



## Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

<b>Manufacturer</b>	<b>ComatReleco AG</b>
<b>Address</b>	Birchstrasse 24, Düringen, 3186, Switzerland
<b>Type</b>	Relays
<b>Description</b>	Relays: CRINT-R11 CRINT-R12  Sockets: CRINT-S11 CRINT-S12 CRINT-S13  CRINT Combo (Relay & Socket) CRINT-C111, -C121, -C131 CRINT-C112, -C122, -C132  For detailed product description, pls. refer to appendix.
<b>Trade Name</b>	CRINT-R11, -R12, -S11, -S12, -S13, -C111, -C121, -C131, -C112, -C122, -C132
<b>Application</b>	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV3 as defined in Lloyd's Register's Type Approval

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System, Test Specification Number 1 - June 2015.

<b>Specified Standard</b>	Manufacturer's specification IACS unified requirements E10 (Rev.9 Aug 2023)
<b>Ratings</b>	Operating voltage relays: 12...60 VDC Operating voltage sockets: 12...240 VDC or VAC  For detailed ratings, pls. refer to appendix.
<b>Other Conditions</b>	Lowest ambient temperature of -40 °C has not been verified by documentary evidence. Battery supply was not been tested.  Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.  If the specified standards are amended during the validity of this certificate, the product is to be re- approved prior to it being supplied to vessels to which the amended standards apply.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

**Previous Version:** LR2195797TA-04

The Design Appraisal Document TSO-25-045195/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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## Appendix

### DESCRIPTION

Interface modules CRINT / CRINT-Combo (Relays & Sockets)

### RATINGS

Type	No. of poles	Operating voltage (V)	Max. switching current (A)	Max. switching voltage (V)
Interface relay				
CRINT-R11/DC...V	1	12, 24, 48, 60 VDC	6	250
CRINT-R12/DC...V				
Interface relay socket				
CRINT-S11/UC...V		12, 24, 48, 60, 110-125, 220-240 VDC or AC	6	250
CRINT-S12/UC...V				
CRINT-S13/UC...V				
CRINT Combo (Interface relay & socket)				
CRINT-C111/UC...V	1	12, 24, 48, 60, 110-125, 220-240 VDC or VAC	6	250
CRINT-C121/UC...V				
CRINT-C131/UC...V				
CRINT-C112/UC...V				
CRINT-C122/UC...V				
CRINT-C132/UC...V				