



High Country Tek, Inc.

Fluid Temperature Sensors: 206-00083 & 206-00084

Electronic Control Solutions for the Global Fluid Power Industry



Application Overview:

- Hydraulic Fan drive systems
- Closed loop temperature applications
- Direct installation into radiator plug ports
- Hydraulic Manifolds
- Direct installation into Hydraulic pumps / motors

**'WET' fluid
temperature
sensor:**
P/No.206-00083



Product Feature Overview:

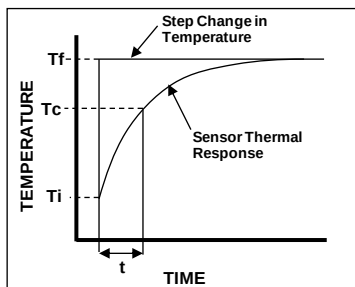
- Brass body - NO galvanic reactions with other metals
- Cost effective and robust product design
- Simple assembly process into application
- NO internally moving components
- Thermistor technology
- 100% calibration certified

Sensor Overview:

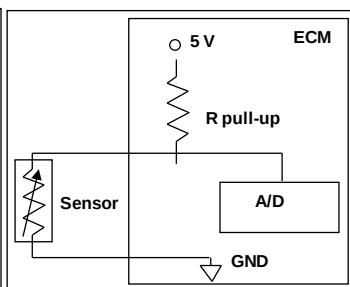
Housing Type:	Delphi Unique
Typical supply voltage:	+5VDC
Dissipation Constant*:	24mW/°C
Thermal Time Constant**:	17.5 to 23.5 seconds
Temperature range:	-40 to +150 °C (operational)
NEMA/IP Rating:	NEMA 6P/68
Connector rating:	>IP67

Electrical Characteristics:

Thermal Time Constant

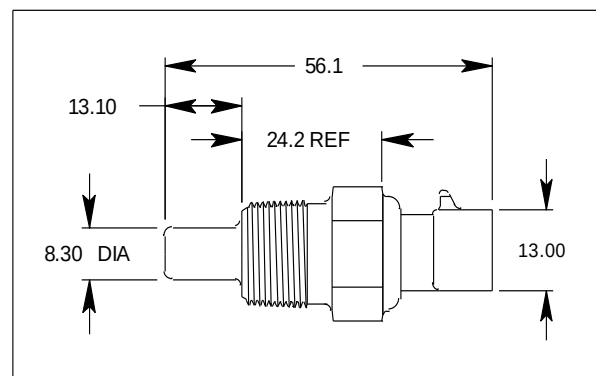


Circuit Schematic



Mechanical Details:

Sensor Body:	Brass
Connector Body:	PBT 30% Glass Filled
Hex Size:	18.9mm / 3/4"
Thread Size:	3/8" - 18 NPTF
Thread Sealant:	GM09985473
Sealing Pressure:	145kPa
Installation Torque:	20Nm
Overall Weight:	40g



- The ratio, at a specified ambient temperature, of the change in the power dissipation of the sensor to the resultant temperature change of the thermistor. Test medium: silicone oil
- ** The time required for the sensor to achieve 63.2% of its steady state value when subjected to a step change in ambient temperature [$T_c = (T_f - T_i) * 63.2\% + T_i$]. Test medium: silicone oil.
- Mating Connector: 2 way sealed female connector
- Contact HCT customer service for price and availability, see back page for contact details.



Fluid Temperature Sensors - 206-00083 & 206-00084

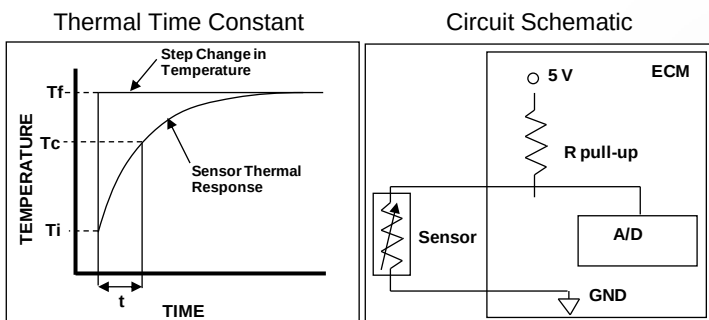
Application Overview:

- Hydraulic Fan drive systems
- Closed loop temperature applications
- Direct installation into radiator plug ports
- Charge Air Cooling (CAC) Manifolds
- Ambient air reference / offset applications
- Direct installation into dry fluid transfer pipes

Product Feature Overview:

- Thermoplastic body - NO galvanic reactions with metals
- Cost effective and robust product design
- Simple assembly process into application
- NO internally moving components
- Pre applied 'threadlock' for positive seal
- Thermistor technology
- 100% calibration certified

Electrical Characteristics:



- The ratio, at a specified ambient temperature, of the change in the power dissipation of the sensor to the resultant temperature change of the thermistor. Test medium: Dry air stream flowing @ 5000mm/sec
- ** The time required for the sensor to achieve 63.2% of its steady state value when subjected to a step change in ambient temperature [$T_c = (T_f - T_i) * 63.2\% + T_i$]. Test medium: Dry air stream flowing @ 5000mm/sec
- Mating Connector: 2 way sealed female connector.
- Contact HCT customer service for price and availability, see back page for contact details.

