DIN rail mounting, 6 inputs and 2 outputs digital I/O module D8 line

Quick Guide • QG D8 - 1/11.09 • Cod. J30-478-1AD8 QG

ASCON TECNOLOGIC

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Configuration and setting Software

The instrument must be configured using **Controller Explorer** (a propietary free software). The most recent release of Controller Explorer is downloadable from our web site:
www.ascontecnologic.com
To download the file access click on the banner: **ascon**
Select: **Download/Software**
Note: The first time you access the Download/Software area, you are requested to register yourself to the site. Press the **"Register"** key and follow the instructions displayed.
Search and download the file:
Ascon_SW_CE_Xnn.zip (**Xnn** identifies the release).
The default communications parameters are: transmission speed: **9600 bps**; protocol: **ModBus**; serial address: **247**

Warning! When more controllers/instruments are to be installed, keep in mind that the default serial address **always** is 247.
For this reason, always connect/power on only 1 not configured instrument a time, in order to avoid the presence, on the same network, of 2 instruments with the same address. During the configuration, assign to each instrument a different serial address.

The "*gammadue® and deltadue® controller series Serial communications and configuration software*" manual can be downloaded from the web site:
www.ascontecnologic.com (then click on: **ascon**)
Select: **Download/Documentation**, and fill the table with:
- Typology: **Manual**
- Type: **All**
- Language: **All**
- Code: **SERG2D2**

Click: **SEARCH** and download the file:
Ascon_MIU_SERIALE GAMMA2-DELTA2_RevXX_EN.zip
(**XX** identifies the revision number)

Declaration of conformity and manual retrival

Class II instrument, rear panel mounting. This controller has been designed with compliance to the European Directives.
Consult Declaration of Conformity for further details on Directives and Standards used for Compliance. Declaration of Conformity can be found in the file **ASCON_DC_D2.zip**.

All information about the controller are inserted in the manuals (**ASCON_MI_D8_EN.zip** and **ASCON_MU_D8_EN.zip**).
The Declaration of Conformity and the manuals of the controller can be downloaded (free of charge) from the web-site:
www.ascontecnologic.com
Once connected to the web-site, click on the **ascon** logo.
Select: **Download/Documentation**, and fill the table with:
• Typology: **Manual**; Type: **All**; Language: **All**; Code: **DELTA2**
Click: **SEARCH** and
• Download the file: **ASCON_DC_D2.zip** (Declaration of Conformity of delta2 controllers)
ASCON_MI_D8_EN.zip (Installation)
or **ASCON_MU_D8_EN.zip** (User)

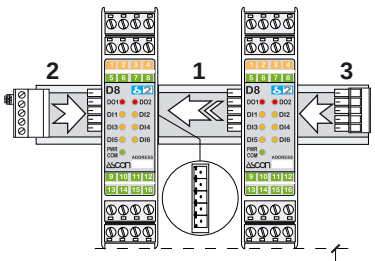
⚠ Warning!

- Whenever a failure or a malfunction of the device may cause dangerous situations for persons, things or animals, please remember that the plant must be equipped with additional devices which will guarantee safety.
- We warrant that the products will be free from defects in material and workmanship for 18 months from the date of delivery. Products and components that are subject to wear due to conditions of use, service life, and misuse are not covered by this warranty.

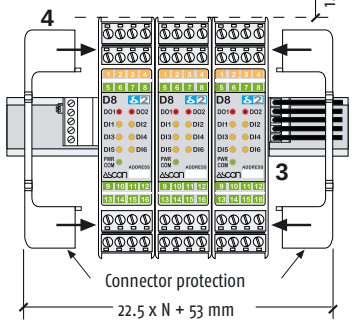
Mounting several instruments

1 Mounted the instruments on the rail, put them side by side so that the male side connector fits into the corresponding female connector

2 Then, insert the female 5-pole connector with the termination resistor of the serial communications into the corresponding male connector;

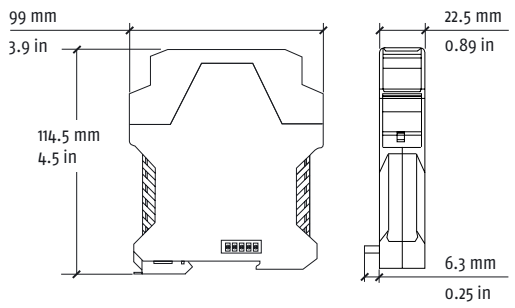


3 Wire the 5-pole male power supply and serial communications connector and insert it in the corresponding female connector

