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Powering Business Worldwide

ZW7-63 - Current transformer-operated overload relay, 42-63A, 1NO+1NC



000245 ZW7-63

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000245 ZW7-63

Current transformer-operated overload relay, 42-63A, 1NO+1NC

Alternate Catalog No.

XTOT063C3S

EL-Nummer (Norway)

4131706

Current transformer-operated overload relay, Product range: ZW7 current transformer-operated overload relays, Description: Test/off button, Reset pushbutton manual/auto, Trip-free release, Protection with heavy starting duty, Mounting type: Separate mounting, Auxiliary contacts N/O = Normally open: 1 N/O, Auxiliary contacts N/C = Normally closed: 1 N/C, Standards: IEC/EN 60947, VDE 0660, UL, CSA, Degree of Protection: IP00

Delivery program

Product range
ZW7 current transformer-operated overload relays

Description
Test/off button
Reset pushbutton manual/auto
Trip-free release
Protection with heavy starting duty

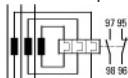
Mounting type
Separate mounting

Setting range

Overload releases  [1]

42 - 63 A

Contact sequence



Auxiliary contacts
NO = Normally open
1 NO
NC = Normally closed
1 NC

Notes

The main current parameters are defined by the main current wiring which is used.

Technical data

General
Standards
IEC/EN 60947, VDE 0660, UL, CSA
Climatic proofing
Damp heat, constant, to IEC 60068-2-78
Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature Open
-25 - +50 °C
Ambient temperature Enclosed
- 25 - 40 °C
Temperature compensation
Continuous
Mounting position
As required
Weight
0.8 kg
Mechanical shock resistance
10
Sinusoidal
Shock duration 10 ms g
Degree of Protection
IP00

Protection against direct contact when actuated from front (EN 50274)
 Finger and back-of-hand proof
 Altitude
 Max. 2000 m
 Main conducting paths
 Rated impulse withstand voltage [U_{imp}]
 8000 V AC
 Overvoltage category/pollution degree
 III/3
 Rated insulation voltage [U_i]
 1000 V
 Rated operational voltage [U_e]
 1000 V AC
 Safe isolation to EN 61140 Between auxiliary contacts and main contacts
 440 V AC
 Safe isolation to EN 61140 Between main circuits
 440 V AC
 Short-circuit protection Maximum fuse
 With overload relay in conjunction with a transformer as required for the contactor
 Current heat loss (3 conductors) Lower value of the setting range
 3 W
 Current heat loss (3 conductors) Maximum setting
 10 W
 Push-through opening [□]
 27 mm
 Auxiliary and control circuits
 Rated impulse withstand voltage [U_{imp}]
 4000 V
 Overvoltage category/pollution degree
 III/3
 Terminal capacities Solid
 1 x (0.75 - 4)
 2 x (0.75 - 4) mm²
 Terminal capacities Flexible with ferrule
 1 x (0.75 - 2.5)
 2 x (0.75 - 2.5) mm²
 Terminal capacities Solid or stranded
 2 x (18 - 14) AWG
 Terminal screw
 M3.5
 Tightening torque
 1.2 Nm
 Stripping length
 8 mm
 Tools Pozidriv screw driver
 2 Size
 Tools Standard screw driver
 1 x 6 mm
 Rated insulation voltage [U_i]
 500 V AC
 Rated operational voltage [U_e]
 500 V AC
 Safe isolation to EN 61140 between the auxiliary contacts
 240 V AC
 Conventional thermal current [I_{th}]
 6 A
 Rated operational current [I_e] AC-15 Make contact 120 V [I_e]
 1.5 A
 Rated operational current [I_e] AC-15 Make contact 220 V 230 V 240 V [I_e]
 1.5 A
 Rated operational current [I_e] AC-15 Make contact 380 V 400 V 415 V [I_e]
 0.5 A
 Rated operational current [I_e] AC-15 Make contact 500 V [I_e]
 0.5 A
 Rated operational current [I_e] AC-15 Break contact 120 V [I_e]
 1.5 A
 Rated operational current [I_e] AC-15 Break contact 220 V 230 V 240 V [I_e]
 1.5 A
 Rated operational current [I_e] AC-15 Break contact 380 V 400 V 415 V [I_e]
 0.9 A
 Rated operational current [I_e] AC-15 Break contact 500 V [I_e]
 0.8 A
 Rated operational current [I_e] DC L/R □ 15 ms
 Switch-on and switch-off conditions based on DC-13, time constant as specified.
 Rated operational current [I_e] DC L/R □ 15 ms 24 V [I_e]
 0.9 A
 Rated operational current [I_e] DC L/R □ 15 ms 60 V [I_e]
 0.75 A
 Rated operational current [I_e] DC L/R □ 15 ms 110 V [I_e]
 0.4 A
 Rated operational current [I_e] DC L/R □ 15 ms 220 V [I_e]
 0.2 A
 Short-circuit rating without welding max. fuse
 6 A gG/gL
 Notes
 Ambient temperature: Operating range to IEC/EN 60947, PTB: -5°C to +50°C

