

SUMARI

SUMARI	1
ANNEX	3
Plànols	3
Fitxes tècniques	9
Serie EI EPIK. INSTRUMENT D'ADQUISICIÓ TCP/RTU.....	9
FRIGEDOR REG SELECTA: unitat refrigeradora per banys	20
BOMBA PERISTÀLTICA DINKO D-25VXi DE DIVERSOS CAPÇALS	21



Annex

Plànols

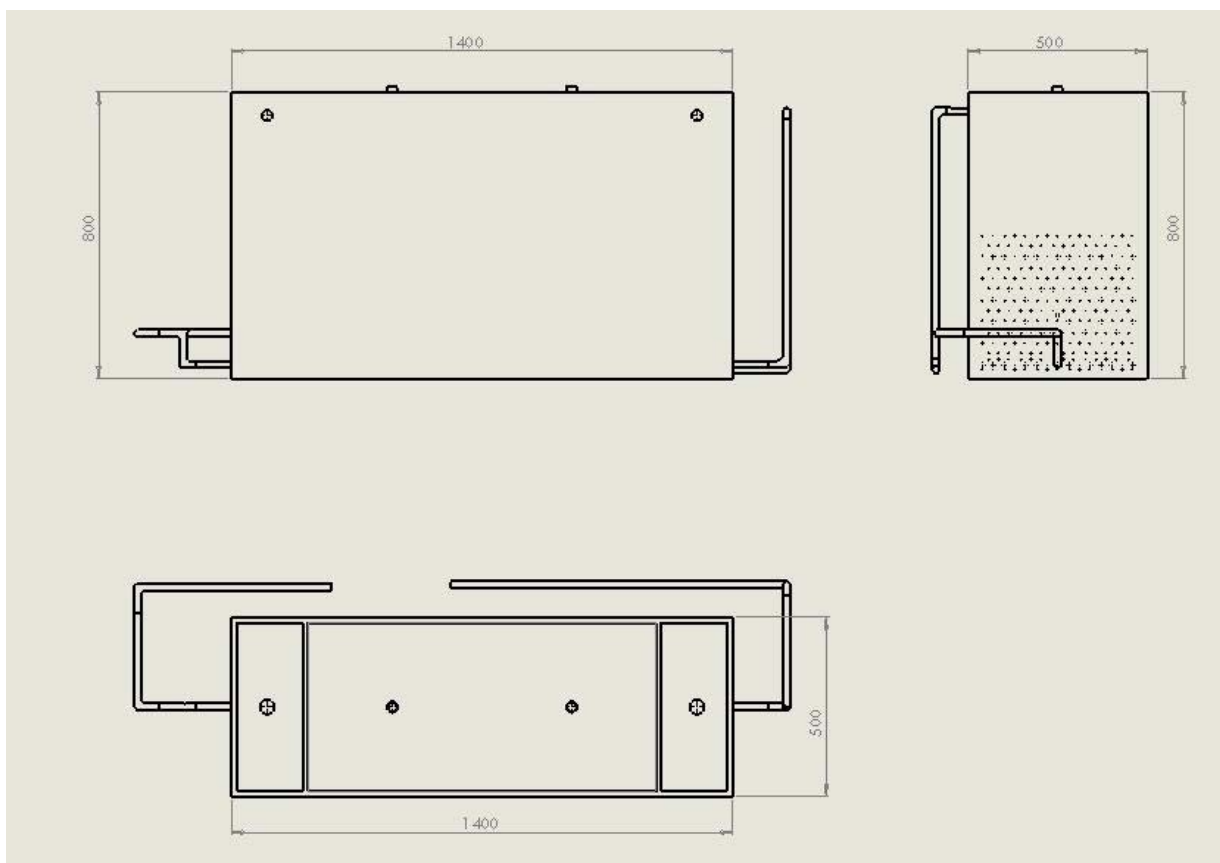


Fig. Alçat, lateral i planta de l'aqüífer.



