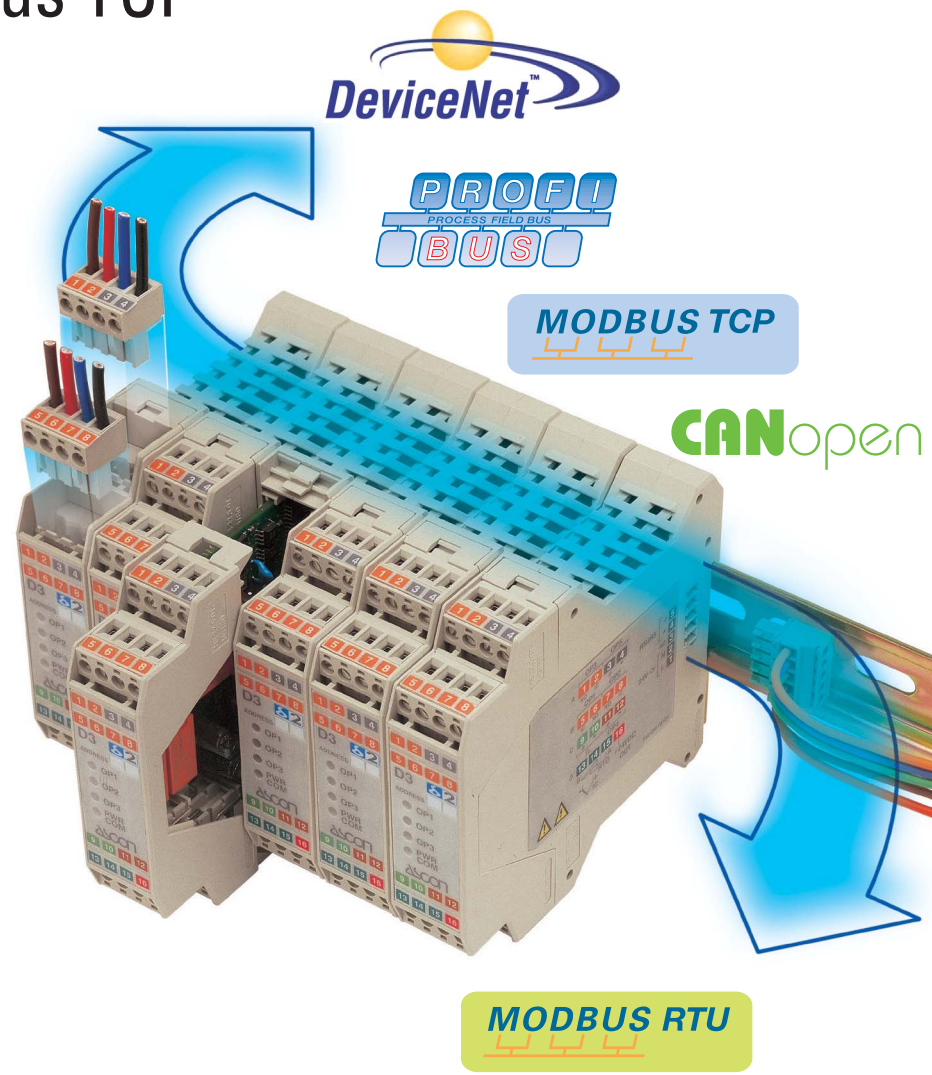
ASCON TECNOLOGIC

S E R I E S

BT. 02.30 DXDY/E

deltadue® series gateways: PROFIBUS DP, DeviceNet, CANopen, Modbus TCP to Modbus RTU



Integrate Ascon instrumentation lines into your system

DX 5000
- Modbus RTU RS232/RS485 Line converter
- Modbus RTU RS485/RS485 Repeater
- Modbus RTU RS485/RS485 Line adapter
- Data transfer between Modbus RTU modules

DX 5010 DeviceNet/Modbus RTU Gateway

DX 5050 Modbus RTU/Modbus RTU Protocol optimizer

DX 5070 PROFIBUS DP/Modbus RTU Gateway

DY 5220 Modbus TCP/Modbus RTU Gateway

DY 5030 CANopen/Modbus RTU Gateway

DY 5121 WebSCADA

DX 5100 delta**due** manager (4 modules)

DX 5200 delta**due** manager (8 modules)

DX 5300 delta**due** manager (16 modules)

DX 5400 delta**due** manager (32 modules)

