

FBC-110 FBC-114 FBC-116
FBC-120 FBC-L20 FBC-126
FBC-D9 FBC-115 FBC-125
FBC-2D5 FBC-2T6 FBC-MD8

Flat BLOCK Contact - Single step

USER MANUAL



grifo®
ITALIAN TECHNOLOGY

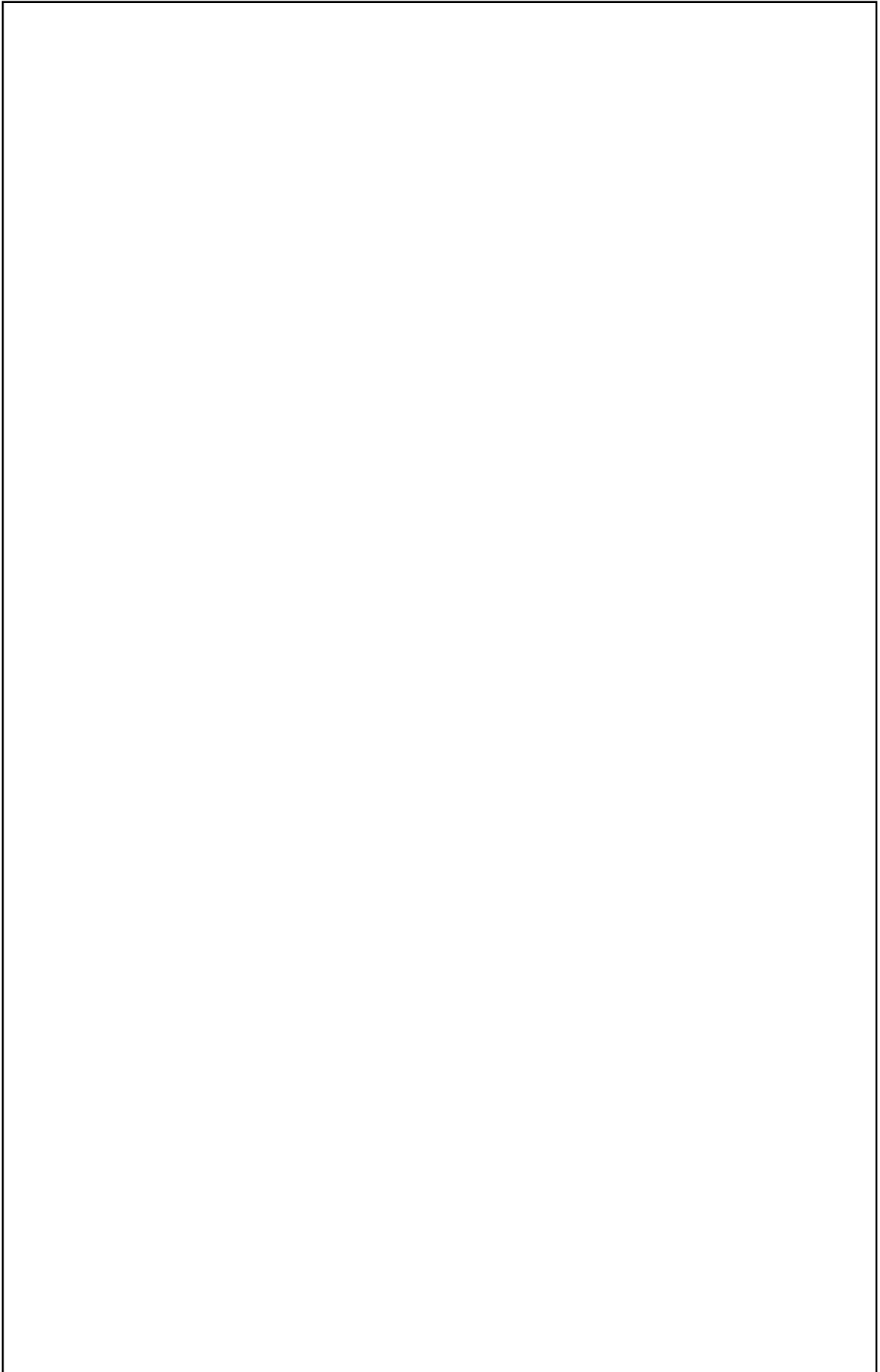
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FBC single step Rel. 5.00 *Edition 03 September 2003*

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Flat BLOCK Contact - Single step

USER MANUAL

FBC 110 Flat BLOCK Contact 10 pins

Interface between a 10 pins male low profile connector and field wiring (quick release screw terminal connectors). Suitable for **DIN 46277-1 and 3 rails**.

FBC 114 Flat BLOCK Contact 14 pins

Interface between a 14 pins male low profile connector and field wiring (quick release screw terminal connectors). Suitable for **DIN 46277-1 and 3 rails**.

FBC 116 Flat BLOCK Contact 16 pins

Interface between a 16 pins male low profile connector and field wiring (quick release screw terminal connectors). Suitable for **DIN 46277-1 and 3 rails**.

FBC 120\L20 Flat BLOCK Contact 20 pins

Interface between a 20 pins male low profile connector and field wiring (quick release screw terminal connectors). Version L20 is provided with LEDs to visualize lines status. Suitable for **DIN 46277-1 and 3 rails**.

FBC 126 Flat BLOCK Contact 26 pins

Interface between a 26 pins male low profile connector and field wiring (quick release screw terminal connectors). Suitable for **DIN 46277-1 and 3 rails**.

FBC D9 Flat BLOCK Contact type D 9 pins

Interface between a 9 pins male or female D-type connector and field wiring (quick release screw terminal connectors). Suitable for **DIN 46277-1 and 3 rails**.

FBC D15 Flat BLOCK Contact type D 15 pins

Interface between a 15 pins male or female D-type connector and field wiring (quick release screw terminal connectors). Suitable for **DIN 46277-1 and 3 rails**.

FBC D25 Flat BLOCK Contact type D 25 pins

Interface between a 25 pins male or female D-type connector and field wiring (quick release screw terminal connectors). Suitable for **DIN 46277-1 and 3 rails**.

FBC 2D5 Flat BLOCK Contact 2 connectors DIN type 5 pins

Interface between two 5 pins female DIN type connectors and field wiring (quick release screw terminal connectors). Suitable for **DIN 46277-1 and 3 rails**.

FBC 2T6 Flat BLOCK Contact 2 connectors Plug type 6 pins

Interface between two 6 pins female telephone PLUG type connectors and field wiring (quick release screw terminal connectors). Suitable for **DIN 46277-1 and 3 rails**.

FBC MD8 Flat BLOCK Contact Mini DIN type 8 pins

Interface between a 8 pins female Mini DIN connector and field wiring (quick release screw terminal connectors). Suitable for **DIN 46277-1 and 3 rails**.

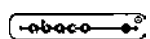
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grifo® reserves the right to change the contents and form of this document, as well as the features and specification of its products at any time, without prior notice, to obtain always the best product.

For specific informations on the components mounted on the card, please refer to the Data Book of the builder or second sources.

SYMBOLS DESCRIPTION

In the manual could appear the following symbols:

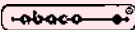


Attention: Generic danger



Attention: High voltage

Trade Marks

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Other Product and Company names listed, are trade marks of their respective companies.

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INTRODUCTION

The use of these devices has turned - IN EXCLUSIVE WAY - to specialized personnel.

The purpose of this handbook is to give the necessary information to the cognizant and sure use of the products. They are the result of a continual and systematic elaboration of data and technical tests saved and validated from the manufacturer, related to the inside modes of certainty and quality of the information.

The reported data are destined- IN EXCLUSIVE WAY- to specialized users, that can interact with the devices in safety conditions for the persons, for the machine and for the environment, impersonating an elementary diagnostic of breakdowns and of malfunction conditions by performing simple functional verify operations , in the height respect of the actual safety and health norms.

The informations for the installation, the assemblage, the dismantlement, the handling, the adjustment, the reparation and the contingent accessories, devices etc. installation are destined - and then executable - always and in exclusive way from specialized warned and educated personnel, or directly from the TECHNICAL AUTHORIZED ASSISTANCE, in the height respect of the manufacturer recommendations and the actual safety and health norms.

The devices can't be used outside a box. The user must always insert the cards in a container that respect the actual safety normative. The protection of this container is not threshold to the only atmospheric agents, but specially to mechanic, electric, magnetic, etc. ones.

To be on good terms with the products, is necessary guarantee legibility and conservation of the manual, also for future references. In case of deterioration or more easily for technical updates, consult the AUTHORIZED TECHNICAL ASSISTANCE directly.

To prevent problems during card utilization, it is a good practice to read carefully all the informations of this manual. After this reading, the user can use the general index and the alphabetical index, respectly at the begining and at the end of the manual, to find information in a faster and more easy way.

CARD VERSION

The present handbook is reported to **FBC** card release:

FBC 110: 020194	FBC 114: 020194	FBC 116: 120495	FBC 120: 020194
FBC L20: 120495	FBC 126: 020194	FBC D9: 120495	FBC 115: 120495
FBC 125: 120495	FBC 2D5: 020194	FBC 2T6: 020194	FBC MD8: 020194

The validity of the bring informations is subordinate to the number of the card release.

The user must always verify the correct correspondence among the two denotations.

On the card the release number is present in more points both board printed diagram (serigraph) and printed circuit.

GENERAL INFORMATION

FBC (Flat BLOCK Contact) are BLOCK type modules, they allow to interface and arrange the signals from flat-cable connectors and the field wiring in the most efficient way.

Arranges signals are available from quick release screw terminal connectors.

To ease the use of these modules, an univocal correspondance between pins of quick release screw terminal connectors and other connectors has been decided.

FBC modules have been designed to make easier the electric panels wiring but also to be used in laboratories.

In fact, during test phases it is often required to interface signals available on flat-cables directly with circuits to test.

