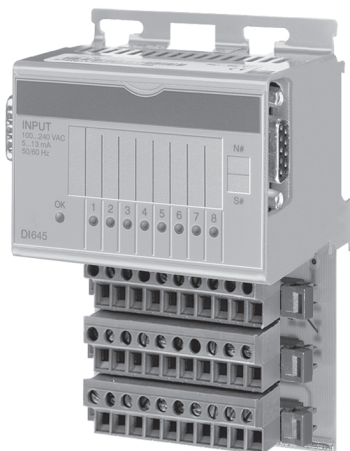


7.10 DI645

7.10.1 Technical Data



Terminal block is not included in the delivery.

Module ID	DI645
General Information	
Model Number	7DI645.7
Short Description	2003 digital input module, 8 inputs 100-240 VAC, 50 ms, Order terminal blocks separately!
C-UL-US Listed	Yes
B&R ID Code	\$E5
Amount	
CP430, EX270	4
CP470, CP770 CP474, CP476, CP774 EX470, EX770 EX477, EX777	8
Static Characteristics	
Module Type	B&R 2003 I/O Module
Number of Inputs	8
Wiring	Sink or source
Input Voltage	
Minimum	85 VAC
Nominal	100 - 240 VAC
Maximum	264 VAC
Input Voltage Frequency	47 - 63 Hz
Switching Threshold	
LOW	<40 VAC at 2 mA
HIGH	>79 VAC
Input Delay	Max. 50 ms (at 85 - 264 VAC)

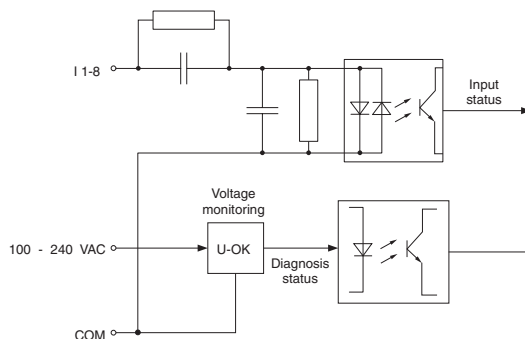
Module ID	DI645
Input Current 100 VAC / 60 Hz 240 VAC / 50 Hz	Approx. 5 mA Approx. 11 mA
Voltage Monitoring (LED: U-OK)	Yes Supply voltage >85 VAC
Power Consumption	Max. 0.2 W
Operating Characteristics	
Electrical Isolation	Input - PCC
Mechanical Characteristics	
Dimensions	B&R 2003 single width

7.10.2 Status LEDs

The status-LEDs 1 - 8 (green) show the logical state of the corresponding inputs.

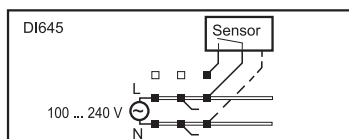
The LED OK (orange) indicates that the input supply voltage is present. The LED is lit for input voltages from 60 to 85 VAC.

7.10.3 Input Circuit Diagram

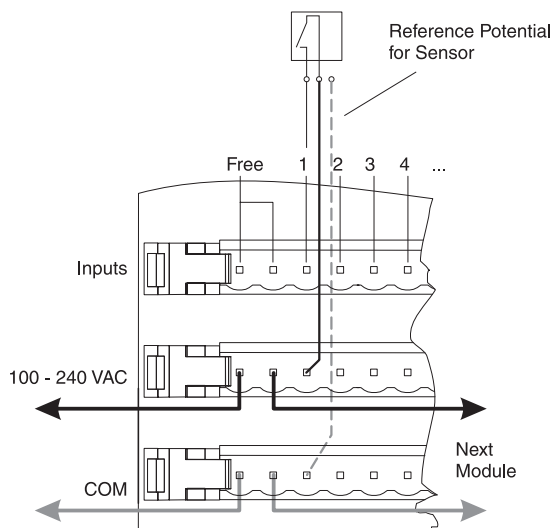


7.10.4 Legend Sheets

A legend sheet can be slid into the front of the module from above. The module circuit is shown on the back. The inputs can be labelled on the front.



7.10.5 Connections



7.10.6 Variable Declaration

The variable declaration is valid for the following controllers:

- 2003 PCC CPU
- Remote I/O Bus Controller
- CAN Bus Controller

The variable declaration is made in PG2000. The variable declaration is described in Chapter 4, "Module Addressing".

Automation Studio™ Support:

See Automation Studio™ Help starting with V 1.40

Variable declaration with PCC 2003 CPU and remote slaves

Function	Variable Declaration				
	Scope	Data Type	Length	Module Type	Chan.
Single digital input (channel x)	tc_global	BIT	1	Digit. In	1 ... 8
Module status	tc_global	BYTE	1	Status In	0

Variable declaration with CAN slaves

Function	Variable Declaration				
	Scope	Data Type	Length	Module Type	Chan.
Single digital input (channel x)	tc_global	BIT	1	Digit. In	1 ... 8

Module status

The module status for CAN slaves can only be read using command codes. The command codes are explained in Chapter 5, "CAN Bus Controller Functions", section "Command Codes and Parameters". An example is provided in Chapter 4 "Module Addressing".

7.10.7 Access Using CAN IDs

Access via CAN Identifiers is used if the slave is being controlled by a device from another manufacturer. Access via CAN Identifiers is described in an example in Chapter 4, "Module Addressing". The transfer modes are explained in Chapter 5, "CAN Bus Controller Functions".

CAN ID Packed

A maximum of eight digital I/O modules can be operated in packed mode.

CAN ID ¹⁾	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
286	Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7	Module 8

¹⁾ CAN ID = $286 + (nd - 1) \times 4$ nd Node number of the CAN slave = 1

CAN ID Unpacked

A maximum of four digital I/O modules can be run in unpacked mode.

Module	CAN ID ¹⁾	Byte
1	286	Inputs 1 - 8
2	287	Inputs 1 - 8
3	288	Inputs 1 - 8
4	289	Inputs 1 - 8

¹⁾ CAN ID = $286 + (nd - 1) \times 4 + (ma - 1)$ nd ... Node number of the CAN slave = 1
ma ... Module address of digital I/O modules = 1 - 4

For more information on ID allocation, see Chapter 5, "CAN Bus Controller Functions".

7.10.8 Module Status

Evaluation of the module status is explained using an example in Chapter 4 "Module Addressing".

								Bit	Description
								7	0Module voltage not present or too low 1Module voltage OK
								6	Digital module = 0
								5	xNot defined, masked out
								0 - 4	Module code = \$05
	0	x	0	0	1	0	1		
7							0		