S E R I E S

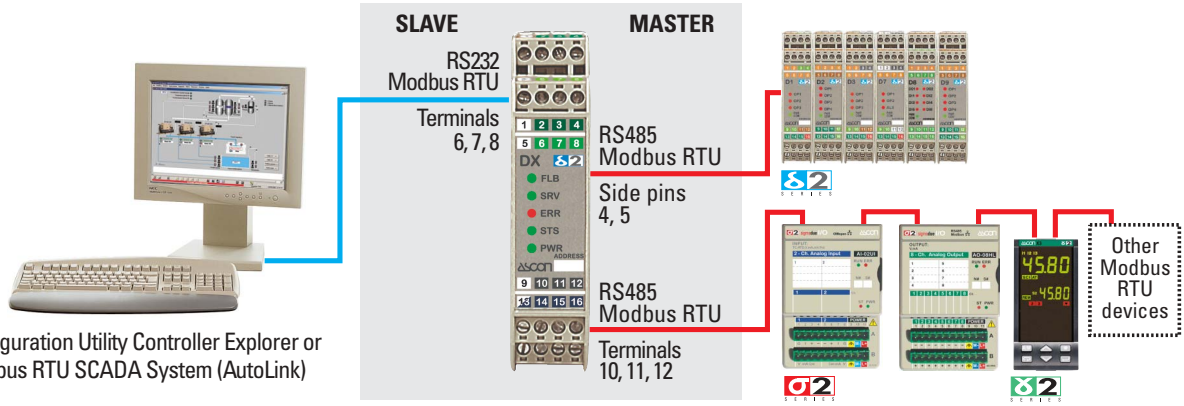
S E R I E S

E

Ascon Tecnologic S.r.l.
via Indipendenza 56, 27029 - Vigevano (PV)
Tel.: +39 0381 69871 - Fax: +39 0381 698730
www.ascontecnologic.com

DX 5000

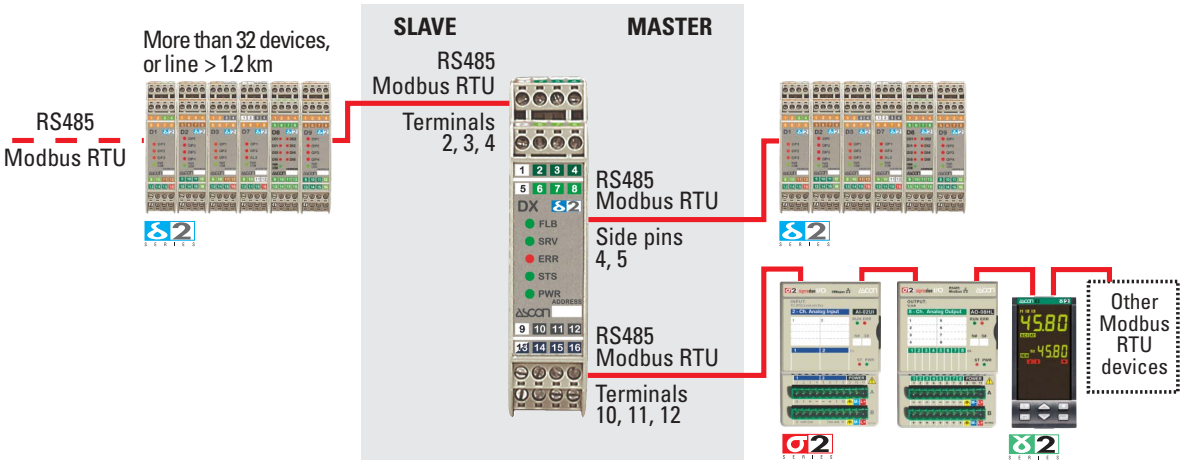
RS232 → 2 x RS485 ModBus RTU converter



Minimal settings required for easy configuration:

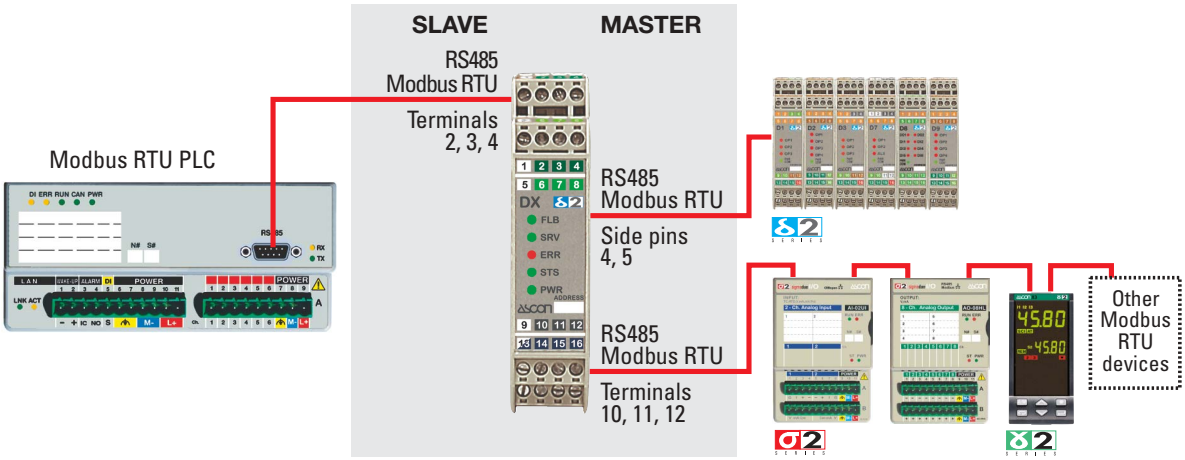
1) for the RS232 slave service port (terminals 6, 7, 8):
   - baud rate (1200...38400 baud);
   - number of characters + parity + stop bits (8N1, 8E1, 8O1, 8N2).
2) for the RS485 master side port (terminals 4 and 5) and RS485 master front port (terminals 10, 11, 12):
   - baud rate (1200...19200 baud) (dip switches SW1).

