



# DET NORSKE VERITAS

## TYPE EXAMINATION CERTIFICATE

[2] **EQUIPMENT OR PROTECTED SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC**

[3] Type Examination Certificate Number: **DNV 09 ATEX 52751X**

[4] Equipment: **CYCLOPS Z – Purge Indicator**

[5] Applicant – Manufacturer or Authorized representative: **Purge Solutions**

[6] Address: **12450 Galveston Road, Suite C, Webster  
Texas 77598, USA**

[7] This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] DNV certifies that this equipment has been found to comply with the Essential Health and Safety requirements that relate to the design of Category 3 equipment, which is intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no.: **2009-3300**


[9] Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:


**EN 60079-0: 2006, EN 60079-2:2007, EN60079-15:2005, EN61241-0:2006 and EN61241-1:2004.**

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.


[11] This TYPE EXAMINATION CERTIFICATE relates only to the design, examinations and tests of the specified equipment. If applicable, further requirements of this Directive may apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

[12] The marking of the equipment shall include the following:

 II 3 G    Ex nA nL [pz] IIC T6    -40°C ≤ T<sub>amb</sub> ≤ +65°C

 II 3 D    Ex tD A22 IP66 T79°C

Høvik, 2009-06-29  
for Det Norske Veritas Certification AS

  
Marianne Spæren  
Certification Manager



  
Ståle Sandstad  
Technical Reviewer

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 300.000. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



[13]

## Schedule

[14] **TYPE EXAMINATION CERTIFICATE No.:** DNV 09 ATEX 52751X

### Certificate History

Revision	Description	Issue date
-	Original certificate	2009-06-29

[15] **Description of Equipment:**

The CYCLOPS are a line of type Pz purge indicator that provide evidence of pressurization for a customer supplied enclosure with either leakage compensation or continuous dilution sources of protective gas. The CYCLOPS type Pz purge indicator come in one casing style, which is available in either stainless steel or anodized aluminium, machined from bar stock. The CYCLOPS type Pz purge indicator product line monitors one pressure point. The CYCLOPS type Pz purge indicator product line are flange mounted to the outer side wall of the enclosure it will be monitoring. All electrical and alarm connections to the CYCLOPS type Pz purge indicators with terminations made inside the purged enclosure. The signal to the pressure switch is energy limited.

### Type Identification

CYCLOPS Z – Purge Indicator

Model		
	PSCZ-1A	12VDC, 6061-T6 machined aluminium round housing
	PSCZ-1S	12VDC, 316 stainless steel machined round housing
	PSCZ-2A	24VDC, 6061-T6 machined aluminium round housing
	PSCZ-2S	24VDC, 316 stainless steel machined round housing
	PSCZ-3A	115VAC, 6061-T6 machined aluminium round housing
	PSCZ-3S	115VAC, 316 stainless steel machined round housing
	PSCZ-4A	230VAC, 6061-T6 machined aluminium round housing
	PSCZ-4S	230VAC, 316 stainless steel machined round housing

**Degrees of protection (IP Code): IP66**

[16] **Report No:** 2009-3300

**Project No:** PRJC-48482-2008-PRC-USA



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#### Descriptive documents

Number	Title	Rev.	Date
DO-11045-F	General assembly CYCLOPS Y&Z – Purge Indicator	F	2002-08-21
EB-11021-C-1	PC board schematics, CYCLOPS Y&Z – Purge Indicator	C	2005-04-11
EB-11021-C-2	PC board bare, CYCLOPS Y&Z – Purge Indicator	C	2005-04-11
EB-11021-C-3	PC board trace layout, CYCLOPS Y&Z – Purge Indicator	C	2005-04-11
EB-11021-C-4	PC board general assembly, CYCLOPS Y&Z – Purge Indicator	C	2005-04-11
MM-10002-H-2	Customer ATEX & IECEx casing brand Label layout CYCLOPS Z –Purge Indicator (sheet 2 of 3)	H	2002-12-27
MM-10002-H-1	Purge Solutions ATEX & IECEx casing Label layout CYCLOPS Z –Purge Indicator	H	2002-12-27

#### Routine tests

A dielectric strength test according to EN60079-15:2005 clause 34.2.1 must be performed on each individual unit.

#### [17] Special conditions for safe use

- When these purge indicators are used with a pressurised enclosure the pneumatic parameters and overall temperature class must be defined by the manufacturer or in a separate certificate.
- When the purge controllers are mounted in the enclosure wall of the pressurised enclosure, The installer must ensure proper installation to achieve the desired degree of protection. The Ex-p enclosure must be at least IP54.
- The ambient temperature range is  $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +65^{\circ}\text{C}$

#### [18] Essential Health and Safety Requirements

See part 9 of this certificate

END OF CERTIFICATE

