

BUS-10 10 Slot backplane

Doc. n° 011606

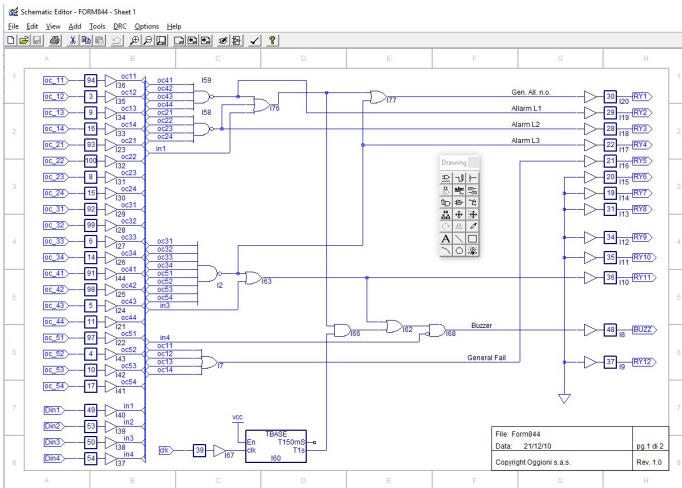
General Description

BUS-10 is an interconnection slot backplane for modular systems of acquisition that use REL/isp modules.

Every BUS-10 backplane can manage up to a maximum of 10 REL/isp units, the interconnection is made in a very practical and safe way using strain relief connectors for multi-core cables like Ribbon 20 pins.

Screw terminal board mounted on a DIN bar card holder circuit are used for the electrical connections

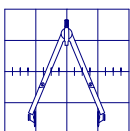
The logical signals generate by the REL/isp modules are elaborated by a programmable logic by which it is possible to realize logical functions, also complex, between the 50 input signals and the 12 output o.c. type or the 11 I/O configurable lines.



The logic unit programming can be done with programs as CAE standard (CADENCE, Synario, Mentor, ORCAD).

This allows a high level programming giving the user the possibility to realize the backplane configuration simply drawing a logical scheme.

The extreme Hardware modularity allows a wide choice of installation solutions, permitting the adaptation to any kind of electrical panel or the inclusion in existing systems.



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Technical Specifications

50 Logic Inputs	0-5 Vcc
12 Configurable Outputs	O.C o O.E.
11 Configurable I/O lines	IN 0-5Vcc / Out O.C.

Environment Limits

EMC Rejection	10V/m
Storage Temperature	-40 to 85 °C
Operational Temperature	-20 to 70 °C
Humidity	90% R.H. n.c.

Electrical Specifications

Power Supply	12-24 Vcc
Absorption	100 mA@ 24V
Output Current	Io Max 300 mA
Logic Input Voltage	0-24Vcc Max.

Mechanical Specifications

Dimensions	164x130 mm
Weight	0.3 Kg.
Power Supply	Terminal board 26...14 AWG
Sensors Inputs	Terminal board 26...14 AWG
O.C. Outputs	Connector DB 15
I/O Functions	Ribbon Cable 14 Pins
REL/isp Connection	Ribbon Cable 20 Pins

Accessories

The following accessories are available for BUS-10 backplane:

- 50 Pin Ribbon cable 2 m.
- 15 Pin cable with DB 15 2m.
- 14 Pin Ribbon cable 14 2m
- 20 Pins Inputs Terminal Board
- 14 Pins Functions Terminal Board