In general, **FBC** allow to reach all signals available from **ABACO**® industrial listing boards' flat cables.

To ease the recognition of the several modules installed in the electric panel, and to locate them faster in the electric diagram, it is possible to put an identification number directly on the BLOCK module. In fact the serigraph features a label, preceded by BLOCK denomination, where the user can write any kind of identification string.

This feature of **ABACO**® BLOCK serie denotes the care used by **grifo**® in examining electric panels installation practical problems of one's users.

Another serigraph contains the five figures BLOCK serial number and the three circles indicating the operational tests that the module has overcome successfully.

Modules are provided with isolating support for omega rails type **DIN 46277-1** and **46277-3** installation.



FIGURE 1: PHOTO OF SEVERAL FBC

TECHNICAL FEATURES OF FBC 110

GENERAL FEATURES

Best use: Arrange the signals of a 10 pins low profile connector of a **GPC®** or a peripheral card to a quick release screw terminal connector, for example:
signals of **RS 422**, **RS 485** and **current loop** interface of **GPC® 188F**, **GPC® 15A**, etc. or LEDs control signals of **RKD LT**.

PHISICAL FEATURES

Size: 72 x 65 x 25 mm

Weight: 45 g

Connectors: CN1: quick release screw terminal, 5 pins, straight, male
CN2: low profile 10 pins, straight, male
CN3: quick release screw terminal, 5 pins, straight, male



FIGURE 2: PHOTO OF AN FBC 110 PROVIDED WITH BLOCK CONTAINER

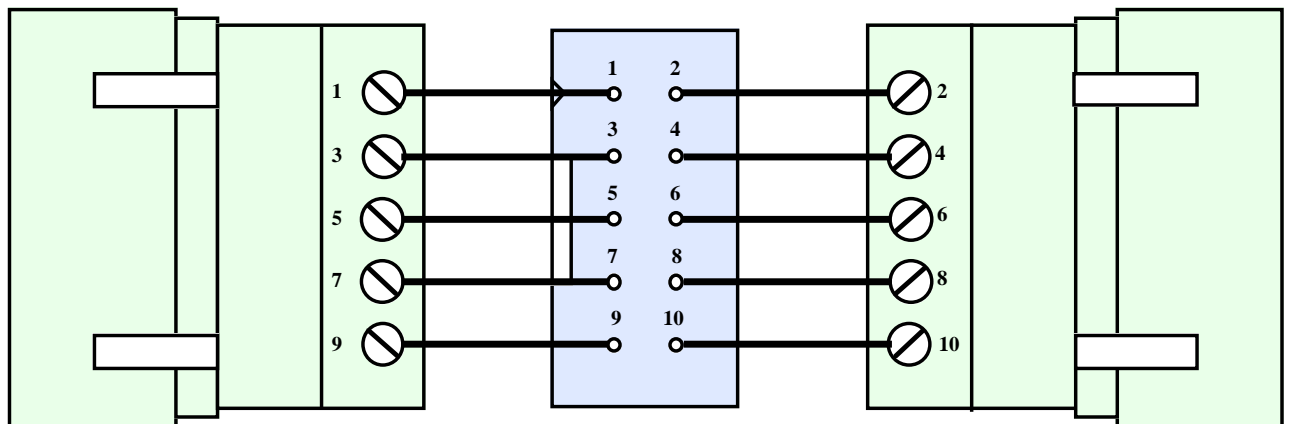


FIGURE 3: FBC 110 CONNECTION DIAGRAM

TECHNICAL FEATURES OF FBC 114

GENERAL FEATURES

Best use: Arrange the signals of a 14 pins low profile connector of a **GPC®** or a peripheral card to a quick release screw terminal connector, for example part of the signals of a wider connector.

PHISICAL FEATURES

Size: 72 x 65 x 25 mm

Weight: 45 g

Connectors: CN1: quick release screw terminal, 7 pins, straight, male
CN2: low profile 14 pins, straight, male
CN3: quick release screw terminal, 7 pins, straight, male

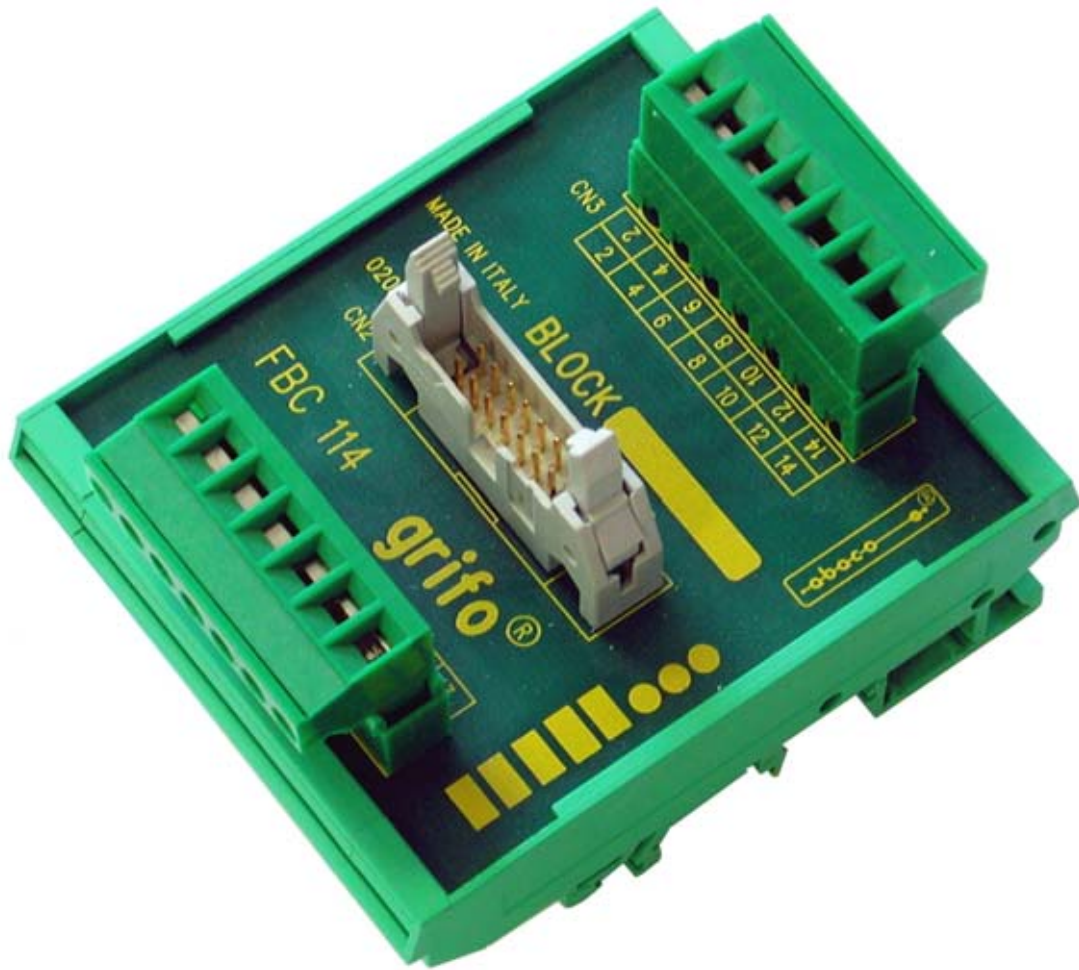


FIGURE 4: PHOTO OF AN FBC 114 PROVIDED WITH BLOCK CONTAINER

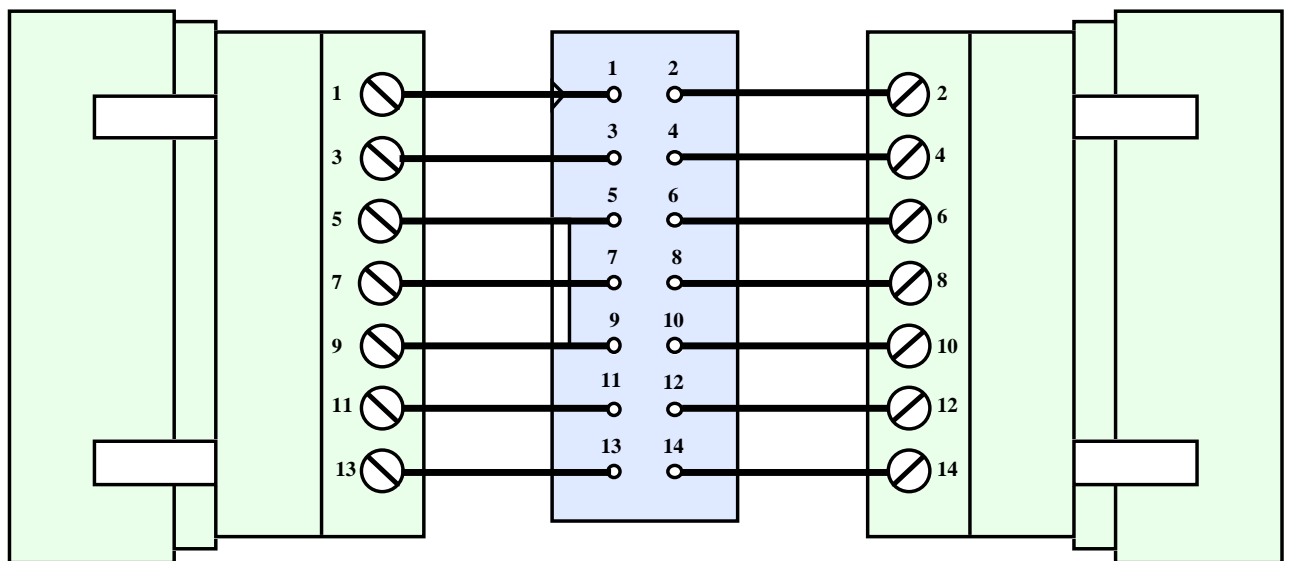


FIGURE 5: FBC 114 CONNECTION DIAGRAM

TECHNICAL FEATURES OF FBC 116

GENERAL FEATURES

Best use: Arrange the signals of a 16 pins low profile connector of a **GPC®** or a peripheral card to a quick release screw terminal connector, for example:
signals of **RS 232** interface and **Timer/Counter** of **GPC® 188F**, etc. or signals or **RS 422** and **current loop** interface of **RKDLT**.

