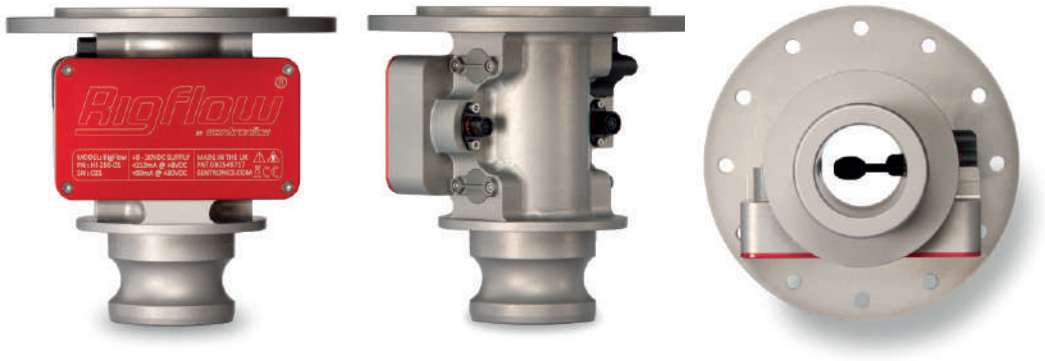
# Motorsport Pit Tank Sensor

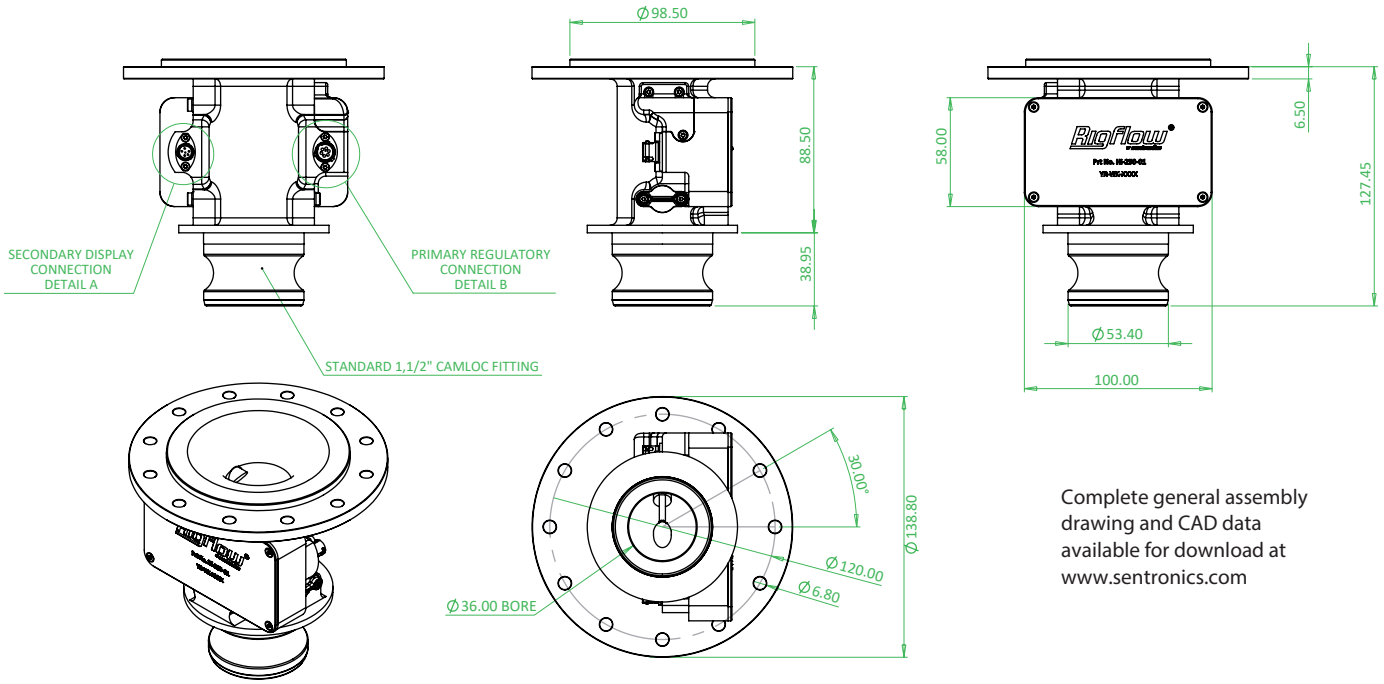
The RigFlow is specifically designed for accurately measuring dispensed fuel during a pit stop. The technology allows both teams and governing bodies to independently assess exactly how much fuel has been dispensed from the 200L FIA® pit tank.



