16 24VDC EXPANSION INPUT PL110

1. Product Description

The PL110 module is a 16 digital expansion input for Piccolo series CPUs. Up to three modules can be connected to a programmable controller, increasing its capacity to 48 input points.

2. Packing List

The product packing contains the following part:
- PL110: 16 24VDC EXPANSION INPUT

3. Functional Characteristics

3.1. General Characteristics

- Number of points: 16
- Individual optocoupling for each input point, with common 0V
- Status information for each input by LEDs
- Process connection: terminal blocks for cables of 0.5 up to 1.5mm^2
- Mechanical protection: IP20, protection against finger access to electrical parts and without protection against water, according to IEC Pub. 144 (1963)
- MTBF: 72,000 hours @ 40°
    calculated according to MIL-HDBK-217E
- Operation temperature: 0 to 60°C
    exceed IEC 1131
- Storage temperature: -25 to 75°C
    according to IEC 1131 level RH2
- Weight:
    net: 400g
    shipped: 500g

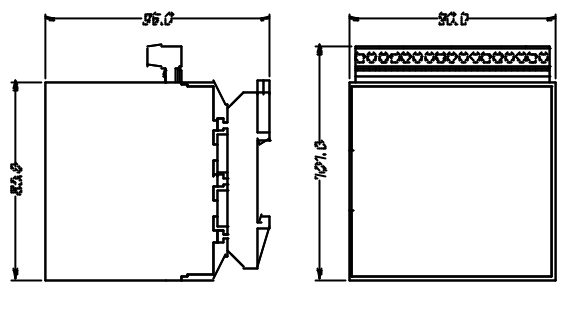### 3.2. Electrical Characteristics

- Input voltages:
    On logical level: 0 Vdc to 5 Vdc
    Off logical level: 13 Vdc to 30 Vdc
- Transition times:
    0-1: 2ms
    1-0: 2ms
- Consumption:
    24VDC CPU power supply: 50mA
- Maximum module dissipation: 3W with nominal supply
- Electrostatic surge discharge: level 4
    according to IEC 1131
- Electrical noise immunity (oscillating wave)
    according to IEC 1131 and IEEE C37.90.1 (SWC)
- Electrical noise immunity (fast transient): level 3
    according to IEC 801-4
- Irradiated electrical field immunity: 10V/m @ 140 MHz
    according to IEC 1131
- Electric discharge protection
    according to IEC 536 (1976), class I

3.3. Software Characteristics

The expansion points addressing is done according to following addresses table:
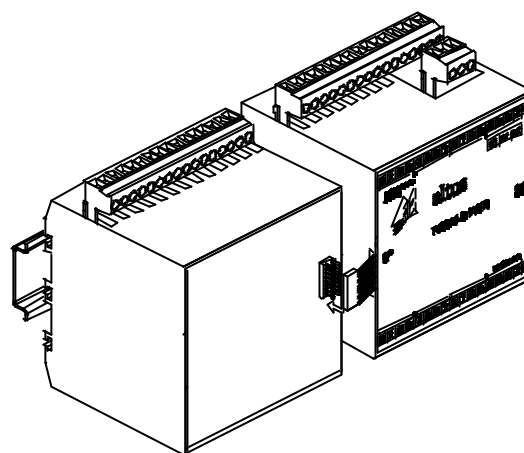
Straps	Bus Address
Position 1	R0004
Position 2	R0008
Position 3	R0012

4. Physical Dimensions

5. Installation

The expansions must be connected to CPUs according to following figure:

For configurations with two or three expansion modules, the right module must be connected to left module, as done with CPU.

6. Handbooks

For more technical details, installation, programming and CPs user security of Piccolo series, the following manuals should be consulted:
- Piccolo Series User Manual
- AL-3830 User Manual
- Mastertool User Manual

7. Compatibility

The PL110 module is compatible with all Piccolo PL103 CPUs, excepting the following:
- Version of executive program PL103 smaller than 1.25 and equal to 1.30 up to 1.40.

8. Revisions

The revision of this document is shown on top of the page, indicating contains changing or format improvements.

ALTUS has rights to modify this TC without previous notice, in order to improve product characteristics.

The following report shows each revision and corresponding remarks:

Revision: A	Date: 12/09/98
Approval: Luis Fernando Saraiva	
Author: Alexandre Voigt da Poian - R&D	

Remarks:

■ Initial revision