



DESCRIPTION

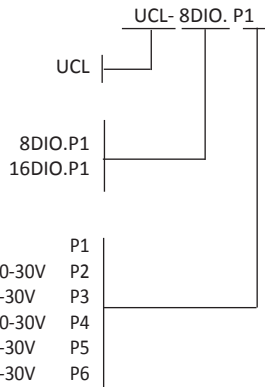
Digital I/O Expansion modules. The digital I/O Expansion modules for use with Brodersen RTU telemetry intelligent modules in the Series 4000 and 5000.

VERSIONS / ORDERING CODES

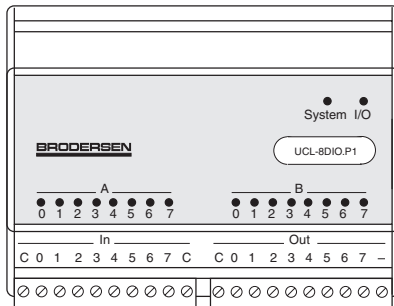
Type
UCL

Input/Output
8 digital input / 8 digital output
16 digital input / 16 digital output

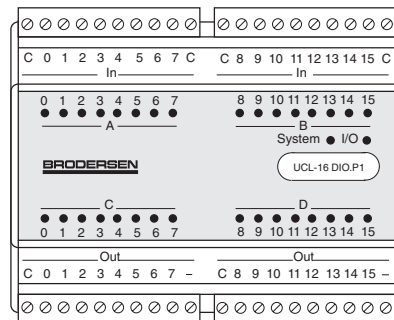
Input voltage range
 Digital input and output 10-30V unipolar P1
 Digital input 30-60V unipolar, digital output 10-30V P2
 Digital input 30-60V bipolar, digital output 10-30V P3
 Digital input 40-72V unipolar, digital output 10-30V P4
 Digital input 40-72V bipolar, digital output 10-30V P5
 Digital input 10-30V bipolar, digital output 10-30V P6



UCL-8DIO.P1



UCL-16DIO.P1





Digital I/O Expansion Modules UCL-8DIO.Px, UCL-16DIO.Px

TECHNICAL DESCRIPTION

Input/output

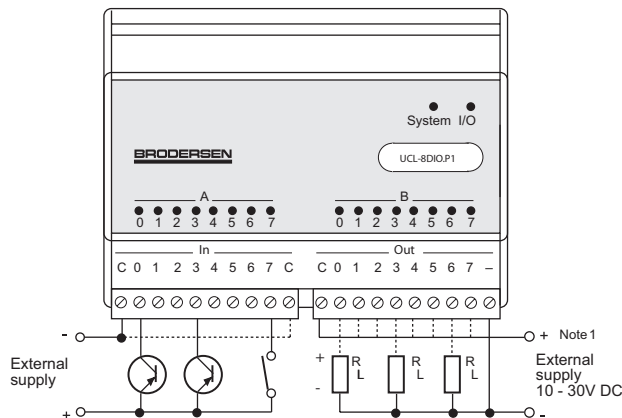
The Expansion I/O modules basic I/O fit can include up to 32 input/output terminals. Among the options available are:

Version	UCB-	8DIO	16DIO
Digital inputs		8	16
Digital outputs (PNP o. c.)		8	16

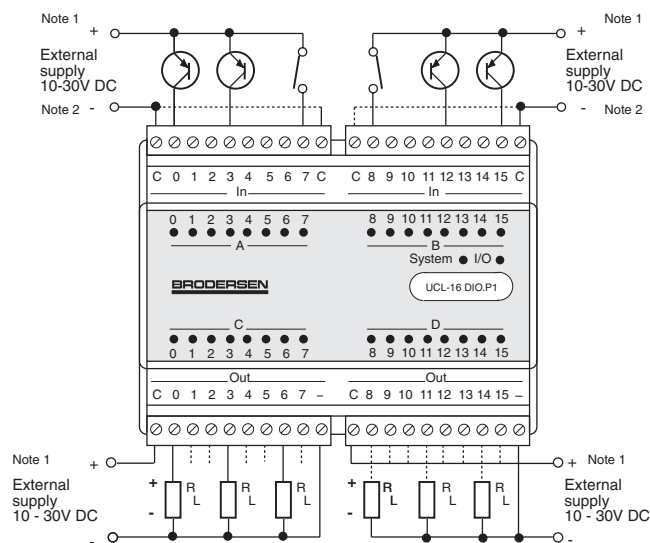
All digital I/O's are equipped with opto-couplers.

