



1971-2011 40 years
the power to control

C3 Snap-ON Alarm Modules

Overview	36
C3 LON-bus coupler for DIN Rail mounting	37
C3 LON-bus 3 phase coupler PLT for DIN Rail mounting	39
C3 digital IN + OUT for DIN Rail mounting	41
C3 digital OUT with positive guided safety relays for DIN Rail mounting	43
C3 analogue IN + OUT for DIN Rail mounting	45
C3text the dimension for plain text annunciator systems	47
C3 Main power unit	49



Overview

General data: Creepage distances: Unitro-Standard
 Degree of protection: IP20
 Climatic conditions: Unitro-Standard
 EMC-values: Unitro-Standard
 Status indication with LED



Types	C3 Ethernet-Bus coupler	C3 LON-bus and 3 phase coupler PLT	C3 digital IN + OUT	C3 analogue GT IN + OUT	C3text plain text-display	C3modem VDS compliant telephone dealer	C3 Main power unit
Dimensions (w x h x d) in mm	22,5x99x113,5	22,5x99x113,5	22,5x99x113,5	22,5x99x113,5 45x99x113,5 (DO-2S)	288 x 72 x 127 Cutting for installation 283 x 62		35x99x95
Weight approx.	150g	150g	150g	150g	750g		250g
Connection	Screw-type terminals/ plug connection max. 2,5mm ²	Screw-type terminals/ plug connection max. 2,5mm ²	Screw-type terminals/ plug connection max. 2,5mm ²	Screw-type terminals/ plug connection max. 2,5mm ²	Screw-type terminals/plug connection with screw-type flange max. 2,5mm ²	Screw-type terminals/ plug connection max. 2,5mm ²	Screw-type terminals/ plug connection max. 2,5mm ²
Power supply	24V DC ± 10%	24V DC ± 10%	via DIN rail-bus	via DIN rail-bus	85-265V AC / 85-250V DC or 14-28V AC / 19-36V DC, 100mA		100 -240V AC
Inputs	Available 2012		C3 DI-8: 8x floating 24V DC ± 10%, 5mA per input Response delay: 25ms Minimum signal duration: 5ms	4 analogue channels galvanic separated (1500V DC) , with pluggable modules freely selectable: 0/4-20mA input resistance: 56Ω 0-10V input resistance: 1MΩ PT100 2 wire / 3 wire / 4 wire	320 messages modular and distributed expansion possible in steps of 24 with UNITRO I/O-Modules (recommended C3 or MVL 24/0)	Available 2012	
Outputs			C3 DO-8: 8x Normally open contact C3 DO-2S: 2x positive guided safety relays according to EN 50205 each with 2x potential-free normally open contacts + 2x potential-free normally closed contacts, max.250V AC, 5A / 25V DC, 5A Electrical isolation: 2000V _{rms}	0/4-20mA max. 400Ω 0-10V min. 1kΩ, max. 10 EVG	<u>Group alarm and equipment fault output:</u> change over contact, max. 250V AC, 5A, 25V DC, 5A <u>Horn output:</u> normally open max. 250V AC, 5A, 25V DC, 5A		<u>Nominal output voltage:</u> 24V DC ±1% <u>Output current:</u> 1,5A (-25°C-60°C), 2A (with POWER BOOST, -25°C-40°C permanent)
Remarks	Ethernet TCP/IP coupler for LAN and Internet connections	C3-FTX: LON FTT10A two wire (twisted-pair), 78kbps max. 2,7km C3-PLT: LON PLT22 two wire, C-band 125-145 kHz (4,8kBit/s) max. 30km C3-phase coupler Capacitive coupling on 3 phases CENELEC band C and redundant band B, or band A	Inductive load (contactors): Mount-in anti-interference capacitors at the coils. Please use external interlock, driving shutter or sun blind motors (up / down)!	Resolution per channel: 14bit Error range: <0,01% Sample rate: approx. 6Hz	64 assignable outputs via LON-bus and/or UNITRO I/O-Modules (recommended C3 OUT or work with CC24 or C3modem telephone dealers) Serial printer connection (RS 232C)	C3modem analog: Voice over the phone. File format for voice entry: MP3 with DTMF acknowledgment. Text messages via SMS and fax. Parameterized via Mini USB interface. Connection of control centers on VDS protocol	<u>Connection in parallel:</u> for redundancy and increased capacity. Maximum of 2 devices for redundancy on DIN rail connector. <u>Connection in series:</u> No
Special functions	Parameterization: via Mini USB-interface and W7-Software, all modules connected with the DIN Rail Bus	Parameterization: via Mini USB-interface and W7-Software, all modules connected with the DIN Rail Bus	Parameterization: via Mini USB-interface of the Bus coupler and W7-Software e.g. quiescent / operating current, delay time etc.	Parameterization: via Mini USB-interface of the Bus coupler and W7-Software e.g. Delta, ...	Parameterization: via Mini USB-interface and W7-Software: relevant / irrelevant, quiescent / operating current, response delay for each signal	C3modem GSM: Functions as C3modem analog but without voice output.	<u>Power failure bypass:</u> > 35ms (120V AC), > 150ms (230VAC)



1971-2011 40 years
the power to control

C3 LON-bus coupler for DIN Rail mounting

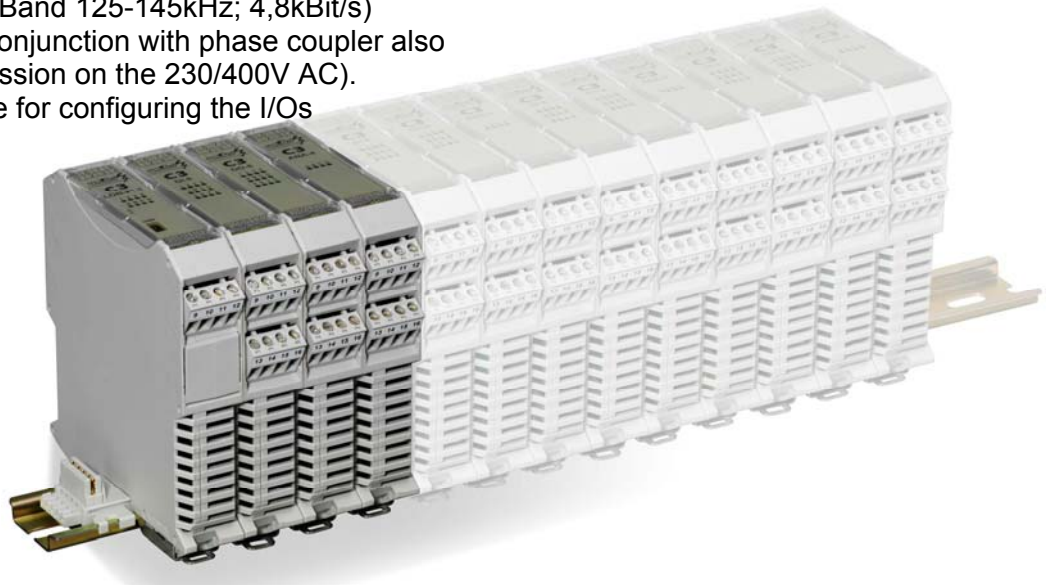
Types:

