

# TYPE APPROVAL CERTIFICATE

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the DNV GL Type Approval System.

Certificate No.	<b>11 251 - 14 HH</b>
Company	<b>W.E.St. Elektronik GmbH</b> <b>Gewerbering 31</b> <b>41372 Niederkrüchten, GERMANY</b>
Product Description	<b>Power amplifier</b>
Type	<b>PAM-199-P-2x3x, PAM-196.FM-P-2x3x</b>
Environmental Category	<b>C, EMC2</b>
Technical Data / Range of Application	<b>For the control of one directional valve with two solenoids or one/two independent pressure or throttle valves with one solenoid each.</b>  <b>Power supply : 12V / 30 VDC (incl. Ripple)</b> <b>Power consumption max.: 60W</b> <b>External protection: 3 A medium time lag</b> <b>Inputs: digital, analogue (-10V to +10V or 4mA to 20mA)</b> <b>Outputs: digital, nominal PWM output current (500 to 2600 mA- broken wire monitored and short circuit proofed-), PWM frequency (61 to 2604 Hz-adjustable in steps)</b>
Test Standard	<b>GL Guidelines for the Performance of Type Approvals, Chapter 2 - Test Requirements for Electrical/Electronic Equipment and System, Edition 2012</b>
Documents	<b>Test reports: TREO 160-14; TÜV Nord 14144-1</b> <b>Technical documentation: PAM-199-P-2030 (27.05.2014)</b>
Remarks	<b>The USB interface to be used for adjustment only. This certificate is issued on the basis of GL Guidelines for the Performance of Type Approvals, Chapter 1 - Procedure (VI-7-1), Edition 2007.</b>

Valid until **2019-08-25**  
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Type Approval Symbol



**DNV GL**

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