PHISICAL FEATURES

Size: 72 x 65 x 25 mm

Weight: 45 g

Connectors: CN1: quick release screw terminal, 8 pins, straight, male
CN2: low profile 16 pins, straight, male
CN3: quick release screw terminal, 8 pins, straight, male



FIGURE 6: PHOTO OF AN FBC 116 PROVIDED WITH BLOCK CONTAINER

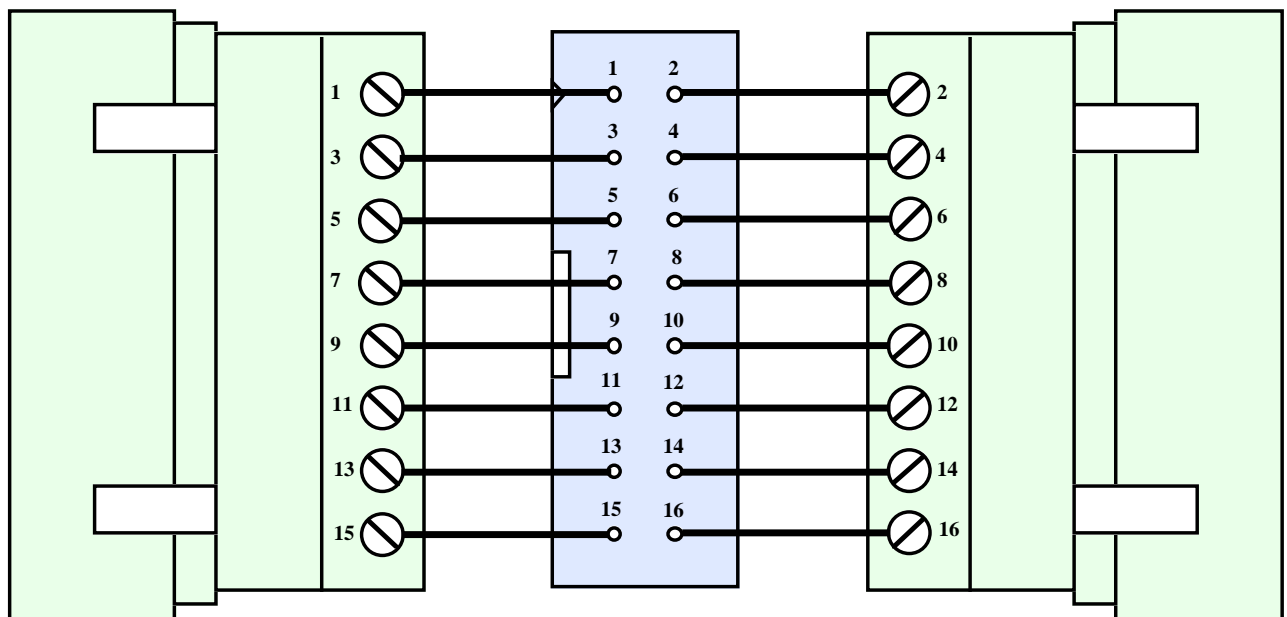


FIGURE 7: FBC 116 CONNECTION DIAGRAM

TECHNICAL FEATURES OF FBC 120

GENERAL FEATURES

Best use: Arrange the signals of a 16 pins low profile connector of a **GPC®** or a peripheral card to a quick release screw terminal connector, for example:
signals of standard interface **I/O ABACO®**.

PHISICAL FEATURES

Size: 72 x 65 x 25 mm

Weight: 45 g

Connectors: CN1: quick release screw terminal, 10 pins, straight, male
CN2: low profile 20 pins, straight, male
CN3: quick release screw terminal, 10 pins, straight, male



FIGURE 8: PHOTO OF AN FBC 120 PROVIDED WITH BLOCK CONTAINER

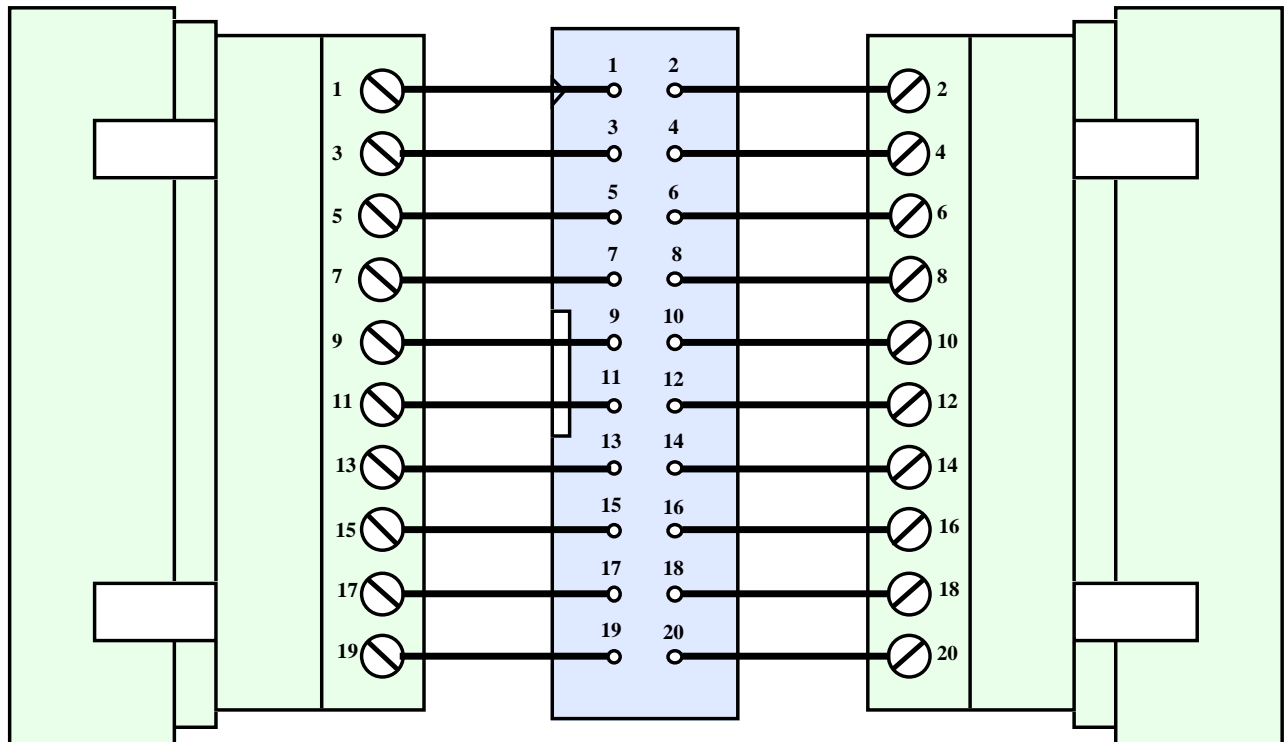


FIGURE 9: FBC 120 CONNECTION DIAGRAM

TECHNICAL FEATURES OF FBC L20

GENERAL FEATURES

Best use: Arrange the signals of cards like, for example, **CI/O 01**, **CI/O 02**, **CI/O T16** and **CI/O-R16** with field wiring and visualize status of signals on the 20 pins connector.. Signals naming is compliant with **grifo®** standard.

PHISICAL FEATURES

Size: 72 x 65 x 25 mm

Weight: 67 g

Connectors:
CN1: low profile 20 pins, straight, male
CN2: quick release screw terminal, 9 pins, straight, male
CN3: quick release screw terminal, 9 pins, straight, male
CN4: quick release screw terminal, 2 pins, straight, male

CN1 - INTERFACE FOR INPUTS OF CI/O-01, CI/O-02, CI/O-T16, CI/O-R16

Allows to interface directly to 16 inputs provided by the above mentioned cards, making available connection to the field for their signals on quick release screw terminal connectors CN2, CN3 e CN4.

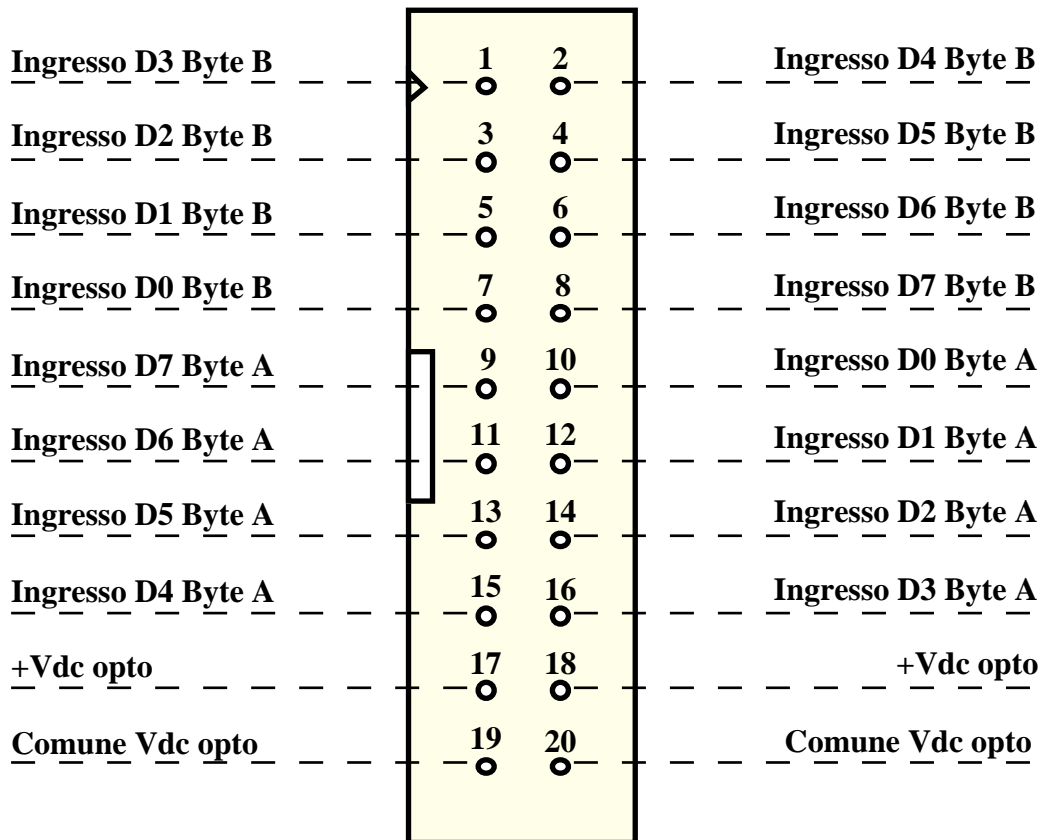


FIGURE 10: CN1 - DIRECT INTERFACE TO INPUTS

Signals description:

