# Product Manual

# IQSBlock J1939 Temperature Sensor Module



## Part Number

PN 100000801

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# Product Specifications

## Main Interface Connector (Black):

**Mates with:** DT06-12SB

**Pinout:**

1 = +9 to +32VDC (Battery Positive)
2 = Ground (Battery Return)
3 = N/C
4 = N/C
5 = N/C
6 = N/C
7 = CANL
8 = CANH
9 = CAN Shield (Tied to Ground on Unit)
10 = N/C
11 = Address Input 1 (Active Low, Pulled High Internally)
12 = Address Input 2 (Active Low, Pulled High Internally)

## RTD Interface Connector (Gray):

**Mates With:** DT06-12SA

**Pinout**:

1 = RTD1+
2 = RTD2+
3 = RTD3+
4 = RTD4+
5 = RTD5+
6 = RTD6+
7 = RTD6-
8 = RTD5-
9 = RTD4-
10 = RTD3-
11 = RTD2-
12 = RTD1-

## RTD Specifications:

RTD Drive Current = 5mA
RTD Value (at 0 Celsius) = 100 Ohm (temperature coefficient of resistance (TCR) of 0.00385 $\Omega/\Omega/°C$ between 0 and 100°C)
Unit Accuracy: +/- 3 Deg C

## Address Input Specifications:

Input Voltage Active/On = 0VDC Typical, 0.8VDC Max
Input Current Active/On = 6.3mA Typical
Input Voltage Inactive/Off = Floating/Unconnected Typical, 3.5VDC Min (if not floating)

## LED Specifications:

### Green:

Solid On = Powered & Microcontroller Functioning
Solid Off = Unpowered

### Red:

Flashing = CAN Bus Communicating
Off/Solid = No CAN Bus Communications

## Environmental Range (Module, not RTDs):

Operating: -40C to 70C
Storage: -40C to 70C
Note: Temperatures between 70C and 85C will result in deformation of enclosure but will not affect device operation.
Ingress Protection: IP68 (with mated connectors attached).
EMI/EMC: Unit has been tested to MIL-STD-461F

## CAN Bus Specifications:

Baud Rate: 250KBPS
Terminated Internally: No

Priority: 0
PGN: 0xFFB0
IDR: 0x01FFB04s (where s is determined by address inputs).
Repetition Rate: 675mS

### Source Addresses:

MSB, LSB of Addressing Inputs (1 = Grounded, 0 = Floating):
00 = 0x43
01 = 0x42
10 = 0x41
11 = 0x40

**Data Format (Proprietary SPN):**
Data Length: 8 Bytes
Resolution: 1 Deg C/bit, -40C Offset
Data Range: 0x00 to 0xFF
Operational Range: -40C to 250C
Notes: 0xFE = short circuited RTD, 0xFF = open circuit/no RTD detected

**Data:**
Byte 0 = RTD1 Value
Byte 1 = RTD2 Value
Byte 2 = RTD3 Value
Byte 3 = RTD4 Value
Byte 4 = RTD5 Value
Byte 5 = RTD6 Value
Byte 6 = Unused (Always 0xFF)
Byte 7 = Unused (Always 0xFF)