McLaren ELECTRONIC SYSTEMS

HUMIDITY PROBE

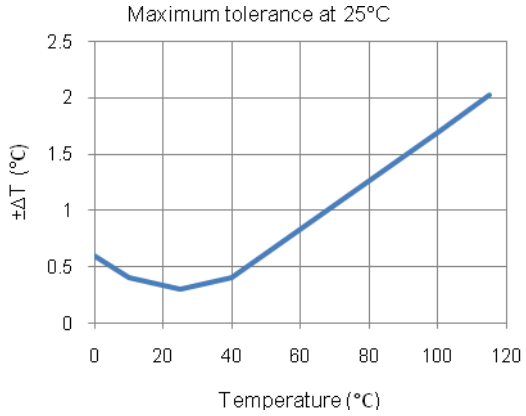
The module contains a humidity sensor with an integral temperature sensor. The humidity is measured using capacitive sensing technology.

Electrical

- Supply voltage 8 to 16V unregulated
- Supply current 25mA max

Temperature

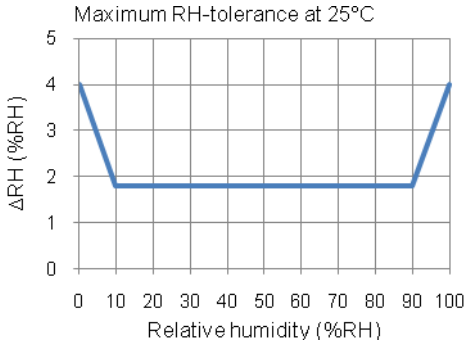
- Resolution: 12bit
- Update rate: 0.5Hz max
- Accuracy



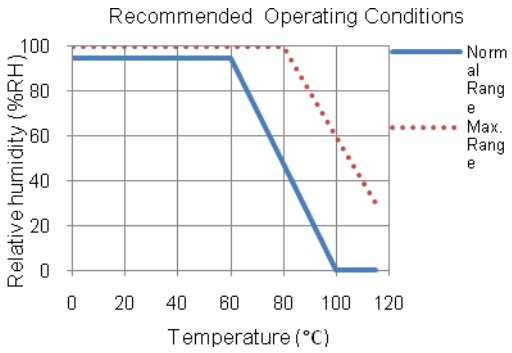
- Measurement range -40ºC to 123.8°C
- Repeatability ±0.1°C typical
- Long term drift < 0.04°C/year
- Response time: 5 to 30s for a 63% step function
- Output 0.25V for -40°C, 4.75V for 123.8°C

Humidity

- Operating range 0 to 100%RH
- Resolution: 12bit
- Update rate: 0.5Hz max
- Output 0.25V for 0%RH, 4.75V for 100%RH
- Accuracy



- Repeatability ±0.1%RH typical
- Hysteresis ±1%RH typical
- Non linearity ±1%RH typical
- Response time[1] 8s typical
- Long term drift < 0.5%RH/year
- Recommended operating conditions[2]



[1] Time for reaching 63% of a step function valid at 25ºC and 1m/s airflow
[2] A temporary offset may occur if element is directly in contact with moisture.

Application

- Humidity measurement

McLAREN TECHNOLOGY CENTRE
CHERTSEY ROAD, WOKING
SURREY GU21 4YH, UNITED KINGDOM
T: +44 (0) 1483 261400
F: +44 (0) 1483 261402
W: www.mclarenelectronics.com

USA: McLAREN ELECTRONICS INCORPORATED
T: +1 (704) 660 3181
Email: sales@mclarenelectronics.com

ASIA: TOKYO R&D CO. LTD
T: +81 (0) 46 226 5501
Email: mes@r-d.co.jp

HUMIDITY PROBE

Mechanical

- Aluminium alloy body, hard anodised and dyed black
- Weight <100g including cable
- Polyester cable boss
- Nose length: shown in order code details – other probe lengths available

Environmental

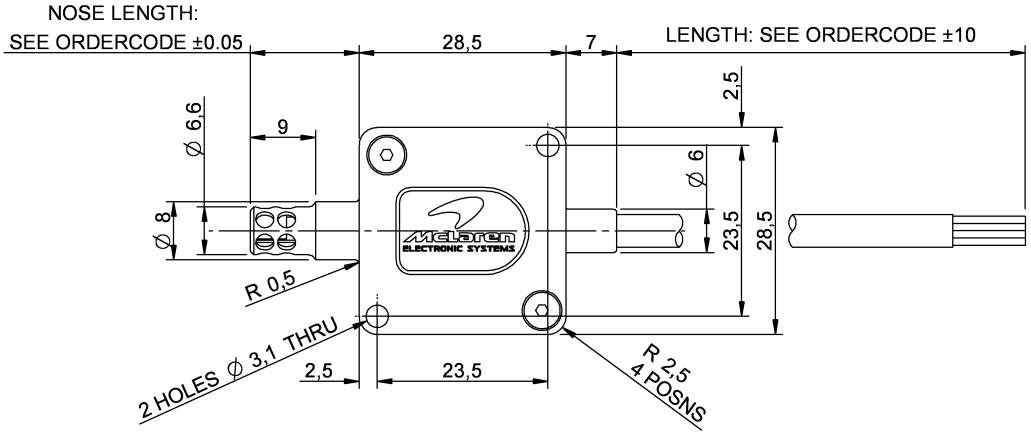
- Body resistant to standard Motorsport fluids
- Maximum humidity 100%
- Operating temperature range 0 to +115°C
- Viton jacketed cable (200°C)
- Humidity sensor may take an offset if exposed to high concentrations of chemical vapours

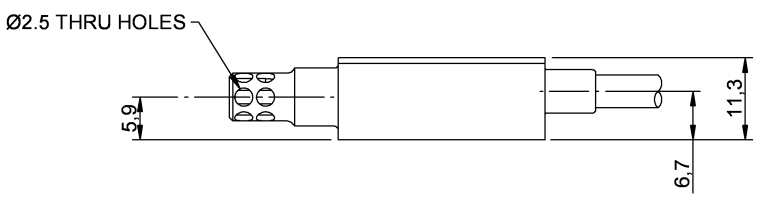
Cable and Connection Definition

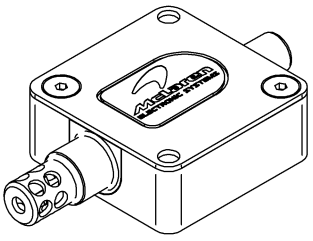
- 26AWG un-screened cable
- Cable length is shown on the order details but any length is available on request
- Various automotive and military standard connectors are available
- Connection

Red wire	Supply
Green wire	Ground
Yellow wire	Humidity output
White wire	Temperature output
Blue wire	N/C

Design and manufacture is in-house, so if our existing designs do not suit your application, we can provide cost effective customised parts to suit even the most demanding application. No engineering charges are made for simple modifications such as customer specific connectors, cable protection and cable lengths. Please contact our technical consultancy service who will be pleased to help.







Cable Length	Nose length	Order Code
1000mm	15mm	O 030 315 001 000

McLAREN TECHNOLOGY CENTRE
CHERTSEY ROAD, WOKING
SURREY GU21 4YH, UNITED KINGDOM
T: +44 (0) 1483 261400
F: +44 (0) 1483 261402
W: www.mclarenelectronics.com
USA: McLAREN ELECTRONICS INCORPORATED
T: +1 (704) 660 3181
Email: sales@mclarenelectronics.com
ASIA: TOKYO R&D CO. LTD
T: +81 (0) 46 226 5501
Email: mes@r-d.co.jp