C3-FTX

LON-bus FT-5000 Smart transceiver
for connection of max. 12x C3 I/O modules
to the two wire (twisted pair)
78kbps LON network.
With USB interface for configuring the I/Os

C3-PLT

LON-bus PL-3150 Power Line Smart transceiver
for connection of max. 12x C3 I/O modules
to the two wire (C-Band 125-145kHz; 4,8kBit/s)
LON-network (in conjunction with phase coupler also
power line transmission on the 230/400V AC).
With USB interface for configuring the I/Os



Controls and displays

- Bright LEDs for status display
- Dip-switch for the termination of the rail-Buses

Parameterization of connectable C3 I/O-Module

- Via Mini USB interface and W7 software configurable
- E.g. quiescent / operating current, delay time, etc. of the modules connected

Power supply

- 24V DC \pm 10%
- 230V AC with rail power unit with supply via the rail-bus

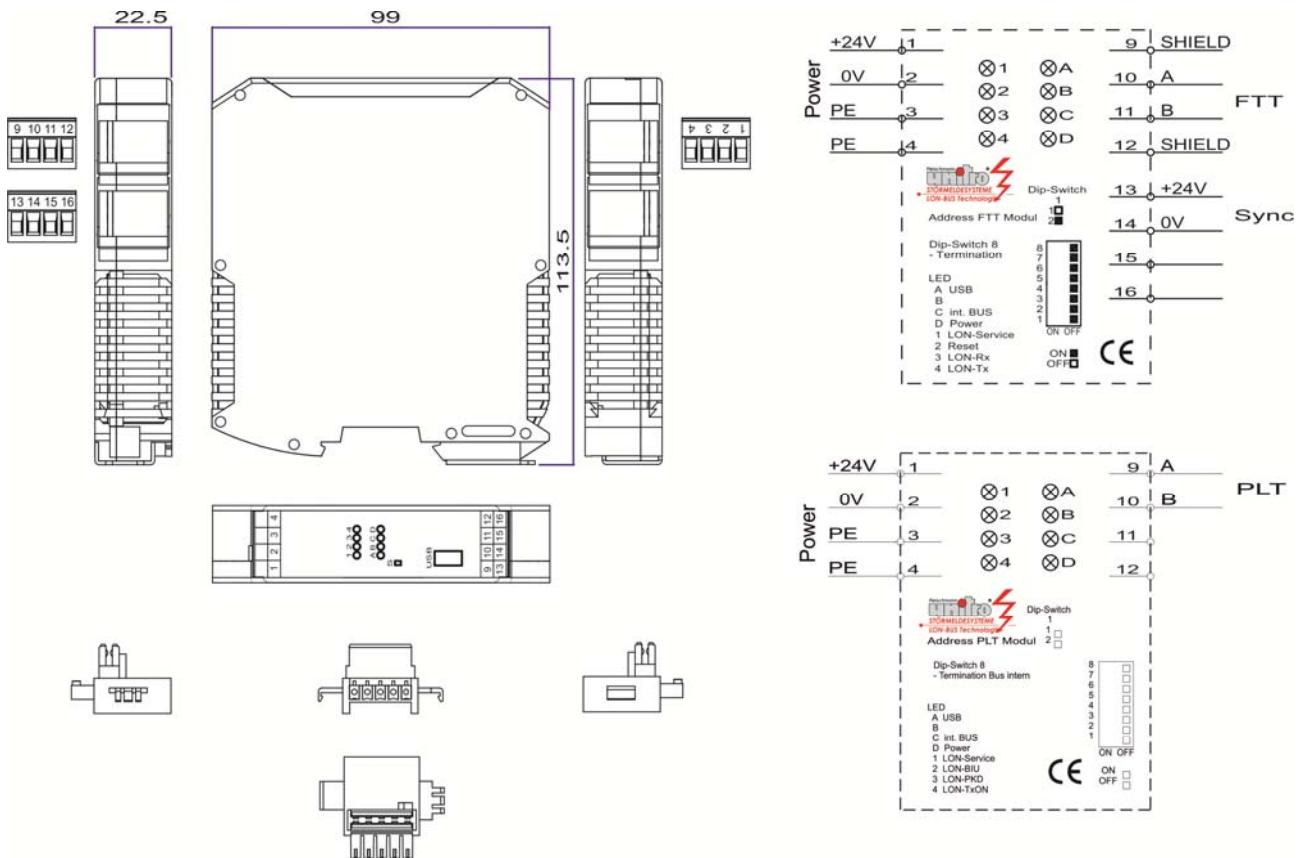
Mechanical characteristics

- Compact Snap-on plastic housing (polyamide) 22,5 x 99 x 113,5mm with DIN-rail-bus
- Screw-type terminals, plug connection for connection max. 2,5mm²

Extensions

- Maximum total of 12x C3 I/O modules can be connected per bus coupler (from that max. 2x C3 ana GT).

Connection diagram C3 LON



Technical data:

- Type of construction:
snap-on plastic housing (polyamide)
with DIN-rail-Bus 22,5 x 99 x 113,5mm
- Degree of protection:
IP20
- Climatic conditions:
in accordance with Unitro-Standard
- Connection:
screw-type terminals/ plug connection
max. 2,5mm²
- Weight:
approx. 150g
- Function buttons:
service button
- Supply voltage:
24V DC \pm 10%
- LED-display:
see connection diagram
- Power loss 100% ED:
PLT max. 1W / 7,5W (broadcasting)
FTX max. 1W
- Transmission:
LON FTX: two wire (twisted-pair), 78kbps
max. 2,7km
LON-PLT: two wire (C-band 125-145kHz)
4,8kBit/s, max. 30km
in conjunction with phase coupler also
power line transmission on the 230/400V AC
- Parameterization:
via **mini USB-interface**, all modules
connected with the DIN-rail-bus
- Leakage distances and clearances:
in accordance with Unitro-Standard
- EMC, immunity of interference:
Unitro-Standard,
in accordance with EN 61000



