



Vogelaar Electronics

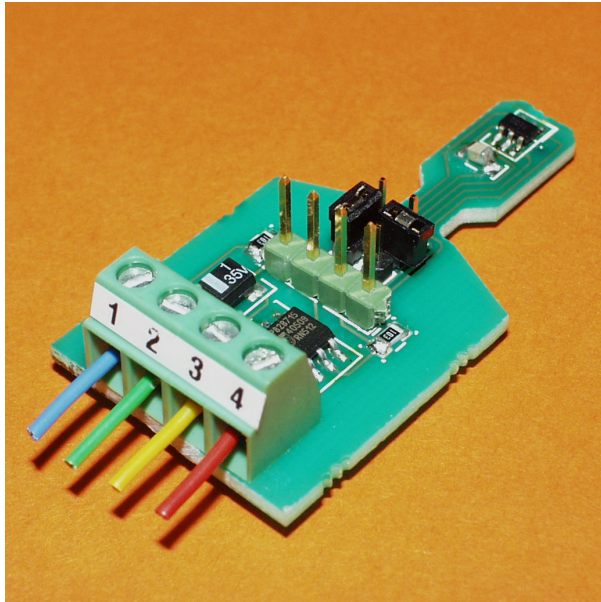
Metrology and Software

Fax. +31 (0)847 115096

e-mail: info@vogelaar-electronics.com
home page: www.metrology.nl

I²C temperature sensor VE 02440

DS02440.doc 10-11-06



PCB module

Screw terminal

Power supply 5 VDC

I²C power bus (up to 1000 m)

local I²C bus

-55 to 125 °C

resolution 0.0625 °C

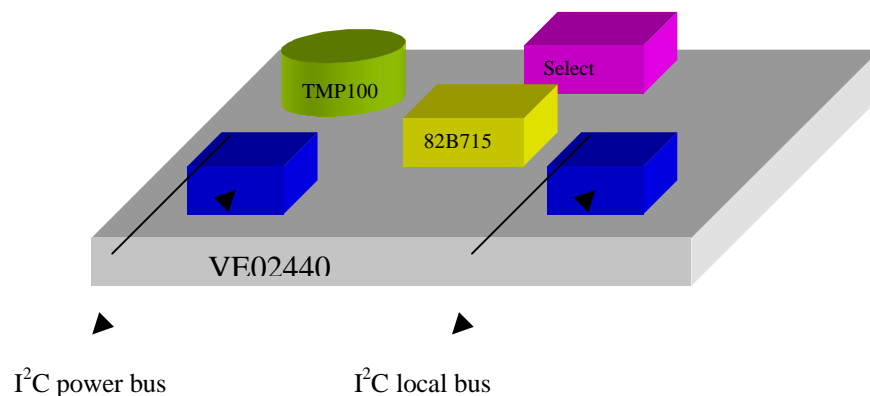
up to 25 samples / second

8 jumper selectable addresses

The VE02440 is a temperature sensor PCB able to communicate with a host, for example a VE08201 DelphiStamp, through a I²C bus. This bus can handle up to 128 modules like I/O extenders, memory, sensors etc. The maximum distance between devices on a local I²C bus is 0.30 meter. The 82B715 bus driver converts the I²C bus into a I²C-power bus which can span up to 1000 meter.

The temperature sensor TMP100 has a quick response time due to its low mass.

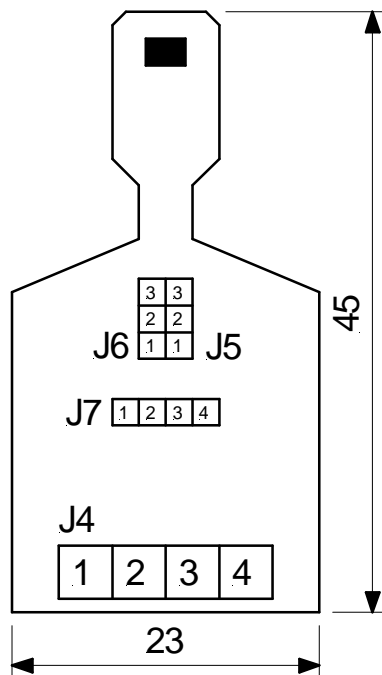
On-board jumpers allow for a 1 out of 8 address select.



Specifications:

| Mechanical: | |
|---------------------------|--|
| Dimensions | 23 x 45 x 12 mm |
| Weight | 6 gram |
| Material | Epoxy |
| Screw terminal | 4 contacts 0.2 .. 0.75 mm ² |
| Local bus | 4 pin header 0.1" |
| Temperature | -40 .. 85 °C |
| | |
| Electrical: | |
| Power supply | +5 VDC +/- 5% |
| Operational current | 16 mA |
| Maximum bus load | 30 mA |
| | |
| Temperature sensor | |
| Range | -55 °C to +125 °C |
| Accuracy | 2 °C between -25 °C and +85 °C |
| Resolution – 9 bit | 0.5 °C |
| Resolution – 12 bit | 0.0625 °C |
| Speed – 9bit | 25 samples / second |
| Speed – 12 bit | 3 samples / second |
| | |
| | |

Dimensions and connections:



| J6:J5 - Address select | | |
|-------------------------------|-----|---------|
| J6 | J5 | Address |
| 1-2 | 1-2 | \$90 |
| 1-2 | | \$92 |
| 1-2 | 2-3 | \$94 |
| | 1-2 | \$96 |
| 2-3 | 1-2 | \$98 |
| 2-3 | | \$9A |
| 2-3 | 2-3 | \$9C |
| | 2-3 | \$9E |

| J7 - Local I²C bus | |
|--------------------------------------|---------|
| 1 | Common |
| 2 | SDA |
| 3 | SCL |
| 4 | + 5 VDC |

| J4 - I²C power bus | |
|--------------------------------------|----------|
| 1 | Common |
| 2 | Ly (SDA) |
| 3 | Lx (SCL) |
| 4 | + 5VDC |