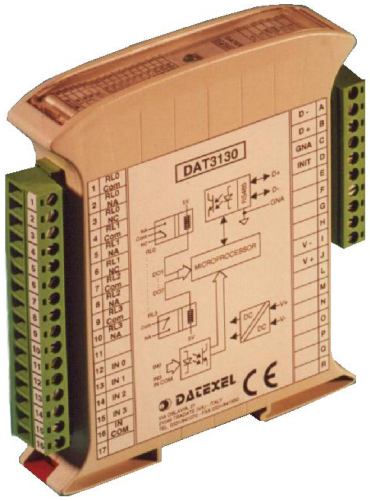
Remotable digital I/O module with RS-485 communication port

DAT 3130

FEATURES
Digital I/O module for remote data acquisition
2 Relays SPDT type
2 Relays SPDT-N.O. type
4 isolated digital inputs
Communication on RS-485
2000Vac 3-way galvanic isolation
In compliance with EMC standards - CE mark
23 mm. thin profile housing
DIN rail mounting

APPLICATIONS
- Network data acquisition & control
- Industrial process monitoring
- Factory & building automation
- Distributed measurement & control



GENERAL INFORMATION

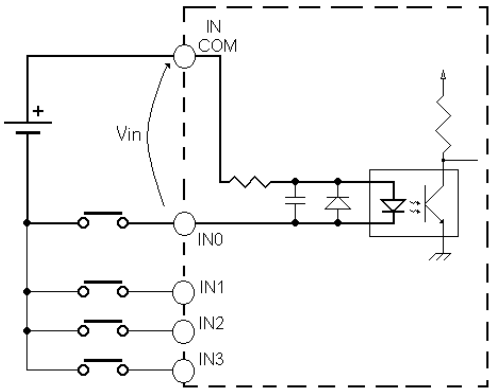
DAT3130 module allows to switch, in its ouput, 4 relays and to acquire, in its input, 4 digital signals and it is capable to transmit the data in ASCII format to the remote terminal through the RS-485 port. It is configured from the remote host by sending the configuration data on the serial line RS-485.
The device is built around a microprocessor core which, over the various tasks performed, has also the control of the digital inputs and of the digital outputs. With the purpose to assure safe operation of the system, the module has two watchdogs which, in case of failure, can activate an alarm and can force the outputs in a safe condition. Each relay is capable to switch up to 2000VA, so being it suitable for handling directly heavy loads.
3-way galvanically isolation is obtained between input, output and power supply by mean of photocouplers and transformers in such a way to guarantee a 2000Vac isolation. Further the 4 digital inputs are isolated from the relays at a level of 1000Vac.
The management of the device and the message exchange with it are performed through simple commands sent to its communication port.
The DAT3130 module, designed, manufactured and tested in strict accordance with the quality assurance standard ISO 9001 /EN 29001, is in compliance with the directive 89/336/EEC on the electromagnetic compatibility and the CE mark confirms its compliance.
The device is housed in a rough self estinguishing plastic container which, thank to its thin profile of 17.5 mm only, allows a high density mounting on DIN rail.

TECHNICAL SPECIFICATIONS (Typical @25°C and in the nominal conditions)

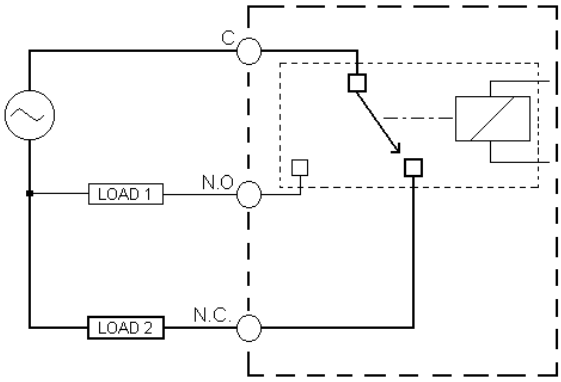
DIGITAL INPUTS	
Channels	4 channels
Input impedance	4.7 KOhm
Digital input level	from 0V up to +1V for logic level 0 from 3.5V up to +30V for logic level 1
DIGITAL OUTPUTS	
Channels	2 SPDT type relay + 2 SPDT-N.O. type relay
Output power (max.)	2 A @ 250 Vac (resistive load) per contact 2 A @ 30 Vdc (resistive load) per contact
Min. load	5Vdc , 10mA
Max. voltage	250Vac (50 / 60 Hz) , 30Vdc
CHARACTERISTICS & PERFORMANCES	
Reverse polarity protection	60 Vdc max.
Sampling frequency	50 sampl./sec
Supply voltage	18÷ 30 Vdc
Current consumption	</= 45 mA @ 24 Vdc
3-way isolation	2000 Vac, 50 Hz, 1 min.
Dielectric strength between relay contacts	1000 Vac, 50 Hz, 1 min.
Dielectric strength between relay contats and coil	4000 Vac, 50 Hz, 1 min.
Electromagnetic Compatibility (EMC)	In compliance with EN50081-2 and EN50082-2
Operating temperature	- 10 ÷ 60 °C
Storage temperature	- 40 ÷ 85 °C
Relative humidity(not condensing)	0 ÷ 90 %
Dimensions(W x H x T) in mm.	100 x 120 x 17,5
Weight	150 g. approx.

