Specifications

Eaton 274399



Catalog Number: 274399

Eaton XC Modular PLC, 24 V DC, 8DI, 6DO, RS232, CAN, 256kB

General specifications

Product Name
Eaton XC Modular PLC

Catalog Number
274399

EAN
4015082743994

Product Length/Depth
100 mm

Product Height
100 mm

Product Width
60 mm

Product Weight
0.28 kg

Certifications
CSA Class No.: 2252-01
UL508
CSA File No.: 012528
UL File No.: E135462
CSA-C22.2 No. 0-M
UL Category Control No.: NRAQ
CSA
IEC/EN 61131-2
EN 50178
CE
CSA-C22.2 No. 142-M
UL
EAC

Powering Business Worldwide

Features & Functions

Features

Asynchronous, cyclic, acyclic PDO types (CANopen®)
Expandable with XI/OC expansions
Short-circuit protection (power supply)
Mains filter (power supply)
Mains overvoltage protection (power supply)

Fitted with:

Real time clock

Functions

Overvoltage protection
Additional program memory possible

Processor

Infineon C164

General

Accessories

Order terminal clamps, module rack and battery separately.

Battery runtime

5 years typ.

Connection type

Plug-in terminal block
Plug-in terminal block, CANopen®
RJ45, Ethernet

Degree of protection

IP20

Model

Modular

Mounting method

Rail mounting possible
Wall mounting/direct mounting

Overvoltage category

II

Pollution degree

2

Potential isolation

CANopen®: yes
Power supply of local inputs/outputs (24 V/0 V) against CPU voltage: yes

Rated insulation voltage (Ui)

500 V

Residual ripple

≤ 5 %

Voltage type

DC

Ambient conditions, mechanical

Mounting position

Horizontal

Shock resistance

15 g, Mechanical, Shock duration 11 ms

Climatic environmental conditions

Air pressure

795 - 1080 hPa (operation)

Ambient operating temperature - min

0 °C

Vibration resistance

10 - 57 Hz, ± 0.075 mm

57 - 150 Hz, ± 1.0 g

Ambient operating temperature - max

55 °C

Ambient storage temperature - min

-25 °C

Ambient storage temperature - max

70 °C

Relative humidity

10 - 95 % (non-condensing)

Electro magnetic compatibility

Emitted interference

Class A (according to EN 50081-2)

Interference immunity

According to EN 50081-2

Terminal capacities

Terminal capacity (flexible with ferrule)

0.5 - 1.5 mm², Screw terminals

Terminal capacity (flexible)

0.34 - 1.0 mm², Spring-loaded terminals

Terminal capacity (solid)

0.14 - 1.0 mm², Spring-loaded terminals

0.5 - 2.5 mm², Screw terminals

Power supply

Input power

26 W

Input voltage

24 V DC (Power supply)

24 V DC (Power supply of local inputs/outputs)

Input current

3.5 mA (per channel at nominal voltage, Digital inputs)

Output current

3.2 A

Output voltage

5 V DC (signal module)

Power loss

Normally 85 mW

6 W

Repetition rate

1 s

Residual ripple

Communication

Bus termination

External, CANopen®

Connection type

Plug-in terminal block

Plug-in terminal block, CANopen®

RJ45, Ethernet

Cycle time

< 0.5 ms, for 1 k of instructions (Bit, Byte), memory

Data transfer rate

57.6 kBit/s, Serial interface (RS232) without handshake lines

0,5 MBit/s, CANopen®

Interfaces

CANopen®/easyNet (built-in)

RS232 (built-in)

Memory

8 kByte Retain Memory

256 kByte Program memory code, optional extension

8 kByte Marker Memory

256 kByte (User memory)

≤ 5 %

Supply voltage

20.4 - 28.8 V DC

Supply voltage at AC, 50 Hz - min

0 VAC

Supply voltage at AC, 50 Hz - max

0 VAC

Supply voltage at DC - min

20.4 VDC

Voltage dips

10 ms

Supply voltage at DC - max

28.8 VDC

Inrush current

No limitation (limited only by upstream 24 V DC power supply unit)

256 kByte Program data code, optional extension

Number of modules

Max. 126 (CANopen)

Operating mode

Watchdog

Protocol

MODBUS
PROFIBUS
Other bus systems
SUCONET
CAN
CANopen® (To DS 301 V4)

Input/Output

Delay time

0.1 ms typ., Digital inputs, Delay time from 0 to 1, Debounce OFF
0.1 ms typ., Digital inputs 24 V DC, Delay time from 1 to 0, Debounce OFF
0.1 ms typ., Output delay, On -> Off

Duty factor

100 %, Digital outputs

Input current

3.5 mA (per channel at nominal voltage, Digital inputs)

LED indicator

Status indication of digital inputs: LED

Limit value type 1

Low: < 5 V DC
High: > 15 V DC

Making/breaking delay

0.1 ms

Number of channels

6

Number of inputs (analog)

0

Number of inputs (digital)

8

Number of outputs

6 (transistor outputs)

Number of outputs (analog)

0

Number of outputs (digital)

6

Number of relay outputs

0

Rated operational current (Ie)

0.5 A at AC-3, 230 V

Signal range

19.2 - 30 V DC (Power supply of local inputs/outputs, note polarity)

Switching capacity

IEC/EN 60947-5-1, utilization category DC-13, Digital outputs

Utilization factor

1 (Inductive load to EN 60947-5-1, Without external suppressor circuit, T0.95 = 1 ms, R = 48 Ω, L = 16 mH)

Safety

Explosion safety category for gas

None

Potential isolation

CANopen®: yes

Power supply of local inputs/outputs (24 V/0 V) against CPU voltage: yes

Protection against polarity reversal

Yes

Yes, for AS-Interface

Explosion safety category for dust

None

System

Memory

8 kByte Retain Memory

256 kByte Program memory code, optional extension

8 kByte Marker Memory

256 kByte (User memory)

256 kByte Program data code, optional extension

Memory capacity

256 kByte

Design verification

Equipment heat dissipation, current-dependent Pvid

0.08 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

0 W

Rated operational current for specified heat dissipation (In)

0 A

Static heat dissipation, non-current-dependent Pvs

6 W

10.2.2 Corrosion resistance

Meets the product standard's requirements.

Resources

Brochures

eaton-xc300-modular-plc-brochure-br050008en-en-us.pdf

Declarations of conformity

DA-DC-00003701.pdf

DA-DC-00003871.pdf

Drawings

eaton-electronic-devices-plc-xc-modular-plc-dimensions.eps

eaton-electronic-devices-front-view-xc-modular-plc-3d-drawing.eps

eCAD model

DA-CE-ETN.XC-CPU101-C256K-8DI-6DO

Installation instructions

IL05003001Z

10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects

Meets the product standard's requirements.

10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2.5 Lifting

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

10.2.6 Mechanical impact

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

10.2.7 Inscriptions

Meets the product standard's requirements.

10.3 Degree of protection of assemblies

Meets the product standard's requirements.

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.

10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

10.10 Temperature rise

Manuals and user guides

MN05003004Z_EN

mCAD model

DA-CD-xc_cpu_101

DA-CS-xc_cpu_101

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.

10.12 Electromagnetic compatibility

Is the panel builder's responsibility.

10.13 Mechanical function

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

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