



Type Approval Certificate

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

This certificate is issued to:

PRODUCER	Dräger Safety AG & Co. KGaA Revalstrasse 1 23560 Lübeck Germany
DESCRIPTION	Open Path Gas Detection System (included receiver and transmitter)
TYPES	Dräger Pulsar 7x00 (OTR 00** ATEX/IECEX) x = 0: Transmitter x = 7: Receiver factory calibrated on Methane and Propane x = 9: Receiver factory calibrated on Ethylene
APPLICATION	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2, ENV3 and ENV4 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 - May 2018.
ADDITIONAL TESTS	Safety Integrity Level: SIL 2 SC 3 (Systematic Suitability SIL 3) Low temperature: -40°C/5h
STANDARD	IEC 60079-0: 2011, EN 60079-0: 2012+A11: 2013 IEC 60079-1: 2014, EN 60079-1: 2014 IEC 60079-11: 2011, EN 60079-11: 2012 IEC 60079-31: 2013, EN 60079-31: 2014 IEC 60079-29-4: 2009, EN 60079-29-4: 2010 EN 50270: 2015+AC: 2016 (susceptibility: type 2, emission: type 1) EN 50581: 2012, EN 61508: 2010 FM Class 6325, ANSI/ISA-12.13.04
Certificate No.	19/20040
Issue Date	05 June 2019
Expiry Date	04 June 2024
Sheet	1 of 3




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Hamburg Technical Support Office
Lloyd's Register EMEA

LR031.1.2016.06

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RATINGS

Power supply: 24V DC
 Power consumption: < 5 W Rx receiver, < 9 W Tx transmitter
 Signal output: 4 to 20mA and HART
 Operating temp: -40° to +70° C
 Response time: ≤ 2,0 sec with Rx/Tx digital link
 Enclosure: IP66, IP67
 Operating range (distance between transmitter and receiver)
 Tx S(hort): 4 to 60m
 Tx L(ong): 30 to 200m
 Rx S(hort): 4 to 120m
 Rx L(ong): 100 to 200m
 mounting plate: Horizontal marked 'Ho' or no marked 'Ho' vertical

OTHER CONDITIONS

Standard Black PE reinforced junction box (4 x M20)
 ** = 10: Dräger Pulsar 7000 Tx S Range JB Ex e
 20: Dräger Pulsar 7000 Tx L Range JB Ex e
 51: Dräger Pulsar 7700 Rx S Range JB Ex e
 71: Dräger Pulsar 7700 Rx L Range JB Ex e
 61: Dräger Pulsar 7900 Rx S Range JB Ex e
 10: Dräger Pulsar 7000 Tx S Range JB Ex e Ho
 20: Dräger Pulsar 7000 Tx L Range JB Ex e Ho
 51: Dräger Pulsar 7700 Rx S Range JB Ex e Ho
 61: Dräger Pulsar 7900 Rx S Range JB Ex e Ho
 Heavy duty / Offshore stainless-steel junction box (4 x M25)
 ** = 61: Dräger Pulsar 7900 Rx S Range JB Ex e SS
 10: Dräger Pulsar 7000 Tx S Range JB Ex e SS
 20: Dräger Pulsar 7000 Tx L Range JB Ex e SS
 51: Dräger Pulsar 7700 Rx S Range JB Ex e SS
 71: Dräger Pulsar 7700 Rx L Range JB Ex e SS

PLACE OF PRODUCTION

Dräger Safety UK Ltd.
 Drakes Court, Eagle Road
 Plymouth, Devon PL7 5JY
 United Kingdom

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The Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.

The Design Appraisal Document No. HTS/ETS 38316-19 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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