DAT3130 - WIRING DIAGRAMS

INPUT



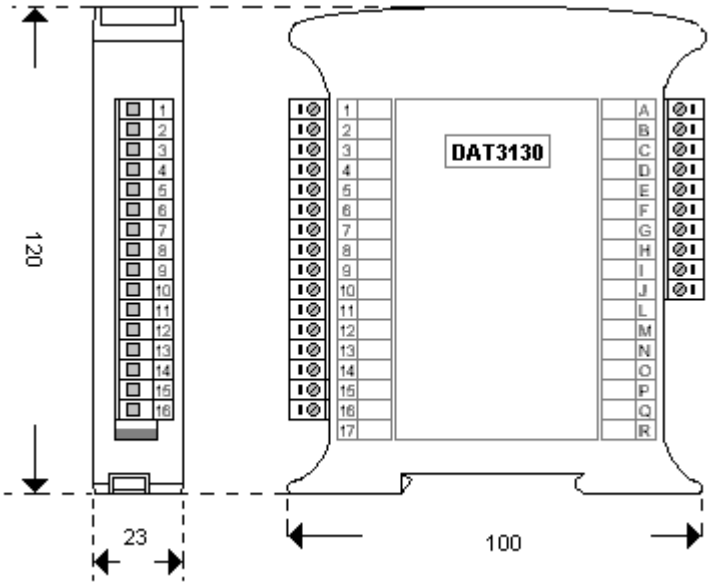
OUTPUT



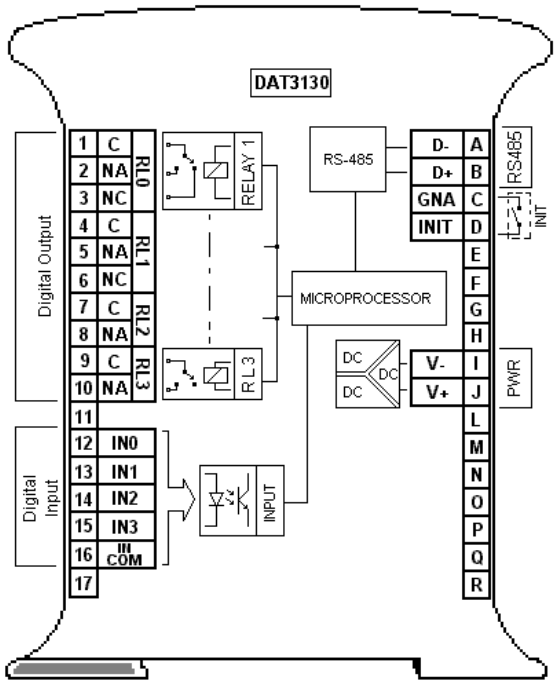
OPERATING INSTRUCTIONS

To put the device in operation it is necessary to make the wiring of power supply, serial line and digital I/O , as indicated in the "BLOCK DIAGRAM" hereafter illustrated. Then it is necessary to proceed to its configuration following the instructions listed in the "User Manual". The various phases through which such procedure is performed are fundamentally the followings: set up of the data; set up of the timer watchdog; set up of the alarms.Then the module is ready for operation.
Please note that the use of pin INIT allows to start up the module, when its address and baud rate are not known,following the default settings listed in the "User manual".

MECHANICAL DIMENSIONS (mm.)



BLOCK DIAGRAM



HOW TO ORDER:

DAT 3130

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SILGE ELECTRONICA S.A. Av. Mitre 950-B1604AKN-Florida-Buenos Aires-Tel(011)4730-1001-Fax(011)4760-4950
Email: ventas@silge.com.ar Internet: http://www.silge.com.ar