RS485 → 2 x RS485 ModBus RTU repeater



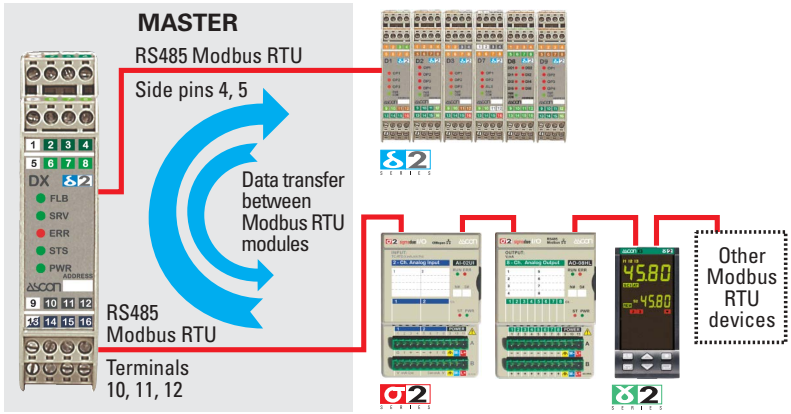
- RS485 line repeater increases the line signal and furthermore doubles the line.
- Service port (terminals 2, 3, 4) is used as RS485 slave.

RS485 → 2 x RS485 ModBus RTU baud rate, parity and stop bits adapter



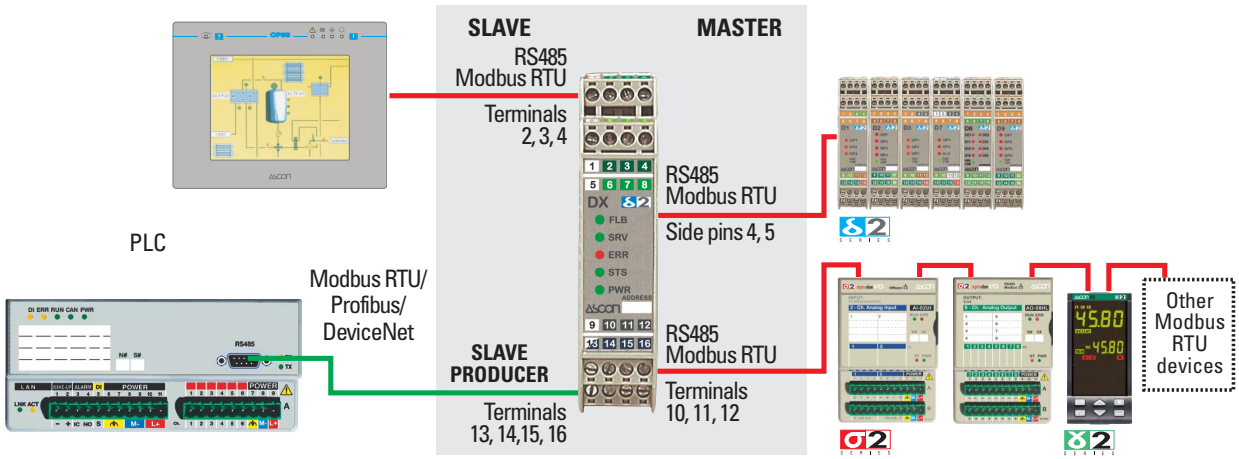
- To be used when the baud rate, parity and stop bits parameters of various modules are different and cannot be changed on the connected instruments.
- Easy configuration of the parameters on the DX5000.

Data transfer between Modbus RTU modules



DX 50x0

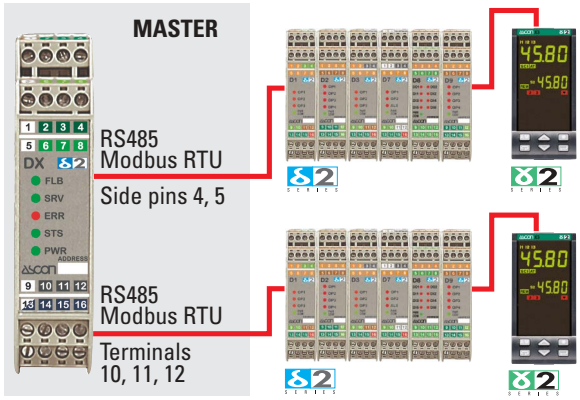
Modbus RTU, PROFIBUS, DeviceNet → 2 x RS485 Modbus RTU converter, double master



- Two masters can simultaneously access the instrumentation connected on Modbus RTU networks.
- One of the two masters must be Modbus RTU.
- The second master can be PROFIBUS or DeviceNet or Modbus RTU; the DX 50x0 converts these protocols to Modbus RTU.
- For example: the RS232 or RS485 service ports of DX 50x0 can be connected to an Ascon AutoLink self configuring SCADA or to a local operator panel; the slave Fieldbus port can be connected to any PLC using PROFIBUS, DeviceNet or Modbus RTU protocols.

