

PRESSURE SENSOR FOR COMBUSTION ANALYSIS

Data Sheet



GU22CK

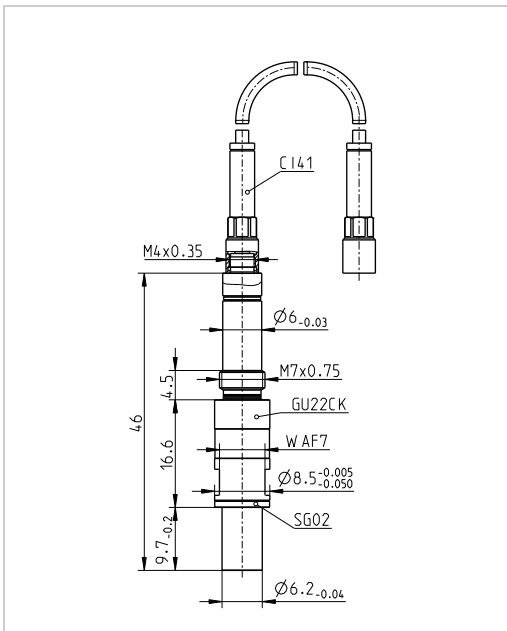
TIGG1355A.01

GU22CK

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The GU22CK is an accurate and robust 6.2 mm plug-type sensor. It is based on a well established design concept that allows high accuracy. It has thermally optimized piezoelectric elements and no influence from the mounting bore on the pressure signal due to minimized mechanical contact between mounting bore and the sensor housing. A thermo protection can improve the cyclic drift down to ± 0.3 bar. The sensor is equipped with built in SID for SDM.



Specifications

Measuring range	0 ... 350 bar		
Overload	400 bar		
Sensitivity	34 pC/bar		nominal
Linearity	≤ ±	0.3 %	FSO
Calibrated ranges	0 ... 80 bar 0 ... 150 bar 0 ... 300 bar		
Natural frequency	96 kHz		
Acceleration sensitivity	≤	0.001 bar/g	axial
Shock resistance	≥	2000 g	
Insulation resistance	≥	10 ¹³ Ω	
Capacitance	8 pF		
Operating temperature range ⁽¹⁾	- 40 ... 400°C		
Thermal sensitivity change	≤	1 %	20 ... 400 °C and 0 ... 300 bar
	≤ ±	0.25 %	250 ± 100 °C and 0 ... 300 bar typ.
Load change drift		1.5 mbar/ms	max. gradient typ.
Cyclic temperature drift ⁽²⁾	≤ ±	0.6 bar	
Thermo shock error Δp ⁽³⁾	≤ ±	0.3 bar	typ.
Mounting bore	6.3 mm		shoulder sealed
Cable connection	M4 x 0.35		negative
Weight	12.5 grams		without cable
Mounting torque	10 Nm		

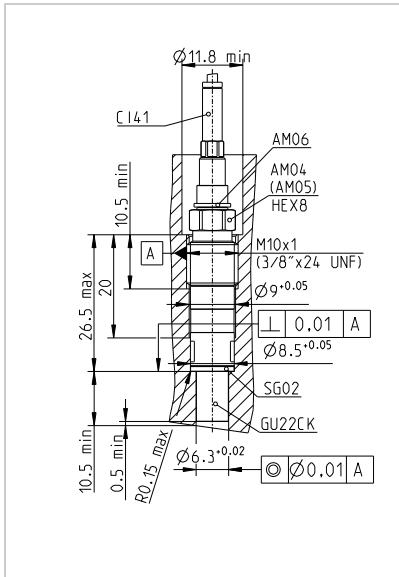
Scope of Supply

- Sensor GU22CK
- Piezo-input cable CI141-1
- Coupling CC41
- Gasket SG02
- Accessory kit (protection cap + 2 spare O-rings)
- Spare gasket SG02
- Calibration sheet
- Documentation

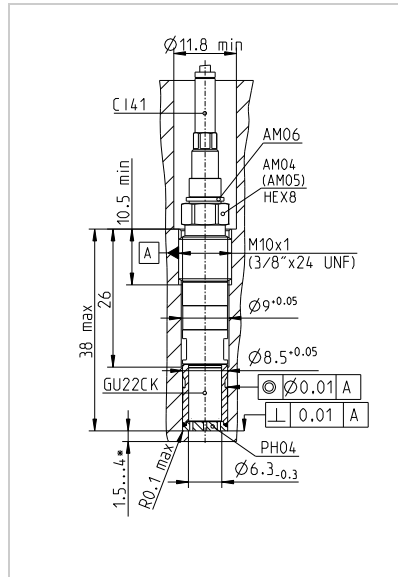
1) surface temperature around the cable connection < 200 °C

2) at 7 bar IMEP and 1300 rpm, diesel

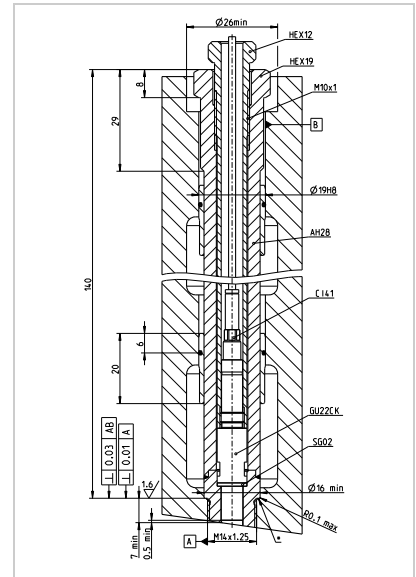
3) at 9 bar IMEP and 1500 rpm, gasoline



Direct installation with the mounting nipple AM04 (AM05).



Direct installation with the mounting nipple AM04 (AM05) and thermo protection PH04.



Direct installation with the mounting sleeve AH26 (AH27).

Accessories

Cables & couplings	CI41, CI42, CI4V, CC41, CC42, E124	
Cable-mounting tool	TC01	TIWG0131A.01
Gasket	SG02	TIBQ0227A.01
Mounting nipples	AM04 (M10 x 1) AM05 (8/3 x 24 UNF)	TIWG0240A.01 TIWG0253A.01
Safety ring for mounting nipple	AM06	TIYG1406A.01
Mounting sleeves	AH26 *, AH27 *, AH28 *	
Dummy	DG10 (GU22CK) DG14 (GU22CK + PH04)	TIWG0336A.01 TIWG0367A.01
Dummy removal tool	TD01	TIWG0122A.01
Mounting adaptors	MA05 (GU22CK + PH04) MA06 (GU22CK)	TIWG0413A.01 TIWG0428A.01
Mounting tool	Toolset TS02 (TT09, TT18) (for AM04, AM05) Mounting socket short TT09 (for AM04, AM05) Mounting socket TA13 (for AM04, AM05) Mounting socket TT07 (for AH26, AH27, AH28) Torque wrench TT18	TIWG0181A.01 TIWG0140A.01 TIWG0136A.01 TIWG0133A.01 TIWG0209A.01
Machining tool	Step drill MD10 Tap drill MT31 (M10 x 1) Tap drill MT13 (3/8" x 24 UNF)	TIWG0175A.01 TIWG0156A.01 TIWG0369A.01
Mounting paste	SF01	TIHK0094A.01
Thermo protection	PH04	TIYF0760A.01

*) Specify sleeve length (28 mm to 160 mm).