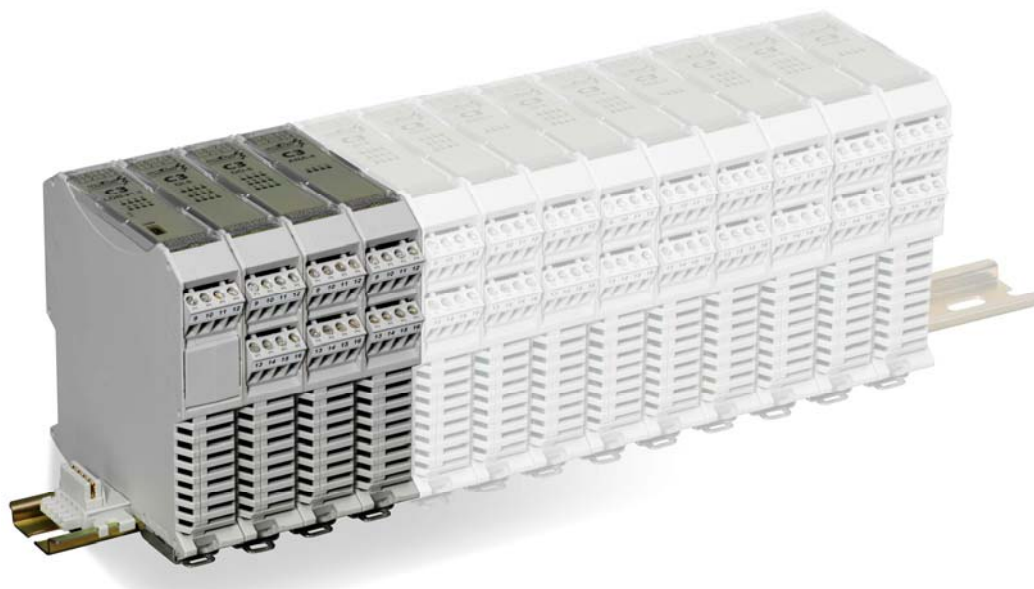
1971-2011 40 years
the power to control

C3 LON-bus 3 phase coupler PLT for DIN Rail mounting

Types:

C3-phase coupler

Capacitive coupling on 3 phases
CENELEC band C and **redundant** CENELEC band B,
or CENELEC band A



Function

- Capacitive coupling on 3 phases
for connection of Echelon PLT power line transceiver

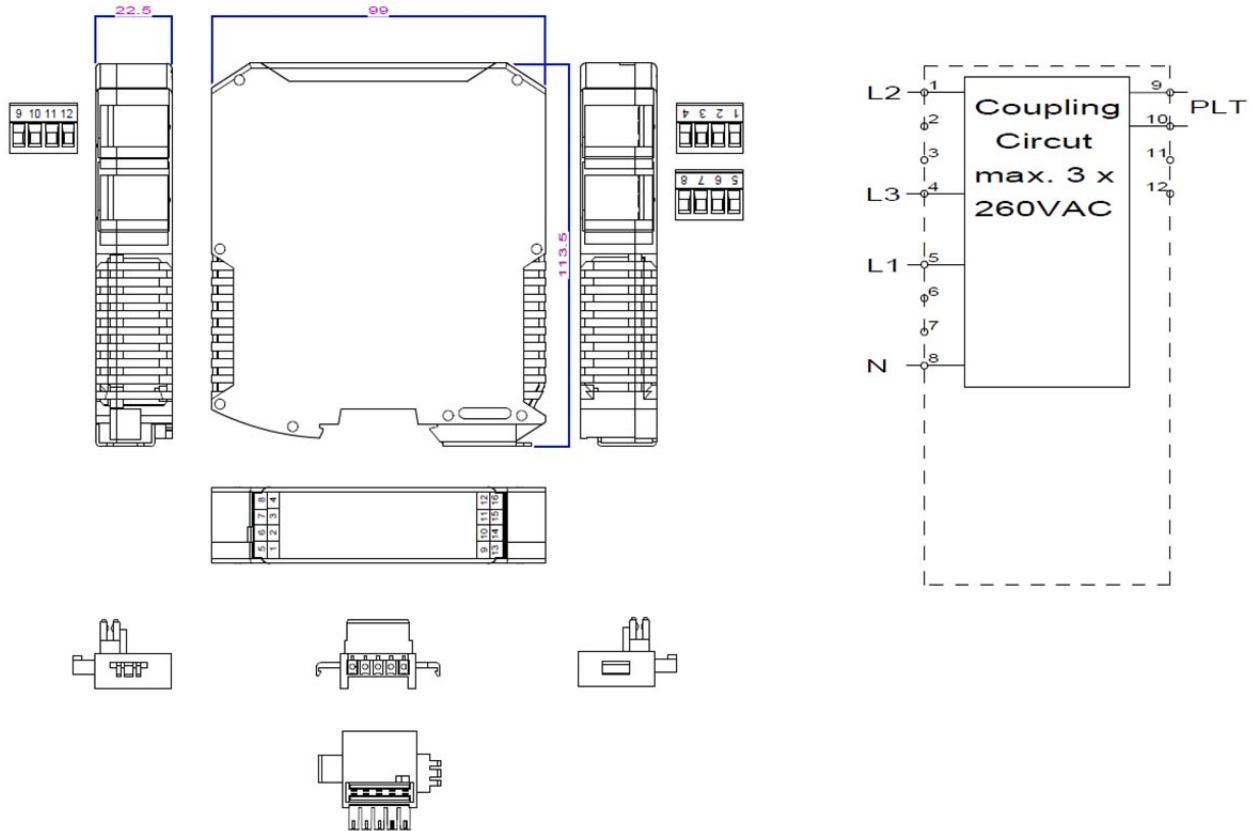
Electrical characteristics

- Supply voltage: L / N max.: 260V AC each phase
- EMC-values: Unitro-Standard in accordance with EN 61000

Mechanical characteristics

- Compact Snap-on plastic housing (polyamide) 22,5 x 99 x 113,5mm
with DIN-rail-bus
- Degree of protection IP20
- Screw-type terminals, plug connection for connection max. 2,5mm²

Connection diagram LON-bus 3 phase coupler



Technical data:

- Type of construction:
snap-on plastic housing (polyamide)
with DIN-rail-Bus 22,5 x 99 x 113,5mm
- Degree of protection:
IP20
- Climatic conditions:
in accordance with Unitro-Standard
- Connection:
screw-type terminals/ plug connection
max. 2,5mm²
- Weight:
approx. 150g
- Supply voltage:
L / N max. 260V AC each phase
- Function:
capacitive coupling on 3 phases
for connection of Echelon PLT power line transceiver
- Frequency range:
CENELEC band C, 125-140 kHz (5,4kBit/s)
and redundant CENELEC band B, 95-125kHz (5,4kBit/s)
or CENELEC band A, 9-95kHz (3,6kBit/s)
- Leakage distances and clearances:
in accordance with Unitro-Standard
- EMC, immunity of interference:
Unitro-Standard,
in accordance with EN 61000



