### **DIN rail mounting** 2 channels data acquisition module D9 line



Quick Guide • QG D9 - 1/11.09 • Cod. J30-478-1AD9



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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 All Type: • Language: All

SERG2D2 Code: Click: SEARCH and download the file:

Ascon\_MIU\_SERIALE GAMMA2-DELTA2\_RevXX\_EN.zip

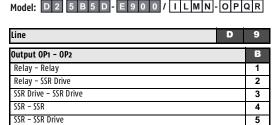
(XX identifies the revision number)

### Model code

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

1<sup>st</sup> part

Basic Accessories



### 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	Range	PV1	ı	L
Input type	Range	PV2	M	N
TR Pt100 IEC751	-99.9300.0°		0	0
TR Pt100 IEC751	-200600°C	-3281112°F	0	1
TC L Fe-Const DIN43710	0600℃	321112°F	0	2
TCJ Fe-Cu45% Ni IEC584	o600°C	321112°F	0	3
TC T Cu-CuNi	-200400°C	-328752°F	0	4
TC K Chromel-Alumel IEC584	01200°C	322192°F	0	5
TC S Pt10%Rh-Pt IEC584	01600°C	322912°F	0	6
TC R Pt13%Rh-Pt IEC584	01600°C	322912°F	0	7
TC B Pt30%Rh Pt6%Rh IEC584	01800°C	323272°F	0	8
TC N Nichrosil-Nisil IEC584	01200°C	322192°F	0	9
TC E Ni10%Cr-CuNi IEC584	o600°C	321112°F	1	0
TC NI-NiMo18%	01100°C	322012°F	1	1
TC W3%Re-W25%Re	02000°C	323632°F	1	2
TC W5%Re-W26%Re	02000°C	323632°F	1	3
Dc input o5omV linear	Engineering units		1	4
Dc input 105omVlinear	Engineering units 1		1	5
Custom input range [1]			1	6
Control mode	LOOP1			0
Control mode	LOOP2			Р
ON-OFF reverse action				0
ON-OFF direct action				
PID single reverse action				2
PID single direct action				3
Output configuration	LOOP1			Q
None				0
OP1			1	1
0P3				2
Output configuration	LOOP2			R
			_	0
None				U
None OP2			$\dashv$	1

custom linearisation etc.

#### 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\_D9\_EN.zip and ASCON\_MU\_D9\_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

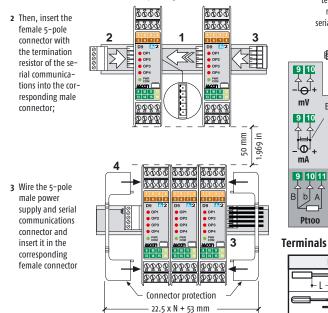
• Download the file: ASCON\_DC\_D2.zip (Declaration of Conformity of delta2 controllers) ASCON\_MI\_D9\_EN.zip (Installation) ASCON\_MU\_D9\_EN.zip (User) or

#### **⚠** 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  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left($ 



4 When assembled insert the connector protection on both sides.

# 0.89 in 114.5 mm 4.5 in

## **Terminal connectors**

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**Connections** 

9 10

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9 10

**. . . .** 

Plug with

termination

resistor for

bus (male)

serial comm.s

External

Features

Stripped

Flat blade

screwdrive

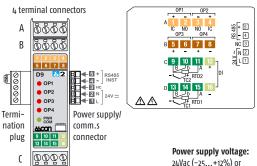
Tightening

Parameter

torque

Dimensions

99 mm



24Vac (-25...+12%) or 24Vdc (-15....+25%)

Configuration

RS485

and Supervision

Power supply

Ď-

TTL

13 14 15

B b A

Bus/Power Supply

L = 7 mm - 0.28 in

0.4 x 2.5 mm

0.4... 0.5 Nm

Value

switch

Power supply

bus connector

communications

and serial

(female)

ЦЩ

ор4 <del>-</del>О

External

A - B - C - D

0.6 x 3.5 mm

0.5... 0.6 Nm

Shunt

Į M

**W** 

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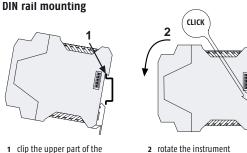
- + 9 | 10 | 11

IN<sub>1</sub>

22.5 mm

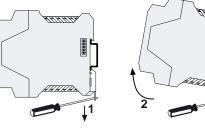
6.3 mm

0.25 in



downwards until the click

### Removing the instrument from the DIN rail



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

2 turn and lift the instrument

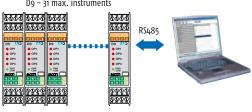
Configuration

Cd-Rom

### Serial communications connection examples



Acquisition and centralized supervision



Local control D9 - 31 max. instruments

00000 00000 00000 00000 00000 00000

Operator panel

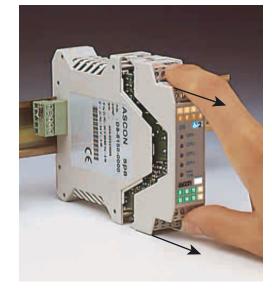
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4) With the blade of the screwdriver, press the two slots (at the top and bottom of the module) in order to free the I/O module from the housing:





5) Firmly grip the front panel in the terminal block area and pull the module outside the housing.



