

TYPE APPROVAL CERTIFICATE

DNV·GL

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. **95 035 - 14 HH**

Company **PULS GmbH**
Arabellastraße 15
81925 München, GERMANY

Product Description **Power Supply and Protection Modules**

Type **PISA11, DIMENSION CPS20, MiniLine2 ML120, DIMENSION YR-Series, DCM types**

Environmental Category **C, [EMC1], EMC2**

Technical Data / Range of Application **DIMENSION PISA Protection Modules (for power distribution and limitation):**
PISA11.206212, In: 24-28VDC, Out 2 x 6A, 2 x 12A
PISA11.206206, In: 24-28VDC, Out 2 x 3A, 2 x 6A
PISA11.401, In: 24-28VDC, Out 4 x 1A
PISA11.402, In: 24-28VDC, Out 4 x 2A
PISA11.403, In: 24-28VDC, Out 4 x 3A
PISA11.404, In: 24-28VDC, Out 4 x 4A
PISA11.406, In: 24-28VDC, Out 4 x 6A
PISA11.410, In: 24-28VDC, Out 4 x 10A
PISA11.CLASS2: In: 24-28VDC, Out: 4 x 3.7A at 24V and 3.2A at 28V.
Protection Modules to be supplied by regulated PULS power supplies only (see PULS Installation Requirements).

Continued on page 2...

Test Standard **Guidelines for the Performance of Type Approvals, Chapter 2- Test Requirements for Electrical / Electronic Equipment and Systems (VI-7-2), Edition 2012**

Documents **Test report : TR2-GL05-BS1_XV_2014-01-10 with appendices; TR2-GL05-BS1_XV_Extension-1, dated 2015-07-03. Related Data Sheets / Instruction Manuals.**

Remarks **See page 2. Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Valid until **2019-01-09**

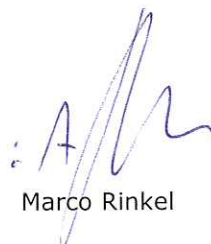
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File No. **I.M.03**

Hamburg, 2015-08-17

Type Approval Symbol




Marco Rinkel


Jens Dietrich

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DIMENSION CPS-Series Power Supplies:

CPS20.121, In 100-240VAC, Out: 12-15VDC, 30A, 360W
CPS20.241, In 100-240VAC, Out: 24-28VDC, 20A, 480W
CPS20.361, In 100-240VAC, Out: 36-42VDC, 13.3A, 480W
CPS20.481, In 100-240VAC, Out: 48-56VDC, 10A, 480W

Power supplies, brand label: Wärtsilä DCM-10, DCM-20:
DCM-10, In 100-240VAC or 110VDC, Out: 24-28VDC, 20A, 480W
DCM-20, In 100-240VAC or 110VDC, Out: 48-56VDC, 10A, 480W

MiniLine2 Power Supplies

ML120.241, In: 100-120VAC / 220-240VAC, Out: 24-28VDC, 5A, 120W
ML120.244, In: 200V-240VAC, Out: 24VDC, 5A, 120W
ML120.CLASS2, In: 100-120VAC / 220-240VAC, Out: 24VDC, 3.8A, 91.2W

DIMENSION YR-Series MOSFET Redundancy Modules for Input Decoupling

YR40.242 Dual Redundancy Module, In: 2 x 12-28VDC, Out: 40A, EMC1
YR40.245 Single Redundancy Module, In: 12-28VDC, Out: 40A, EMC1
YR40.482 Dual Redundancy Module, In: 2 x 24-56VDC, Out: 40A, EMC1
YR80.242 Dual Redundancy Module, In: 2 x 12-28VDC, Out: 80A, EMC1.
Redundancy Module inputs to be supplied from sources with negligible harmonics (see PULS Installation Requirements) .

Variants with suffix:

-S1: with Quick-connect spring clamp terminals
-C1: with conformal coated PCBs.

Remarks: Conditions in respective Instruction Manuals to be observed.

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