CERTIFICATE NUMBER

09-HG526745-PDA

ABS TECHNICAL OFFICE

Hamburg Engineering Services

DATE

24 November 2009

CERTIFICATE OF
Design Assessment

This is to Certify that a representative of this Bureau did, at the request of

Phoenix Contact GmbH & Co. KG - Blomberg

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate. It will remain valid as noted below or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT: Ethernet Switch

MODEL: FL Switch SFNT 5TX, 4TX/FX, 8TX, 7TX/FX, 7TX/FX-ST

ABS RULE: 2009 Steel Vessel Rules, 1-1-4/7.7, 4-8-3/1.7/1.11.1/1.17, 4-9-7/7/13

OTHER STANDARD N.A.;

AMERICAN BUREAU OF SHIPPING

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D-48346 Ostbevern
Etherwan Systems Inc., Far East World Center 4TH
FL-7, 79 HSIN TAI WU RD, SEC 1,
Taipei Hsien 221/ Taiwan

Product: **Ethernet Switch**

Model: **FL Switch SFNT 5TX, 4TX/FX, 8TX, 7TX/FX, 7TX/FX-ST**

Intended Service:

Ethernet network applications, network expansion to the field level.

Description:

Five and eight-port standard function Ethernet Switches.
FL Switch SFNT 5TX (2891003): 5 RJ45 ports (10/100 Mbps).
FL Switch SFNT 4TX/FX (2891004): 4 RJ45 ports (10/100 Mbps) and 1 fiber optic port in SC format (100 Mbps).
FL Switch SFNT 8TX (2891005): 8 RJ45 ports (100 Mbps).
FL Switch SFNT 7TX/FX (2891006): 7 RJ45 ports (10/100 Mbps) and 1 fiber optic port in SC format (100 Mbps).
FL Switch SFNT 7TX/FX-ST (2891007): 7 RJ45 ports (10/100 Mbps) and 1 fiber optic port in ST format (100 Mbps).

Ratings:

Power Supply: 24V DC.
Alarm Contacts: 24V DC, 100 mA.
Degree of Protection: IP20.
Operating Temperature: -25°C to 70°C.

Service Restrictions:

Unit Certification is required for this product.

Comments:

Each particular application of the modules is to be specifically approved in conjunction with the relevant system in which they are used.

Term of Validity:

This product/model is covered under Product Design Assessment (PDA) Certificate # 09-HG526745-PDA, dated 24/Nov/2009. This PDA Certificate expires 23/Nov/2014. It will remain valid for 5 years from date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first). It is valid for all vessels contracted on or before the date of the Rules used in this evaluation.

STANDARDS

ABS Rules:

2009 Steel Vessel Rules, 1-1-4/7.7, 4-8-3/1.7/1.11.1/1.17, 4-9-7/7/13

National:

N.A.

International:

NA

Government Authority:

NA

EUMED:

NA

Others:

NA