Compatible with HCT Dedicated Fan System Controllers

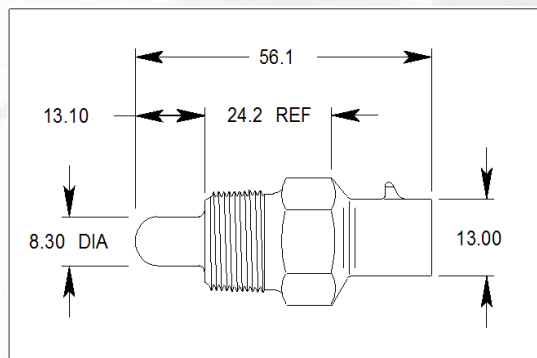


Sensor Overview:

Housing Type:	Delphi Unique
Typical supply voltage:	+5VDC
Dissipation Constant*:	18mW/°C
Thermal Time Constant**:	60seconds
Temperature range:	-40 to +150 °C (operational)
NEMA/IP Rating:	NEMA 6P/68
Connector rating:	>IP67

Mechanical Details:

Sensor Body:	PEI (polyetherimide) 30% GF
Connector Body:	PBT 30% Glass Filled
Hex Size:	18.9mm / 3/4"
Thread Size:	3/8" - 18 NPTF
Thread Sealant:	GM09985490
Sealing Pressure:	145kPa
Installation Torque:	10.8 - 16.3 Nm
Overall Weight:	13.2g
Color:	Black



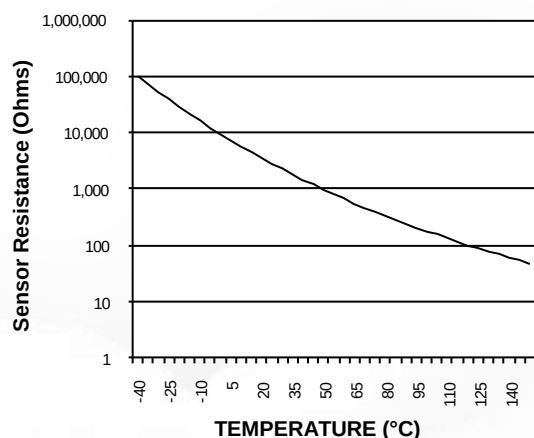
Use with DVC series programmable modules



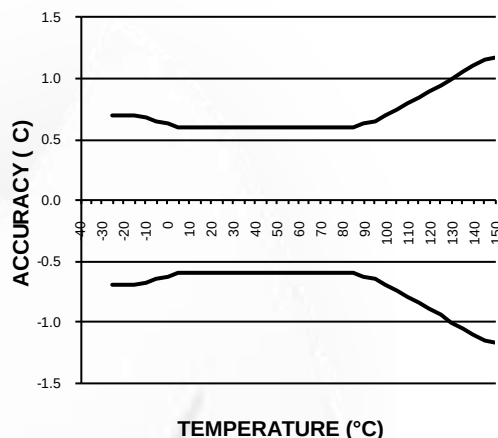


Fluid Temperature Sensor - 206-00083 & 206-00084

UNLOADED RESISTANCE Vs TEMPERATURE
CHARACTERISTIC CHART



TEMPERATURE ACCURACY CHART



Note: Temperature Sensor Calibration Resistance Guaranteed by 100% Automated Calibration Certification.

Temp (°C)	Res (Ohms)	Res (±%)	Ref Acc (±°C)	Temp (°C)	Res (Ohms)	Res (±%)	Ref Acc (±°C)	Temp (°C)	Res (Ohms)	Res (±%)	Ref Acc (±°C)
-40	100865	4.87	0.70	25	2795	2.50	0.60	90	241.8	2.10	0.70
-35	72437	4.64	0.70	30	2240	2.45	0.60	95	207.1	2.21	0.70
-30	52594	4.43	0.70	35	1806	2.40	0.60	100	178.0	2.31	0.80
-25	38583	4.21	0.70	40	1465	2.36	0.60	105	153.6	2.42	0.80
-20	28582	4.00	0.70	45	1195	2.31	0.60	110	133.1	2.52	0.90
-15	21371	3.80	0.70	50	980	2.27	0.60	115	115.7	2.61	0.90
-10	16120	3.60	0.60	55	809	2.23	0.60	120	100.9	2.68	1.00
-5	12261	3.40	0.60	60	671	2.19	0.60	125	88.3	2.75	1.00
0	9399	3.21	0.60	65	559	2.15	0.60	130	77.5	2.80	1.10
5	7263	3.06	0.60	70	469	2.11	0.60	135	68.3	2.84	1.10
10	5658	2.92	0.60	75	395	2.07	0.60	140	60.3	2.87	1.20
15	4441	2.78	0.60	80	334	2.04	0.60	145	53.4	2.89	1.20
20	3511	2.64	0.60	85	283	2.00	0.60	150	47.5	2.90	1.20

Important Notes:

- The generic values above for 206-00083 & 206-00084, are for the unloaded thermistor, as shipped from Delphi Packard Electric, and does not reflect the effects of application system errors and aging.
- These sensors are recommended by HCT for use with ALL their hydraulic fan system controllers wherever an external discrete sensor is needed.
- HCT controllers have this sensor curve information embedded in the controllers and GUI set-up software for fast and easy selection and configuration of the cooling system

Visit our website at this address to see our entire cooling solutions product range, including low voltage e-Fan controllers and accessories:

http://www.hctcontrols.com/products/fan_control/index.htm



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