- Cod. CB – 50 B10
- Cod. CB – 15 B10
- Cod. CB – 14 B10
- Cod. M-20
- Cod. M-14

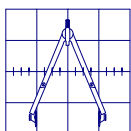


- ISP Down load cable pDS4102-DL2
- ISP Down load Software ispVM® System

- Cod. CB - isp
- Cod. SW - isp



Product Code BUS-10



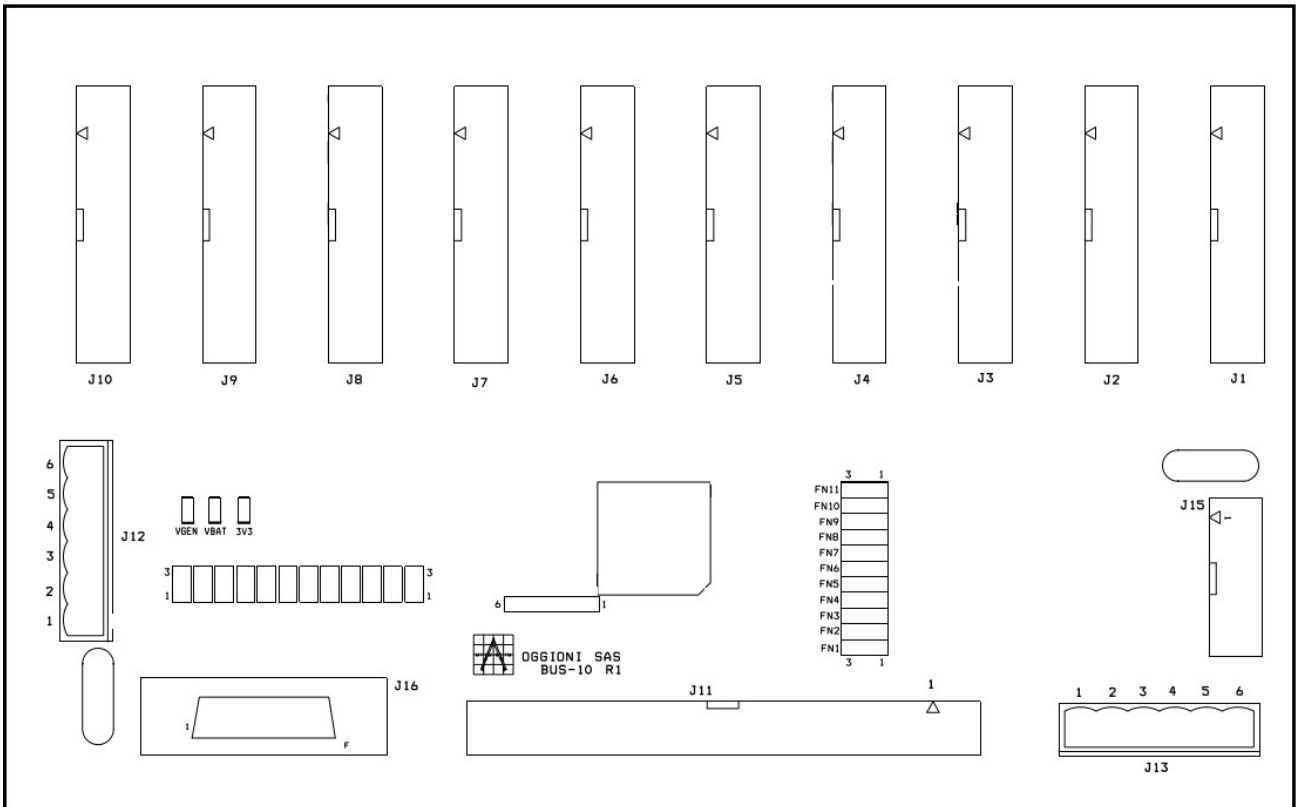
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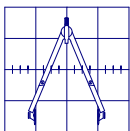


Connectors assignment J1-J10 connection to Rel/isp modules

O.C.1	1	2	Common
O.C.2	3	4	Common
O.C.3	5	6	O.C.5
O.C.4	7	8	GND
Vin(+)	9	10	Vin(+)
Vin(-)	11	12	Vin(-)
+Vser	13	14	B RS-485
In2	15	16	A RS-485
In1	17	18	n.u.
+V1	19	20	+V2

1	Open Collector 1*	11	(-)Power Supply Input
2	(-) Common Power Supply	12	(-)Power Supply Input
3	Open Collector 2*	13	(+) Services Power Supply
4	(-)Common Power Supply.	14	RS-485 (B)
5	Open Collector 3*	15	Signal Input CH2
6	Open Collector 5*	16	RS-485 (A)
7	Open Collector 4*	17	Signal Input CH1
8	Ground	18	N.U.
9	(+) Power Supply Input	19	+Sensor Power Supply CH1
10	(+)Power Supply Input	20	+ Sensor Power Supply CH2

*For the understanding of this signals please refer to the technical manual of REL/isp modules.