- Input Dn Byte A = I - Open collector NPN input connected to n-th signal of Byte A.
- Input Dn Byte B = I - Open collector NPN input connected to n-th signal of Byte B.
- +Vdc opto = - Positive terminal of inputs power supply.
- Common Vdc opto = - Common terminal of inputs power supply.

CN2 - CONNECTOR FOR OPTOCOUPLED INPUTS OF SECTION B

CN2 is a 9 pins quick release screw terminal connector.

It allows to connect 8 out of 16 NPN optocoupled inputs of section B.

Connector features open collector optocoupled inputs and their power supply common terminal.

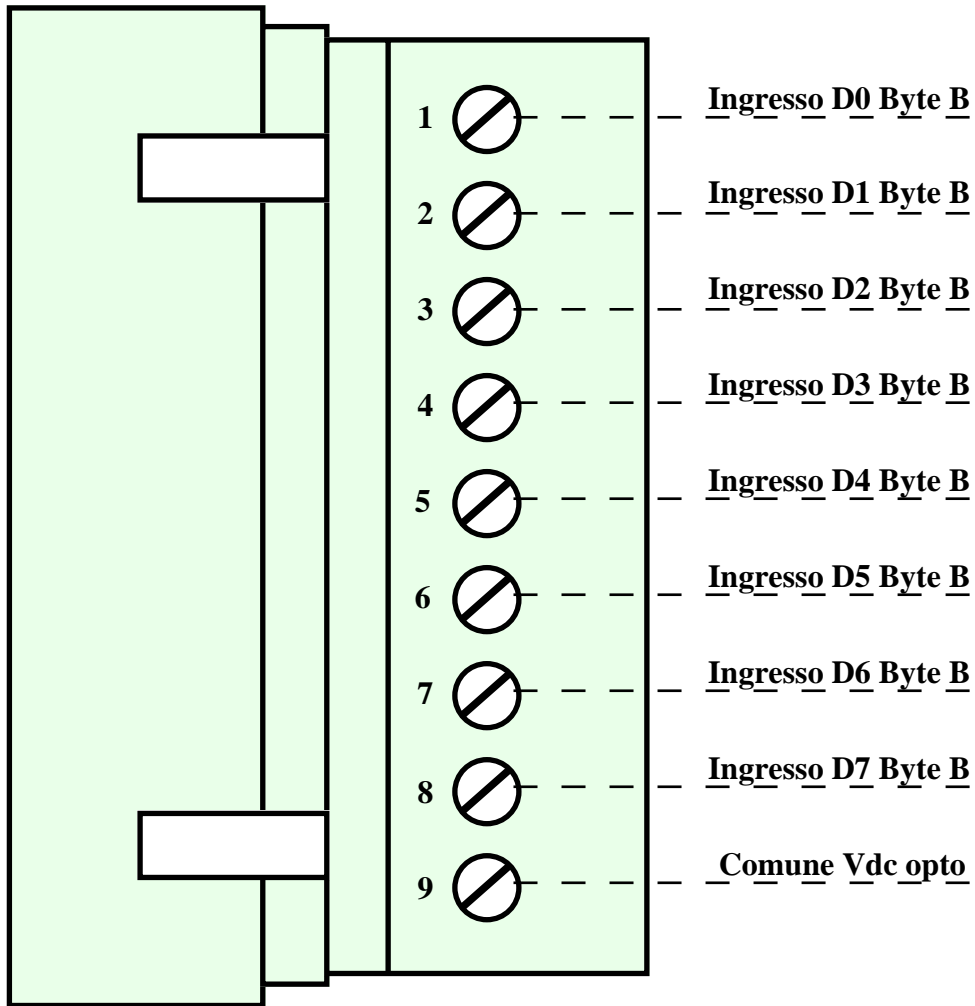


FIGURE 11: CN2 - CONNECTOR FOR OPTOCOUPLED INPUTS OF SECTION B

Signals description:

- Ingresso Dn Byte B = I - Open collector NPN input connected to n-th signal of Byte B.
- Comune Vdc opto = - Common terminal of inputs power supply.

CN3 - CONNECTOR FOR OPTOCOUPLED INPUTS OF SECTION A

CN3 is a 9 pins quick release screw terminal connector.

It allows to connect 8 out of 16 NPN optocoupled inputs of section A.

Connector features open collector optocoupled inputs and their power supply common terminal.

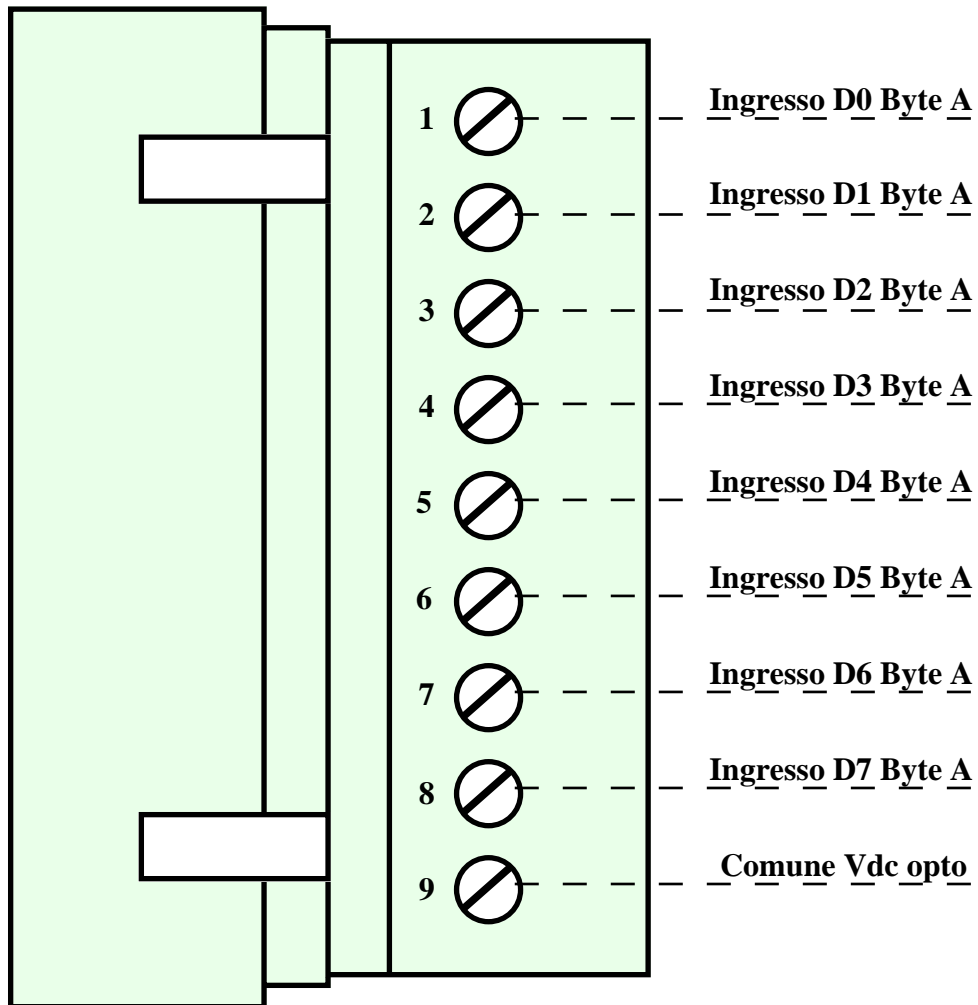


FIGURE 12: CN3 - CONNECTOR FOR OPTOCOUPLED INPUTS OF SECTION A

Signals description:

Ingresso Dn Byte A = I - Open collector NPN input connected to n-th signal of Byte A.
 Comune Vdc opto = - Common terminal of inputs power supply.

CN4 - CONNECTOR FOR OPTOCOUPLEDERS POWER SUPPLY

CN4 is a 2 pins quick release screw terminal connector.

It allows to supply optocouplers circuitry with galvanically isolated power source.

