DNV·GL

Certificate No:
TAA0000246

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Programmable Controller

with type designation(s)
FL1B-… , FL1C-… , FL1D-… and FL1E-… and FL1F-… Series

Issued to
IDEC Corporation
Osaka City, Osaka Pref., Japan

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	**D**
Humidity	**B**
Vibration	**A**
EMC	**A (B for TD)**
Enclosure	**Required protection according to DNV GL Rules shall be provided upon installation on board**

Issued at **Hamburg** on **2018-12-20**
This Certificate is valid until **2023-12-19**.
DNV GL local station: **Kobe**

Approval Engineer: **Marco Rinkel**

for **DNV GL**

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

IDEC SmartRelay (Base Module)
FL1B-H12SCD, -H12RCA, -H12RCC, -H12RCE, -B12RCE, -B12RCA, -B12RCC
FL1C-H12SCD, -H12RCA, -H12RCC, -H12RCE, -B12RCE, -B12RCA, -B12RCC
FL1D-H12SCD, -H12RCA, -H12RCC, -H12RCE, -B12RCE, -B12RCA, -B12RCC
FL1E-H12SCD, -H12RCA, -H12RCC, -H12RCE, -B12RCE, -B12RCA, -B12RCC
FL1F-H12SCD 8DI(4AI)/4DQ
FL1F-H12RCA 8DI/4DQ
FL1F-B12RCA 8DI/4DQ
FL1F-H12RCE 8DI(4AI)/4DQ
FL1F-B12RCE 8DI(4AI)/4DQ
FL1F-H12RCC 8DI/4DQ
FL1F-B12RCC 8DI/4DQ

IDEC SmartRelay (Expansion Module):

FL1B/FL1F-M08B1S2	24 V DC	4 DI/4 DO
FL1B/FL1F-M08D2R2	24 V AC/DC	4 DI/4 DO relays
FL1B/FL1F-M08B2R2	12/24 V DC	4 DI/4 DO relays
FL1B/FL1F-M08C2R2	115/230 V AC/DC	4 DI/4 DO relays
FL1B/FL1F-J2B2	12/24 V DC	Inputs: 2 AI
FL1F-J2BR2	12/24 V DC	Inputs: 2 x PT100/PT1000
FL1F-K2BM2	24 V DC	Outputs: 2 AO
FL1D-K2B2	24 V DC	Outputs: 2 AO

IDEC SmartRelay Text Display:

FL1E/FL1F-RD1	24 V AC, 12/24 V DC

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 classification of ships Pt.4 Ch.9 Control and monitoring systems.

IDEC SmartRelays fulfil the EMC requirements for A(General Power Distribution Zone) Exception: FL1F series except FL1F-RD1 may be used in B (bridge and deck zones)

Type Approval documentation

See ANNEX

Tests carried out

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

Marking of product

The products to be marked with:
- manufacturer name
- type designation
- serial number.

Periodical assessment

The assessment is done in connection with TAA00001AS

END OF CERTIFICATE

ANNEX
Type Approval documentation
(hidden)