1971-2011 40 years
the power to control

C3 digital IN + OUT for DIN Rail mounting

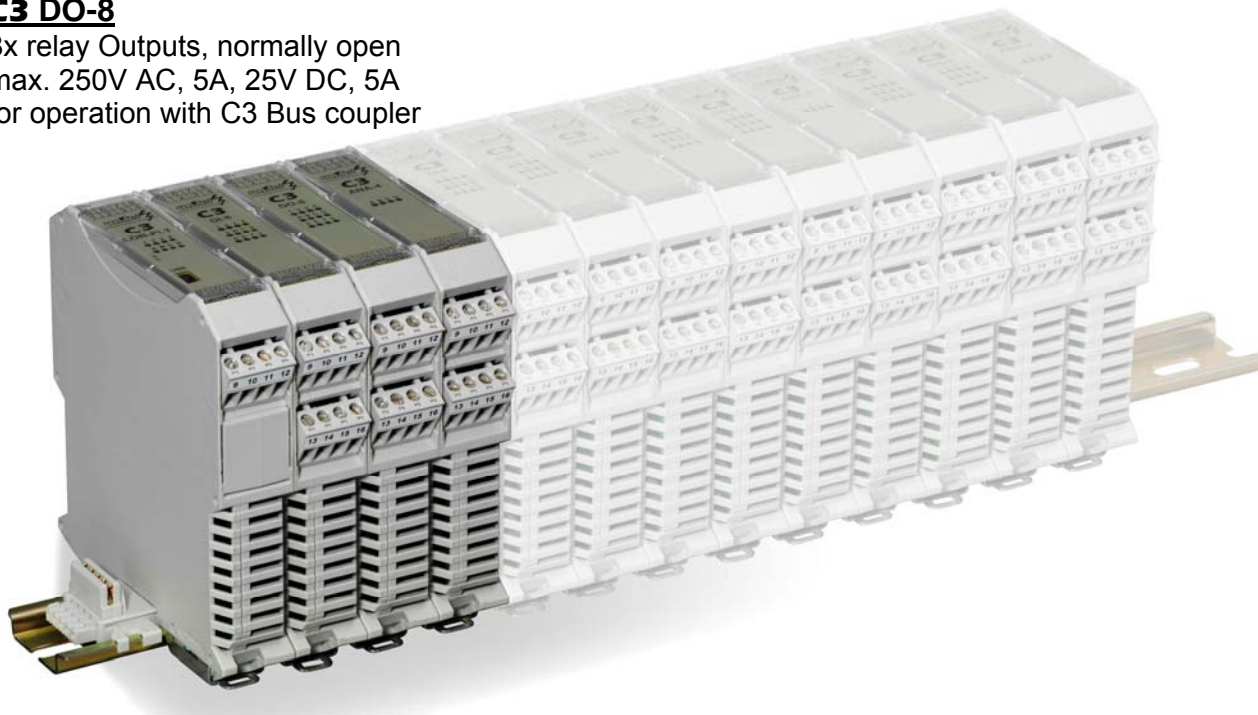
Types:

C3 DI-8

8x floating digital Inputs (24V)
for operation with C3 Bus coupler

C3 DO-8

8x relay Outputs, normally open
max. 250V AC, 5A, 25V DC, 5A
for operation with C3 Bus coupler



Controls and displays

- Bright LEDs for status display
- Dip-switch for the termination of the rail-Buses

Parameterization of C 3 I/O modules via the C3 bus coupler

- Via Mini USB interface and W7 software configurable
- E.g. quiescent / operating current, delay time, etc.

Power supply

- via DIN-rail-bus

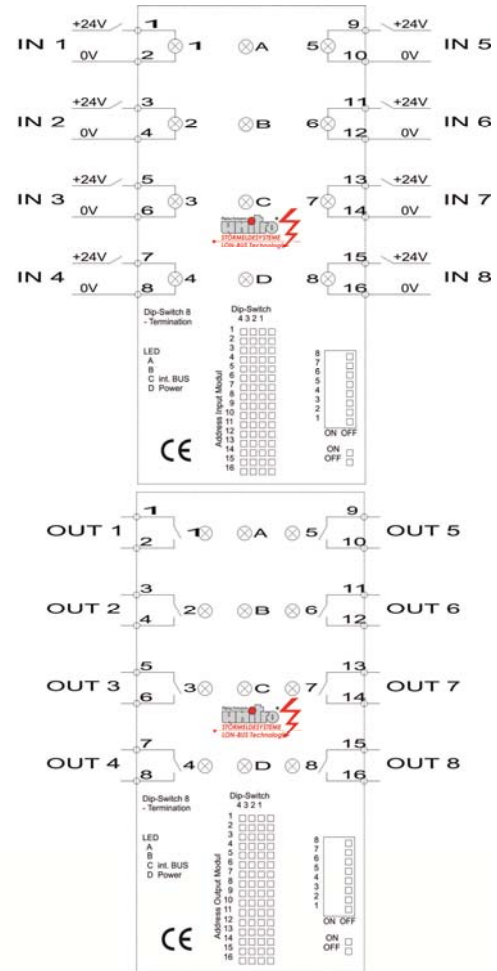
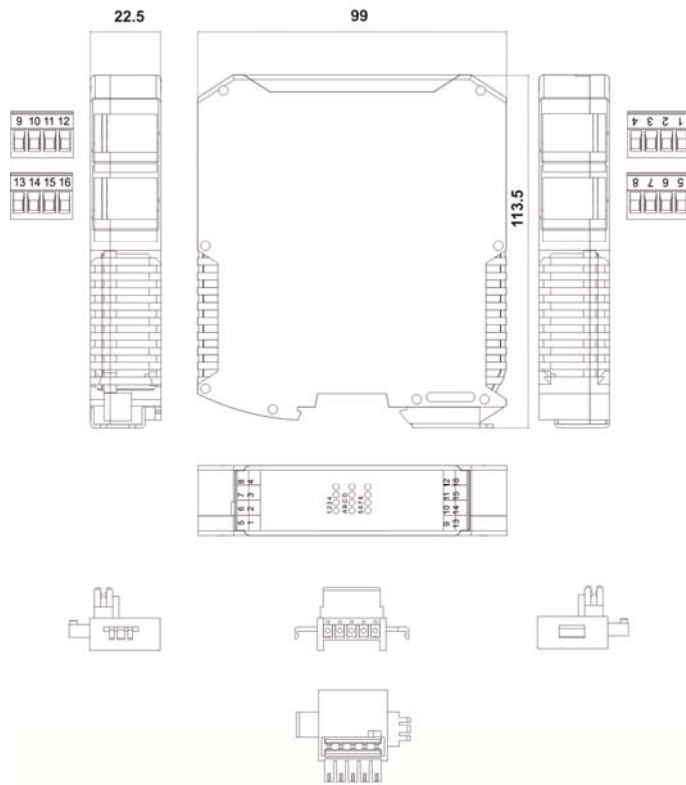
Mechanical characteristics

- Compact Snap-on plastic housing (polyamide) 22,5 x 99 x 113,5mm with DIN-rail-bus
- Screw-type terminals, plug connection for connection max. 2,5mm²

Extensions

- Maximum total of 12x C3 I/O modules can be connected per bus coupler (from that max. 2x C3 ana GT)

Connection diagram C3 digital 8x IN and 8x OUT



Technical data:

1. Type of construction:
snap-on plastic housing (polyamide)
with DIN-rail-Bus 22,5 x 99 x 113,5mm
2. Degree of protection:
IP20
3. Climatic conditions:
in accordance with Unitro-Standard
4. Connection:
screw-type terminals/ plug connection
max. 2,5mm²
5. Weight:
approx. 150g
6. Supply voltage:
via DIN-rail-bus
7. Signal voltage:
24V DC \pm 10%, 5mA per input
8. Response delay:
25ms
9. Minimum signal duration:
5ms
10. LED-display:
see connection diagram
11. Relay outputs:
normally open: 250V AC, 5A / 25V DC, 5A
electrical isolation: 2000V_{rms}
inductive load (contactors): mount-in
anti-interference capacitors at the coils,
please use external interlock, driving
shutter or sun blind motors (up / down)!
12. Parameterization:
via **mini USB-interface** on the Bus cou-
pler, connected with the DIN-rail-bus:
e.g. quiescent / operating current,
delay time, etc.
13. Leakage distances and clearances:
in accordance with Unitro-Standard
14. EMC, immunity of interference:
Unitro-Standard,
in accordance with EN 61000



1971-2011 40 years
the power to control

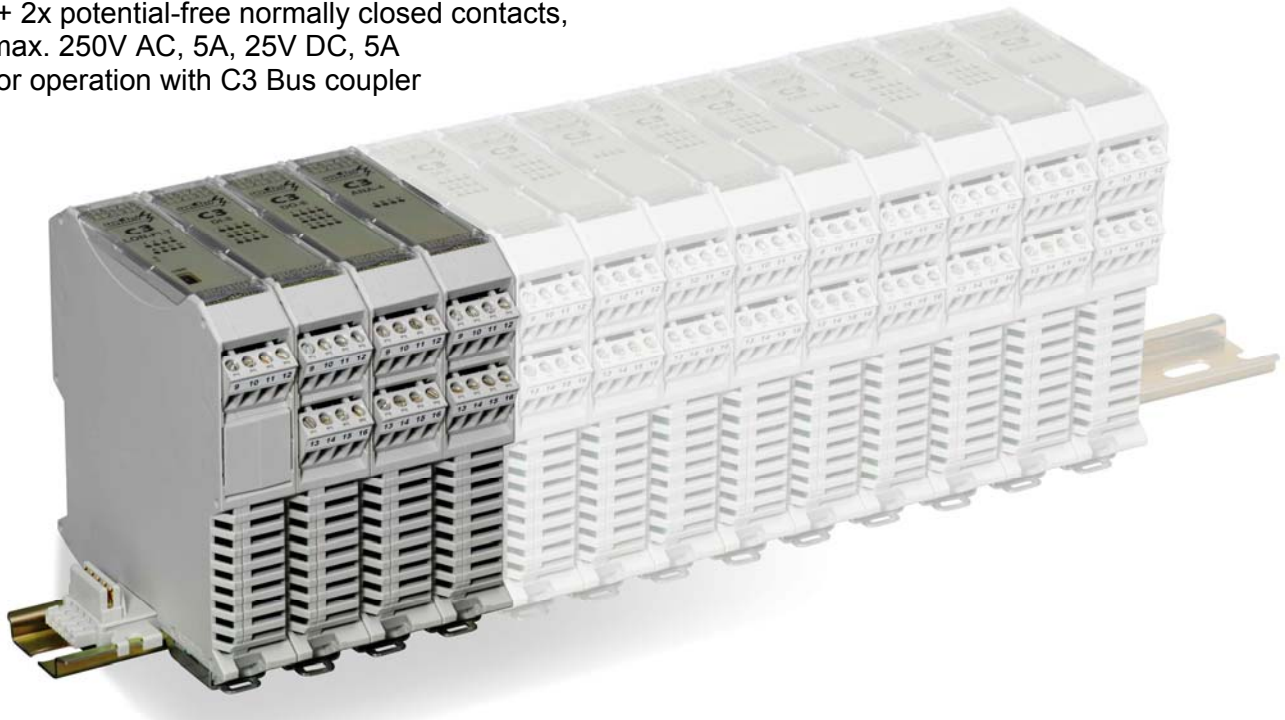
Fleischmann
unitro[®]
STÖRMELDESISTEME

C3 digital OUT with positive guided safety relays for DIN Rail mounting

Types:

C3 DO-2S

2x **positive guided safety relays** according to EN 50205
each with 2x potential-free normally open contacts
+ 2x potential-free normally closed contacts,
max. 250V AC, 5A, 25V DC, 5A
for operation with C3 Bus coupler



Controls and displays

- Bright LEDs for status display
- Dip-switch for the termination of the rail-Buses

Parameterization of C 3 I/O modules via the C3 bus coupler

- Via Mini USB interface and W7 software configurable
- E.g. quiescent / operating current, delay time, etc.