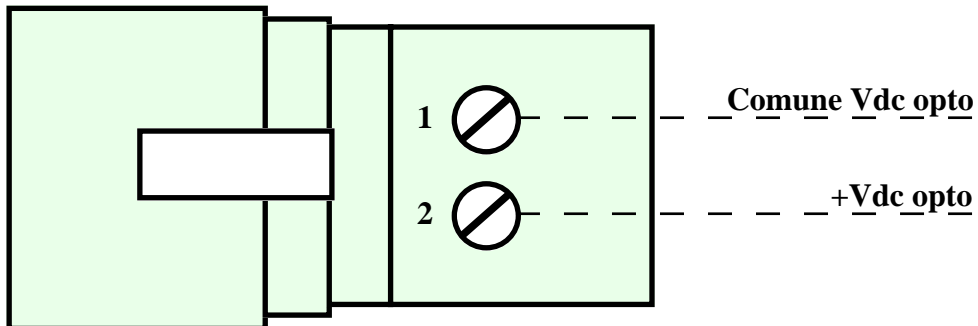


FIGURE 13: CN4 - CONNECTOR FOR OPTOCOUPLEDERS POWER SUPPLY

Signals description:

+Vdc opto	=	- Positive terminal of optocoupled inputs power supply.
Comune Vdc opto	=	- Common terminal of optocoupled inputs power supply.

VISUAL SIGNALATIONS

FBC L20 is provided with 16 LEDs that indicated the status of input signal they are connected to; correspondance between optocoupled inputs and LEDs is:

LD1	-	Input D0 Byte B
LD2	-	Input D1 Byte B
LD3	-	Input D2 Byte B
LD4	-	Input D3 Byte B
LD5	-	Input D4 Byte B
LD6	-	Input D5 Byte B
LD7	-	Input D6 Byte B
LD8	-	Input D7 Byte B
LD9	-	Input D0 Byte A
LD10	-	Input D1 Byte A
LD11	-	Input D2 Byte A
LD12	-	Input D3 Byte A
LD13	-	Input D4 Byte A
LD14	-	Input D5 Byte A
LD15	-	Input D6 Byte A
LD16	-	Input D7 Byte A

TECHNICAL FEATURES OF FBC 126

GENERAL FEATURES

Best use: Arrange the signals of a 26 pins low profile connector of a **GPC®** or a peripheral card to a quick release screw terminal connector, for example:
signals of I/O interface of **GPC® 884** or **GPC® 15A**.

PHISICAL FEATURES

Size: 72 x 65 x 25 mm

Weight: 45 g

Connectors: CN1: quick release screw terminal, 13 pins, straight, male
CN2: low profile 26 pins, straight, male
CN3: quick release screw terminal, 13 pins, straight, male



FIGURE 14: PHOTO OF AN FBC 126 PROVIDED WITH BLOCK CONTAINER

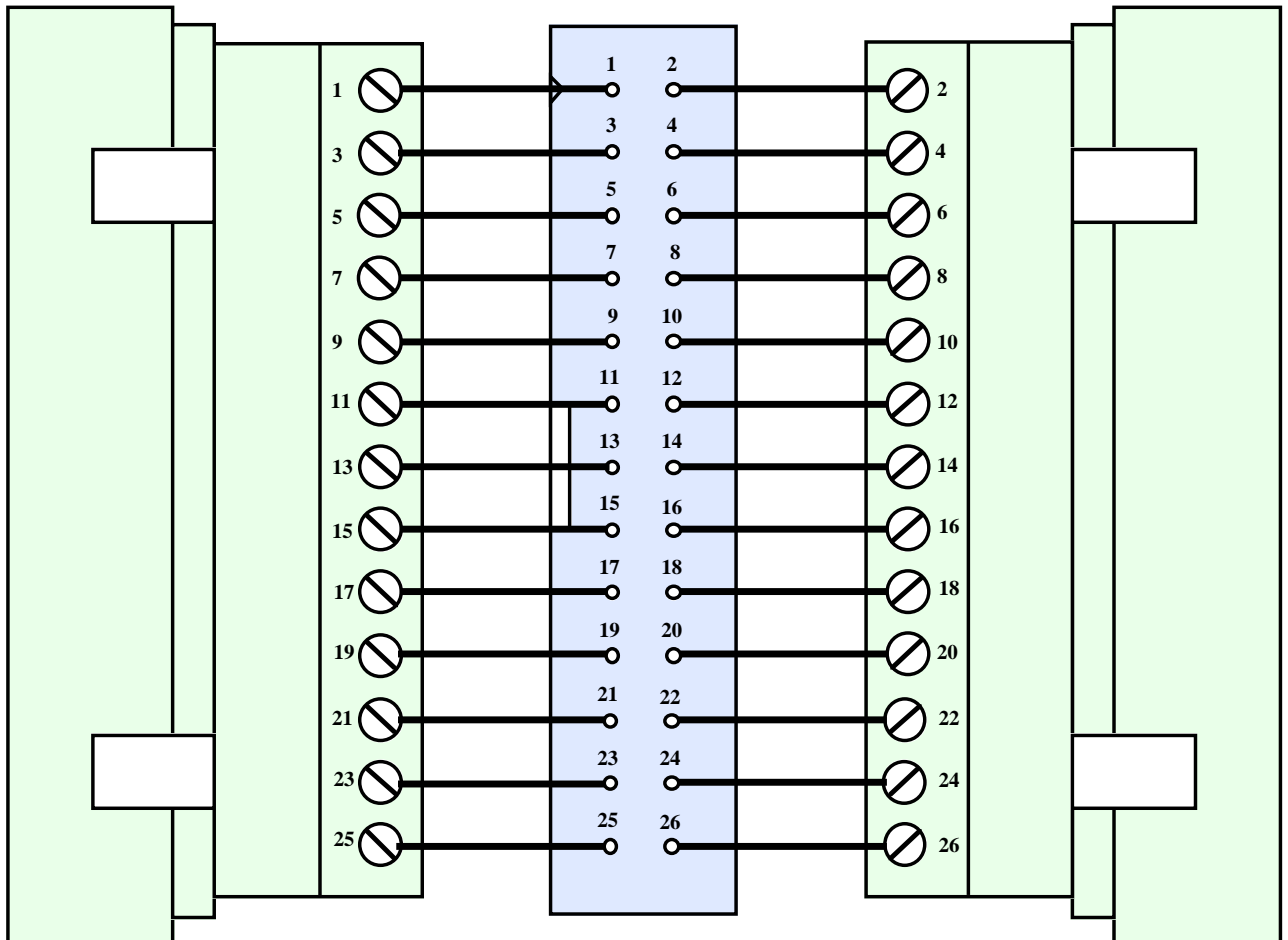


FIGURE 15: FBC 126 CONNECTION DIAGRAM

TECHNICAL FEATURES OF FBC D9 (M/F)

GENERAL FEATURES

Best use:

Arrange the signals of a 9 pins D-type connector of a **GPC®** or a peripheral card to a quick release screw terminal connector, for example: signals of a **RS 232, RS 422, RS 485** or **current loop** serial line.

PHISICAL FEATURES

Size:

72 x 65 x 25 mm

Weight:

45 g

Connectors:

CN1: D-type connector (male or female), 9 pins, 90 degrees
 CN2: quick release screw terminal, 9 pins, straight, male

