

**DESCRIPTION**

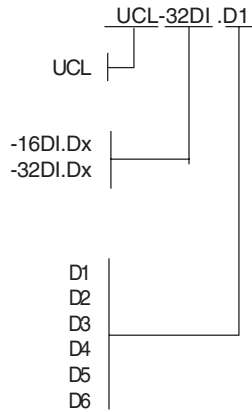
Digital input expansion modules. The digital input expansion modules for use with Brodersen fieldbus and telemetry intelligent modules in the Series 2000 and 4000.

**VERSIONS / ORDERING CODES**

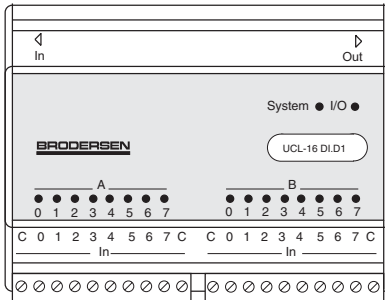
**Type**  
UCL

**Input/Output**  
16 digital input  
32 digital input

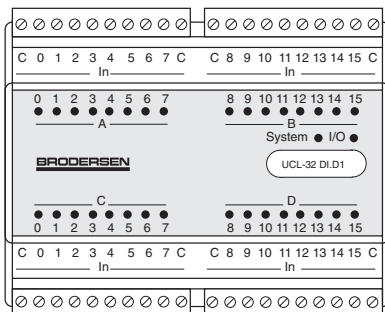
**Input voltage range**  
Digital input, 10-30V unipolar  
Digital input 30-60V unipolar  
Digital input 30-60V bipolar  
Digital input 40-72V unipolar  
Digital input 40-72V bipolar  
Digital input 10-30V bipolar



**UCL-16DI.D1**



**UCL-32DI.D1**



**Digital Input Expansion Modules**

UCL-16DI, UCL-32DI

**TECHNICAL DESCRIPTION**

**Input/output**

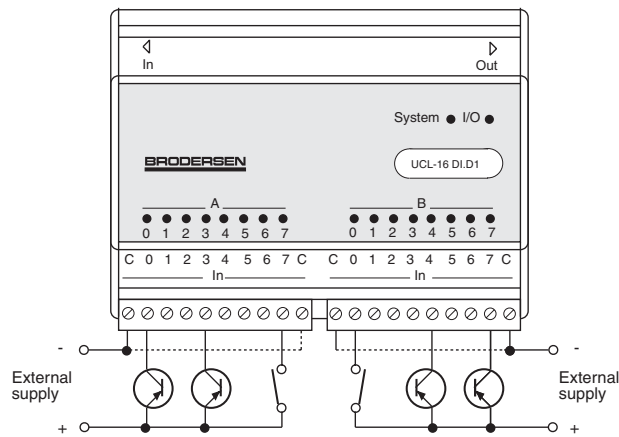
The Expansion I/O modules basic I/O fit can include up to 32 input terminals. Among the options available are:

Version	UCL-	16DI	32DI
Digital inputs		16	32

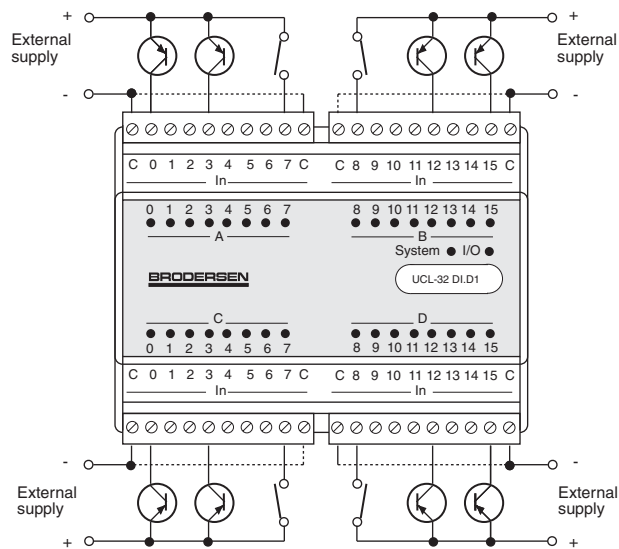
All digital I/O's are equipped with opto-couplers.

**Wiring Diagram**

**UCL-16DI**



**UCL-32DI**



**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.

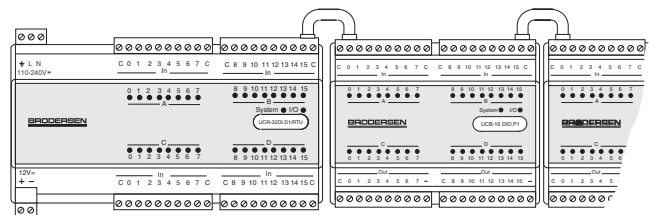
A range of appropriate cables for adding expansion modules is available.

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 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-16: 16 isolated digital inputs  
UCL-32: 32 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.

**Isolation:** 2kV AC (input to electronics)

**Indicators:** One for each digital input (red)

**GENERAL**

**Current consumption (12V) :**

UCL-16DI: max. 45mA.  
UCL-32DI: max. 80mA.

**Ambient temperature:** -10 - +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 mm<sup>2</sup> wire.

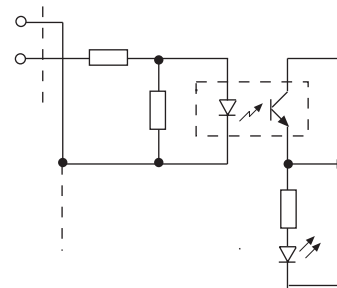
**Housing:** Anodized aluminium with plastic ends.  
According to DIN 43880.

**Dimensions:**

HxWxD: 80(+connectors)x108x62mm

**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.