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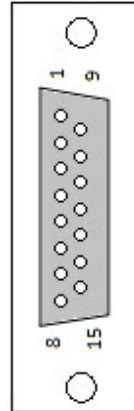


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J15 Connector Assignment I/O Functions

Common 1	□ □	2 Common
I/O 1 1 3	□ □	4 I/O 10
I/O 9 5	□ □	6 I/O 8
I/O 7 7	□ □	8 I/O 6
I/O 5 9	□ □	10 I/O 4
I/O 3 11	□ □	12 I/O 2
I/O 1 13	□ □	14 Common

J16 Connector Assignment Logic Output

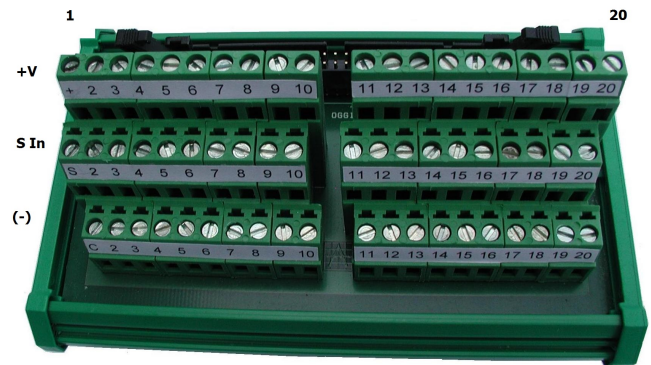


1	(+) V services
2	Out 2
3	Out 4
4	Out 6
5	Out 8
6	Out 10
7	Out 12
8	(-) Common
9	Out 1
10	Out 3
11	Out 5
12	Out 7
13	Out 9
14	Out 11
15	n.u.

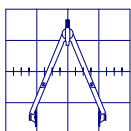
J11 Connector Assignment

In 1-CH2 1	□ □	2 In1- CH1
1V+ CH1 3	□ □	4 1V+ CH2
In 2-CH2 5	□ □	6 In 2-CH1
2V+ CH1 7	□ □	8 2V+ CH2
(-) Common 9	□ □	10 (-) Common
In 3-CH2 11	□ □	12 In3-CH1
3V+ CH1 13	□ □	14 3V+ CH2
In 4-CH2 15	□ □	16 In 4-CH1
4V+ CH1 17	□ □	18 4V+ CH2
(-) Common 19	□ □	20 (-) Common
In 5-CH2 21	□ □	22 In 5-CH1
5V+ CH1 23	□ □	24 5V+ CH2
In 6-CH2 25	□ □	26 In 6-CH1
6V+ CH1 27	□ □	28 6V+ CH2
(-) Common 29	□ □	30 (-) Common
In 7-CH2 31	□ □	32 In 7-CH1
7V+ CH1 33	□ □	34 7V+ CH2
In 8-CH2 35	□ □	36 In 8-CH1
8V+ CH1 37	□ □	38 8V+ CH2
(-) Common 39	□ □	40 (-) Common
In 9-CH2 41	□ □	42 In 9-CH1
9V+ CH1 43	□ □	44 9V+ CH2
In 10-CH2 45	□ □	46 In 10-CH1
10V+ CH1 47	□ □	48 In 10-CH2
(-) Common 49	□ □	50 (-) Common

M-20 Sensors Connection



+V	+ 1-20
S In	In Signal 4-20 mA Sensors 1-20
(-)	Sensors Power Supply Common



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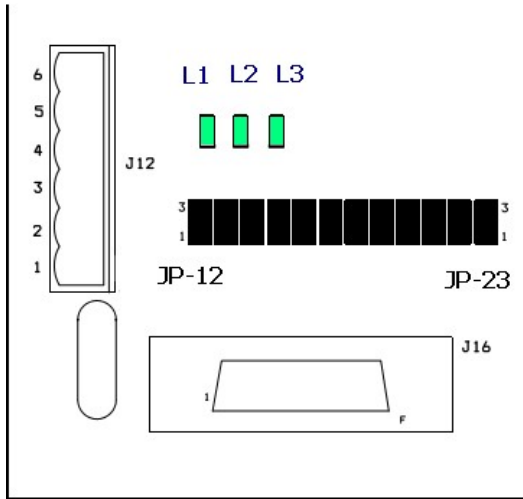
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Optical Indications

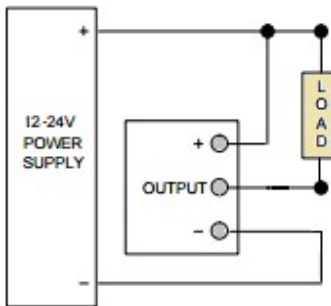
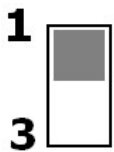


- L1** Green Led Main Power Supply Presence
- L2** Green Led REL/isp modues Power Supply Presence
- L3** Green Led Logic Power Supply Presence

