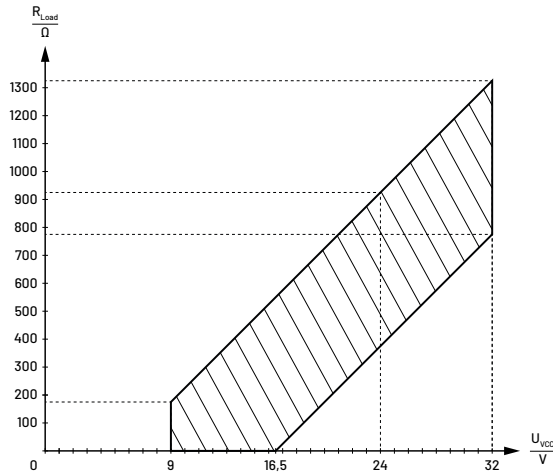


Z01-M14



TECHNICAL DATA

Operating area for current output

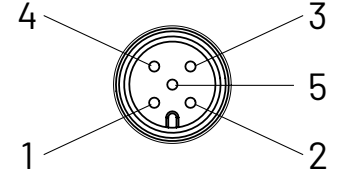


$$\text{Current output load: } \frac{U_{VCC} - 4V}{0,02A} (\Omega)$$

PIN ASSIGNMENT

Pin assignment sorted by pin numbers

Pin	Name	Description
1	VCC	Power supply
2	OUT	Analog out
3	GND	Common Ground
4	CAN_H	CAN bus (high)
5	CAN_L	CAN bus (low)



Recommended terminal layout

3-wire technology

