DESCRIPTION

Digital I/O expansion module. The digital I/O expansion modules for use with Brodersen fieldbus and telemetry intelligent modules in the Series 2000, 3000 and 4000.

The module include 24 digital input and 12 NO relay output.

VERSIONS / ORDERING CODES

UCL-36IO .P1

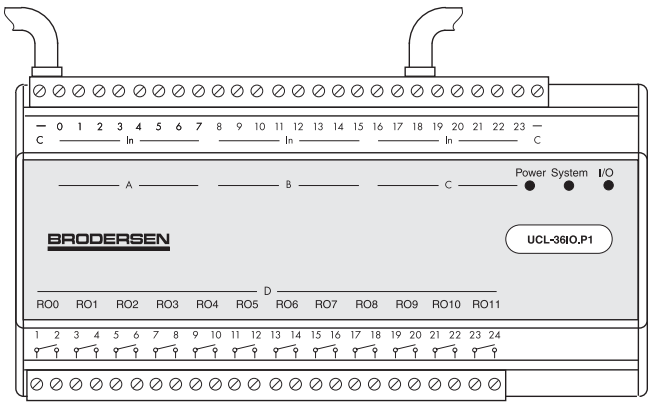
Type
UCL — UCL

Input/Output
24 digital input/12 relay output — 36IO

Input voltage range

Digital input 10-30V unipolar, relay output	P1
Digital input 30-60V unipolar, relay output	P2
Digital input 30-60V bipolar, relay output	P3
Digital input 40-72V unipolar, relay output	P4
Digital input 40-72V bipolar, relay output	P5
Digital input 10-30V bipolar, relay output	P6

UCL-36IO.P1



TECHNICAL DESCRIPTION

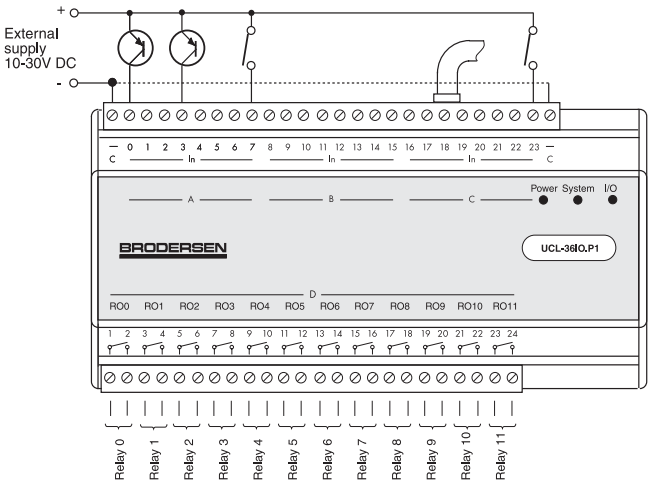
Input/output
The Expansion I/O module basic I/O fit include up to 24 input/12 relay output terminals.

Version UCL-	36IO
Digital inputs	24
Relay outputs (NO)	12

All digital I/O´s are equipped with opto-couplers.

Wiring Diagram

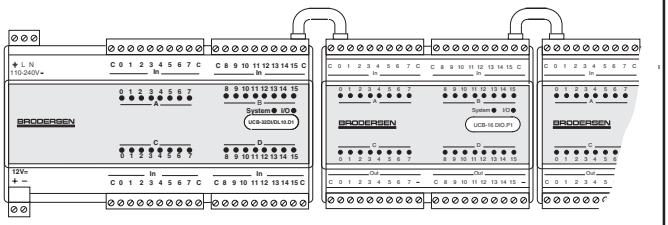
UCL-36IO



Local bus connections
The I/O expansion module is connected to the intelligent module and additional expansion modules using the local bus connector on the left and right top side of the module. 8 pole RJ connector cable is used. Technical details of the local bus and wiring detail can be ordered from your module supplier.
A range of appropriate cables for adding expansion modules is available.
Length of local bus cable is max. 50cm.