- No moving parts
- Highly accurate and repeatable
- -10°C to +50°C temperature range
- Internal processing and diagnostics
- Fast measurement rate for dynamic flows
- Compatible with wide range of fuel types
- Standard fitment for 200L FIA® Refuelling Pit Tank (Constructed as per Appendix J Drw N°252-7)

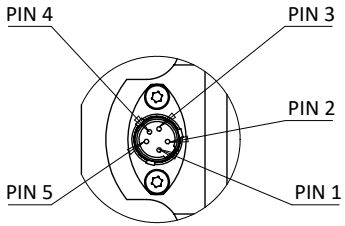
IMSA

## Dimensions (mm)

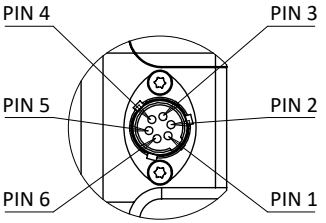



Complete general assembly drawing and CAD data available for download at www.sentronics.com

## Pin Out Functions




DETAIL A
SCALE 1:1
SOURIAU 8STA0-0205SN




DETAIL B
SCALE 1:1
SOURIAU 8STA0-0406SN

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## Model References

| Model | Colour | Part # | Description |
|---|---|---|---|
| RigFlow | ● | HI-250-01 | IMSA / FIA Refuelling Pit Tank Flow Sensor |

## Measurement Performance

| | |
|---|---|
| **Flow Measurement** | |
| Measurement rate | 200 Hz |
| Repeatability | ± 0.3% of reading |
| Uncertainty* | ± 0.75% of reading |
| Operating flow range | 0 - 250 l/min |
| Calibrated measurement range | 50 - 250 l/min |
| **Fluid Temperature Measurement** | |
| Accuracy | ± 0.5°C |

** Calculated according to ISO/TR using root-sum square method yielding 95% confidence*

## Flow Outputs and Functions

- Calibrated volumetric flow rate (ml/min)
- Calibrated cumulative volumetric flow (ml)
- Calibrated mass flow rate (g/min)
- Calibrated cumulative mass flow (g)
- Max/min logging
- Elapsed time counter (power on, ETI)
- Run-time (flow time, RTI)
- Speed of sound (m/s)
- Diagnostics via CAN

## Fuel Compatibility

- Pump petrol or diesel
- WEC standard E20
- F1 petrol blends
- Neat butanol, neat methanol or neat ethanol
- Methanol/petrol or ethanol/petrol

## Mechanical

| | |
|---|---|
| Dry weight | 895 g |
| O-ring seal elastomer | FPM fluorocarbon |
| Wetted materials | FPM, anodised aluminium alloy, stainless steel |
| Fluid operating pressure | 10barG |

## Environmental

| | |
|---|---|
| Storage temperature | -40°C to +85°C |
| Operational temperature | -10°C to +50°C |

## Electrical

| | |
|---|---|
| Voltage | 8V to 30V DC |
| Current | < 200mA |
| Voltage protection | Over-voltage 45V DC, reverse polarity -45V DC |
| Primary sensor connector | SOURIAU 8STA0-0406SN |
| Primary mating harness connector | SOURIAU 8STA6-0406PN |
| Display connector | SOURIAU 8STA0-0205SN |
| Display mating harness connector | SOURIAU 8STA6-0205PN |

## CAN Communications

| | |
|---|---|
| Design standard | ISO 11898-2 (high-speed applications) |
| Message format | 2.0A (11-bit identifier) |
| Baud rate | 500 kbit/sec |
| CAN termination resistor | No |
| Message/Channel description | Please contact us for the .dbc |

## Primary Connector Pin-out (Souriau 8STA0-0406SN)

| | |
|---|---|
| Pin 1 | V+ Supply (12V) |
| Pin 2 | GnD |
| Pin 3 | CAN Hi |
| Pin 4 | CAN Lo |
| Pin 5 | Comms Tx from sensor to PC (factory only) |
| Pin 6 | Comms Rx from PC to sensor (factory only) |

## Display Connector Pin-out (Souriau 8STA0-0205SN)

| | |
|---|---|
| Pin 1 | N/C |
| Pin 2 | GnD |
| Pin 3 | CAN Hi |
| Pin 4 | CAN Lo |
| Pin 5 | N/C |

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