DNV·GL

Certificate No:
TAA00002HK

TYPE APPROVAL CERTIFICATE

This is to certify:

That the General Controller

with type designation(s)
Hybrid motor starter ELR Series

Issued to
Phoenix Contact GmbH & Co. KG
Blomberg, Nordrhein-Westfalen, Germany

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

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

Temperature	**B**
Humidity	**B**
Vibration	**A**
EMC	**A**
Enclosure	**Required protection according to the Rules shall be provided upon installation on board.**

Issued at **Hamburg** on **2019-12-02**
This Certificate is valid until **2024-12-01**.
DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Heinz Scheffler**

Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Product description

Reversing Hybrid Motorstarter with SIL, ATEX Overload protection and Underload detection

Article No.	Article Name	Connection
2900582	ELR H5-IES-SC- 24DC/500AC-0,6	Screw-Connector
2900414	ELR H5-IES-SC- 24DC/500AC-2	
2900421	ELR H5-IES-SC- 24DC/500AC-9	
2900420	ELR H5-IES-SC-230AC/500AC-2	
2900422	ELR H5-IES-SC-230AC/500AC-9	
2909556	ELR H5-IES-PT-24DC/500AC-3-P	Push in-Connector
2909554	ELR H5-IES-PT-24DC/500AC-9-P	

Reversing Hybrid Motorstarter with SIL, ATEX Overload protection

Article No.	Article Name	Connection
2297031	ELR W3- 24DC/500AC- 2I	Screw-Connector
2297057	ELR W3- 24DC/500AC- 9I	
2297044	ELR W3-230AC/500AC- 2I	
2297060	ELR W3-230AC/500AC- 9I	

Hybrid Motorstarter with SIL, ATEX Overload protection and Underload detection

Article No.	Article Name	Connection
2900566	ELR H3-IES-SC- 24DC/500AC-0,6	Screw-Connector
2900567	ELR H3-IES-SC- 24DC/500AC-2	
2900569	ELR H3-IES-SC- 24DC/500AC-9	
2900568	ELR H3-IES-SC-230AC/500AC-2	
2900570	ELR H3-IES-SC-230AC/500AC-9	
2909557	ELR H3-IES-PT-24DC/500AC-3-P	Push in-Connector
2909555	ELR H3-IES-PT-24DC/500AC-9-P	

Reversing Hybrid Motorstarter with SIL and Overload protection

Article No.	Article Name	Connection
2908699	ELR H5-IS-SC-24DC/500AC-3-P	Screw-Connector
2908697	ELR H5-IS-SC-24DC/500AC-9-P	
2909569	ELR H5-IS-PT-24DC/500AC-3-P	Push in-Connector
2909567	ELR H5-IS-PT-24DC/500AC-9-P	

Hybrid Motorstarter with SIL and Overload protection

Article No.	Article Name	Connection
2908700	ELR H3-IS-SC-24DC/500AC-3-P	Screw-Connector
2908698	ELR H3-IS-SC-24DC/500AC-9-P	
2909570	ELR H3-IS-PT-24DC/500AC-3-P	Push in-Connector
2909568	ELR H3-IS-PT-24DC/500AC-9-P	

Reversing Hybrid Motorstarter with Overload protection

Article No.	Article Name	Connection
2908695	ELR H5-I-SC-24DC/500AC-3-P	Screw-Connector
2908693	ELR H5-I-SC-24DC/500AC-9-P	
2909562	ELR H5-I-PT-24DC/500AC-3-P	Push in-Connector
2909560	ELR H5-I-PT-24DC/500AC-9-P	

Hybrid Motorstarter with Overload protection

Article No.	Article Name	Connection
2908696	ELR H3-I-SC-24DC/500AC-3-P	Screw-Connector
2908694	ELR H3-I-SC-24DC/500AC-9-P	
2909563	ELR H3-I-PT-24DC/500AC-3-P	Push in-Connector
2909561	ELR H3-I-PT-24DC/500AC-9-P	

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case.
Reference is made to DNV GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Ex-certification and SIL is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Test Reports: U145060E5; U71394b; U 80081E1; E181123E12; E181122E12; E113885E22; E113885E12; E113884E22; E113884E12; E80081; E62394B; TB_ELR W 3-230AC-9I_02; TB_ELR W 3-24DC-0,4I_01
Documents: TAA00002HK_related-docs_r01

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE