

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Timer Relays**

with type designation(s)

Crouzet Chronos 2 MUR3 / MXR1 / MURC3 / MAR1 / MBR1 / MCR1 / MHR1 / MLR4 / MLR1 / MUR4 / MUR1, MAS5 / MHS2 / MLS2 / MUS2

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	*)

***) Required protection according to Rules shall be provided upon installation onboard**Issued at **Hamburg** on **2018-11-20**This Certificate is valid until **2023-11-19**.for **DNV GL**DNV GL local station: **Certification of Materials -
Singapore**Approval Engineer: **Marco Rinkel**

**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

Electromechanical or solid state time relays fitted with 17.5 mm housing for DIN rail

- Multi or Mono-functional
- Timers:- 1-10s-1min-10min-1hr-10hr-100hr
- Cage clamps for all series, except Spring clamps for MURC3
- One relay output 8A, 250V AC/DC
- One solid state relay output 0.7A, 250V AC/DC
- Display of output condition by LED

Nomenclature:

abcde

a: Housing

- M: 17.5

b: Function

- A: On Delay Function
- B: Pulse Function
- C: Off Delay Function with Control Signal
- H: Off Delay Function
- L: Asymmetrical flashing, start with output in rest position - A
- U: Multifunctions(A-At-B-C-H-Ht-Di-D-Ac-Bw)
- X: Multifunctions(Ad-Ah-N-O-P-Pt-TI-Tt-W)

c: Output

- none: 1 Contact Output

d: Output Type

- R: Relay
- S: Solid State Relay

c: Terminal Block

- none: Cage clamp terminal
- S: Spring clamp terminal

d: Input Voltage

- 1: 24 V DC / 24 – 240 V AC
- 2: 24 – 240 V AC
- 3: 12 – 240 V AC/DC
- 4: 12 V AC/DC
- 5: 24 – 240 V AC/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.

Type Approval documentation

TÜV SÜD 71191042429-EEC12/SCH
TÜV SÜD 7191036644-EEC12/01,
HRB4660001-00...HRB4660017-00

Tests carried out

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

Job Id: **262.1-028085-1**
Certificate No: **TAA00001NF**

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number

Brands:

- Crouzet

Place of Production:

PT 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