



Electrical Installation

Temperature Sensors 1090173, 1090174



Revision history*Table of revisions*

Date	Changed	Rev
September 2015	Minor layout revision	CB
July 2014	Conversion to Danfoss layout	CA
May 2006	Various	BA
February 2006	Table corrected	AB
February 2006	First edition	AA

Electrical Installation 1090173, 1090174 Temperature Sensors

Contents**Literature references**

Literature references.....	4
Latest version of technical literature.....	4

Product overview

Product image.....	5
Description/theory of operation.....	5
Electrical specifications.....	5

Electrical installation

Pinout.....	6
Pin compatibility.....	6
Mating connector.....	6

Electrical Installation 1090173, 1090174 Temperature Sensors

Literature references**Literature references***References*

Literature ID number	Title	Description
BLN-95-9063	<i>1090173, 1090174 Temperature Sensor Technical Information</i>	Complete product electrical and mechanical specifications
11007104	<i>PLUS+1* Compliant 1090173 Temperature Sensor function blocks User's Guide</i>	Compliant function blocks set-up information
11007117	<i>PLUS+1* Compliant 1090174 Temperature Sensor function blocks User's Guide</i>	Compliant function blocks set-up information

Latest version of technical literature

Danfoss product literature is online at: <http://powersolutions.danfoss.com/literature/>

Product overview
Product image
1090173, 1090174 temperature sensors

Description/theory of operation

1090173 (liquid) and 1090174 (air) temperature sensors are thermistor-type temperature sensors. The resistance of the sensing element is a function of temperature of the measured fluid. The relationship between measured temperature and sensing element resistance is non-linear. The PLUS+1® Compliant temperature sensor compliant function block algorithm is designed to provide a measured temperature output for a given resistance.

Electrical specifications
Measured temperature versus sensing element resistance

Measured Temperature °C	Resistance Ω Nominal	Resistance Ω Tolerance
50	810.9	± 5%
80	283.0	± 5%
100	152.9	± 8%
125	76.9	± 8%

The liquid and air temperature sensors are specifically designed to interface with PLUS+1® devices that have AIN/TEMP/Rheo input pins. When configured in the TEMP/Rheo mode, the input pin has a 1.33 KΩ pull up resistor to + 5 Vdc. It will provide up to 3.75 mA current to the temperature sensor which can be measured.

Maximum over-voltage: Battery voltage should never be applied to the temperature sensors.

Electrical Installation 1090173, 1090174 Temperature Sensors

Electrical installation
Pinout

Pinout

2 pin Delphi-Packard® Metri-Pack™ 150 series connector	Connect either pin to a PLUS+1® controller AIN/TEMP/Rheo input pin and the other to the controller ground.
---	--

Pin compatibility

PLUS+1® module pin type

Pin	Function
Either sensor pin may be connected to this device pin	Power ground -
Either sensor pin may be connected to this device pin	AIN/Temp/Rheo

Mating connector

Parts list

2 pin connector	Quantity	Ordering number
Connector	1	Packard, 12162197
Terminal (16 to 18 gauge)	2	Packard Metri-Pack, 2124075-1
Mating connector kit	1	Danfoss K23436



Products we offer:

- Bent Axis Motors
- Closed Circuit Axial Piston Pumps and Motors
- Displays
- Electrohydraulic Power Steering
- Electrohydraulics
- Hydraulic Power Steering
- Integrated Systems
- Joysticks and Control Handles
- Microcontrollers and Software
- Open Circuit Axial Piston Pumps
- Orbital Motors
- PLUS+1® GUIDE
- Proportional Valves
- Sensors
- Steering
- Transit Mixer Drives

Danfoss Power Solutions is a global manufacturer and supplier of high-quality hydraulic and electronic components. We specialize in providing state-of-the-art technology and solutions that excel in the harsh operating conditions of the mobile off-highway market. Building on our extensive applications expertise, we work closely with our customers to ensure exceptional performance for a broad range of off-highway vehicles.

We help OEMs around the world speed up system development, reduce costs and bring vehicles to market faster.

Danfoss – Your Strongest Partner in Mobile Hydraulics.

Go to www.powersolutions.danfoss.com for further product information.

Wherever off-highway vehicles are at work, so is Danfoss. We offer expert worldwide support for our customers, ensuring the best possible solutions for outstanding performance. And with an extensive network of Global Service Partners, we also provide comprehensive global service for all of our components.

Please contact the Danfoss Power Solution representative nearest you.

Comatrol

www.comatrol.com

Schwarzmueller-Inverter

www.schwarzmueller-inverter.com

Turola

www.turolaocg.com

Hydro-Gear

www.hydro-gear.com

Daikin-Sauer-Danfoss

www.daikin-sauer-danfoss.com

Local address:

Danfoss Power Solutions (US) Company
2800 East 13th Street
Ames, IA 50010, USA
Phone: +1 515 239 6000

Danfoss Power Solutions GmbH & Co. OHG
Krokamp 35
D-24539 Neumünster, Germany
Phone: +49 4321 871 0

Danfoss Power Solutions ApS
Nordborgvej 81
DK-6430 Nordborg, Denmark
Phone: +45 7488 2222

Danfoss Power Solutions Trading (Shanghai) Co., Ltd.
Building #22, No. 1000 Jin Hai Rd
Jin Qiao, Pudong New District
Shanghai, China 201206
Phone: +86 21 3418 5200

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.