DX 5x00

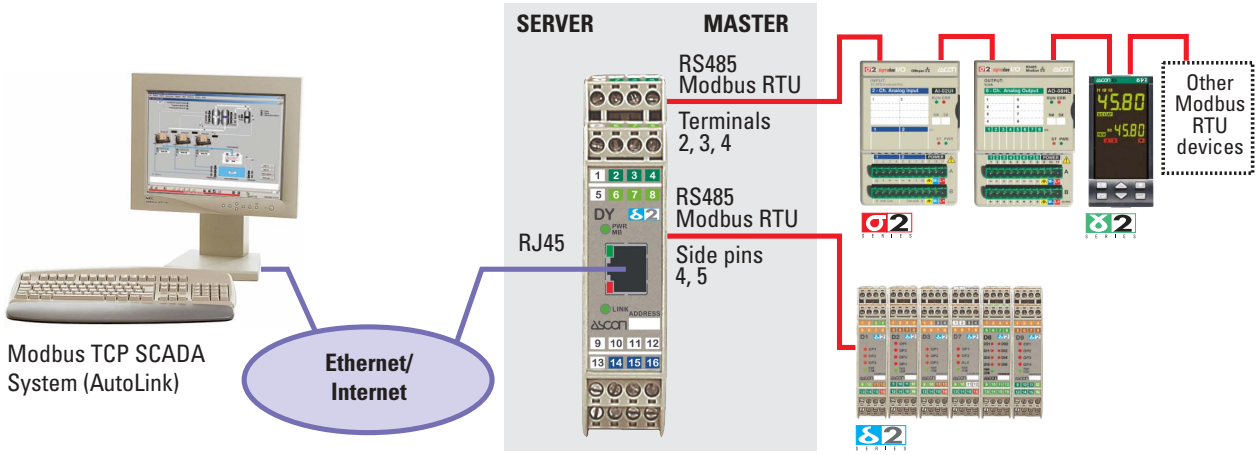
Manager for up to 32 devices (delta**due** and/or gamma**due** X1, X3, Q1, Q3)



- Memorization of the configuration and operator parameters of up to 32 connected instruments in Ascon gamma**due** and delta**due** series.
- Automatic configuration and parameterization of the new instrument in case of failure (hot swapping).
- Instrument configurations and parameters can be downloaded to the DX 5x00 when instruments are not yet installed (off-line configuration). Automatic configuration and parameterization of the new instruments when connected.

DY 5220

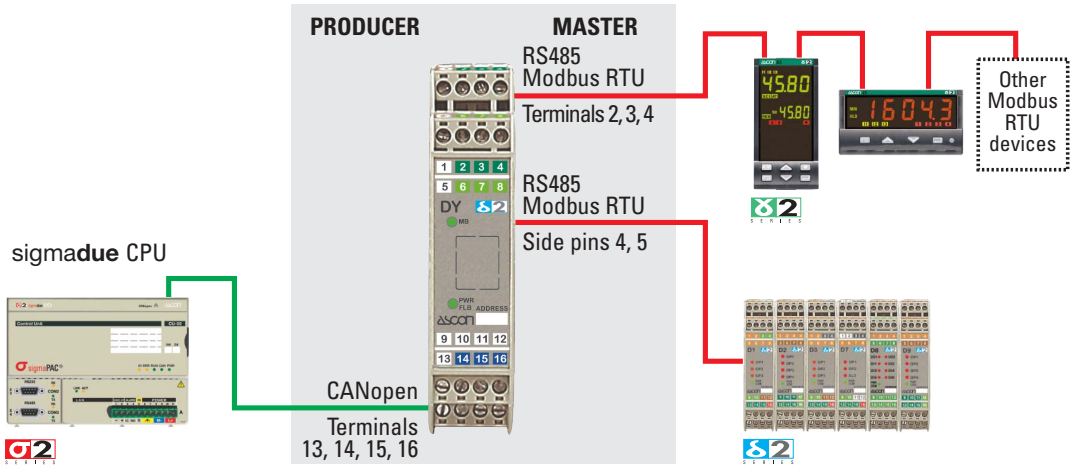
Modbus TCP → 2 x RS485 Modbus RTU converter



- Connects Ascon instrumentation in the gamma**due**, delta**due** and sigma**due** series, with Modbus RTU protocol to a PLC or SCADA with Modbus TCP protocol via an Ethernet network (e.g. the factory LAN) or the web. Can also connect any other device with Modbus RTU protocol.
- Two Modbus TCP / Modbus RTU conversion modes are available:
  - Routing (transparent mode);
  - Natting (conversion using a configurable table).
- The network identifies the DY5220 by means of its IP.