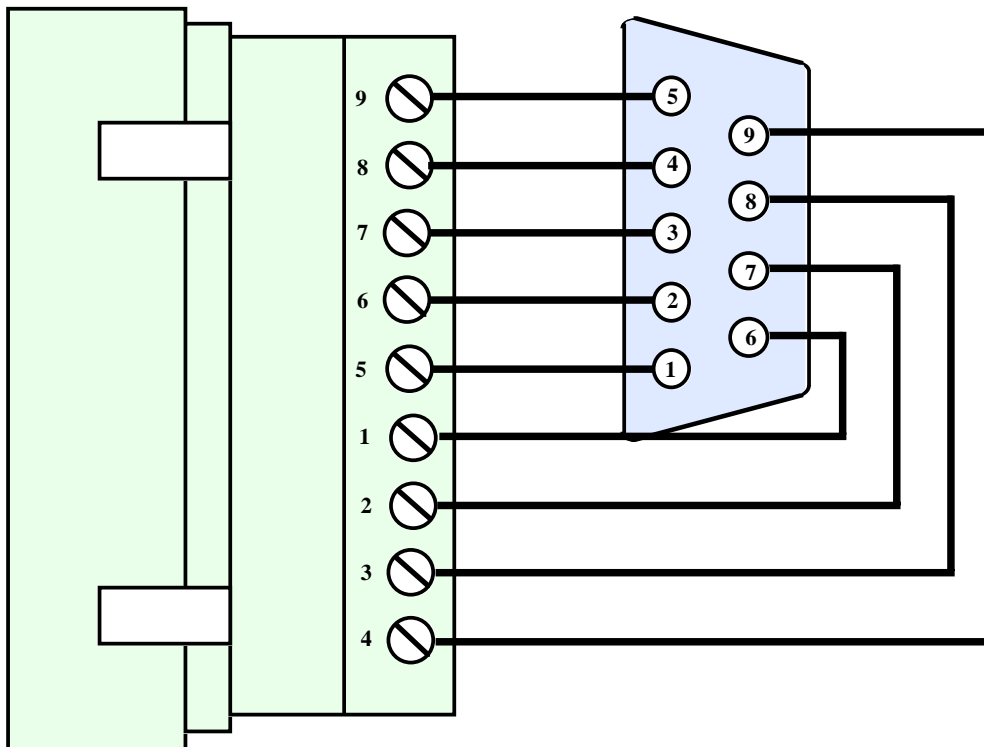


FIGURE 16: FBC D9F CONNECTION DIAGRAM



FIGURE 17: PHOTO OF AN FBC D9M PROVIDED WITH BLOCK CONTAINER

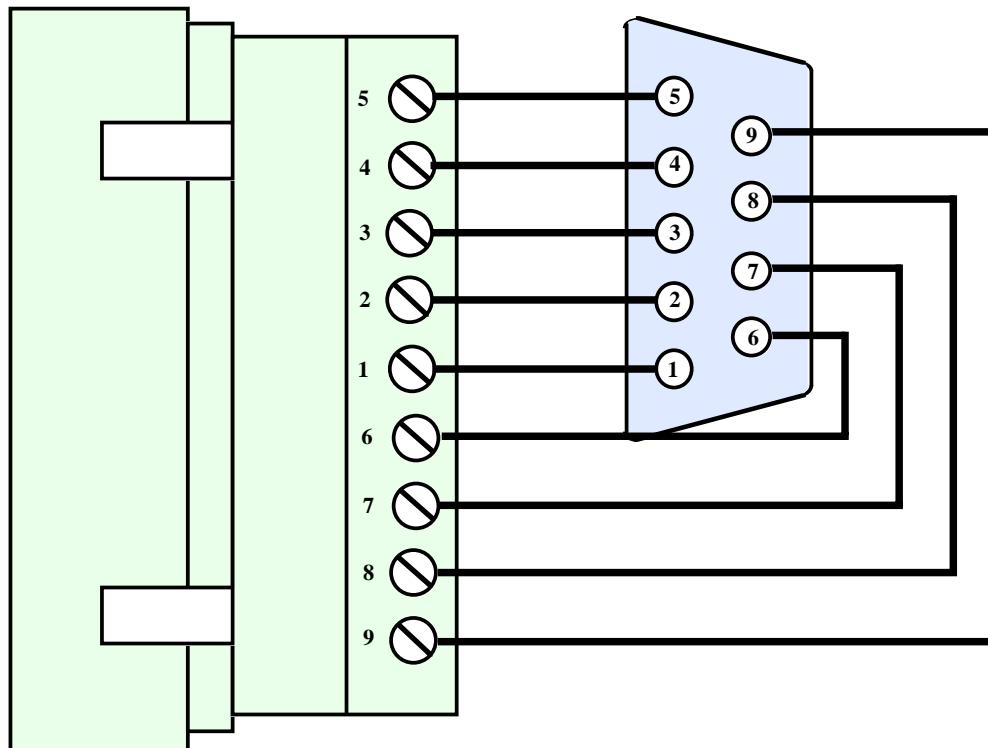


FIGURE 18: FBC D9M CONNECTION DIAGRAM

TECHNICAL FEATURES OF FBC 115 (M/F)

GENERAL FEATURES

Best use:

Arrange the signals of a 15 pins D-type connector of a **GPC®** or a peripheral card to a quick release screw terminal connector, for example:
signals of thermocouples available on **IPC 52** or several signals (serial lines, digital outputs, etc.) available on **UAR 24**.

PHISICAL FEATURES

Size:

72 x 65 x 25 mm

Weight:

45 g

Connectors:

CN1: quick release screw terminal, 7 pins, straight, male
CN2: D-type connector (male or female), 15 pins, straight
CN3: quick release screw terminal, 8 pins, straight, male

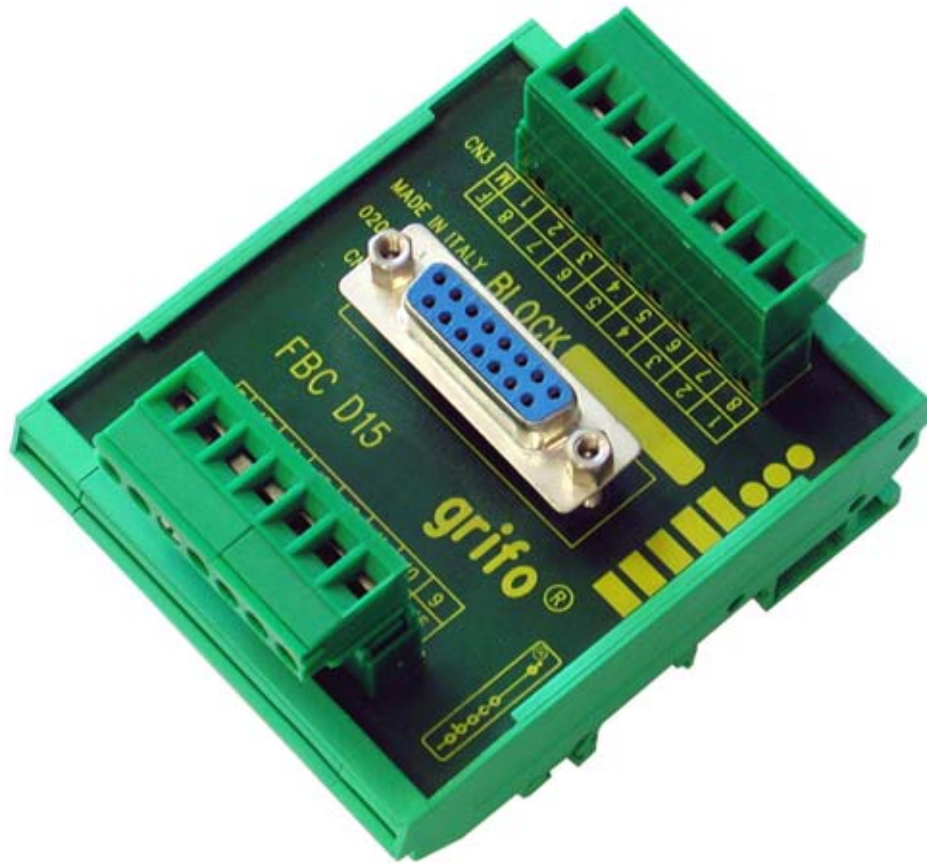


FIGURE 19: PHOTO OF AN FBC 115 PROVIDED WITH BLOCK CONTAINER

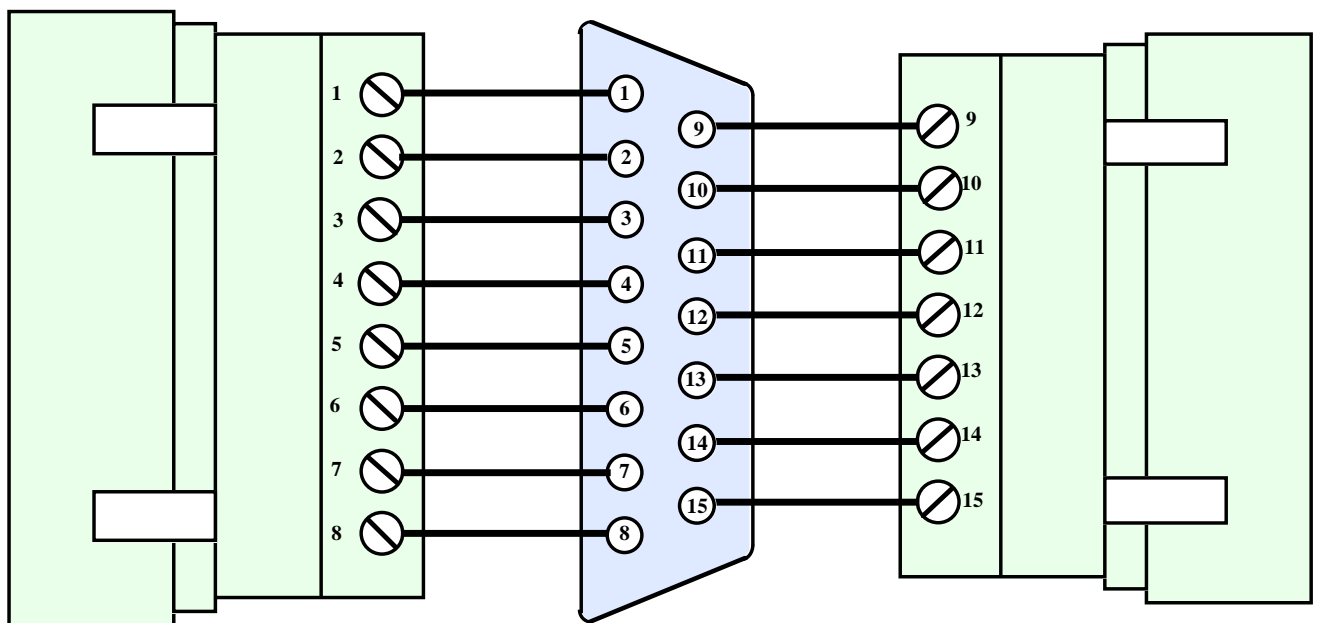


FIGURE 20: FBC 115 CONNECTION DIAGRAM

TECHNICAL FEATURES OF FBC 125 (M/F)

GENERAL FEATURES

Best use: Arrange the signals of a 25 pins D-type connector of a **GPC®** or a peripheral card to a quick release screw terminal connector, for example:
signals of serial interface **RS 232, RS 422, RS 485** or **current loop** on several cards or signals to **optical fiber** interface available on **IBC 01**.

