7.3 DI475 / DI476

7.3.1 General Information

The DI475 and DI476 are standard digital input modules.

7.3.2 Order Data

Model Number	Short Description	Figure
3DI475.6	2005 digital input module, 16 inputs 24 VDC, 10 ms, sink/source, 4 electrically isolated input groups. Order TB170 terminal blocks separately.	
3DI476.6	2005 digital input module, 16 inputs 24 VDC, 1 ms, sink/source, 4 electrically isolated input groups. Order TB170 terminal blocks separately.	
3TB170.9	2005 terminal block, 20-pin, screw clamps	
3TB170.91	2005 terminal block, 20-pin, cage clamps	
3TB170:90-02	2005 terminal block, 20-pin, 20 pcs., screw clamps	
3TB170:91-02	2005 terminal block, 20-pin, 20 pcs., cage clamps	
Terminal blocks not included in the delivery (see "Accessories").		

Table 100: DI475 / DI476 order data

7.3.3 Technical Data

Product ID	DI475	DI476
C-UL-US Listed	Yes	Yes
B&R ID Code	$01	$07
Number of Inputs Total in 4 Groups of	16 4	
Electrical Isolation Input - PLC Group - Group Input - Input (same group)	 Yes (optocoupler) Yes (optocoupler) No	
Wiring	Sink or source	

Table 101: DI475 / DI476 technical data

Product ID	DI475	DI476
Input Voltage Nominal Maximum	24 VDC 30 VDC	
Input Resistance	4.8 kΩ	
Switching Threshold LOW Range Switching range HIGH Range	< 5 V 5 to 15 V > 15 V	
Input Delay Typical Maximum	10 ms 12 ms	1 ms 1.2 ms
Input Current at Nominal Voltage	Approx. 5 mA	
Maximum Peak Voltage	500 V for 50 µs max. every 100 ms	
Power Consumption 5 V 24 V Total	Max. 1.5 W --- Max. 1.5 W	
Dimensions	B&R 2005 single-width	

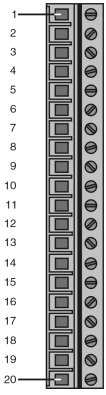
Table 101: DI475 / DI476 technical data (cont.)

7.3.4 Status LEDs

Figure	LED	Description
	1 - 16	The status LEDs indicate the logical status of the corresponding inputs. Regardless of the type connection (sink or source connection) the LED is lit, if the input is logical 1, i.e. when the current flows through the optocoupler.

Table 102: DI475 / DI476 status LEDs

7.3.5 Pin Assignments



TB170

Connection	Assignment	
1	COM (1-4)	Group 1
2	Input 1	
3	Input 2	
4	Input 3	
5	Input 4	
6	Input 5	Group 2
7	Input 6	
8	Input 7	
9	Input 8	
10	COM (5-8)	
11	COM (9-12)	Group 3
12	Input 9	
13	Input 10	
14	Input 11	
15	Input 12	
16	Input 13	Group 4
17	Input 14	
18	Input 15	
19	Input 16	
20	COM (13-16)	

Table 103: DI475 / DI476 pin assignments

7.3.6 Input Circuit Diagram

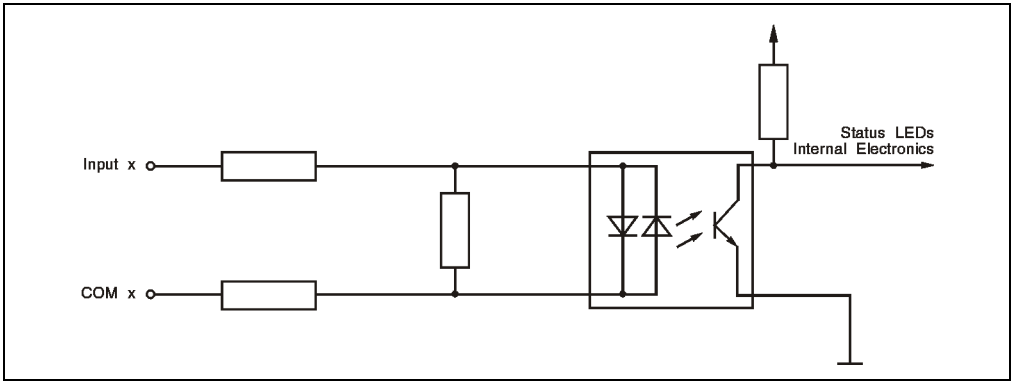


Figure 90: DI475 / DI476 input circuit diagram

7.3.7 Variable Declarations

The variable declaration is made in B&R Automation Studio™:

Function	Variable Declarations				
	Scope	Data Type	Length	Module Type	Chan.
Read single digital input (channel x)	tc_global	BOOL	1	Digit. In	1 ... 16

Table 104: DI475 / DI476 variable declaration