DY 5030

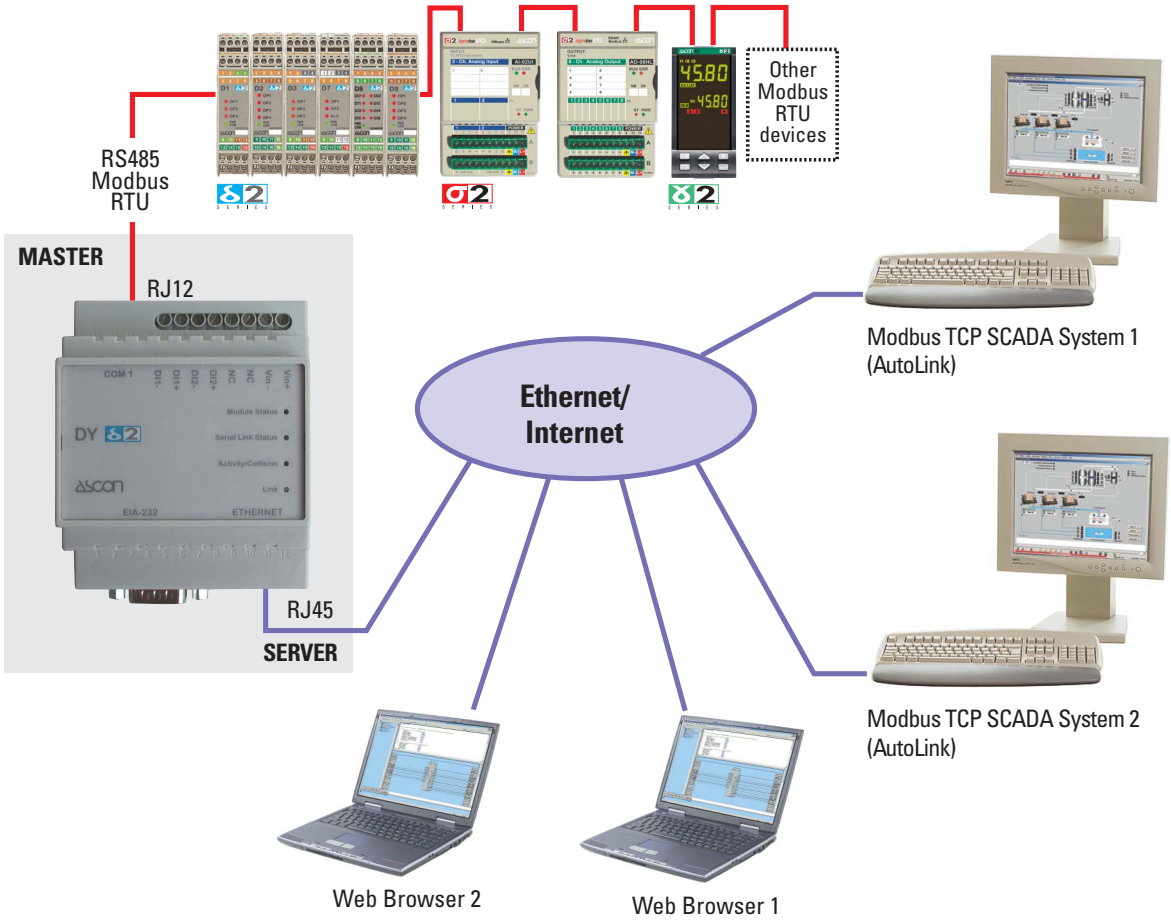
CANopen → 2 x RS485 Modbus RTU converter



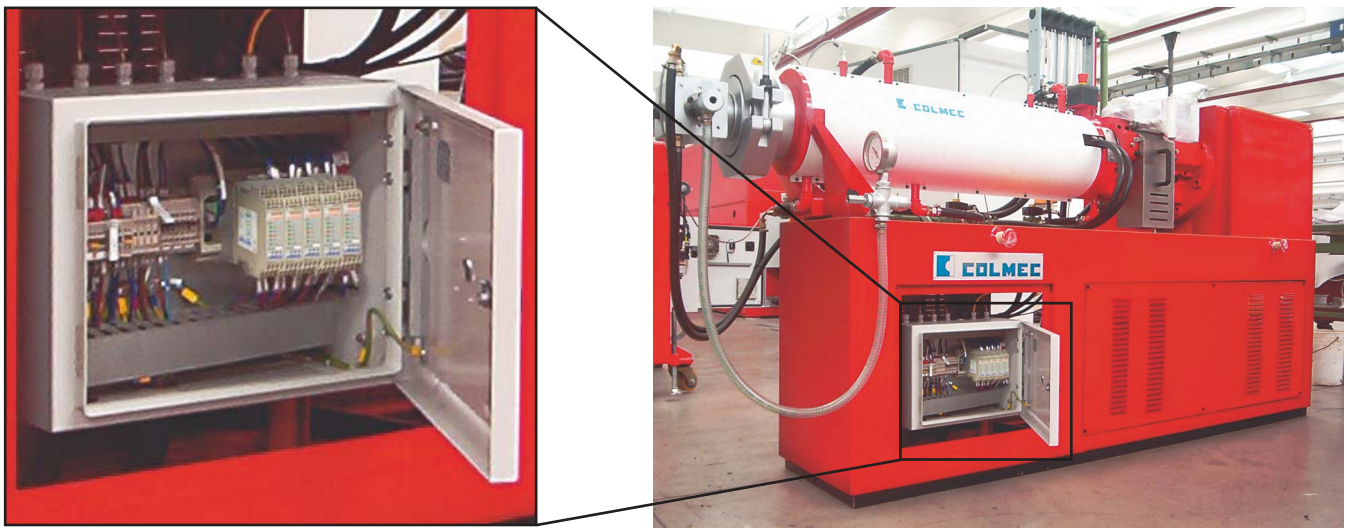
- Allows connection of Modbus RTU instrumentation to CANopen networks.
- DY5030 is not only a protocol converter but also supports the automatic PDO "change of status" transmission and the management of the data consistency information. The DY5030 is a real CANopen node.
- Main features include:
  - analogue and digital SDOs;
  - 4 analogue RPDOs and one digital RPDO;
  - 4 analogue TPDOs and one digital TPDO transmitted on:
    - Remote request;
    - Event (dead band for the analogue units and mask for the digital units);
    - Sync.
  - Data consistency check bit for each PDO;
  - Mask for the writing of the digital SDOs and RPDOs.

