DNV·GL

Certificate No:
TAA0000218

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Timer Relays

with type designation(s)
Zelio Time RE22..., RENF22..., Schneider Electric brand

Issued to
Schneider Electric Asia Pte Ltd
SINGAPORE, Singapore

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	***)**

Issued at **Hamburg** on **2018-09-28**

This Certificate is valid until **2023-09-27**.
DNV GL local station: **Certification of Materials - Singapore**

Approval Engineer: **Marco Rinkel**

for **DNV GL**
Digitally Signed By:
Papanuskas, Joannis
Signing Date: Freitag, 28. September 2018

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.

Product description

Electronic Timers Type No. RE22 or modular timing relay RENF22 followed by R followed by 1 or 2, followed by A, AC, AK, C, D, H, K, Q, QC, QE, QG, QT, M, MX, MY, MW, MK, MA or ML, followed by JU, MW, MU, MQ, MR or MT.

RE22: Timing range 20/40/60/80/100/120/140 ms
or 1s/10s/1 min/10 min/1 h/10 h/100 h
Multi or Mono-functional, Screw clamps for all types, One or two relay output 8A, 250V AC/DC

RENF22: NFC capabilities
Timing range 0.1 s...999 h

Types: 22.5 mm housing, DIN rail

Nomenclature:

RE22	R	1	M	MU
I	II	III	IV	V

I: Product Range
- -RE22 Universal Function Electronic Timer

II: Output
- - R Electromechanical relay

III: Time Delay Type and Function
- - 1 One Relay
- - 2 Two Relays

IV: Time Delay Sub-types and Sub-function
- - A On Delay function
- - AC On Delay function with control
- - AK Asymmetrical ON/OFF delay with external control
- - C Off Delay with control signal
- - D Symmetrical flashing
- - H Timing on energization
- - K Delay on de-energization
- - Q Star-delta timing
- - QC Star-delta timing
- - QE Star-delta timing
- - QG Star-delta timing
- - QT Star-delta timing
- - M Multi-function(A-At-B-C-H-Ht-Di-D-Ac-Bw)
- - MX Multi-function(Ad-Ah-N-O-P-Pt-T-Tt-W)
- - MY Multi-function(A-C-D-Di-H-W)
- - MW Multi-function(Ht-W)
- - MK Multi-function(K-He)
- - MA Multi-function(A-At-Aw)
- - ML Multi-function(L-Li-Lt)

V: Input Voltage (50/60 Hz)
- - MU 24 V dc and 24-240 V ac
- - MW 12-240 V ac/dc
- - JU 12 V ac/dc
- - MQ 230-240 V ac, 380-440 V ac
- - MR 24-240 V ac/dc
- - MT 380-415 V ac

RENF22	R	2	M	MW
I	II	III	IV	V

I: Product Range
- -RENF22 Multifunction Electronic Timer

II: Output
- - R Electromechanical relay

III: Time Delay Type and Function
- - 2 Two Relays

IV: Time Delay Sub-types and Sub-function
- - M Multi-function(A-At-B-C-H-Ht-Di-D-Ac-Bw)

V: Input Voltage (50/60 Hz)
- - MW 12-240 V ac/dc

Covered types:

RE22R1QMU, RE22R1QMQ, RE22R2AMU, RE22R2MJU, RE22R2MMW, RE22R2MMU and RE22R2MXMU, RE22R1AMR, RE22R2AMR, RE22R1HMR, RE22R2HMR, RE22R1DMR, RE22R2DMR, RE22R1CMR, RE22R2CMR, RE22R1ACMR, RE22R2ACMR, RE22R1AKMR, RE22R2MWMR, RE22R1MAMR, RE22R2MYMR, RE22R1MYMR, RE22R1MLMR, RE22R2QTMR, RE22R2QGMR, RE22R2QEMR, RE22R1QCMU, RE22R1KMR, RE22R2KMR, RE22R1MKMR, RE22R2QEMT and
RENF22R2MMW

Factory: P T Schneider Electric Manufacturing Batam
Batamindo Industrial Park, Jalan Beringin Lot 4 & 208, Muka Kuning, Batam Island, Indonesia

Brands: Schneider Electric
Telemecanique

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.

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
- model name
- serial number

Brands:
- Schneider Electric
- Telemecanique

Place of Production:
P T Schneider Electric Manufacturing Batam
Batamindo Industrial Park, Jalan Beringin Lot 4 & 208, Muka Kuning, Batam Island, Indonesia

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

ANNEX
Type Approval documentation

Test Reports:

AV5196200	Juret Timer_Flammability Test- PSB
EAV5196300	Juret Timer_Vibration Test_ PSB
EAV5197100	Juret Timer_ High Voltage Dielectric
EAV5198300	Juret Timer_ Insulation Resistance
EAV5198500	Juret Timer_ Power Supply Failure
EAV5200900	Juret Timer_ Power Supply Variations
EAV5201000	Juret Timer_ Cold
EAV5201100	Juret Timer_ Dry Heat
EAV5201200	Juret Timer_ Damp Heat
EAV5201300	Juret Timer_ Electrostatic Discharge
EAV5201400	Juret Timer_EMC Test (Electromagnetic Fields, CE, RE)
EAV5201500	Juret Timer_ Product Performance
EAV5201700	Juret Timer_ Conducted low frequency interference (harmonics)
EAV5201800	Juret Timer_Surge
EAV5201900	Juret Timer_Conducted Fast Transients
EAV5202000	Juret Timer_ Conducted High Frequency Interference

NHA5582801	Performance test
NHA5582802	Vibration
NHA5582803	High voltage
NHA5582804	Insulation resistance
NHA5582805	Power supply failure
NHA5582806	Power supply variation
NHA5582807	Cold
NHA5582808	Dry heat
NHA5582809	Damp heat
NHA5582810	Electrostatic discharge
NHA5582811	Electromagnetic fields
NHA5582811	Conducted emissions
NHA5582811	Radiated emissions from enclosure port
NHA5582814	Conducted low frequency interference (harmonics)
NHA5582815	Conducted slow transients (surge)
NHA5582816	Conducted fast transients (burst)
NHA5582817	Conducted high frequency interference

NVE6772617	NFC Basic Operating Function- All Function Check Test Report
NVE6772634	Conducted fast transients (burst)
NVE6772635	Conducted slow transients (surge)
NVE6772636	CI
NVE6772653	Vibration (GL)
NVE6772654	Electrostatic discharge
NVE6772655	CE, RE, RI (GL)