## **Parameters list**

In the table that follows are listd 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 Loop1

ModBus	Parameter name		Value		
address		Default	Modbus	User	
0	Process Value PV				
21	Input filter PV1 measure	inhibited	0		
22	Input shift PV1 measure	inhibited	0		
92	Loop1 Ref. Value selection	local	0		

### Analogue Loop2

ModBus	Darameter name	Value		
address		Default	Modbus	User
30	Process Value PV			
51	Input filter PV2 measure	inhibited	0	
52	Input shift PV2 measure	inhibited	0	
93	Loop2 Ref. Value selection	local	0	

### Analogue general

ModBus	Daramotor namo	Value		
address		Default	Modbus	User
60	AL1 alarm threshold	0	0	
61	AL2 alarm threshold	0	0	
62	AL3 alarm threshold	0	0	
63	AL4 alarm threshold	0	0	
64	AL1 alarm Hiysteresis	0.5	5	
65	AL2 alarm Hysteresis	0.5	5	
66	AL3 alarm Hysteresis	0.5	5	
67	AL4 alarm Hysteresis	0.5	5	
68	AL1 Alarm addressing	PV1	0	
69	AL1 alarm type	disabled	0	
70	AL1 Latching/Blocking	none	0	
71	AL1 Alarm output	internal status	0	
72	AL2 alarm addressing	PV1	0	
73	AL2 alarm type	disabled	0	
74	AL2 Latching/Blocking	none	0	
75	AL2 alarm output	internal status	0	
76	AL3 alarm addressing	PV1	0	
77	AL3 alarm type	disabled	0	
78	AL3 Latching/Blocking	none	0	
79	AL3 alarm output	internal status	0	
80	AL4 alarm addressing	PV1	0	
81	AL4 alarm type	disabled	0	
82	AL4 Latching/Blocking	none	0	
83	AL4 alarm output	internal status	0	
95	Instrument position	alone	0	

#### Digital ModBu

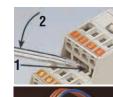
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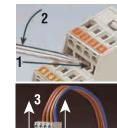
address	1	1	
0	OP1 digital output	0 = 0FF, 1 = 0N	
1	OP2 digital output	0 = 0FF, 1 = 0N	
2	OP3 logical output	0 = 0FF, 1 = 0N	
3	OP4 logical output	0 = 0FF, 1 = 0N	
4	Alarms acknowledgement	1 = Alarms acknowledge	
5	Forcing the Output status	o = Not influenced, 1 = Forces the OP status to OFF	
6	PV1 measure Hold	1 = PV1 locked	
7	PV2 measure Hold	1 = PV2 locked	
10	PV1 out of range	o = Valid measure, 1 = Out of range	
11	PV2 out of range	o = Valid measure, 1 = Out of range	
12	AL1 alarm status	o = Normal, 1 = alarm	
13	AL2 alarm status	o = Normal, 1 = alarm	
14	AL3 alarm status	o = Normal, 1 = alarm	
15	AL4 alarm status	o = Normal, 1 = alarm	
16	IL1 logic input status	0 = 0FF, 1 = 0N	
17	OP3 input status	0 = 0FF, 1 = 0N	
18	OP4 input status	0 = 0FF, 1 = 0N	
32	NOT OP1 output	o = Not influenced, 1 = Forces the OP reverse status	
33	NOT OP2 output	0 = Not influenced, 1 = Forces the OP reverse status	
34	NOT OP3 output	o = Not influenced, 1 = Forces the OP reverse status	
35	NOT OP4 output	o = Not influenced, 1 = Forces the OP reverse status	

#### Remove/insert the module from/in its housing Removing the module

The electronic module of the instruments can be extracted from the housing in order to allow an easy maintenance, wiring and setting.

- 1) Insert the blade of a negative screwdriver under the I/O polarized connectors;
- 2) Moving the screwdriver as indicated, unplug the connector from the module:
- 3) Remove the connector and repeat the steps in order to unplug all the external connections:





## Re-inserting the module in the housing

In order to correctly re-insert the module in its housing, invert the previous extracting sequence, paying particular attention in inserting the printed circuit board in the slots present at the top and bottom of the case.



