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CPO 239064

Pro/ENGINEER DRAWING

SPECIFICATION RPS8100-***B-112M5495

PRESSURE RANGES: 35 TO 1100 hPa a
35 TO 1310 hPa a
35 TO 2650 hPa a
35 TO 3500 hPa a

OVER PRESSURE: 2 x FS

CONTAINMENT PRESSURE: 7000 hPa

SUPPLY VOLTAGE: 5 TO 28 Vdc

CURRENT CONSUMPTION: <3.5 mA

JITTER: <20 ns

PRESSURE SIGNAL OUTPUT:
FORMAT: 4.5V TTL SQUARE WAVE
LIMITS: 25 TO 40 kHz
SENSITIVITY: 1.4 TO 4.0 Hz/hPa

TEMPERATURE SIGNAL OUTPUT:
FORMAT: VOLTAGE
LIMITS: 0.4 TO 0.8 V
SENSITIVITY: -1.6 TO -2.6 mV/°C

MEDIA COMPATIBILITY: NON-CONDENSING DRY GASES COMPATIBLE
WITH SILICON DIOXIDE, FLUOROSILICONE RV ADHESIVE,
STAINLESS STEEL 316L AND GLASS.

STATEMENTS IN ACCORDANCE WITH THE
EUROPEAN PRESSURE EQUIPMENT DIRECTIVE

REFER TO DOCUMENT K0581 FOR PRODUCT
CLASSIFICATION AND REGULATORY INFORMATION

TOTAL PRECISION: ±0.01% FS

TOTAL ACCURACY: ±0.014% FS

LONG TERM STABILITY: ±0.01% FS/ANNUM

'G' SENSITIVITY: <0.05 hPa/g

COMPENSATED TEMPERATURE RANGE: -55 TO +85°C

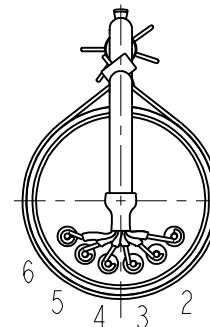
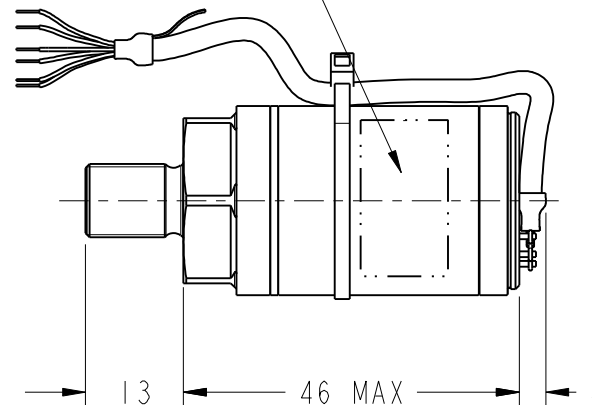
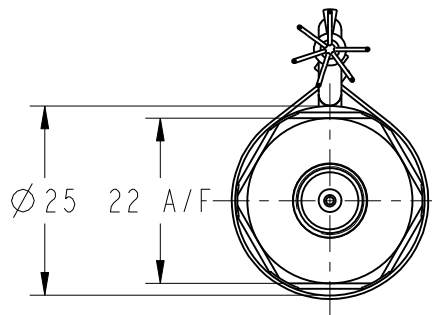
OPERATING TEMPERATURE RANGE: -55 TO +85°C

STORAGE TEMPERATURE RANGE: -55 TO +125°C

PRESSURE CONNECTOR: G1/8 MALE 60° INTERNAL CONE

GE DRUCK LTD. GROBY, LE6 0FH, UK
MODEL CODE → RPS8100-***B-112M5495 S/N → SERIAL NUMBER
PRESSURE RANGE → ** TO **** hPa a
Supply: 5 TO 28 Vdc

MARKING DETAILS:





ELECTRICAL CONNECTIONS:

WIRING DETAIL		
FUNCTION	WIRE COLOUR	GLASS/METAL SEAL
+VE SUPPLY	RED	PIN 1
FREQUENCY	YELLOW	PIN 2
-VE TEMP SIGNAL	WHITE	PIN 3
+VE TEMP SIGNAL	GREEN	PIN 4
-VE SUPPLY	BLUE	PIN 5
EEPROM	BLACK	PIN 6
NO SCREEN CONNECTION		