I/O expansion general
The basic I/O fit of the Series 2000/4000 Slaves can be expanded by attaching the System expansion modules.

Example: BITBUS slave with expansion modules



If the current consumption of the expansion modules exceeds the capability of the power supply, an additional power supply must be inserted.

DIGITAL INPUTS

Inputs: 24 PNP
All equipped with optocouplers.

12-24V- unipolar/bipolar (D1 and D6) :
Input voltage activated: 10 - 30V DC, note 1.
Input voltage deactivated: Max. 3V DC.
Input current: 12V DC: Typical 3mA
24V DC: Typical 6mA

48V - unipolar/bipolar (D2 and D3) :
Input voltage activated: 30 - 60V DC, note 1
Input voltage deactivated: Max. 8V DC.
Input current: 48V DC: Typical 4mA

60V - unipolar/bipolar (D4 and D5) :
Input voltage activated: 48 - 72V DC, note 1
Input voltage deactivated: Max. 8V DC.
Input current: 60V DC: Typical 4mA

Input delay: Typical 5ms.

RELAY OUTPUTS

Outputs: 12 potential free SPST-N/O contacts.

Output voltage : Max. 240V AC.
Output current: Max. 1A AC (resistive).
Output delay: Typical 10ms.

Lifetime (relay): Min. 100.000 operations at rated load.

Contact material: Gold overlay silver alloy.

Isolation (coils-contacts): 2kV AC 50Hz 1 min (IEC255-5).
4kV 1,2/50micro s. / impulse withstand (IEC255-5).

INDICATORS

Digital input: None.
Relay output: None.
Power: Green LED
(on = power on)
System Green LED
(on = module OK)
I/O Green LED
(on= local bus OK)

GENERAL

Current consumption (12V) :
UCL-36IO: max. 150mA (VN)

Ambient temperature: -25 - +55°C.

EMC: EN 50081-1/EN50082-2.

Climatic:
Dry heat: IEC 68-2-2, Test Bd, Temp. +55°C, Duration 8h.
Cold: IEC 68-2-1, Test Ad, Temp. -10°C, Duration 8h.
Damp heat: IEC 68-2-3, Test Ca, Temp. 40°C, RH 95%, Duration 8h.

Mechanical:
Vibration: IEC 68-2-6, Test Fc (sinusoidal), Freq. 10-150Hz, Amp. 4g, 5 sweeps in 3 orthogonal axes.

Shock: IEC 68-2-27 (half sine), Acc. 15g, Pulse time 11msec., 3 x 6 shocks.

Protection: IP20.

Mounting: 35 mm DIN-rail, EN50022.

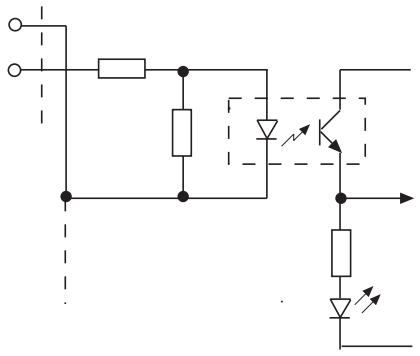
Terminals: Max. 1.5 mm2 wire.

Housing: Anodized aluminium with plastic ends. According to DIN 43880.

Dimensions:
HxWxD: 80 (+connectors)x162x62mm

CIRCUIT CONFIGURATION (DIGITAL)

Input



NOTES/REMARKS

1) For unipolar types the input must be positive. Bipolar types allows both negative and positive connections to inputs.

2) Input signals exceeding the maximum values **MAY CAUSE PERMANENT DAMAGE** to the module.

3) The 12V external supply is not isolated from the circuit supplying the electronics. It is therefore recommended to use an external source for the I/O if the I/O signals are influenced by electrical noise, e.g. from long cables or inductive load.

4) The sum of current consumed from the 12V rail, i.e. internal consumption, consumption from the external screw terminals and by expansion modules at the local bus, must never exceed the maximum total output current.