

# ***Tixi I/O-Modules***

***Manual for Tixi I/O Modules XP84D, XP84DR and XP88D***

***v1.2***

## 1. What are Tixi I/O modules?

Tixi I/O modules are used to increase the number of in- and outputs of a Tixi Alarm Modem. They are connected and powered by the Tixi Alarm Modem via the *Tixi IO-Bus*.



The modular Tixi-System with its main device and up to 8 expansion modules perfectly adapts to different cases of operation. A maximum amount of 128 I/Os is possible.

The Tixi IO-Bus uses the serial synchronous two wire bus I<sup>2</sup>C (Inter-IC Bus) from Philips. This bus is a bidirectional Master/Slave- architecture with integrated transfer protocol and software addressing, with just two connections between the ICs. The Tixi IO-Bus uses two additional control lines and a 5V power supply.

If you connect several I/O Modules to a Tixi Alarm Modem, the hardware addresses of all modules must be different. Please contact Tixi-Support for assistance. Visit <http://www.tixi.com> and use the support formula:

[http://www.tixi.com/support\\_request/?L=1](http://www.tixi.com/support_request/?L=1)

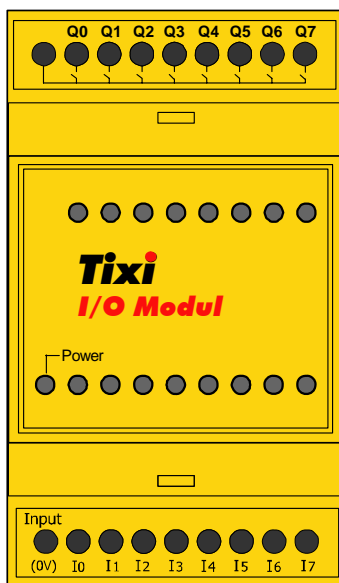
### 1.1. Variants of Tixi I/O modules

There are three I/O modules with different in- and output combinations available:

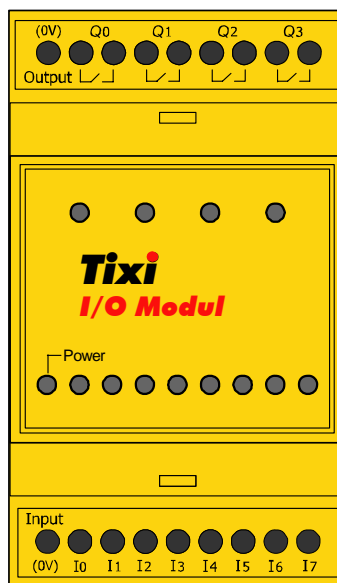
Model	Digital Inputs	Digital Outputs	Relay Outputs
XP84D	8	4	
XP84DR	8		4
XP88D	8	8 <sup>1</sup>	

<sup>1</sup> with one single 0V connector.

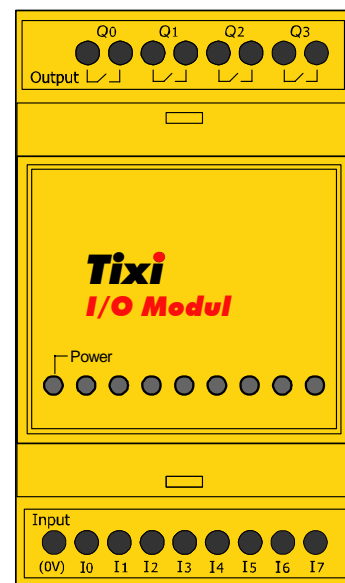
System drawings:



