



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.

Manufacturer	WAGNER Group GmbH
Address	Schleswigstraße 1 - 5, Langenhagen, 30853, Germany
Type	Fire And Gas Detection Alarm And Control Systems
Description	Aspirating Smoke Detector TYPE TITANUS MICRO SENS DM-TM(V)(-R)(-B)-10(-F)-U DM-TM(V)(-R)(-B)-50(-F)-U TITANUS PRO SENS/net TP-3-U, TP-3-SL-U TP-4-U, TP-4-SL-U TP-5-U, TP-5-SL-U TITANUS TOP SENS TT-1-U, TT-1-SL-U
Trade Name	TITANUS MICRO SENS, TITANUS PRO SENS /net, TITANUS TOP SENS
Application	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV4 as defined in Lloyd's Register's Type

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Approval, Test Specification Number 1 – July 2013.

Specified Standard

DIN EN 54-20: 2009-2
ISO 7240-20: 2010
IEC 60695-11-5: 2016
IACS requirements E10 (1991/Rev. 7: Oct. 2018)

Ratings

Power supply: 24V DC
Current: $\leq 436\text{mA}$
Number of sensors: TITANUS MICRO SENS: 1
TITANUS PRO SENS / net, 1 - 2
TITANUS TOP SENS 1 – 2

Alarm contact: contact 1A and 30V DC
Fault contact: contact 1A and 30V DC
External reset: potential free contact

(-V) pre-alarm
(-R) localisation of seat of fire
(-B) bar graph
(-F) refrigeration Area to -40°C
(-SL) silent
(-L) fire pattern recognition
(-U) flame resistant

Sensitive (obscuration)

(10) TITANUS MICRO SENS Max. 0.1% obsc. /m detection unit DM-TMx-xx-10-x-U
(50) TITANUS MICRO SENS Max. 0.5% obsc. /m detection unit DM-TMx-xx-50-x-U
(01) TITANUS PRO SENS/net Max. 0.015% obsc. /m detector module DM-TT-01-L
(10) TITANUS PRO SENS/net Max. 0.1% obsc. /m detector module DM-TT-10-L
(50) TITANUS PRO SENS/net Max. 0.5% obsc. /m detector module DM-TT-50-L

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(01) TITANUS TOP SENS Max. 0.015% obsc. /m	detector module DM-TT-01-L
(10) TITANUS TOP SENS Max. 0.1% obsc. /m	detector module DM-TT-10-L
(50) TITANUS TOP SENS Max. 0.5% obsc. /m	detector module DM-TT-50-L

Classification for aspirating smoke detectors
according to EN 54-20: 2009-2 / ISO 7240-20:2010
Class A
Class B
Class C

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR2181072TA

The Design Appraisal Document TSO-24-019793/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.