



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. **97 865 - 96 HH**

Company **Danfoss A/S
Nordborgvej 81
6430 Nordborg, DENMARK**

Product Description **Exhaust Gas Temperature Sensor**

Type **MBT 5111, MBT 5114**

Environmental Category **D, H, EMC1**

Technical Data /
Range of Application **Thermocouple (MBT 5111): 1x or 2x Type K, max. 800°C or Type J, max. 600°C
Element (MBT 5114): 1x or 2x Pt100 or Pt1000
Protection tube diameter [mm]: 3, 4.5, 6, 6/12 or 6/9.5
Design of the protection tube: straight or bended
Protection tube / insertion length: max. 25 x the diameter of the sensor
Flexible tube max. length(free): 117mm
Process connection (type): none, adjustable fitting, fixed fitting or clamp A
Process connection (thread): 1/4"-18NPT, 1/2"-NPT, G1/4, G1/2 or M18x1.5
Connection plug: none or Jäger (4 pins, straight)
Cable: none or Couplix K-BIM5-5 (10 m)**

*H: Vibration test: 40 Hz up to 2000 Hz, 4g (at 800°C)

Test Standard **Guidelines for the Performance of Type Approvals, Chapter 2 - Edition 2003**

Documents **Data sheets: Danfoss MBT 5111 (IC.PD.P30.C1.02) - Appendix A, B, C, D, E, F, G
Test Reports: Danfoss No.: 20052669E-x, 087U4029, 087U4034, 087U4035,
087U4040, TR087U0001-01, TR087U0002-01, 201000978**

Remarks **None**

Valid until **2016-10-31**

Page **1 of 1**

File No. **I.D.02**

Hamburg, 2011-11-01

Type Approval Symbol



Burkhard Lilienthal

Dariusz Lesniewski

Germanischer Lloyd