Power supply

- via DIN-rail-bus

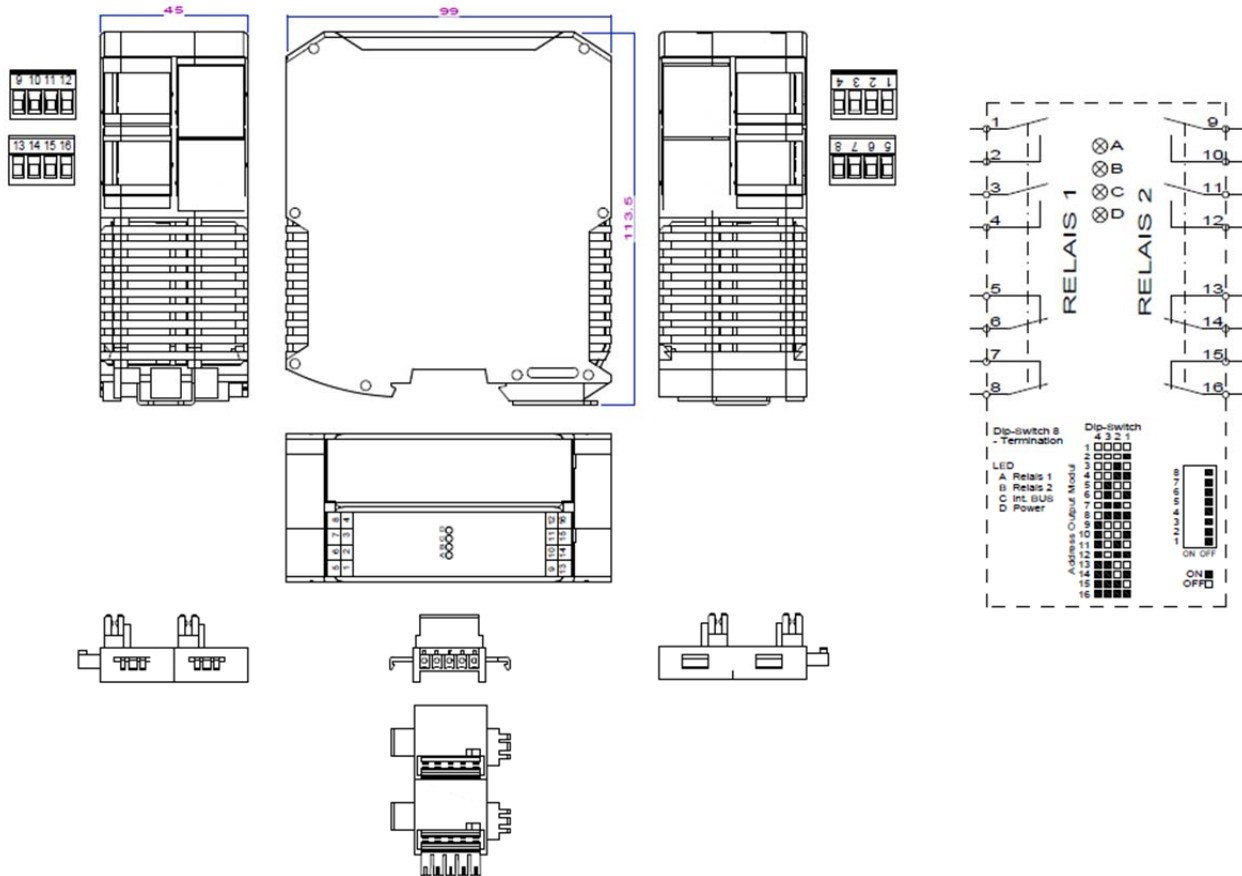
Mechanical characteristics

- Compact Snap-on plastic housing (polyamide) 45 x 99 x 113,5mm with DIN-rail-bus
- Screw-type terminals, plug connection for connection max. 2,5mm²

Extensions

- Maximum total of 12x C3 I/O modules can be connected per bus coupler (from that max. 2x C3 ana GT)

Connection diagram C3 digital OUT 2S



Technical data:

1. Type of construction:
snap-on plastic housing (polyamide)
with DIN-rail-Bus 45 x 99 x 113,5mm
2. Degree of protection:
IP20
3. Climatic conditions:
in accordance with Unitro-Standard
4. Connection:
screw-type terminals/ plug connection
max. 2,5mm²
5. Weight:
approx. 150g
6. Supply voltage:
via DIN-rail-bus
7. LED-display:
see connection diagram
8. Relay outputs:
2x **positive guided safety relays** according to EN 50205 each with 2x potential-free normally open contacts + 2x potential-free normally closed contacts, max. 250V AC, 5A, 25V DC, 5A
9. Parameterization:
via **mini USB-interface** on the Bus coupler, connected with the DIN-rail-bus: e.g. quiescent / operating current, delay time, etc.
10. Leakage distances and clearances:
in accordance with Unitro-Standard
11. EMC, immunity of interference:
Unitro-Standard,
in accordance with EN 61000



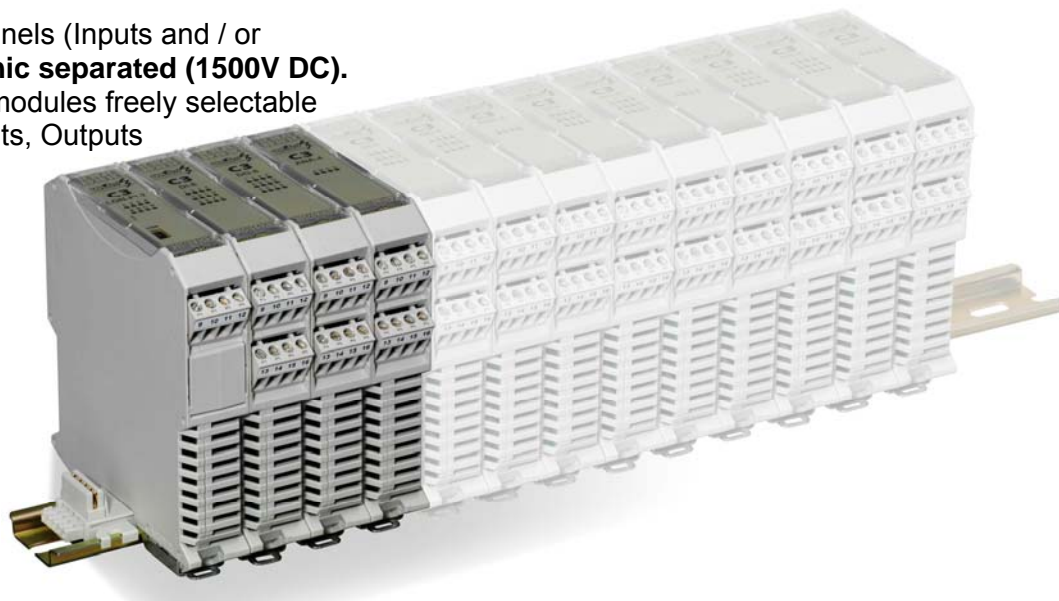
1971-2011 40 years
the power to control

C3 analogue IN + OUT for DIN Rail mounting

Types:

C3-ANA-4 GT

4 analogue channels (Inputs and / or Outputs), **galvanic separated (1500V DC)**.
With pluggable modules freely selectable the types of Inputs, Outputs



Controls and displays

- Bright LEDs for status display
- Dip-switch for the termination of the rail-Buses

Parameterization of C 3 I/O modules via the C3 bus coupler

- Via Mini USB interface and W7 software configurable
- E.g. Delta, ...

Power supply

- via DIN-rail-bus

Electrical characteristics

- 4 analogue channels, **galvanic separated (1500V DC)**, with pluggable modules freely selectable:

Inputs:	0/4-20mA	input resistance:	56Ω
	0-10V	input resistance:	1MΩ
	PT100	2 wire / 3 wire / 4 wire	
Outputs:	0/4-20mA	max. 400Ω	
	0-10V	min. 1kΩ, max. 10 EVG (Osram Quicktronic)	
- Resolution **14bit**, sample rate: approx. **6Hz**, error range: **< 0,01%**