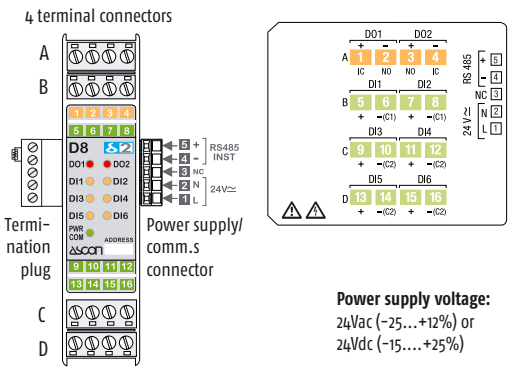


4 When assembled insert the connector protection on both sides.

Dimensions

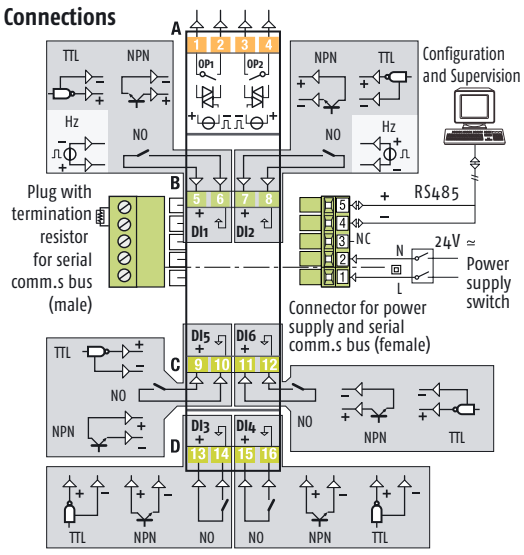


Terminal connectors



Power supply voltage:
24Vac (-25...+12%) or
24Vdc (-15....+25%)

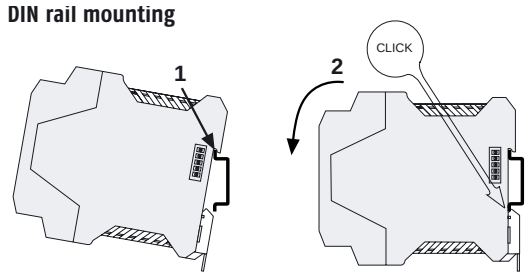
Connections



Terminals

Features		A - B - C - D	Bus/Power Supply
L →	Stripped wire	L = 7 mm - 0.28 in.	L = 7 mm - 0.28 in.
	Flat blade screwdriver	0.6 x 3.5 mm	0.4 x 2.5 mm
	Tightening torque	0.5... 0.6 Nm	0.4... 0.5 Nm

DIN rail mounting

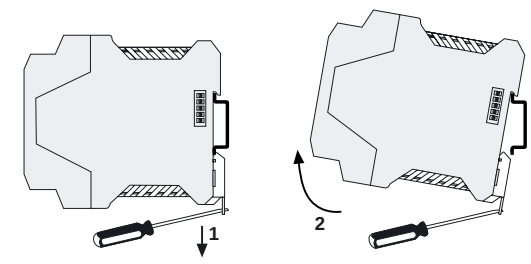


1 clip the upper part of the instrument on the rail

2 rotate the instrument downwards until the click

Removing the instrument from the DIN rail

Switch the instrument off



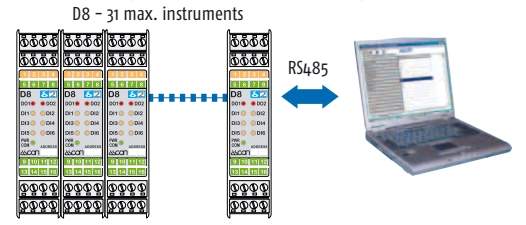
1 lower the spring slide by inserting a flat-blade screwdriver as indicated

2 turn and lift the instrument upwards.