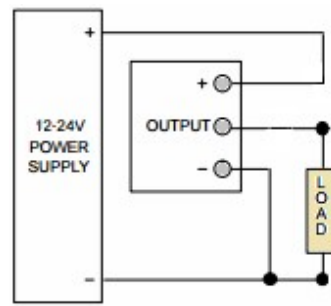
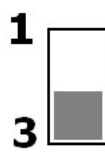
Configuration Jumper for the Outputs

The logic outputs can be configured as “SINK” Switching to negative or “SOURCE” switching to positive. The configuration is done via pond drops jumpers JP12-JP23

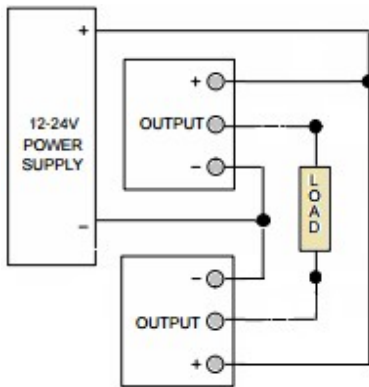
SINK



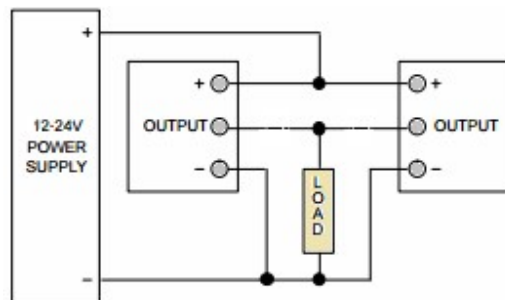
SOURCE



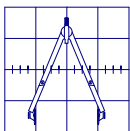
It i also possible to realize dual architectures with 1oo2 o 2oo2 configurations.



Architecture 1oo2



Architecture 2oo2



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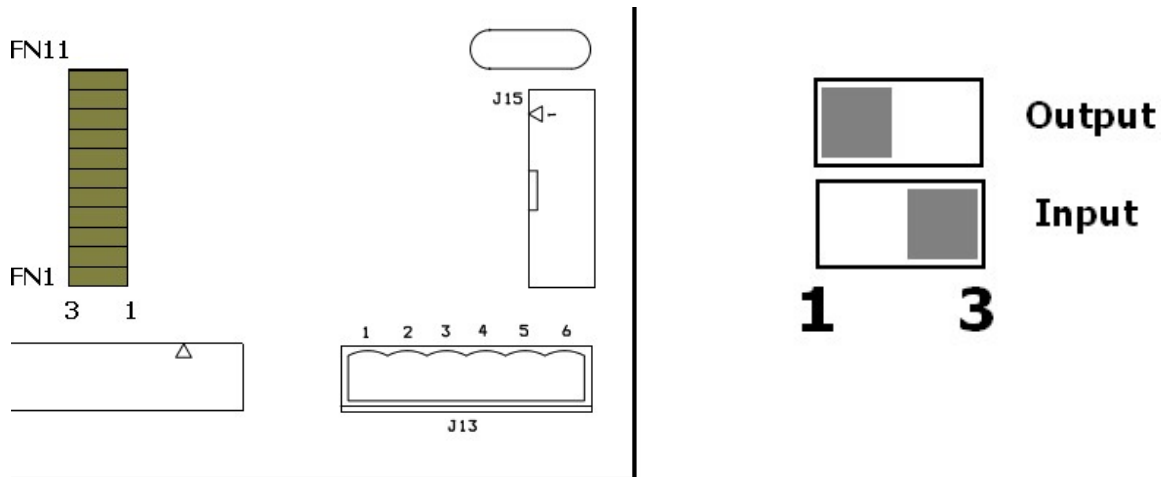
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Configuration Jumper for Logic Functions

The logic functions can be configured as Logic Inputs or os “SINK” Outputs.

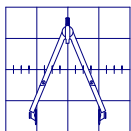
Le funzioni logiche possono essere configurate come Ingressi Logici o come Uscite di tipo

The configuration is done via pond drops jumpers FN1-FN11



RS-485 Serial Connetion

J-13	Segnale
1	(A) RS-485
2	(B) RS-485
3	(-) Power Supply Common
4	(A) RS-485
5	(B) RS-485
6	(-)Power Supply Common



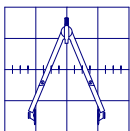
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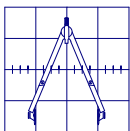


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