



# Type Approval Certificate

Germanischer Lloyd

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

Certificate No.	<b>8541593 HH</b>
Company	<b>Böning Automationstechnologie GmbH &amp; Co. KG Am Steenöver 4 27777 Ganderkesee, GERMANY</b>
Product Description	<b>Engine Monitoring System</b>
Type	<b>AHD 414</b>
Environmental Category	<b>C, EMC2</b>
Technical Data / Range of Application	<b>Start-Stop automatic for auxillary diesel engine</b> <b>Supply voltage 12 V DC or 24 V DC</b> <b>Inputs</b> 7 binary inputs, NO or NC contacts with wire break supervision facility for 4 contacts potential separation of inputs by optical coupler 1 analogue input for speed U max. = 50 V <b>Outputs</b> 2 binary outputs, 24 V, 10 A 2 binary outputs, 24 V, 2 A 1 potential-free NO / NC contact 24 V, 2 A for common alarm <b>Degree of protection: front IP 54, terminal IP 00</b> <b>Base software version 1C60F5, project software 1Cxxxx</b>
Test Standard	<b>Guidelines for the Performance of Type Approvals, 2003.</b>
Documents	<b>Technical description, Circuit diagram 930 104; Test reports Atlas Elektronik 25.3.93, Aqua Signal QTR F12 Böning 99/00015, 99/00016 dated 01.07.1999; EMV services 02/2064-7, dated 2002-05-14.</b>
Remarks	<b>None.</b>
Valid until	<b>2014-11-07</b>

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Type Approval Symbol



File No. I.A.03

Hamburg, 2009-10-28

Germanischer Lloyd

Jürgen Wittburg

Jens Dietrich

This certificate is issued on the basis of "Regulations for the Performance of Type Tests, Part 0, Procedure".