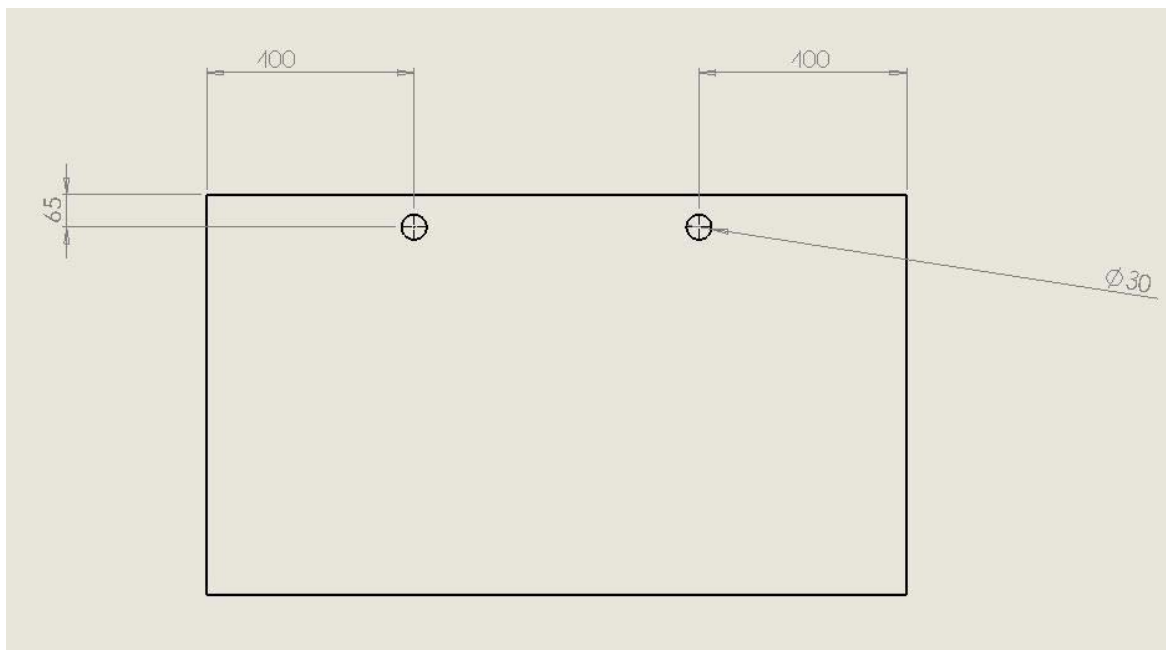


Fig. Vista lateral: detall dels orificis per facilitar el transport del dipòsit.



