DNV·GL

Certificate No:
TAE00003NW

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Instrument for Switchboard

with type designation(s)
IFL12, IFL12C, IFL12MC, IFL12MCT, IFL12H

Issued to
Schneider Electric Private Limited
Bangalore, Karnataka, India

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.

Issued at **Hamburg** on **2019-09-05**
This Certificate is valid until **2024-09-04**.
DNV GL local station: **Mumbai NB & CMC**

Approval Engineer: **Uwe Supke**

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.

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Job Id: **262.1-031921-1**
Certificate No: **TAE00003NW**

Name and place of manufacturer

Schneider Electric India Pvt Ltd,
#12A, Attibele Industrial Area
Hosur Main Road Neralur Post
Bangalore 562107 India

Product description

Insulation Fault Locator:

Model number	Commercial reference number	Description
IFL12 IFL12C	IMDIFL12 IMDIFL12C	12 channel insulation fault locator for ungrounded power systems with isolated neutral or impedance-grounded neutral. For monitoring system voltage <=1000V.
IFL12H	IMDIFL12H	12 channel insulation fault locator for ungrounded power systems with isolated neutral or impedance-grounded neutral. For monitoring system voltage <=230V for hospital applications.
IFL12MC	IMDIFL12MC	12 channel insulation fault locator for ungrounded power systems with isolated neutral or impedance-grounded neutral. For monitoring system voltage <=480V. (<=1000V with adaptor)
IFL12MCT	IMDIFL12MCT	12 channel insulation fault locator for ungrounded power systems with isolated neutral or impedance-grounded neutral. For monitoring system voltage <=480V. (<=1000V with adaptor) Conformal coated.

Technical data / characteristics:

Locator type	IFL12, IFL12C, IFL12MC, IFL12MCT	IFL12H
Monitored Network	• Ungrounded system with isolated neutral or impedance-grounded neutral • monitoring system voltage <=1000V (IFL12, IFL12C) <=480 V (IFL12MC,IFL12MCT) • Frequency: 50/60/400 Hz • Maximum total ungrounded system capacitance: 150µF • Maximum capacitance per monitored feeder: 15µF • Accuracy <= 15%	• Ungrounded system with isolated neutral or impedance-grounded neutral • monitoring system voltage <=230V for hospital applications.
Auxilliary power supply	50/60 Hz 100 to 300 VLN/ 440V LL AC ±15 % 100 to 440 V DC ±15 % <6W	50/60 Hz 110 to 230 VLN/ 400V LL AC ±15 % 125 to 250 V DC ±15 % <10W
Relay output	• Type: Form C mechanical • Rated load: 6A at 250VAC, 1A at 48VDC • Maximum switching voltage: 400 VAC, 300 VDC • Maximum switching current: 8A	• Type: Form C mechanical • Rated load: 6A at 250VAC, 1A at 48VDC • Maximum switching voltage: 400 VAC, 300 VDC Maximum switching current: 8A
Operating temperature	- 25° to + 55 ºC	- 25° to + 55 ºC

Locator type	IFL12, IFL12C, IFL12MC, IFL12MCT	IFL12H
Degree of protection	IP54 on front display, IP20 body	IP54 on front display, IP20 body
Remark	To be used with IM400 insulation monitoring device.	To be used with IM20-H insulation monitoring device.

Application/Limitation

For installation inside switchboards / enclosures onboard ships and offshore units.
Operating instructions of the manufacturer are to be observed.

Type Approval documentation

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, November 2016.
Type tests in accordance with IEC 61557-9 and IEC61010-1.

Marking of product

Manufacturer – Type designation – Serial number - Power ratings.

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