TABLE 1

R8100055B-112M5495	RPS8100-055B-112M5495	TERPS EXPOSED CALIBRATED RANGE 35 TO 1100 hPa a
R810006B-112M5495	RPS8100-06B-112M5495	TERPS EXPOSED CALIBRATED RANGE 35 TO 1310 hPa a
R8100075B-112M5495	RPS8100-075B-112M5495	TERPS EXPOSED CALIBRATED RANGE 35 TO 2650 hPa a
R810008B-112M5495	RPS8100-08B-112M5495	TERPS EXPOSED CALIBRATED RANGE 35 TO 3500 hPa a
SAP PART NO.	MODEL CODE	DESCRIPTION, MATERIAL, REMARKS ETC

NON-RESTRICTED DOCUMENT FOR GENERAL CIRCULATION

REV	A	 © 2015 DRUCK LTD FIR TREE LANE GROBY, LEICESTER LE6 0FH UK TEL: +44 (0)116 2317100	UNITS: mm UOS LINEAR TOLERANCES UOS: X ±1.0 X.X ±0.5 X.XX ±0.2 ANGULAR TOLERANCE: ±5° UOS GENERALLY IN ACCORDANCE WITH BS8888:2008 AND DC0065	CUSTOMER SPECIFICATION DO NOT AMEND WITHOUT AUTHORISATION	A3
DATE	11-APR-16				SCALE 1:1
DRAWN	A MAO				
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MANUF	C HINCKLEY			DO NOT ALTER MANUALLY DO NOT SCALE	
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COMM	I ABBOTT	TITLE: RPS8100 MINICORE SPECIFICATION			
APPROVED	J MACGREGOR	TERPS EXPOSED			
CH. ENG	-	DRG. No 112M5495		SHT 1 OF 2	

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EQUATION FOR CALCULATION OF APPLIED PRESSURE FOR RPS8100

THE READING OF APPLIED PRESSURE IS CALCULATED USING THE EQUATION BELOW

$$\text{PRESSURE} = \sum_i \sum_j k_{i,j} \cdot x^i \cdot y^j \quad \text{for } i=0 \text{ to } 4 \quad j=0 \text{ to } 3$$

$$= k_{0,0} \cdot x^0 \cdot y^0 + k_{0,1} \cdot x^0 \cdot y^1 + k_{0,2} \cdot x^0 \cdot y^2 + k_{0,3} \cdot x^0 \cdot y^3$$

$$+ k_{1,0} \cdot x^1 \cdot y^0 + k_{1,1} \cdot x^1 \cdot y^1 + k_{1,2} \cdot x^1 \cdot y^2 + k_{1,3} \cdot x^1 \cdot y^3$$

$$+ k_{2,0} \cdot x^2 \cdot y^0 + k_{2,1} \cdot x^2 \cdot y^1 + k_{2,2} \cdot x^2 \cdot y^2 + k_{2,3} \cdot x^2 \cdot y^3$$

$$+ k_{3,0} \cdot x^3 \cdot y^0 + k_{3,1} \cdot x^3 \cdot y^1 + k_{3,2} \cdot x^3 \cdot y^2 + k_{3,3} \cdot x^3 \cdot y^3$$

$$+ k_{4,0} \cdot x^4 \cdot y^0 + k_{4,1} \cdot x^4 \cdot y^1 + k_{4,2} \cdot x^4 \cdot y^2 + k_{4,3} \cdot x^4 \cdot y^3$$

$$= k_{0,0} + k_{0,1} \cdot y^1 + k_{0,2} \cdot y^2 + k_{0,3} \cdot y^3$$

$$+ k_{1,0} \cdot x^1 + k_{1,1} \cdot x^1 \cdot y^1 + k_{1,2} \cdot x^1 \cdot y^2 + k_{1,3} \cdot x^1 \cdot y^3$$

$$+ k_{2,0} \cdot x^2 + k_{2,1} \cdot x^2 \cdot y^1 + k_{2,2} \cdot x^2 \cdot y^2 + k_{2,3} \cdot x^2 \cdot y^3$$



$$+ k_{3,0} \cdot x^3 + k_{3,1} \cdot x^3 \cdot y^1 + k_{3,2} \cdot x^3 \cdot y^2 + k_{3,3} \cdot x^3 \cdot y^3$$

$$+ k_{4,0} \cdot x^4 + k_{4,1} \cdot x^4 \cdot y^1 + k_{4,2} \cdot x^4 \cdot y^2 + k_{4,3} \cdot x^4 \cdot y^3$$

WHERE PRESSURE IS IN UNITS OF hPa

x = (FREQUENCY OUTPUT IN HERTZ) - X'
y = (TEMPERATURE SIGNAL OUTPUT IN mV) - Y'

AND $k_{i,j}$ X' AND Y' ARE CALIBRATION COEFFICIENTS SUPPLIED WITH EACH DEVICE

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		DRG. No 112M5495		SHT 2 OF 2	