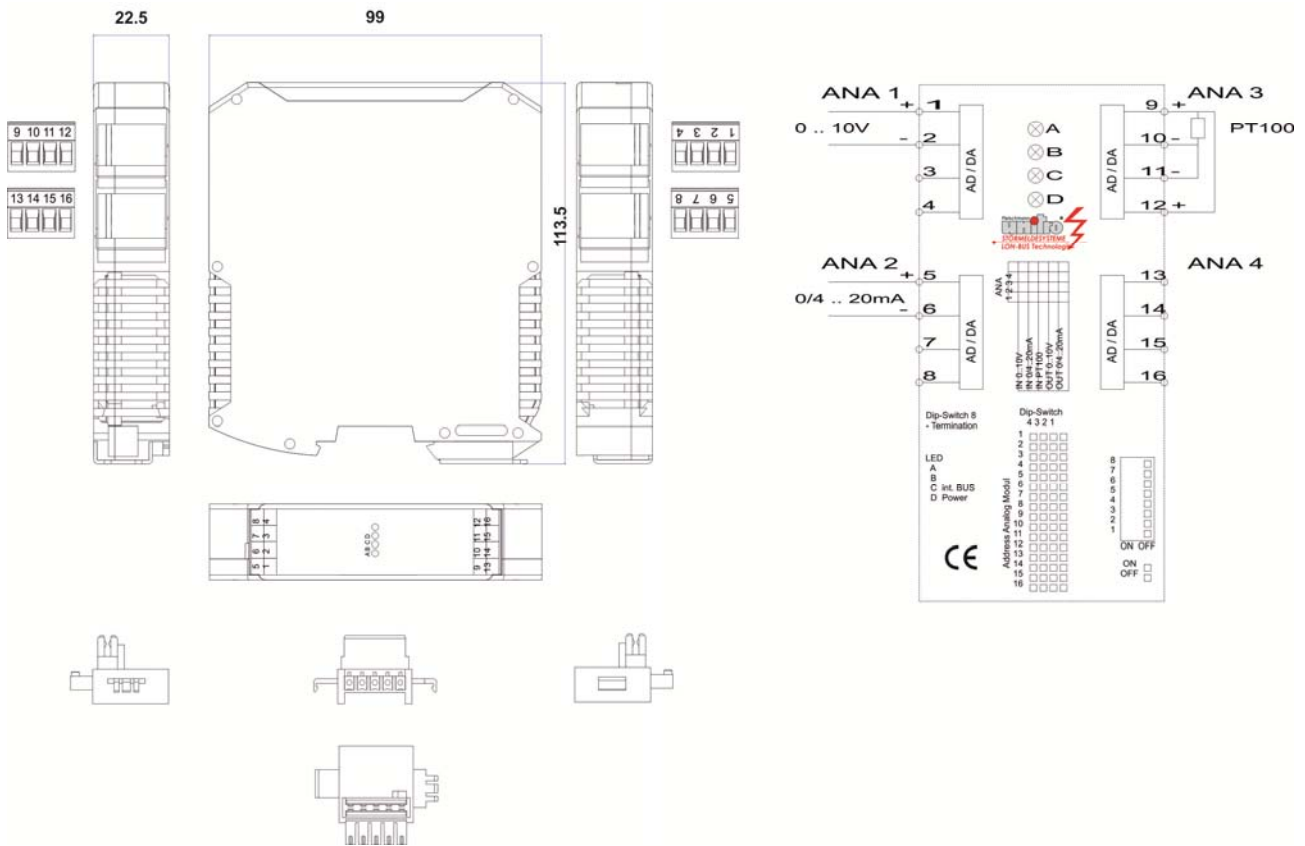
Mechanical characteristics

- Compact Snap-on plastic housing (polyamide) 22,5 x 99 x 113,5mm with DIN-rail-bus
- Screw-type terminals, plug connection for connection max. 2,5mm²

Extensions

- Maximum total of 12x C3 I/O modules can be connected per bus coupler (from that max. 2x C3 ana GT).

Connection diagram C3 analogue GT



Technical data:

1. Type of construction:
snap-on plastic housing (polyamide)
with DIN-rail-Bus 22,5 x 99 x 113,5mm
2. Degree of protection:
IP20
3. Climatic conditions:
in accordance with Unitro-Standard
4. Connection:
screw-type terminals/ plug connection
max. 2,5mm²
5. Weight:
approx. 150g
6. Supply voltage:
via DIN-rail-bus
7. Analogue channels (plug-in cards):
4 analogue channels, **galvanic separated (1500V DC)**, with pluggable modules
freely selectable:
inputs: 0/4-20mA input resistance: 56Ω
0-10V input resistance: 1MΩ
PT100 2 wire / 3 wire / 4 wire
outputs: 0/4-20mA max. 400Ω
0-10V min. 1kΩ, max. 10 EVG
8. Resolution per channel:
14bit
9. Error range:
< 0,01%
10. Sample rate:
approx. 6Hz
11. Parameterization:
via **mini USB-interface** on the Bus coupler, connected with the DIN-rail-bus: e.g. Delta, ...
12. Leakage distances and clearances:
in accordance with Unitro-Standard
13. EMC, immunity of interference:
Unitro-Standard,
in accordance with EN 61000



1971-2011 40 years
the power to control

C3text

the dimension for plain text annunciator systems

Types:

C3text

plain text display, 320 messages with 4x 40 characters per message, integrated horn, RS232 printer connector, LON-bus FT-5000 Smart transceiver with USB interface for configuring



Controls and displays

- LCD-display with back-light, 4x 40 characters, 5mm high, from that 1x 40 characters to display date, time, message status
- Front buttons for acknowledge the horn and function selection
- Rear LED status display (e.g. LON, DCF; ...)

Parameterization

- Via Mini USB interface and Windows XP Pro, W7 software configurable
- Relevant / irrelevant, quiescent / operating current, response delay for each signal
- LON-bus self-binding address assignment (in conjunction with appropriate LON-bus modules)

Supply voltage

- Wide-range power supplies with **85-265V AC / 85-250V DC** or **14-28V AC / 19-36V DC**, 100mA

Electrical characteristics

- Inputs modular and distributed expansion possible in steps of 16 or 24 with UNITRO I/O-Modules (recommended **C3** or MVL 24/0)
- Group alarm output, change over contact, max. 250V AC, 5A, 25V DC, 5A
- Equipment fault output, change over contact max. 250V AC, 5A, 25V DC, 5A
- Horn output, normally open, max. 250V AC, 5A, 25V DC, 5A
- Serial Printer Interface (RS 232C)
- 64 assignable outputs via LON-bus and/or UNITRO I/O-Modules (recommended **C3 OUT** or work with CC24 or **C3modem** telephone dealers)
- Battery backed real time clock (10 years)

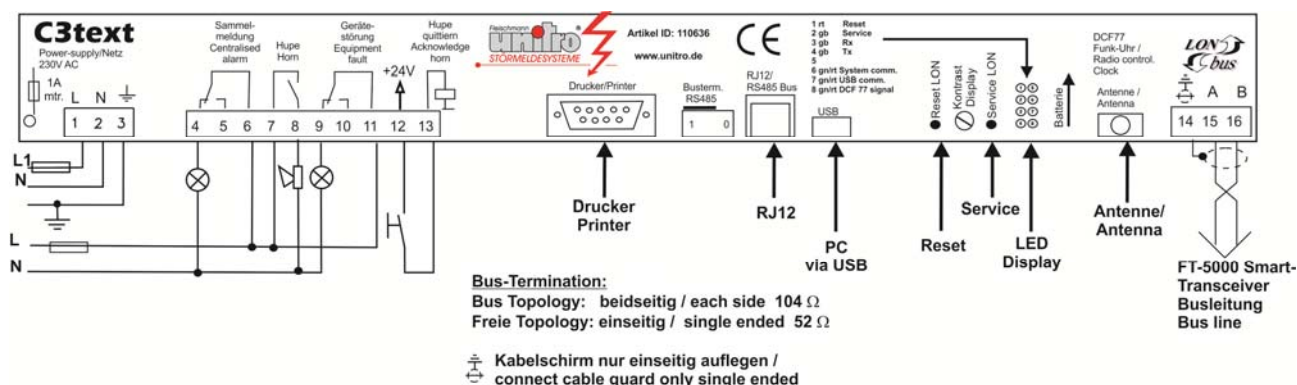
Mechanical characteristics

- Control panel bay 288 x 72 x 127mm
- Screw-type terminals, plug connection with screw-type flange for connection max. 2,5mm²

