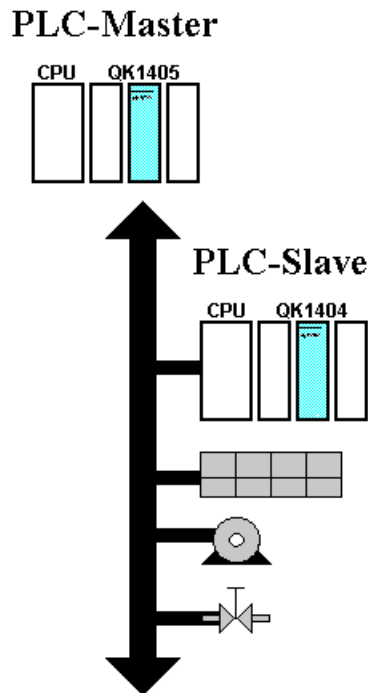


1. Product Description

Profibus DP Master interface QK1405, belonging to Programmable Controllers QUARK series, make possible the PLC connection to Profibus standard open communication networks, according to EN 50170. This Interface enables PLC to access any field device compatible with this protocol, as sensors, valves, transmitters, etc.

QK1405 Interface is supported by QK801, QK2000/MSP, AL-2002/MSP and AL-2003/MSP CPUs.



2. Packing List

The product packing contains the following parts:

- 01 QK1405: PROFIBUS DP Master Interface
- 01 Floppy disc with function Module, application example and Manual

3. Functional Characteristics

3.1. General Characteristics

- Protocol: PROFIBUS DP - master according to EN 50170 standard
- Smart interface: independent processors to PROFIBUS net and PLC bus.
- Network architecture: bus
- Communication speed: 12 Mbaud maximum
- 6 LED's status indicators
- Built in self test
- Operation temperature: 0 to 60 °C exceeding IEC 1131 standard
- Storage temperature: -25 to 75 °C according IEC 1131 standard
- Operation relative humidity: 5 to 95% (no condensing) according IEC 1131 standard

- Weight:
 - net: 500 g
 - shipped: 580 g
- Degree of protection: IP 20, against contact with live moving parts inside and no protection against water according to IEC Pub. 144(1963) standard

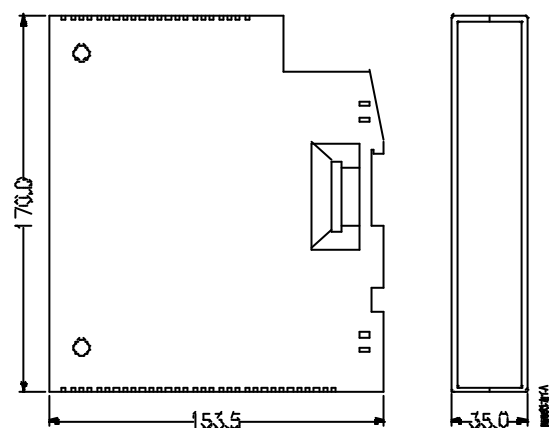
3. Electrical Characteristics

- External supply voltage: 19 to 30 Vdc (ripple included)
- Current consumption:
 - 50 mA @ 12 Vdc (PLC bus)
 - 300 mA @ 24 Vdc (external)
- Module power dissipation: 7 W
- Dielectric Strength 500 Vdc: PROFIBUS signals relative to PLC bus and system ground
- Electrostatic discharge immunity (ESD): according IEC 1131 standard, level 3
- Damped oscillatory wave conducted noise immunity: according IEC 1131, level A, and IEEE C37.90.1 (SWC) standards
- Fast transient conducted noise immunity: according IEC 1131 standard, level B according IEC 801-4 standard, level 3
- Radiated electromagnetic field immunity: 10 V/m @ 140 MHz according IEC 1131 standard

3.2. Software Characteristics

- Communication through Profibus DP protocol.
- Network configuration through PROFITool software
- Programming through F-1405.025 function module integrated to ladder diagram through MasterTool®

4. Physical Dimensions



5. Handbooks

For installation and programming, consult QK1405 User Manual, included in packaged floppy disc.

For more information about PROFIBUS network consult PROFIBUS Network User Manual.

For information about configuration consult PROFITool User Manual.

For more information about installation and utilization, consult also the User Manual for Programmable Controller used.

For information about programming consult the User Manual for programmer used.

6. Ordering Data

6.1. Optionals

The following items may be ordered separately:

	Description
AL-2601	PROFIBUS connector
AL-2602	PROFIBUS terminator connector
AL-2303	PROFIBUS cable.
AL-3865	PROFITool software

Connector AL-2601 must be used for attach the module to PROFIBUS network where termination is not needed (nodes at middle of network segment).

Connector AL-2602 must be used attach the module to PROFIBUS network where termination is needed (nodes at endings of network segment).

AL-2303 cable must be used for data communication in PROFIBUS network.

PROFITool software PROFITool permits assembling QK1405 interface configuration for PROFIBUS network

7. Revisions

This Technical Characteristic is valid for QK1405 PROFIBUS DP master interface module, revision A and above.

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

Altus reserve the right to change this TC without previous warning.

The following account shows the observations corresponding to each revision:

Revision: A	Date: 17/12/97
Approval: Luiz Gerbase	
Author: Sérgio Bordini	

Remarks:

- Initial revision

Revision: B	Date: 13/03/98
Approval: Luiz Gerbase	
Author: Sérgio Bordini	

Remarks:

- AL-2303 cable part number alteration