



**TYPE APPROVAL CERTIFICATE**  
No. ELE090716XG/002

**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>Pressure 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 8, 2016**. This Certificate is valid until **June 8, 2021**

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

This certificate consists of this page and 1 enclosure



## TYPE APPROVAL CERTIFICATE

No. ELE090716XG/002

Enclosure - Page 1 of 1

CAS

### Standard pressure switches

Setting range p (bar)	Mechanical differential (bar)	Permissible operating pressure for low pressure (bar)	Max test pressure (bar)	Max burst pressure (bar)	Type
0 -3.5	0.1	10	10	40	CAS 133
0 -10	0.2	22	22	40	CAS 136
6 -18	0.3	27	27	72	CAS 137
10 - 35	0.6	53	53	100	CAS 139

### Pressure controls for high pressure and strongly pulsating media

Setting range p (bar)	Mechanical differential (bar)	Permissible operating pressure for low pressure (bar)	Max test pressure (bar)	Max burst pressure (bar)	Type
1 - 10	0.2 - 0.6	120	180	240	CAS 143
4 - 40	0.8 - 2.4	120	180	240	CAS 145
6 - 60	1 - 3	120	180	240	CAS 147

### Additional Technical Data

**Switch:** Microswitch with single pole changeover (SPDT)

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

**Temperature of medium:** CAS 133 - 139: -40 to +100°C  
CAS 143 -147: -25 to +100°C  
For water and sea water, max. 80°C

**Enclosure:** IP67

### Reference documents:

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

Drawing: 060 R 0251, 060R0253, 060R0254

This certificate supersedes the Type Approval Certificate N° ELE 049011XG/002 issued by the Society.

HAMBURG June 8, 2016