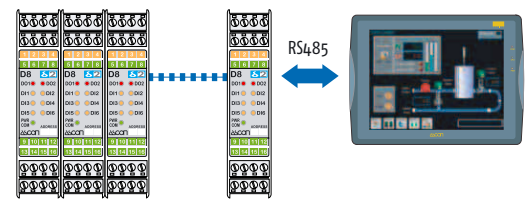
Serial communications connection examples

Configuration

Acquisition and centralized supervision



Local control



Model code

The product code indicates the specific hardware coniguration of the instrument, that can be modified by specialized engineers only.

	Line	Basic	Accessories	Configuration 1st part	Configuration 2nd part
Model:	D 8	5 B 5 D -	E 9 0 0 /	I L 0 0 -	0 0 0 0

Line	D	8

D01 - D02 Outputs	B
Relay - Relay	1
Relay - SSR Drive	2
SSR drive - SSR drive	3
SSR - SSR	4
SSR - SSR drive	5

Special function	E
Not fitted	0
2 Timers	2

Configuration code

A 4 + 4 digits index code follows the model (letters from I... R).
This code can be used to buy a pre-configured controller.

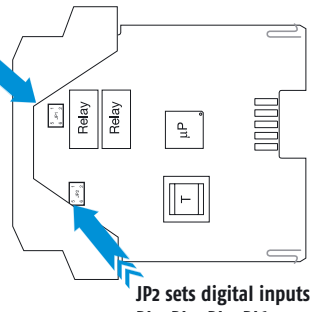
Input type	I
No frequency input	0
Frequency input on DI1	1
Frequency input on DI1 and DI2	2

Output type	L
No PWM output	0
PWM output on DO2 [1]	1
PWM output on DO1 and DO2 [2]	2

[1] Only when B = 2, 3, 4 and 5;
[2] Only when B = 3, 4 and 5.

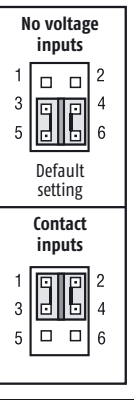
Jumpers to select the input type

JP1 sets digital inputs DI1, DI2



JP2 sets digital inputs DI3, DI4, DI5, DI6

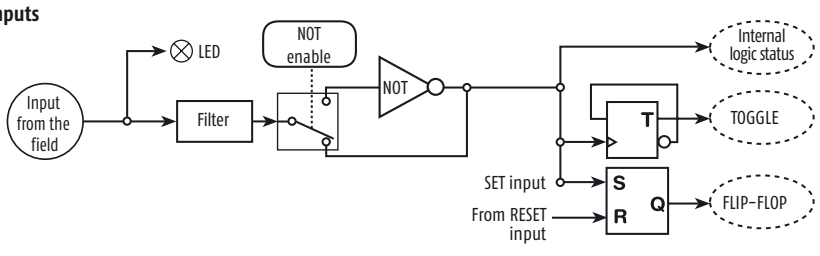
Settings common to JP1 and JP2 jumpers



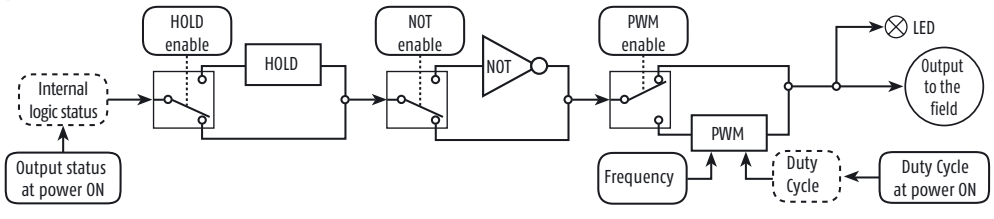
Warning!
Carefully control that jumper blocks (JP1 and JP2) connect PIN 1 with 3 and 2 with 4 or 3 with 5 and 4 with 6 as indicated in the drawings.
Different connections can trigger the protection that inhibits the instrument to power ON.

Inputs and Outputs functioning diagrams

Inputs



Outputs



Parameters list

In the table that follows are listed the parameters of the controller associated to the correspondent serial ModBus address.
For further details, consult the manual: "*gammadue® and deltadue® controller series Serial communications and configuration software*".

