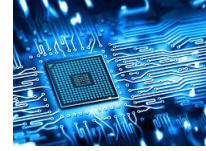


ZIZTEL IEC 60945 / 60068

TDS-015 Issue 01 Ziztel Technical Bulletin



Thank you for your interest in Ziztel - we are a UK based manufacturer of PAGA and Intercom products. Our systems are mainly designed for use in the Marine, Hazardous Oil / Gas and Petrochemical industries.

The systems we deliver comply with international standards.

Independent testing to IEC 60945 and IEC 60068 continues Ziztel commitment to delivering a world class product into some of the most aggressive and demanding applications known to man. The Ziztel package is in daily use in such diverse applications as Off shore drilling rigs, Oil producing sites, Military installations where safety and reliability are key system requirements.

COMPLIANCE WITH IEC60945 AND IEC60068

IEC 60945 Maritime Navigation and Radio communication Equipment and Systems – General Requirements

IEC 60068 Environmental Testing



Ziztel Public Address and General Alarm PAGA Main Broadcast system and MT50 Talkback Intercom system have been independently UKAS tested to ensure compliance with the strict requirements of IEC60945 and IEC 60068.



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Dry Heat:

The equipment was fully operational during the test and subjected to a temperature of +55°C +/- 2°C for 16 hours. The humidity was monitored during the heating process (not to exceed 50% at 35°C; equivalent to 9% at 70°C). A functional test was then performed during the last hour at the test temperature and again after recovery to normal temperature. The system was fully operational during and at the conclusion of the test cycle.

No degradation of equipment performance.

<i>Overview</i>	<i>Referenced Basic Test Standard</i>
<i>EN60945: 2002 + Corrigendum 2008</i>	<i>IEC 60068-2-2</i>
<i>IACS E10:2006</i>	<i>IEC 60068-2-2</i>
<i>Lloyd`s Register Type Approval System Test Specification Number 1 : 2013</i>	<i>IEC 60068-2-2</i>
<i>BV Type Approval Rules: 2009 + A1 : 2010</i>	<i>IEC 60068-2-2</i>
<i>ABS Rules for Building and Classing Steel Vessels:2010</i>	<i>IEC 60068-2-2</i>
<i>Polish Register Type Approval Requirements : 2007</i>	<i>IEC 60068-2-2</i>
<i>GL Type Approval Requirements: 2003</i>	<i>IEC 60068-2-2</i>
<i>DNV Standard for certification No. 2.4 – Environmental Test Specification for instrumentation and automation equipment</i>	<i>IEC 60068-2-2</i>
<i>RINA Type approval rules : 2011</i>	<i>IEC 60068-2-2</i>
<i>NKK Type approval rules : 2011</i>	<i>IEC 60068-2-2</i>

Damp Heat:

The system was placed in a test chamber and the temperature raised to 55°C ± 2°C at a humidity of 95% ± 5% for a period of 12 hours with the equipment fully operational. The temperature was then reduced to 20°C ± 5°C for not less than 12 hours. This cycle was then repeated but with the system de energised. Supply was reconnected and a functional test was performed during the last hour at the test temperature and again after recovery to normal temperature. Monitoring of insulation resistance was performed for the duration of the testing.

No degradation of equipment performance.

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Overview	Referenced Basic Test Standard
<i>EN60945: 2002 + Corrigendum 2008</i>	<i>IEC 60068-2-30</i>
<i>IACS E10:2006</i>	<i>IEC 60068-2-30</i>
<i>Lloyd`s Register Type Approval System Test Specification Number 1 : 2013</i>	<i>IEC 60068-2-30</i>
<i>BV Type Approval Rules: 2009 + A1 : 2010</i>	<i>IEC 60068-2-30</i>
<i>ABS Rules for Building and Classing Steel Vessels:2010</i>	<i>IEC 60068-2-30</i>
<i>Polish Register Type Approval Requirements: 2007</i>	<i>IEC 60068-2-30</i>
<i>GL Type Approval Requirements: 2003</i>	<i>IEC 60068-2-30</i>
<i>DNV Standard for certification No. 2.4 – Environmental Test Specification for instrumentation and automation equipment</i>	<i>IEC 60068-2-30</i>
<i>RINA Type approval rules : 2011</i>	<i>IEC 60068-2-30</i>
<i>NKK Type approval rules : 2011</i>	<i>IEC 60068-2-30</i>

Low Temperature':

The equipment was fully operational and subjected to the following cold temperature test: -25°C +/- 2°C for a period not less than 16 hours. A functional test was performed during the last hour at the test temperature and again after recovery to normal temperature with insulation resistance measurement also being performed.

No degradation of equipment performance.

Overview	Referenced Basic Test Standard
<i>EN60945: 2002 + Corrigendum 2008</i>	<i>IEC 60068-2-1</i>
<i>IACS E10:2006</i>	<i>IEC 60068-2-1</i>
<i>Lloyd`s Register Type Approval System Test Specification Number 1: 2013</i>	<i>IEC 60068-2-1</i>
<i>BV Type Approval Rules: 2009 + A1: 2010</i>	<i>IEC 60068-2-1</i>
<i>ABS Rules for Building and Classing Steel Vessels:2010</i>	<i>IEC 60068-2-1</i>
<i>Polish Register Type Approval Requirements: 2007</i>	<i>IEC 60068-2-1</i>
<i>GL Type Approval Requirements: 2003</i>	<i>IEC 60068-2-1</i>
<i>DNV Standard for certification No. 2.4 – Environmental Test Specification for instrumentation and automation equipment</i>	<i>IEC 60068-2-1</i>
<i>RINA Type approval rules: 2011</i>	<i>IEC 60068-2-1</i>
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Vibration:

The equipment was fully operational whilst being tested in three mutually perpendicular axes as follows: for each axis the sweep is carried out from 2-13.2Hz at +/-1mm and from 13.2-100Hz at +/-0.7g with a sweep rate of 0.5 Octave / Minute. The central rack, AP100-01 and ZAP10-02 access units were vibrated for a period of 2 hours at *each* resonant frequency with an amplification factor of 2 or above, the test was repeated at 30Hz.

No degradation of equipment performance.

Overview	Referenced Basic Test Standard
<i>EN60945: 2002 + Corrigendum 2008</i>	<i>IEC 60068-2-6</i>
<i>IACS E10:2006</i>	<i>IEC 60068-2-6</i>
<i>Lloyd`s Register Type Approval System Test Specification Number 1: 2013</i>	<i>IEC 60068-2-6</i>
<i>BV Type Approval Rules: 2009 + A1: 2010</i>	<i>IEC 60068-2-6</i>
<i>ABS Rules for Building and Classing Steel Vessels:2010</i>	<i>IEC 60068-2-6</i>
<i>Polish Register Type Approval Requirements: 2007</i>	<i>IEC 60068-2-6</i>
<i>GL Type Approval Requirements: 2003</i>	<i>IEC 60068-2-6</i>
<i>DNV Standard for certification No. 2.4 – Environmental Test Specification for instrumentation and automation equipment</i>	<i>IEC 60068-2-6</i>
<i>RINA Type approval rules: 2011</i>	<i>IEC 60068-2-6</i>
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