

INTRODUCTION

Digital input expansion module for 110-125 VDC input. All inputs are 2-wire with separate common for each single input. Each input channel is individually isolated.

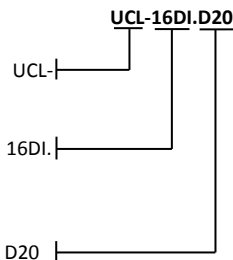
The digital input expansion module can be used with all Brodersen RTUs that support I/O LocalBus. That includes e.g. RTU8, RTU870, RTU22 and RTU32 Series products.

VERSION/ORDERING CODES

Type
UCL

Input
16 digital inputs

Input voltage range
Digital input, 110-125VDC unipolar



TECHNICAL DESCRIPTION

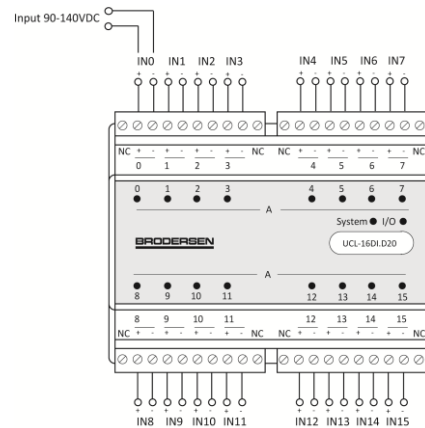
Inputs

The Expansion I/O module basic I/O fit can include up to 16 input terminals. Among the options available are:

All digital inputs are equipped with opto-couplers.

Wiring Diagram

UCL-16DI.D20



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.

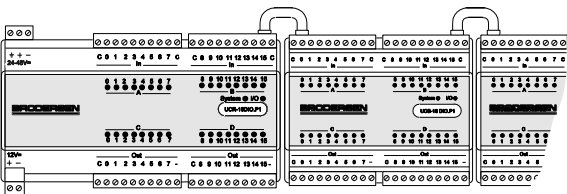


A range of appropriate cables for adding expansion modules is available. Length of local bus cable is max. 300cm.

I/O expansion general

The basic I/O fit of the Brodersen RTU Series can be expanded by attaching the UCL I/O Expansion modules. Number of modules supported by the RTUs varies from type to type. But in general more than 1000 I/Os are supported by the RTUs.

Example: RTU 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.

TECHNICAL DATA

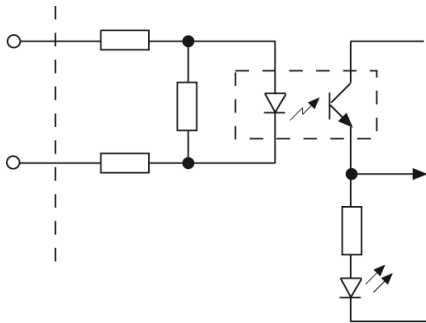
Inputs:	16 isolated digital inputs each with separate common. All equipped with opto couplers.
110/125VDC unipolar (D20) :	
Input voltage activated:	90 - 140VDC, note 1 & 2.
Input voltage deactivated:	Max. 25VDC.
Input current:	110VDC: Typical 3mA.
Input delay:	Typical 5ms.
Isolation:	2kV AC (input to electronics). 2kV AC (input to input).
Indicators:	One red LED for each digital input.
GENERAL	
Power Supply:	12VDC – powered via the LocalBus interface by the RTU or additional power supply.
Current consumption (12V):	
UCL-16DI.D20:	max. 75mA.
Ambient temperature:	-10 - +55°C. Optional: -25 - +70°C
EMC:	EN 61000-6-2/EN61000-6-4.
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 ² wire.
Housing:	Aluminum housing with plastic end caps. According to DIN 43880.
Dimensions:	
HxWxD:	80(+connectors)x108x62mm

CIRCUIT CONFIGURATION

Input block diagram



NOTES/REMARKS

- 1) For unipolar types the input must be positive. 140VDC is absolute max input voltage.
- 2) Input signals exceeding the maximum values **MAY CAUSE PERMANENT DAMAGE** to the module.