

Product Description

PO5063 is a PROFIBUS-DP modular fieldbus head belonging to Ponto® PLC Series that can control all I/O modules of the series. Can be connected to HMIs (keyboards and diplays), creating a powerful man-machine interface on PROFIBUS slave.

The photograph shows the product mounted over a PO6500 base, with power supply and PROFIBUS-DP network connecting terminals. His main characteristics are:

- PROFIBUS-DP slave protocol for data communication compatible with any PROFIBUS-DP master equipment, according to EN50170 standard
- I/O modules access through PONTO Series data bus
- Connects up to 20 I/O modules
- Data capacity up to 200 input and 200 output bytes
- Allows local use of HMIs, used as na interface between HMIs and PROFIBUS-DP network
- Allows Hot standby in I/O modules
- Automatic configuration and parameterization of all I/O modules through the PROFIBUS-DP class 1 master
- Diagnostic and local operation state through panel Leds
- Sends diagnostic to PROFIBUS-DP master
- Network address on the base, avoiding addressing mistakes when changing the head
- 12 Mbits maximum baudrate
- BaudRate automatic detection
- Panel label to identify equipment
- Module exchange without disassemble of the base and electrical wiring
- Has a supervision serial RS-232 standard interface, for forcing and supervise I/O points and local diagnosis



Ordering Information

Packing List

The product packing contains the following parts:

- PO5063 Module
- Installation guide

Part Number

The following code must be used when ordering th product

Part Number	Description
PO5063	Cabeça de Rede de Campo PROFIBUS-DP

Related Products

The following products must be ordered separately when needed:

Part Number	Description
PO6500	Base Cabeça PROFIBUS, Modbus
PO6504	Base Cabeça PROFIBUS com conector DB9
PO8085	Fonte Alimentação 24 Vdc
AL-2601	Conector derivador, para rede PROFIBUS
AL-2602	Conector terminador, para rede PROFIBUS
AL-2303	Cabo de rede PROFIBUS, diâmetro 7,1 mm
AL-1715	Cabo RJ45-CFDB9
AL-1719	Cabo RJ45-CMDB9 RS232
AL-1720	Cabo RJ45-CMDB9 RS232 / RS485
MT6000	MasterTool ProPonto
PO8510	10 Folhas de 14 etiquetas de 14 tags p/ impressora

Notes

PO6500: This base has terminals for PROFIBUS cable, dispensing DB9 connectors like AL-2601 and AL-2602

PO6504: This base has a DB9 PROFIBUS connector, needing AL2601 or AL2602 connectors.

AL-1715: This cable has a RJ45 connector on one and and a DB9 (RS-232) female IBM/PC standard connector on other end. Can be used for:

- Interface to HMIs with IBM/PC standard compatible connector, for local process supervision
- Interface to IBM/PC standard microcomputer with supervision software
- Interface to IBM/PC standard microcomputer for local variable monitoring and forcing, trough MasterTool software, if desired

AL-1719: This cable has a RJ45 connector on one and and a DB9 (RS-232) male with Altus standard pin-out. Can be used for:

- Interface an HMI Foton 5 or Foton 10 type

AL-1720: This cable has a RJ45 connector on one and and a DB9 (RS-232) male with Altus standard pin-out.. Can be used for:

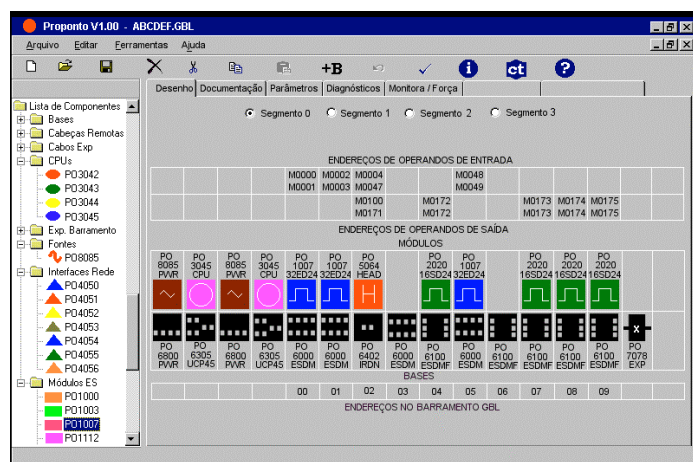
- Interface an HMI Foton 1 type

MT6000 –MasterTool ProPonto

The software MasterTool ProPonto is used to configure PONTO Series modules. The software is not needed to configure the PROFIBUS head, but it has some functions that helps system design:

- Data bus design and view in graphics environment
- Configuration validation verification, checking issues as power consumption, compatible bases and project limits
- System points tag setting. Label generation to identify modules
- Bill of materials generation

Th software is executed in Windows 32 bits environment.