Analogue

ModBus address	Parameter name	Value Default	Value Modbus	Value User
0	Inputs internal logical status (bits 1...6) and outputs (bits 7... 8)			
1	DI1 frequency			
2	DI2 frequency			
3	PWM frequency	0	0	
4	Duty Cycle output DO1	0	0	
5	Duty Cycle output DO2	0	0	
6	Duty Cycle output DO1 at Power-ON	0	0	
7	Duty Cycle output DO2 at Power-ON	0	0	
30	Input filter DI1	0	0	
31	Input filter DI2	0	0	
32	Input filter DI3	0	0	
33	Input filter DI4	0	0	
34	Input filter DI5	0	0	
35	Input filter DI6	0	0	
49	Timer 1 - Type	none	0	
50	Timer 1 - Digital Input associated to Trigger	none	0	
51	Timer 1 - Digital Input associated to Reset	none	0	
52	Timer 1 - Digital Output associated to Timer	none	0	
53	Timer 1 - Enable status at startup	0	0	
54	Timer 1 - Period Time Base (TP)	seconds	0	
55	Timer 1 - ON Period Time Base (TOn)	seconds	0	
56	Timer 1 - Period selection (TP)	1	1	
57	Timer 1 - ON Period selection (TOn)	1	1	
58	Timer 1 - Enable (TEn)	0	0	
59	Timer 1 - Reset	0	0	
60	Timer 1 - Event			
61	Timer 1 - Status			
62	Timer 1 - Trigger in memory		0	
63	Timer 1 - Type	0	0	
64	Timer 2 - Digital Input associated to Trigger	0	0	
65	Timer 2 - Digital Input associated to Reset	0	0	
66	Timer 2 - Digital Output associated to Timer	0	0	
67	Timer 2 - Enable status at startup	0	0	
68	Timer 2 - Period Time Base (TP)	seconds		
69	Timer 2 - ON Period Time Base (TOn)	seconds		
70	Timer 2 - Period selection (TP)	0	0	
71	Timer 2 - ON Period selection (TOn)	0	0	
72	Timer 2 - Enable (TEn)	0	0	
73	Timer 2 - Reset	0	0	
74	Timer 2 - Event			
75	Timer 2 - Status			
76	Timer 2 - Trigger in memory	0	0	

Digital

ModBus address	Command	Values
0	Internal logical status - DI1	
1	Internal logical status - DI2	
2	Internal logical status - DI3	
3	Internal logical status - DI4	
4	Internal logical status - DI5	
5	Internal logical status - DI6	
6	Internal logical status - DO1	
7	Internal logical status - DO2	
8	TOGGLE logical status - DI1	
9	TOGGLE logical status - DI2	
10	TOGGLE logical status - DI3	
11	TOGGLE logical status - DI4	
12	TOGGLE logical status - DI5	
13	TOGGLE logical status - DI6	
14	FLIP-FLOP 1 logical status	
15	FLIP-FLOP 2 logical status	
16	FLIP-FLOP 3 logical status	
17	HOLD output DO1 enable	0 = free; 1 = HOLD
18	HOLD output DO2 enable	0 = free; 1 = HOLD
19	Output DO1 status at Power-ON	0 = Output disabled; 1 = output enabled
20	Output DO2 status at Power-ON	0 = Output disabled; 1 = output enabled
22	Status retention	
32	NOT enable - DI1	0 = Not influenced, 1 = Forces the OP reverse status
33	NOT enable - DI2	0 = Not influenced, 1 = Forces the OP reverse status
34	NOT enable - DI3	0 = Not influenced, 1 = Forces the OP reverse status
35	NOT enable - DI4	0 = Not influenced, 1 = Forces the OP reverse status
36	NOT enable - DI5	0 = Not influenced, 1 = Forces the OP reverse status
37	NOT enable - DI6	0 = Not influenced, 1 = Forces the OP reverse status
38	NOT enable - DO1	0 = Not influenced, 1 = Forces the OP reverse status
39	NOT enable - DO	0 = Not influenced, 1 = Forces the OP reverse status
43	Timer 1 enable	
44	Timer 1 Reset in Memory	1 = Resets timer 1
45	Timer 1 Event (Output Status)	
46	Timer 1 Trigger in Memory	
47	Timer 2 Enable	
48	Timer 2 Reset in Memory	1 = Resets timer 1
49	Timer 2 Event (Output Status)	
50	Timer 2 Trigger in Memory	