DY 5121

WebSCADA and Modbus TCP → RS485 Modbus RTU converter



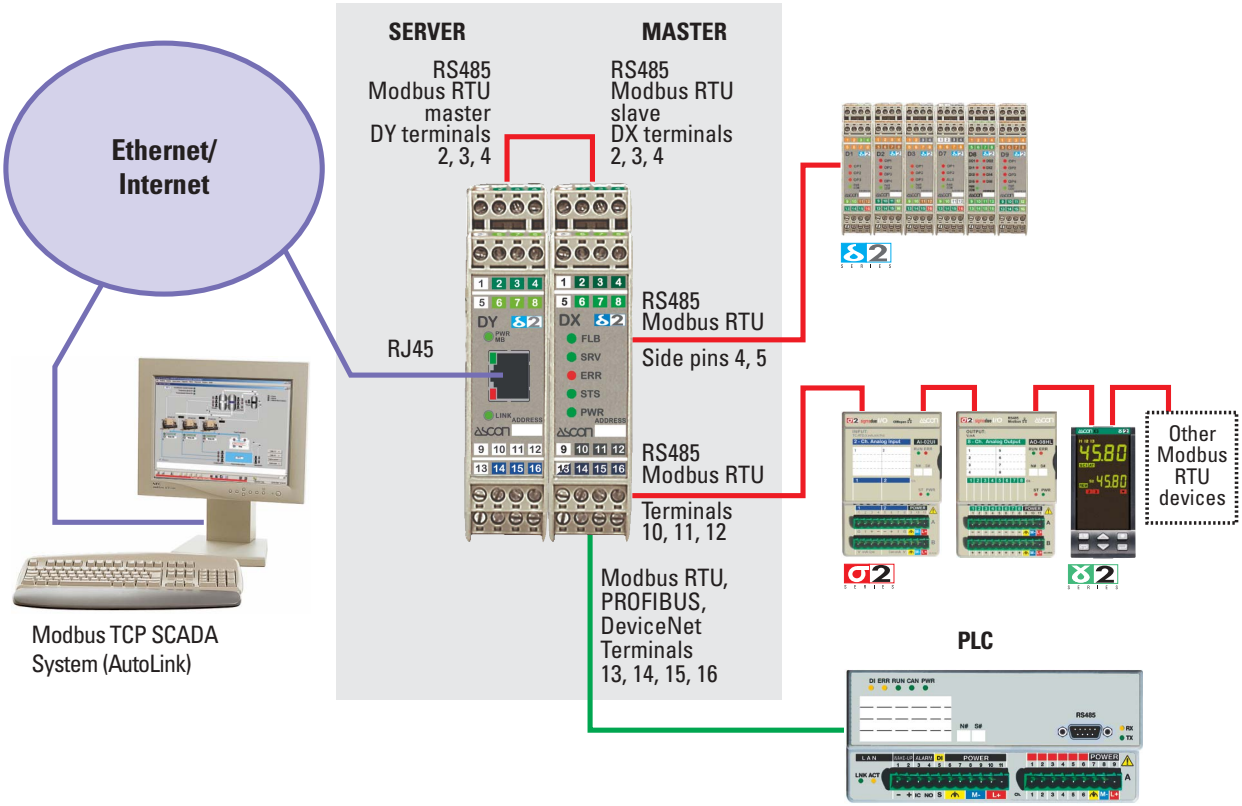
- Performs simultaneous multi client Modbus TCP / Modbus RTU conversion.
- Allows configuration of HTML pages for management of Modbus RTU instruments by using any web browser.
- The WebSCADA function includes:
  - Templates;
  - Binding (data transfer);
  - 30 pages with 20 variables each;
  - 64 alarms (e-mail and SMS with external analogue, GSM or GPRS modem);
  - Log file (.csv) of 64 variables, can be sent periodically via e-mail;
  - Graphics (if JAVA is installed).



COLMEC extrusion line with Siemens PLC. Control and data acquisition are made by using delta**due** series (D1, D8 and D9).
A gateway DX 5370 is installed to perform PROFIBUS-Modbus RTU data exchange and manager function for 16 instruments.