Characteristics

	PO5063
Module type	PROFIBUS-DP Fieldbus Head
Communication Protocol	PROFIBUS-DP slave, EN50170, IEC 61158 and IEC 61784 standards
Maximum number of digital points	320 modules with 16 points 640 modules with 32 points
Maximum number modules	20
Maximum number of segments	4
Input data Capacity	200 bytes
Output data capacity	200 bytes
Baudrate	Automatic baudrate detection 9,6 to 12000 Kbit/s
Terminal configuration with PO6500 base	1 3 input terminal for power supply (+ Vdc, 0 Vdc, GND). 1 3 input terminal for PROFIBUS-DP input cable (+ , - , GND) 1 3 input terminal for PROFIBUS-DP output cable (+ , - , GND) 1 RJ45 connector for local supervision
Terminal configuration with PO6504	1 3 input terminal for power supply (+ Vdc, 0 Vdc, GND). 1 DB9 connector to PROFIBUS network 1 RJ45 connector for local supervision
Diagnostic Indication	One multifunctional led (DG) for module Ok indication, without configuration, any modulo with diagnostic, output modules forced our internal bus error
State Indication	OL, LC and ER Leds
Hot Standby	Yes for I/O modules
Protection	Power supply fuse available on base
External Power Supply Voltage	18,5 to 30 Vdc ripple included max. consumption 620 mA @ 24 Vdc with twelve I/O modules
Isolation External power supply to logic	1500 Vac per 1 minute
Power Dissipation	4,5 W @ 24 Vdc with 15 I/O modules
Maximum operation temperature	60 °C
Dimensions	99 x 49 x 81 mm
Supervision Interface	RS232 in RJ45
Supervision Interface communication protocol	ALNET I V 2.0
Standards accomplished	EN 50170, IEC 61158 e IEC 61784 IEC 61131 standards See series general characteristics
Compatible bases	PO6500: PROFIBUS / MODBUS fieldbus head base PO6504: PROFIBUS, DB9 fieldbus head base

I/O Capacity

One PROFIBUS slave implemented with PO5063 module has his capacity limited by:

- Maximum total module number: 20
- Maximum bus segment number: 4
- Maximum total bytes to sent through network: 200 bytes input and 200 bytes output

The maximum number of points depends on points type utilized. The limit for digital points only is 640 (20 modules) . The limit for analog points only 96 points (12 modules). The maximum number in a mixed configuration is limited by the number of bytes received or transmitted (200). Each module occupies the following number of bytes:

- 16 points digital modules: 2 bytes
- 32 points digital modules: 4 bytes
- 4 points analog modules: 8 bytes
- 8 points analog modules: 16 bytes

For better details we can suggest consulting the PROFIBUS Head Configuration Manual of (MU209010) and PO5063 PROFIBUS Head Utilization Manual (MU209503).

Power Supply Capacity

The head has a power supply capable of feed up to 12 I/O modules. To feed more than 12 modules is necessary to use a PO8085 power supply.

Local Supervision Interface

Has a unique characteristic this head also has one serial interface which can be used to connect HMIs or having local supervision and diagnostic through MasterTool software:

Connected to HMIs

Creates a powerful local interface on PROFIBUS slave.

The HMI can read or write on virtual modules, making possible the interaction with master control variables. Virtual modules are a set of bytes which have no correspondence with local hardware, but can be readed or written by the HMIs.

Local supervision and diagnostic through MasterTool software

- Permits monitoring and forcing of points
- Permits have a complete local diagnostic of the head

Mechanical Mounting

The mechanical mounting of this module is described in PONTO series Utilization Manual, and there is no any particular issue on installation of this module.

The mechanical code to be adjusted on the mounting base is 63 (6 in A key and 3 in B key) .

Parameterization

PROFIBUS head parameterization and the modules attached to it is done remotely with PROFIBUS-DP master configuration software.

In case of Altus manufactured masters this software is called ProfiTool. Head parameters are transmitted through PROFIBUS-DP net, without the necessity of additional configuration.

The head parameters are described in his Utilization Manual and are related to operation modes aspects as:

- Module hot standby operation
- Points forcing
- Safe state

The module parameterization is described in his CTs (Technical Characteristics). For better information about module parameterization consult Utilization Manual of PROFIBUS head PO5063.

GSD File

All parameterization options of head and modules are defined in the PROFIBUS standard file called GSD. This file is delivered in ProfiTool software. For using the head with other manufacturers masters the GSD file can be obtained and also available on www.altus.com.br or at ALTUS support.

Diagnostic

The diagnostic of head and modules attached to it are available remotely through master PROFIBUS-DP configuration program connected to network master.

In the case of ALTUS manufactured masters this software is called ProfiTool.

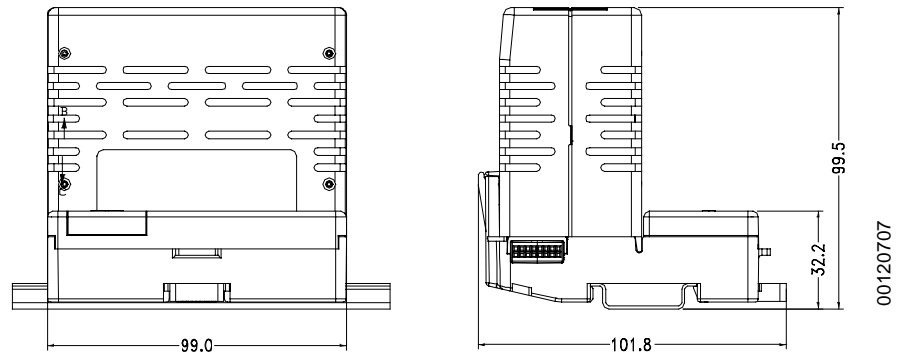
Diagnostic LEDs

The state and diagnostic leds of this module are described in his Utilization Manual.

Physical Dimensions

Dimensions in mm.

PONTO series installation Manual must be consulted for panel dimensioning.



Manuals

For using **PO5063 – PROFIBUS Head** the Utilization Manual (**MU209903**) must be consulted.

For better technical details in dos PONTO series products configuration, installation and programming, The following documents must be consulted:

Document number	Description
CT109000	Características Gerais da Série Ponto
MU209503	Manual de Utilização PO5063 - Cabeça PROFIBUS
MU299026	Manual Utilização Rede PROFIBUS
MU209010	Manual de Configuração da Remota PROFIBUS
MU209000	Manual de Utilização da Série Ponto IP20
MU203026	Manual de Utilização ProfiTool - AL-3865
MU229040	Manual de Utilização MT6000 - MasterTool ProPonto
MU203028	Manual de Utilização MasterTool MT4100
CT109xxx	CTs dos Modules da Série Ponto