Option

- Antenna for built-in DCF77 clock

Connection diagram **C3text** (LON)



Technical data:

- Type of construction:**
control panel bay 288 x 72 x 127mm
(cutting for installation 283 x 62mm)
- Weight:**
approx. 750g
- Degree of protection:**
front: IP54
bay: IP20
- Climatic conditions:**
in accordance with Unitro-Standard
- Connection:**
screw-type terminals/ plug connection
with screw-type flange max. 2,5mm²
- Bus connection:**
2 wire LON-bus FT-5000 Smart transceiver
with screw plug-in terminals, max. 2,7km
- Supply voltage:**
24V AC/DC (=14-28V AC, 19-36V DC),
230V AC/DC (= 85-265V AC, 85-250V DC),
100mA
- Real time clock:**
battery backup (max. 10 years)
DCF77 radio clock with optional antenna
- Data retention in the absence of power:**
battery backup (max. 10 years)
- Printer connector:**
9-pin Sub-D socket RS232
- Rear LED status display:**
Status of e.g. LON-bus, DCF-status etc.
- Parameterization:**
via **mini USB-interface** e.g. self-binding,
relevant / irrelevant, quiescent / operating current,
response delay (from 1s to 18h
(see grid)) and text input
- Operating modes:**
new value message with horn control
acknowledgement of reports
message comes = +
message is acknowledged = Q
message goes unacknowledged = -
message goes acknowledged = message goes
- Group messages:**
64 output contact (group messages)
arbitrarily assigned the 320 messages
issue e.g. about 4x LM 0/16R or via LON-bus
- Power loss:**
max. 6W
- Relay outputs:**
max. 250V AC, 5A, 25V DC, 5A
- Leakage distances and clearances:**
in accordance with Unitro-Standard
- EMC, immunity of interference:**
Unitro-Standard,
in accordance with EN 61000



1971-2011 40 years
the power to control

C3 Main power unit

Types:

C3 Main power unit

DIN rail power supply unit,
primary-switched mode,
slim design,
Output: 24V DC / 1,5A
Input: 100V AC – 240V AC



Function

- C3 modules can be supplied with 24 DC using the optional DIN rail connectors.
- The electronic short-circuit and idling-proof device is connected to single-phase AC networks with nominal voltages of 100V AC to 240V AC or to two of the phase conductors of three-phase networks with a linked voltage of this value. In the event of a malfunction, the output voltage is limited to 30V DC.
- Operating voltage display LED green

Input data

- Nominal input voltage 100V AC to 240V AC, AC input voltage range 85V AC to 264V AC, approx. 0,75A
- AC frequency range 45Hz to 65Hz
- Power failure bypass > 35ms (120V AC), > 150ms (230V AC)

Output data

- Nominal output voltage 24 V DC $\pm 1\%$, 1,5 A (-25 °C ... 60 °C)

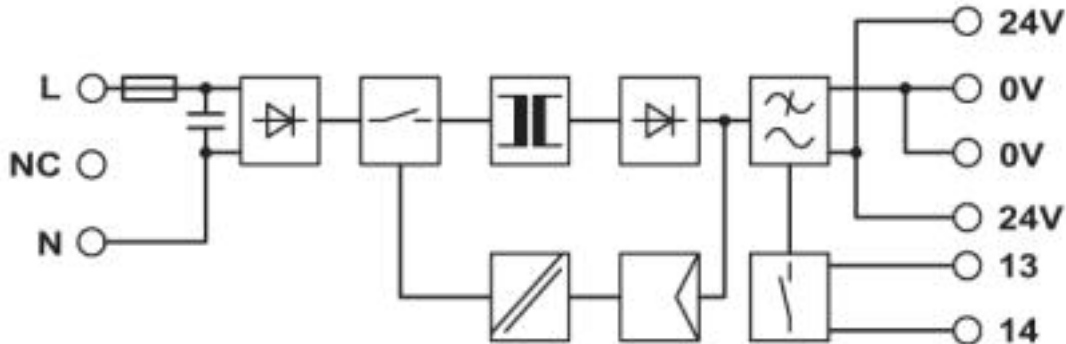
Mechanical characteristics

- Compact Snap-on plastic housing 35x99x95mm (WxHxD) with DIN-rail-bus
- Screw-type terminals, plug connection for connection max. 2,5mm²

Extensions

- Connection in parallel for redundancy and increased capacity, maximum of 2 devices for redundancy on DIN rail connector

Block diagram C3 Main power unit



Technical data:

1. Type of construction:
snap-on plastic housing (polyamide)
with DIN-rail-Bus 35x99x95mm (WxHxD)
2. Degree of protection:
IP20
3. Climatic conditions:
ambient temperature (operation):
-25°C to 70°C (> 60°C derating)
ambient temperature (storage/transport):
-40°C to 85°C
max. permissible relative humidity (operation):
≤ 95% (at 25°C, no condensation)
4. Connection:
screw-type terminals/ plug connection
max. 2,5mm²
5. Weight:
approx. 250g
6. Supply voltage:
nominal input voltage: 100V AC-240V AC
AC input voltage range: 85V AC-264V AC
AC frequency range AC 45Hz-65Hz
7. Current consumption:
approx. 0,75A (120V AC), 0,45A (230V AC)
8. Inrush surge current:
< 15A (0,6A2s)
9. Power failure bypass:
> 35ms (120V AC), > 150ms (230V AC)
10. Input fuse:
3,15A (slow-blow, internal)
11. Nominal output voltage:
24V DC ±1%
12. Output current:
1,5A (-25°C-60°C), 2A
(with POWER BOOST, -25°C-40°C
permanent)
13. Connection in parallel:
for redundancy and increased
capacity, maximum of 2 devices for
redundancy on DIN rail connector
14. Connection in series:
no
15. Max. capacitive load:
unlimited
16. Power loss:
dissipation idling max. 1,5W,
nominal load max. 6,5W
17. Leakage distances and clearances:
in accordance with Unitro-Standard
18. EMC, immunity of interference:
Unitro-Standard,
in accordance with EN 61000