

TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MERB0000411
Revision No:
1

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify:

That the Fixed oxygen analysis and gas detection equipment

with type designation(s)
Polytron 8xxx Series, ITR 0xxx, XTR 0xxx, ETR 0xxx

Issued to
Dräger Safety AG & Co. KGaA
Lübeck, Germany

is found to comply with the requirements in the following Regulations/Standards:
Regulation **MSN 1874 Amendment 7,**
item No. UK/3.54b. SOLAS 74 as amended, Regulation II-2/4 & VI/3 and FSS Code 15

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2029-02-18.**

Issued at **London** on **2024-02-19**

DNV local unit:
Hamburg

Approval Engineer:
Dariusz Lesniewski



Approved Body No.: **0097**

for **DNV UK Ltd.**

Christine Mydlak-Röder
MER Service Responsible



**Maritime &
Coastguard
Agency**

UK Approved Body Authorised
by the MCA

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the approved body named on this certificate.

During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.

"The Mark of Conformity" may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. In case limitations of use apply, these should be indicated in the Annex.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

Gas transmitter for monitoring concentrations of combustible gases and vapours and oxygen

Technical Data Polytron 8xx0:
 Supply voltage: 3-wire shielded cable, 10 to 30 VDC
 Output: 4 to 20 mA analogue current (normal condition)
 3x relay outputs (Alarm, Fault, Maintenance) - optional
 Display: Resolution 128x64, back-lit
 3x LEDs (Alarm, Fault, Maintenance)
 Degree of protection: IP 65/66/67
 Software Version: 4.x.x

Transmitter types, coding of type:

- (1)TR 0(2)(3)(4)
 (1) Sensor
 I, X or E : infrared (I), catalytic (X) or electro-chemical (E)
 (2) Material of housing
 4 or 5 : aluminium (4), stainless steel (5)
 (3) Internal sensor (ITR 0xxx)
 1 : IDS 0101 (PIR 7000, 334) P8700
 2 : IDS 0102 (PIR 7000, 340) P8700
 Internal sensor (XTR 0xxx)
 0 : IDS 0002 (DrägerSensor IR) P8310
 1 : XDS 020X (Dräger DQ / DQ S) P8200
 Internal sensor (ETR 0xxx)
 0 : O₂, O₂LS P8100
 (4) Interface
 0 : XP or "d", 4-20mA
 1 : XP or "d", 4-20mA w/Relays
 I : "e", 4-20mA
 J : "e", 4-20mA w/Relays

Application/Limitation

The equipment is found to comply with following location/application dependent requirements:

Category	TEMPERATURE	VIBRATION	ENCLOSURE	EMC
Location class	TMP-D	VIB-B	ECL-B/C*	EMC-B

*ECL-C: C

- XTR 05**
- ITR 05**
- ETR 05** (excepted ETR 052*)
- EAC 011*
- ERH 00**
- ERA 00**
- only with stainless steel or nickel plated blind plugs

EMC-B:

- Type approved power supply required

Location class: Location or test parameter

TMP-D: -25°C/+70°C (ref. IEC 60092-504 (2016) table 1 item 6-7)

VIB-B: Acceleration 4g (ref. IEC 60092-504 (2016) table 1 item 10)

ECL-B (IP65): Engine room (ref. IEC 60092-504 (2016) table 1 12)

ECL-C (IP66/67): Open deck, masts (ref. IEC 60092-504 (2016) table 1 item 9 and 12)

EMC-B: Bridge and open deck zone (ref. IEC 60092-504 (2016) table 1 item 13-20)

Type Examination documentation

Test Reports (Environmental, EMC):

Test Report No. 422.193.2 Rev. 0, dated 2022-11-24 (EMC, P8100 SensorAlive)

Test Report No. 423.134.1 Rev. 0, dated 2023-09-22 (EMC, P8200)

Test Report No. 423.134.2 Rev. 0, dated 2023-09-22 (EMC, P8700)

Test Report No. 423.134.3 Rev. 0, dated 2023-10-10 (vibration, P8200)

Test Report No. 423.134.4 Rev. 0, dated 2023-10-10 (vibration, P8700)
Test Report No. 423.134.5 Rev. 0, dated 2023-10-12 (clime, P8200)
Test Report No. 423.134.6 Rev. 0, dated 2023-10-12 (clime, P8700)
Test Report No. 423.134.7 Rev. 0, dated 2023-10-13 (IP, P8200)
Test Report No. 423.134.8 Rev. 0, dated 2023-10-13 (IP, P8700)

Explosion Protection:

PTB 11 ATEX 1005 X, Issue 04, dated 2022-12-14

Test Report No. Ex 22-21212, dated 2022-12-14

Measuring Performance, Software:

BVS 13 ATEX G 001 X, Issue 02, dated 2023-10-23

PFG 14 G 001 X, Supplement 8, dated 2023-10-31

Test Report No. 41300313P N12, dated 2023-10-31

Test Report No. 41300313P N14, dated 2023-10-17

Test Report No. 41300313P N15, dated 2023-10-23

Z10053474 0023 Rev. 02, dated 2020-07-30

Test Report No. DL76801aC, dated 203-11-24

Other:

IFU_9033826 (P8900) Edition 07, dated 2023-03

11258338 DNV Test Plan Polytron 8xx0

Tests carried out

IEC 60092-504:2016

IEC 60533:2015

EN 50104:2019

EN 60079-0:2018 incl. AC:2020

EN 60079-29-1:2016

Marking of product

- Manufacturer's name or trade mark
- Type designation
- Mark of Conformity (wheel mark), followed by
- Identification number of the NoBo / the year the mark is affixed (example: 0097/2024)