XP-88D



XP-84D



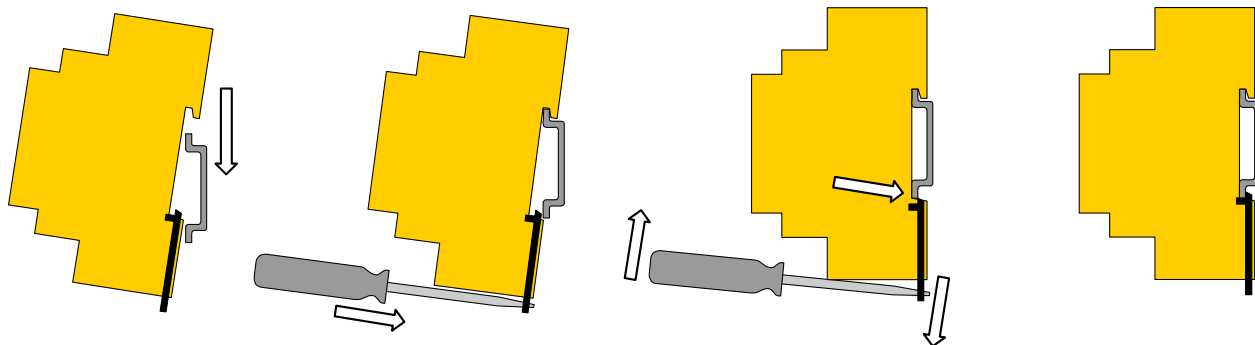
XP-84DR

## 2. Connecting Tixi I/O Modules

### 2.1. Connecting to a Tixi Alarm Modem

Follow these steps to connect an I/O Module to a Tixi Alarm Modem:

1. Mount the Alarm Modem to a 35mm DIN rail:



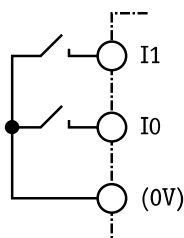
2. Mount the Tixi I/O Module a view centimetre right next to the Alarm Modem.
3. Check if the six pin connector of the I/O module is properly aligned to move it easily into the main unit without using force.
4. Move both devices together to establish the connection.



We recommend to use DIN rail end brackets on both sides for tight fit, e.g. Phoenix Contact "CLIPFIX".

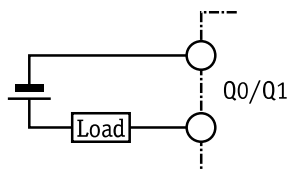
### 2.2. Wiring of In- and Outputs

#### digital inputs



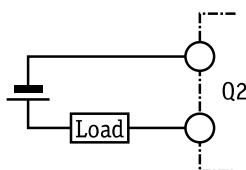
The inputs are used to monitor digital signals (on/off). The digital inputs I0...I7 can be connected potential free or by using a relay.

#### digital outputs



The digital outputs Q0...Q7 (Model XP88D) or Q0...Q3 (Model XP84D) are potential free and can switch DC/AC voltage up to 125 V with a maximum load of 0,12 A. Connect relays to the digital outputs to switch higher loads.

#### relay outputs



The relay outputs Q0...Q3 (Model XP84DR) can directly be connected to resistive or inductive loads. The maximum load is 3 A for 230 VAC or 0,3A for 110 VDC.

### 3. LEDs of the Tixi I/O Modules

The status of the in- and outputs are reflected by LEDs by following meaning:

	Logical status	Electrical status
<b>Inputs</b>		
ON	0	closed
OFF	1	open
<b>Outputs<sup>2</sup></b>		
ON	1	closed
OFF	0	open

<sup>2</sup>Only XP-88D and XP-84D

### 4. Technical data

#### 4.1. In- and Outputs

Inputs	digital	to be switched via potential-free contacts
Outputs	digital	potential-free, AC/DC 125 V, 130 mA
	Relay	potential-free, 230 VAC 3 A or 110 VDC 0,3 A
I/O-Terminals		screw terminals (grid dimensions: 5,08 mm), cross-section max. 2,5 mm <sup>2</sup>

#### 4.2. General data

Power supply		erfolgt über Tixi Alarm Modem (Grundgerät)
LEDs		Power, Zustandsanzeigen für Ein- und Ausgänge
Housing/Mounting		DIN-Schienen-Gehäuse/auf Hutschiene 35 mm nach EN50022 (senkrecht oder waagerecht)
Conformity	EMV/Safety	CE EN55022, EN55024, EN60950
Temperature range	Operation	0...+50 °C
	Storage	-30...+70 °C
Permissible air humidity		5...95 % relative humidity, non-condensing
Protection class		IP20
Degree of pollution		2
Dimensions		Width: 53 mm × Height: 58 mm × Depth: 90 mm DIN rail mounting: Norm DIN rail DIN EN 50022-35x15 and DIN EN 50022-35x7,5
Weight		XP84D: 103g      XP88D: 104g      XP84DR: 126g