

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Monitoring Relay**with type designation(s)
SIM-Q, SIM Q mkII

Issued to

DEIF A/S
Skive, Midtjylland, Denmarkis 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.**Issued at **Hamburg** on **2018-05-30**This Certificate is valid until **2023-05-29**.DNV GL local station: **Aalborg**Approval Engineer: **Thomas Hartmann**for **DNV GL**.....
Arne Schaarmann
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.



Product description

Insulation monitoring device for the continuously monitoring of the insulation resistance between the connected network (IT-network) and Functional Earth (FE).

Common properties			
Auxiliary voltage U_s	24VDC / 110 VAC/ 230 VAC/ 450 VAC		
Overvoltage Category	600V Cat.III		
Pollution degree	2 (see Application/ Limitation)		
Degree of Protection	Front: IP 52 Rear: IP 20		
Measuring range	1..0 M Ω / 1000..0 k Ω / 10..0 M Ω		
Aux. Supply influence	Max 0.2 % of scale length at $U_s +20\% - 15\%$ Max 5.0 % of scale centre at $U_s -15\% - 20\%$		
Temperature drift	Max 0.5 % of scale length per 10°		
DC resistance (R_i)	300 k Ω $\pm 1\%$		
AC impedance (Z_i)	251 k Ω $\pm 1\%$ at 50 Hz		
Measuring output voltage (U_m):	Typ: ± 25.5 V Max: ± 27.3 V		
Measurement current (I_m)	Max: 100 μ A		
AC Input voltage (U_N)	690 VAC +20% continuously (828 VAC)		
DC Input voltage (U_{fg})	1000 VDC continuously		
Frequency working range	20...500Hz		
Product properties	SIM-Q	SIM-Q mkII	SIM-Q mkII Custom
Max. Leakage Capacitance	50 μ F / 500 μ F	500 μ F / 2000 μ F	
Accuracy	As per makers' technical data sheet		
Programmed fixed set-point	N/A	Off	0 to 10M Ω
Power-up fast-mode	15 s	0 s	0 to 30s
Power-up set-point	N/A	10 s	0 to 30s
Power-up delay	N/A	15 s	0 to 30s
Warning delay Off	N/A	4 s	0 to 30s
Options:	As per makers' product description		

Application/Limitation

Location Classes:

Temperature:	B
Humidity:	B
Vibration:	A

For installation inside switchgear and control gear assemblies.
 Operating instructions of the manufacturer are to be observed.

Type Approval documentation

Job Id: **262.1-026388-1**
Certificate No: **TAE0000260**

Tests carried out

Power supply variations, cold, dry heat, damp heat, vibration, flame retardancy, EMC

Marking of product

DEIF – SIM Q/ SIM-Q MKII – type designation

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and 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