PHISICAL FEATURES

Size: 72 x 65 x 25 mm

Weight: 86 g

Connectors: CN1: quick release screw terminal, 12 pins, straight, male
CN2: D-type connector (male or female), 25 pins, straight
CN3: quick release screw terminal, 13 pins, straight, male



FIGURE 21: PHOTO OF AN FBC 125 PROVIDED WITH BLOCK CONTAINER

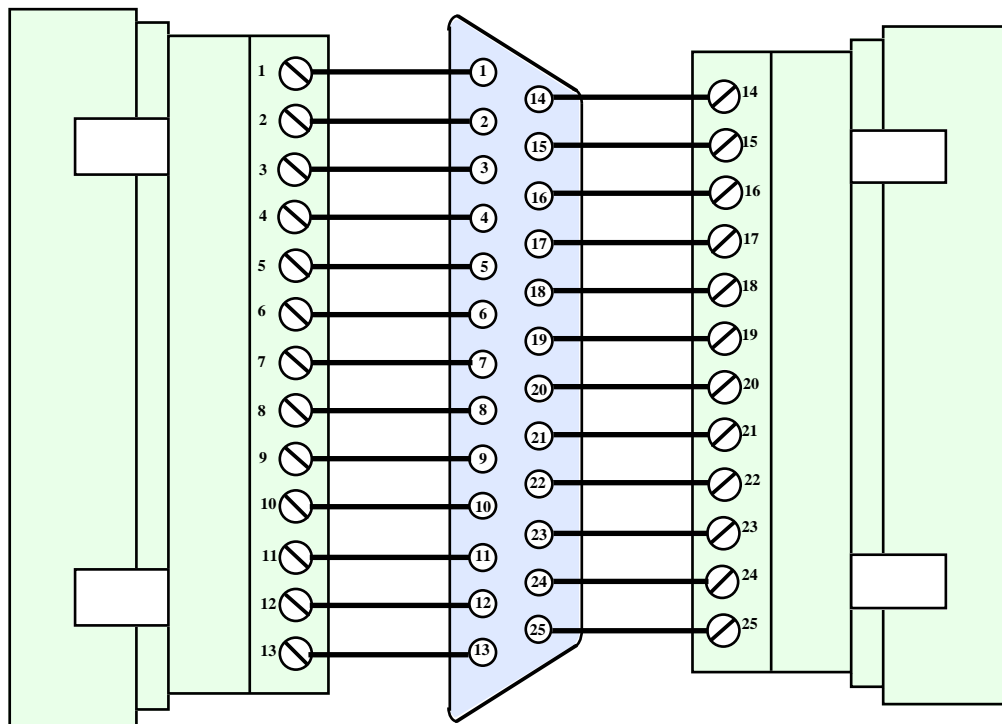


FIGURE 22: FBC 125 CONNECTION DIAGRAM

TECHNICAL FEATURES OF FBC 2D5

GENERAL FEATURES

Best use: Arrange the signals of two 5 pins DIN type connector of a peripheral card to quick release screw terminal connectors, for example:
signals of **IAS 02 encoders**.

PHISICAL FEATURES

Size: 72 x 65 x 25 mm

Weight: 55 g

Connectors: CN1: DIN type connector, female, 5 pins, 90 degreeses
CN2: DIN type connector, female, 5 pins, 90 degreeses
CN3: quick release screw terminal, 6 pins, straight, male
CN4: quick release screw terminal, 6 pins, straight, male



FIGURE 23: PHOTO OF AN FBC 2D5 PROVIDED WITH BLOCK CONTAINER

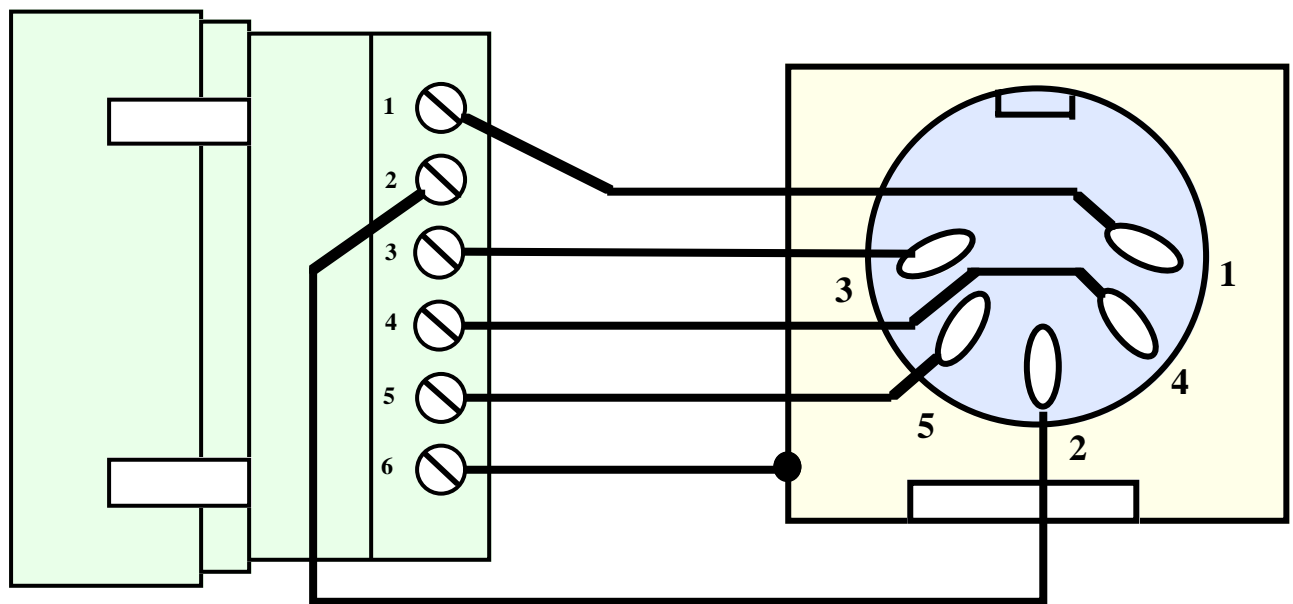


FIGURE 24: FBC 2D5 CONNECTION DIAGRAM

TECHNICAL FEATURES OF FBC 2T6

GENERAL FEATURES

Best use:

Arrange the signals of two 6 pins telephone PLUG type connector of a **GPC®** or a peripheral card to quick release screw terminal connectors, for example:
signals of **RS 232**, **RS 422**, **RS 485** or **current loop** lines for all **GPC®** cards serie 3 and 4.

PHISICAL FEATURES

Size:

72 x 65 x 25 mm

Weight:

44 g

Connectors:

CN1: telephone PLUG connector, female, 6 pins, 90 degreeses
CN2: telephone PLUG connector, female, 6 pins, 90 degreeses
CN3: quick release screw terminal, 6 pins, straight, male
CN4: quick release screw terminal, 6 pins, straight, male



FIGURE 25: PHOTO OF AN FBC 2T6 PROVIDED WITH BLOCK CONTAINER

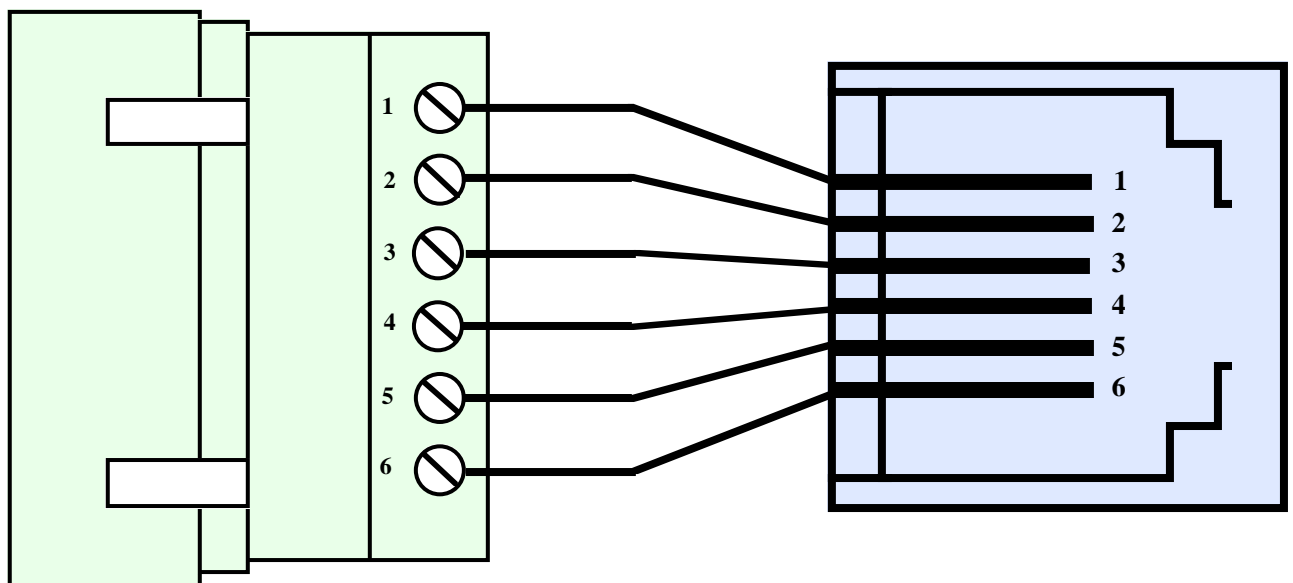


FIGURE 26: FBC 2T6 CONNECTION DIAGRAM

TECHNICAL FEATURES OF FBC MDS

GENERAL FEATURES

Best use: Arrange the signals of a 8 pins Mini DIN type connector of a **GPC®** or a peripheral card to a quick release screw terminal connectors, for example:
signals of thermocouples and thermoresistances of **UAR 24**.

PHISICAL FEATURES

Size: 72 x 65 x 25 mm

Weight: 44 g

Connectors: CN1: mini DIN type connector, female, 8 pins, 90 degrees
CN2: quick release screw terminal, 9 pins, straight, male