DY 5220 + DX 5xx0

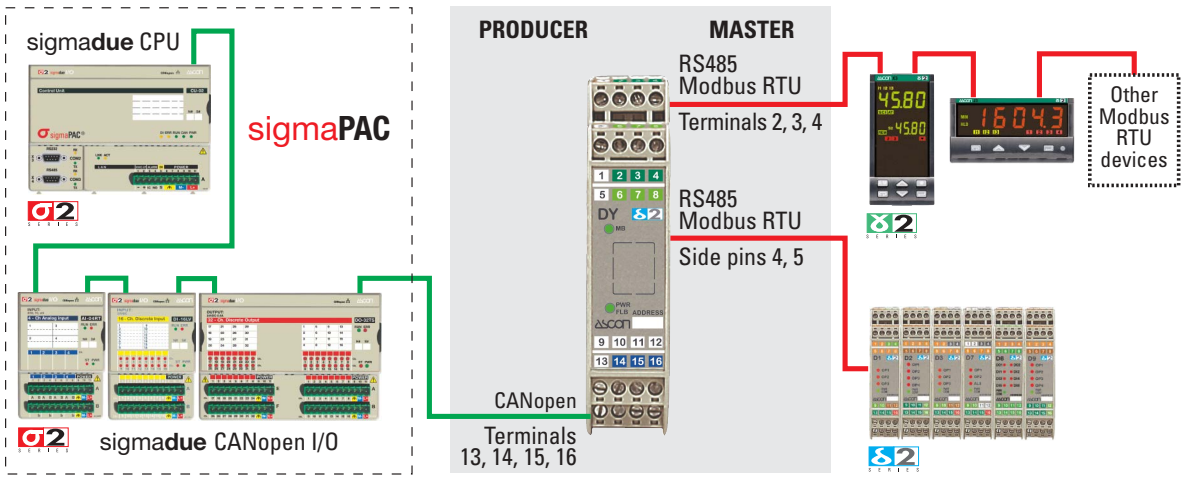
AutoLink Modbus TCP and PLC together as 2 different masters



- The combined use of one DY5220 and one DX5xx0 allows the simultaneous use of a Modbus TCP SCADA (e.g.: Ascon AutoLink) and a PLC (PROFIBUS or DeviceNet or Modbus RTU).
- The SCADA and the PLC can also share the same Modbus RTU instrumentation.

SigmaPAC + DY 5030

SigmaPAC with Modbus RTU I/O in CANopen network



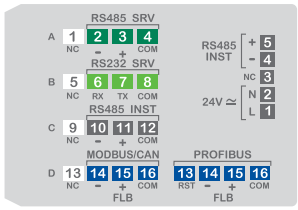
- Allows the use of Ascon Modbus RTU gamma**due** and delta**due** instruments as I/Os of the sigma**due** CPU.

Technical data

DX Line

Features	Description		
Functions	Manager	OFF line configuration and parameterization. Backup of the configuration and parameter data of the connected modules. Hot swapping, automatic configuration and parameterization of the replaced modules	
	Gateway	Network adapter for PROFIBUS DP, DeviceNet, Modbus RTU and RS485/RS232 line converter	
Communications ports	Instruments Bus	RS485 Modbus protocol master replicated on the terminal connectors (max. 19200 baud)	
	Service	RS485, RS232 Modbus protocol slave, isolated (max. 38400 baud)	
	Fieldbus	RS485 Modbus protocol slave, isolated (max. 57600 baud)	
		PROFIBUS DP slave	DP control: SPC3
			DP interface: RS485 isolated, max. 12 Mb/s
		CAN 2.0b, isolated, max. 1Mb/s	
General characteristics	UL and cUL approval	File E176452	

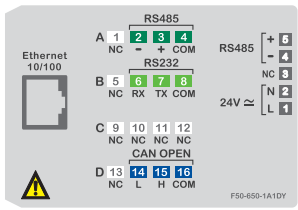
Electrical connections



DY Line

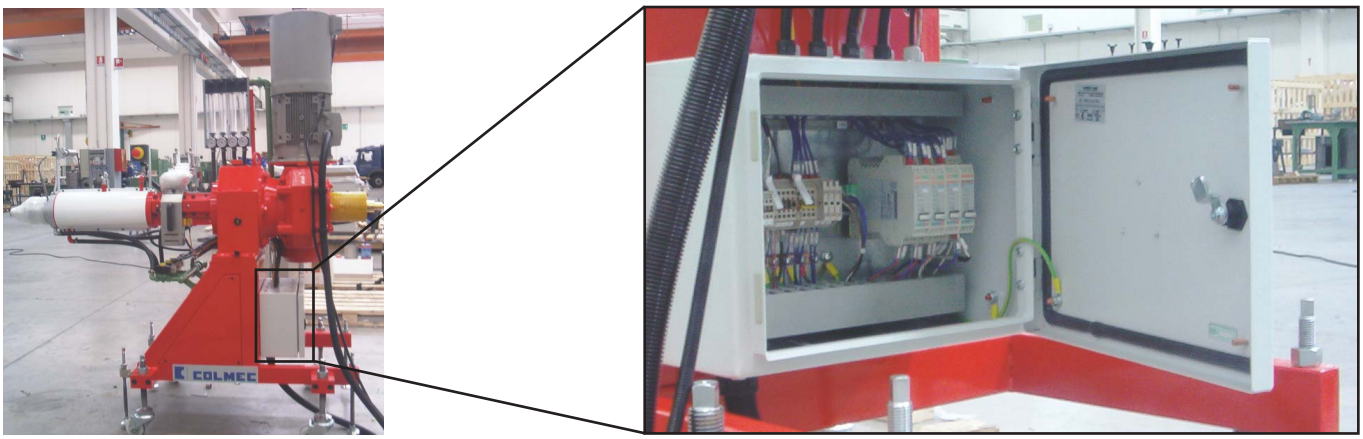
Features	Description		
Functions	WebSCADA	- templates - binding (data transfer) - 30 pages of 20 variables - 64 alarms (e-mail and SMS with external analogue modem, GSM or GPRS) - 64 variables log file (.csv), can be transmitted periodically by e-mail - graphics (if JAVA is installed	
Communications ports	Gateway	From CANopen or Modbus TCP to Modbus RTU	
	Instrument Bus	RS485 Modbus protocol master replicated on connector A (max. 115200 baud)	
	Service	RS232 standard (only for instrument configuration)	
	Fieldbus	CAN 2.0b, isolated, max. 1Mb/s	
		Ethernet 10/100 Mbaud, RJ45 female connector	

