




**TYPE APPROVAL CERTIFICATE**  
No. ELE090716XG/001

**This is to certify** that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	<b>Temperature switches</b>
<i>Type</i>	<b>CAS</b>
<i>Applicant</i>	<b>DANFOSS A/S Nordborgvej DK 6430 Nordborg Denmark</b>
<i>Manufacturer</i>	<b>DANFOSS POLAND SP. Z.O.O.</b>
<i>Place of manufacture</i>	<b>UL. CHRZANOWSKA 5 PL-05-825 GRODZISK MAZOWIECKI POLAND</b>
<i>Reference standards</i>	<b>"RINA Rules for the Classification of Ships - Part C, Machinery, Systems and Fire Protection - Chapter 3, Section 6 , table 1"</b>

Issued in **HAMBURG** on **June 6, 2016**. This Certificate is valid until **June 6, 2021**

  
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RINA Services S.p.A.  
**Giuseppe Russo**

This certificate consists of this page and 1 enclosure



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CAS

### ...Thermostats Types CAS

Setting range °C	Mechanical differential adjustable/ fixed °C	Max. sensor temperature °C	Suitable sensor length (see also "Accessories") mm	Capillary tube length m	Type
20 - 80	2.0	130	65; 75; 110; 160	2	CAS 178
70 - 120	2.0	220	65; 75; 110; 160	2	CAS 180
60 - 150	2.0	250	65; 75; 110; 160	2	CAS 181

### 2-Step Thermostats CAS 1080

Factory setting		Mechanical differential °C	Max. temperature °C	Insert sensor length mm	Type
Step 1	Step 2				
100°C	115°C	2.0	220	75	CAS 1080
80°C	80°C	2.0	220	200	CAS 1080

### Additional Technical Data

**Switch:** Microswitch with single pole changeover (SPDT) for CAS 178, CAS 180, CAS 181 and (2 x SPDT) for CAS 1080

**Contact load:** AC:220 V, 0,1 A, AC-14and AC-15 (inductive load)  
DC: 125 V, 12 W DC-13 (inductive load)

**Ambient Temperature:** -25 to +70°C

**Enclosure:** IP67

### Reference documents:

Data sheet: IC.PD.P10.G7.02 I 520B674 dated 2015-04

Drawings: 060 R 0251, 060R0253, 060R0254

This certificate supersedes the Type Approval Certificate N° ELE 049011XG/001 issued by the Society.

HAMBURG June 6, 2016



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