Terminal capacities Main circuits solid and flexible with ferrule: When connecting 2 conductors, only the following combinations are admissible:

Rated operational current: Making and breaking currents to DC-13, time constant as stated

Short-circuit rating: See transparent overlay "Fuses" for time/current characteristics (Please enquire)

Rating data for approved types

Auxiliary contacts Pilot Duty AC operated

B300 at opposite polarity

B600 at same polarity

Auxiliary contacts Pilot Duty DC operated

R300

Design verification as per IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation [I_n]

63 A

Heat dissipation per pole, current-dependent [P_{rd}]

2 W

Equipment heat dissipation, current-dependent [P_{rd}]

6 W

Static heat dissipation, non-current-dependent [P_{rs}]

0 W

Heat dissipation capacity [P_{dss}]

0 W

Operating ambient temperature min.

-25 °C

Operating ambient temperature max.

+50 °C

IEC/EN 61439 design verification

10.2 Strength of materials and parts 10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts 10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts 10.2.7 Inscriptions

Meets the product standard's requirements.

10.3 Degree of protection of ASSEMBLIES

Does not apply, since the entire switchgear needs to be evaluated.

10.4 Clearances and creepage distances

Meets the product standard's requirements.

10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be evaluated.

10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

10.8 Connections for external conductors

Is the panel builder's responsibility.

10.9 Insulation properties 10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

10.9 Insulation properties 10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

10.9 Insulation properties 10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (L) is observed.

Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Thermal overload relay (EC000106)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Overload protection device / Thermal overload relay
(ecl@ss10.0.1-27-37-15-01 [AKF075014])

Adjustable current range

42 - 63 A

Max. rated operation voltage U_e

690 V

Mounting method

Separate positioning

Type of electrical connection of main circuit

Screw connection

Number of auxiliary contacts as normally closed contact

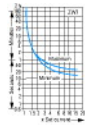
1
 Number of auxiliary contacts as normally open contact
 1
 Number of auxiliary contacts as change-over contact
 0
 Release class
 Other
 Reset function input
 No
 Reset function automatic
 Yes
 Reset function push-button
 Yes

Approvals

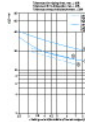
Product Standards
 UL 508; CSA-C22.2 No. 14; IEC/EN 60947-4-1; CE marking
 UL File No.
 E29184
 UL Category Control No.
 NKCR
 CSA File No.
 12528
 CSA Class No.
 3211-03
 North America Certification
 UL listed, CSA certified
 Specially designed for North America
 No
 Suitable for
 Branch circuits
 Max. Voltage Rating
 600 V AC
 Degree of Protection
 IEC: IP00, UL/CSA Type: -

Characteristics

Characteristic curve



These tripping characteristics are mean values of the spread at 20 °C ambient air temperature in a cold state. Tripping time depends on response current. When the devices are at operational temperature the tripping time of the overload relay reduces to approx. 25 % of the read off value.



Dimensions

Reset/on

Permissible mounting positions

IL03407195Z, Sealable shroud

- [IL03407195Z, Sealable shroud](#)
(PDF)

IL03407124Z, Tripping characteristics

- [IL03407124Z, Tripping characteristics](#)
(PDF)

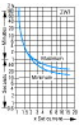
IL04210001Z, Overload relay, Current transformer-operated overload relay

- [IL04210001Z, Overload relay, Current transformer-operated overload relay](#)
(PDF)

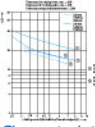
CAD data

- [Product-specific CAD data](#)
(Web)
- [3D Preview](#)
(Web)

Characteristic curve



- [Characteristic curve](#)
Tripping characteristic
Characteristic curve
Coordinate visualization

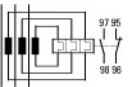


- [Characteristic curve](#)
Characteristic curve
Coordinate visualization

Declaration of Conformity

- [DA-DC-00003317](#)
Declaration of Conformity
(PDF)

Wiring diagram



- [Contact sequence](#)
Current transformer-operated overload relay circuit symbol
Wiring diagram
Line drawing

3D drawing

- [230I009](#)
Current transformer-operated overload relay
3D drawing
Line drawing

Product photo



- [Photo](#)
Current transformer-operated overload relay
Product photo
Photo

Dimensions single product

- [230X032](#)
 [Reset/on](#)
Current transformer-operated overload relay
Dimensions single product
Line drawing
- [230X031](#)
Current transformer-operated overload relay
Dimensions single product
Line drawing

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