Wiring Diagram

UCL-8DIO



UCL-16DIO



Local bus connections

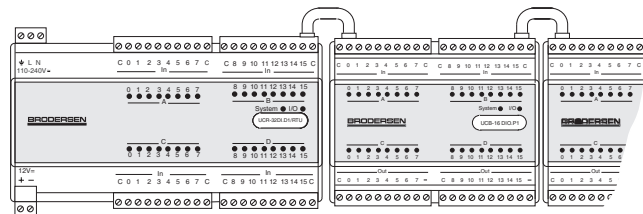
The I/O expansion module is connected to the intelligent module and additional expansion modules using the local bus connector on the left and right top side of the module. 8 pole RJ connector cable is used. Technical details of the local bus and wiring detail can be ordered from your module supplier.

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



In general several expansion modules are available with the following I/O configurations:

- 8-32 10-30V inputs
- 8-32 10-30 V PNP (or NPN) open collector outputs
- 8 230V inputs / 8 230V outputs (potential free relay)
- 4-8 analogue inputs (0-10V, 4-20mA, etc.)
- 8 Thermo coupled inputs (J, K, R, S, T type)
- 8 Pt-100, Pt-500 or Pt-1000 RTD inputs
- 4 analogue outputs (0-10V, 4-20mA, etc.)
- etc.

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



DIGITAL INPUT/OUTPUT

Inputs: UCL-8DIO: 8 isolated digital inputs
UCL-16DIO: 16 isolated digital inputs
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.

Outputs:

External voltage: 10 - 30V DC (note 2).
Output voltage drop: Max. 1.5V (output activated).
Output current: Max. 0.5A, max 2A totally per section of 8 outputs
Output peak current: Max. 5A in 1 second (note 2).
Output leakage current (off): Max. 0.5mA.
Output delay: Max. 1ms.

Isolation

(input or output to electronics, input to output): 2kV AC.

Indicators:

Digital input: One for each digital input (red) indicating active input.
Digital output: One for each digital output (yellow) indicating active output.

GENERAL

Current consumption (12V) :

UCL-16DIO: max. 105mA
UCL-8DIO: max. 60mA

Ambient temperature: -40 - +65°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.

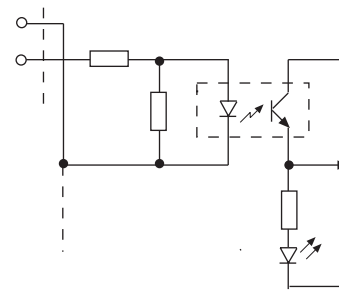
Housing: Anodized aluminium with plastic ends.
According to DIN 43880.

Dimensions:

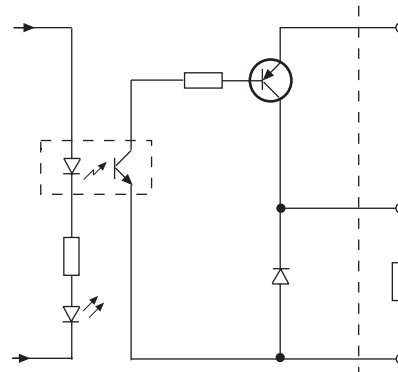
HxWxD: 80 (+connectors)x108x62mm

CIRCUIT CONFIGURATION (DIGITAL)

Input



Output PNP



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.