FIGURE 27: PHOTO OF AN FBC MD8 PROVIDED WITH BLOCK CONTAINER

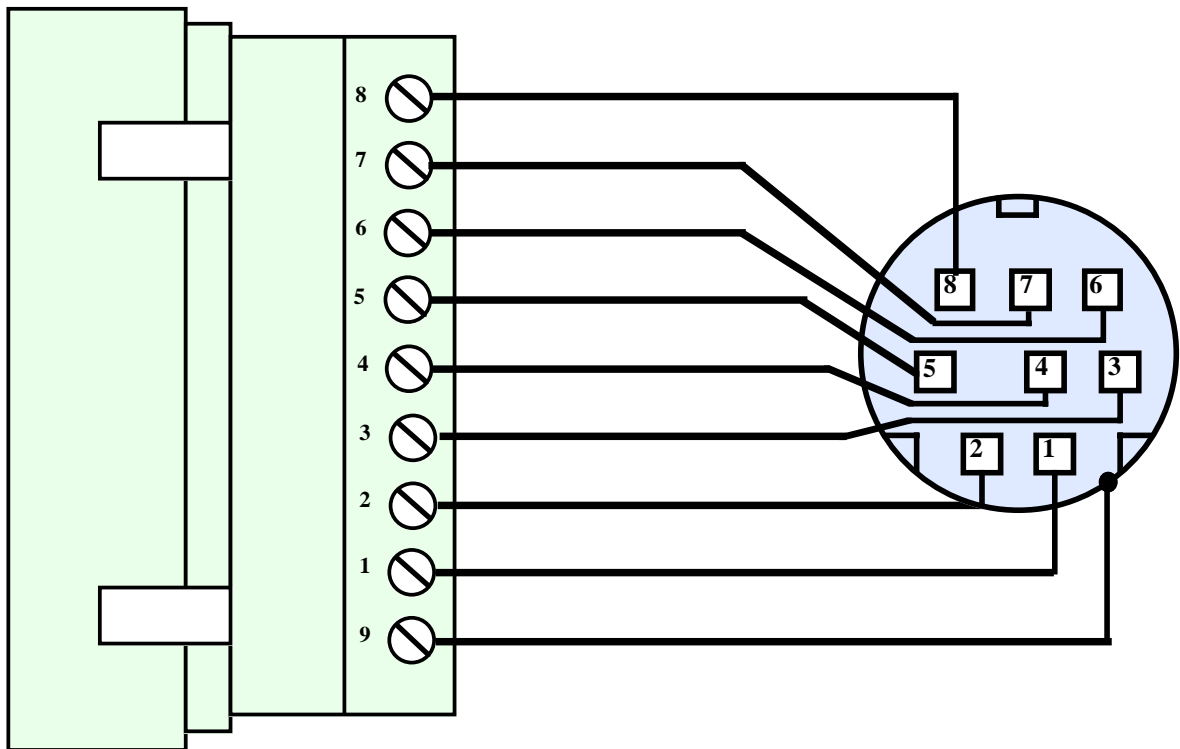


FIGURE 28: FBC MD8 CONNECTION DIAGRAM

EXTERNAL CARDS

BLOCK modules described in this manual interface directly most of **ABACO**[®] cards, increasing the possibilities of the system.

Here is a short list of them:

GPC[®] 553

General Purpose Controller 80C552

80C552 μ P, 22÷33 MHz; 1 RS 232 line (software); 1 RS 232 or RS 422-485 or Current Loop line; 16 TTL I/O lines; 8 A/D 10 bits lines; 3 Timers Counters; 64K EPROM; 64K RAM; 32K RAM and RTC backed; 32K DIL EEPROM; 8K serial EEPROM; 2 PWM lines; 1 Activity LED; Watch dog; 5 readable DIPs; LCD Interface; **ABACO**[®] I/O BUS.

GPC[®] 323

General Purpose Controller 51 family

80C32 μ P, 14 MHz; Full CMOS; 1 RS 232 line (software); 1 RS 232 or RS 422-485 or Current Loop line; 24 TTL I/O lines; 11 A/D 12 bits lines; 3 Timers Counters; 64K EPROM; 64K RAM; 32K RAM and RTC backed; 32K DIL EEPROM; 8K serial EEPROM; Buzzer; 2 Activity LED; Watch dog; 5 readable DIPs; LCD Interface; **ABACO**[®] I/O BUS.

GPC[®] 153

General Purpose Controller Z80

84C15 μ P, 10÷16 MHz; Full CMOS; 1 RS 232 line; 1 RS 232 or RS 422-485 or Current Loop line; 16 TTL I/O lines; 8 A/D 12 bits lines; 2÷4 Timers Counters; 512K EPROM or FLASH; 512K RAM and RTC backed; 8K serial EEPROM; Buzzer; 1 Activity LED; Watch dog; 8 readable DIPs; LCD Interface; **ABACO**[®] I/O BUS.

GPC[®] 184

General Purpose Controller Z80195

Microprocessor Z80195 at 22 MHz; implementation completely CMOS; 512K EPROM or FLASH; 512K RAM; Back-Up with Lithium battery internal or external; 1 serial line RS 232 + 1 RS 232 or RS 422-485 or current loop + 1 TTL; 18 I/O TTL; 4 timer/counter 8 bits; 2 timer 16 bits; Watch Dog; Real Time Clock; activity LED; EEPROM; interface for **ABACO**[®] I/O BUS.

GPC[®] 154

“4” Type General Purpose Controller Z80

84C15 μ P, 10 MHz; full CMOS; 1 RS 232 line; 1 RS 232 or RS 422-485 line; 16 TTL I/O lines; 512K EPROM or FLASH; 512K RAM and RTC backed; 8K serial EEPROM; 2÷4 timers/counters; Watch dog; 2 readable DIPs; LCD Interface; **ABACO**[®] I/O BUS; 5Vdc power supply. Size 100x50 mm.

GPC[®] 324/D

“4” Type General Purpose Controller 80C32/320

80C32 or 80C320 μ P, 14÷22 MHz; Full CMOS; 1 RS 232 line; 1 RS 232 or RS 422-485 or Current Loop line; 4÷16 TTL I/O lines; 3 Timers Counters; 64K EPROM; 64K RAM; 32K RAM backed; 32K DIL E2; 8K serial EEPROM; Watch dog; 1 readable DIP; LCD Interface; **ABACO**[®] I/O BUS; 5Vdc Power supply; Size: 100x50 mm.

GPC® 884

General Purpose Controller Am188ES

Microprocessor AMD Am188ES up to 40 MHz; 16 bits; implementation completely CMOS; serie 4 format; 512K EPROM or FLASH; 512K SRAM backed with Lithium battery; RTC; 1 RS 232 serial line + 1 RS 232 or RS 422-485 or current loop; 16 I/O TTL; 3 timer/counter; watch dog; EEPROM; 11 signals A/D converter with 12 bit resolution; interface for **ABACO®** I/O BUS.

GPC® 114

General Purpose Controller 68HC11

Microprocessor 68HC11A1 at 8 MHz; type 4 format; 32K EPROM; 32K SRAM backed with Lithium battery; 32K EPROM, SRAM, EEPROM; RTC; 1 serial line RS 232, RS 422 or RS 485; 10 TTL I/O lines; 3 timers/counters; watch dog; 8 A/D converter signals with 8 bits resolution; 1 synchronous serial line; extremely low power consumption; interface for **ABACO®** I/O BUS.

GPC® AM4

General Purpose Controller ATmega103

Microprocessor ATmega103 at 5.5 MHz; CMOS implementation; 128K internal FLASH; 32K SRAM; Back-Up with Lithium battery internal or external; 4K internal EEPROM; 1 serial line RS 232, RS 422, RS 485 or current loop; 16 I/O TTL; 8 line A/D resolution 10 bits; 3 timers/counters; Watch Dog; Real Time Clock; **ABACO®** I/O BUS expansion. Interface for ISP programming.

MSI 01

Multi Serial Interface 1 line

Interface card for TTL serial line that is buffered in RS 232, RS 422, RS 485, or current loop line. The TTL line is on a mini screw connector and the buffered one is on standard plug connector.

IBC 01

Interface Block Communication

Conversion card for serial communication, 2 RS 232 lines; 1 RS 422 or RS 485 line; 1 optical fibre line; selectable DTE/DCE interface; quick connection for DIN 46277-1 and 3 rails.

GPC® 188F

General Purpose Controller 80C188

80C188 μ P 20MHz; 1 RS 232 line; 1 RS 232, RS 422-485 or Current Loop line; 24 TTL I/O lines; 1M EPROM or 512K FLASH; 1M SRAM Lithium battery backed; 8K serial EEPROM; RTC; watch dog; 8 dip switch; 3 timer counter; 8 13 bit A/D lines; Power failure; activity LEDs.

GPC® 15A

General Purpose Controller 84C15

Full CMOS card, 10÷20 MHz 84C15 CPU; 512K EPROM or FLASH EPROM; 128K RAM; 2K or 8K backed RAM+RTC; 8K serial EEPROM; 1 RS 232 serial line; 1 RS 232, RS 422, RS 485 or current loop line; 40 TTL I/O lines; 2 counters timers; 2 watch dogs; 2 dip switches, buzzer.

GPC® R/T94

General Purpose Relays/transistors 9 inputs 4 outputs

CMOS card, 14 MHz 89C4051 CPU; 4K FLASH; 128 byte RAM; 256 byte SRAM+RTC backed through battery; 1K serial EEPROM; 1 RS 232, RS 422, RS 485 or current loop line; 9 optocoupled NPN inputs; 4 relays outputs (5 A) or transistor (4A 45 Vdc) optocoupled; I/O lines displayed by LEDs; 1 counter timer.+5 Vdc power supply or 8÷24 Vac wide range; plastic container for Ω rails.

GPC® 150

General Purpose Controller 84C15

Microprocessor Z80 at 16 MHz; implementation completely CMOS; 512K EPROM or FLASH; 512K SRAM; RTC; Back-Up through external Lithium battery; 4M serial FLASH; 1 serial line RS 232 plus 1 RS 232 or RS 422-485 or current loop; 40 I/O TTL; 2 timer/counter; 2 watch dog; dip switch; EEPROM; A/D converter with resolution 12 bit; activity LED.

GPC® 550

General Purpose Controller 80C552

Microprocessor 80C552 at 22 MHz. 32K EPROM; 32 K RAM; 32 K EEPROM or SRAM; RTC; serial EEPROM; serial lines 1 RS 232 + 1 RS 232 or RS 422-485 or current loop; 40 I/O TTL; 2 lines of PWM; 16 bits timer/counter; watch dog; dip switch; 8 lines 10 bit A/D converter; interface for BUS ABACO®; CAN line galvanically isolated. Unique power supply +5 Vdc; EUROCARD format.

SBP 02-xx

Switch BLOCK Power xx version

Low cost switching power supply able to generate voltage from +5 to +40 Vdc and current up to 2.5 A; Input from 12 to 24 Vac; Connection for DIN C Type and Ω rails.

APPENDIX A: ALPHABETICAL INDEX

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