Electrical connections



Common features

Features at env. 25°C	Description		
General characteristics	Power supply (PTC protected)	24Vac (-25...+12%) 50/60Hz and 24Vdc (-15...+25%)	Power consumption: 3W max.
	Safety	EN61010-1 (IEC1010-1), installation class 2 (2.5kV) pollution class 2, instrument class II	
	Electromagnetic compatibility	Compliance to the CE standards	
	Protection	Terminal strip IP20	
	Dimensions	Pitch: 22.5 mm - height: 99 mm - depth 114.5 mm	
	Weight	200 g max.	



A further example of COLMEC extrusion line.

S E R I E S

Ordering codes

DX Line

Line | Basic model | Accessories

Model: **DX** **5** **B** **C** **0** – **0** **0** **0** **0**

- **B**: No. of instruments backed up
- **C**: Fieldbus communications
- **0 0**: Instructions handbook

Number of instruments to be backed up	B
0	0
4	1
8	2
16	3
32	4

Fieldbus communications	C
None [1]	0
DeviceNet	1
RS 485 Modbus/Jbus	5
Profibus DP slave	7

Instructions handbook	F
Italian-English (standard)	0

If not differently specified the controller will be supplied with standard version
Model: DX 5000-0000

[1] The instrument perfoms the hardware conversion RS232/485 only for the Modbus RTU protocol.

DY Line

Line | Basic model | Accessories

Model: **DY** **5** **B** **C** **D** – **0** **8** **0** **0**

- **B C**: Function
- **D**: Housing type
- **0 8**: Instructions handbook

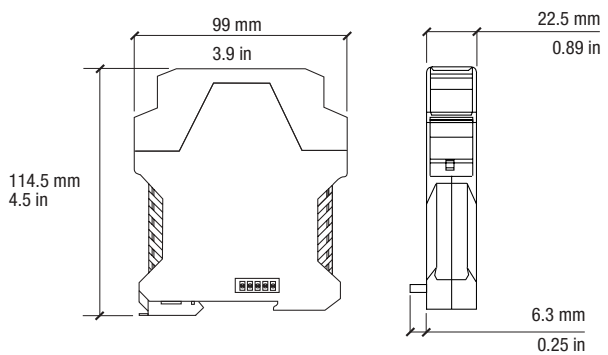
Function and housing type	B	C	D
CANOpen/Modbus RTU	0	3	0
WEB server + Modbus TCP/RTU	1	2	1
Modbus TCP/RTU	2	2	0

Instructions handbook	F
English (standard)	8

If not differently specified the controller will be supplied with standard version
Model: DY 5220-0800

Note: **D** = **0** deltadue housing;
D = **1** 4 DIN standard housing

Mechanical dimensions



Ascon Tecnologic s.r.l.
viale Indipendenza, 56
27029 Vigevano (PV) Italy
Tel.: +39 0381 69 871
Fax: +39 0381 69 87 30
info@ascontecnologic.com
www.ascontecnologic.com

Branches around the world:

Ascon Tecnologic France
BP 76 · 77202 -
Marne La Vallee Cedex 1
Tel.: +33 1 64 30 62 62
Fax: +33 1 64 30 84 98
info@ascontecnologic.fr
www.ascontecnologic.com/fr

Ascon Polska Sp. z o.o.
KOCHCICE ul. Kochanowicka 43
42-713 Kochanowice
Tel.: +48 34 35 33 619
Fax: +48 34 35 33 884
info@ascon.pl
www.ascon.pl

Ascon Tecnologic - North America
1111 Brook Park Road
Cleveland, OH 44109
Tel.: +1 216 485 8350 ext. 229
info@ascontec-na.com
www.ascontecnologic.com/en

Coelmatic Ltda
Rua Clélia 1810 - Lapa
Sao Paulo · SP - CEP
05042-001- Brazil
Tel.: +55 11 2066-3211
Fax: +55 11 3046-8601
info@coel.com.br
www.coelmatic.com.br

Coelmatic SAPI SA de CV
Calle Praga # 4489,
Colonia Las Torres, Monterrey,
Nuevo León - CEP 64103
Tel.: +52 81 8104 1012
info@coelmatic.com.mx
www. coelmatic.com.mx

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