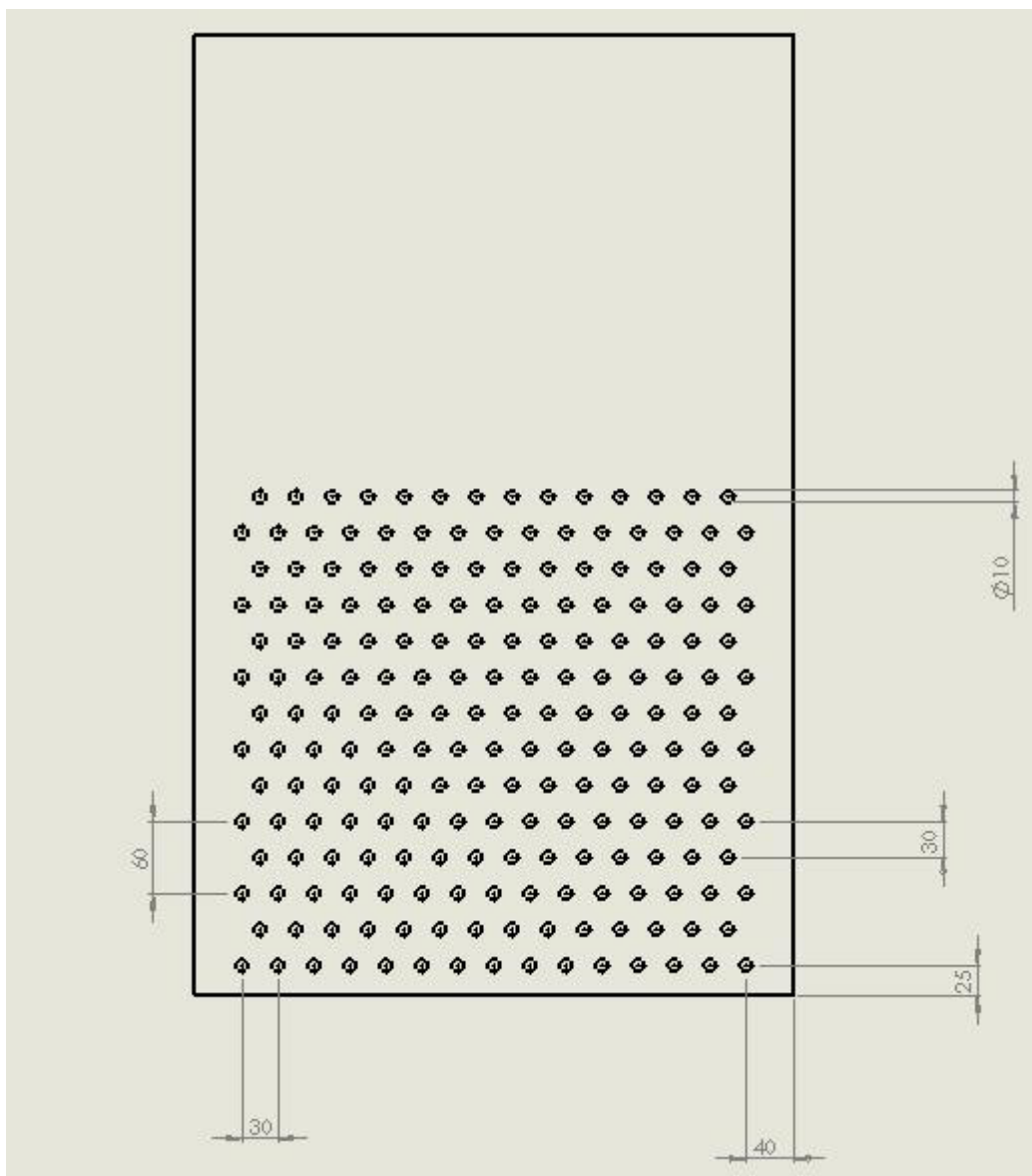


Fig. Placa que limita el dipòsit d'entrada amb el central.



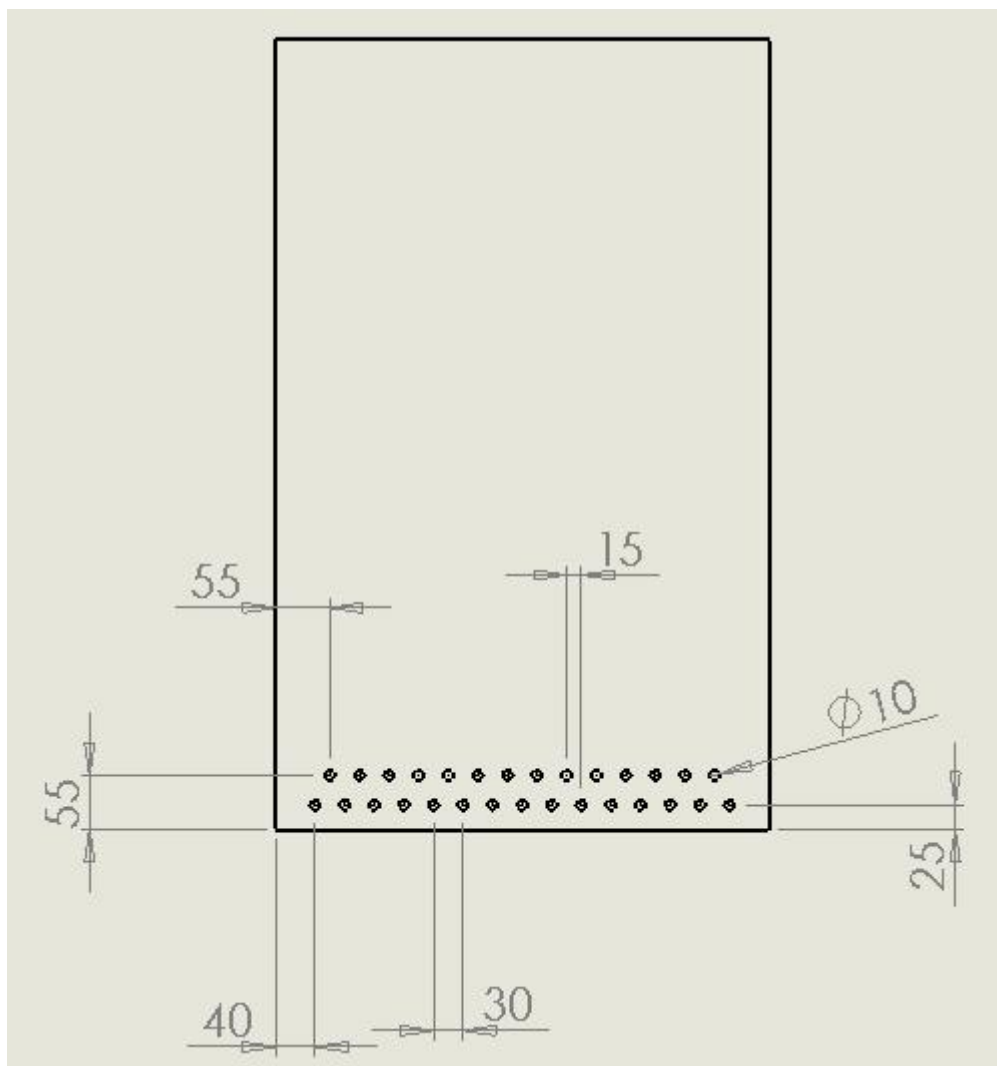


Fig. Placa que limita el dipòsit central amb el de sortida.



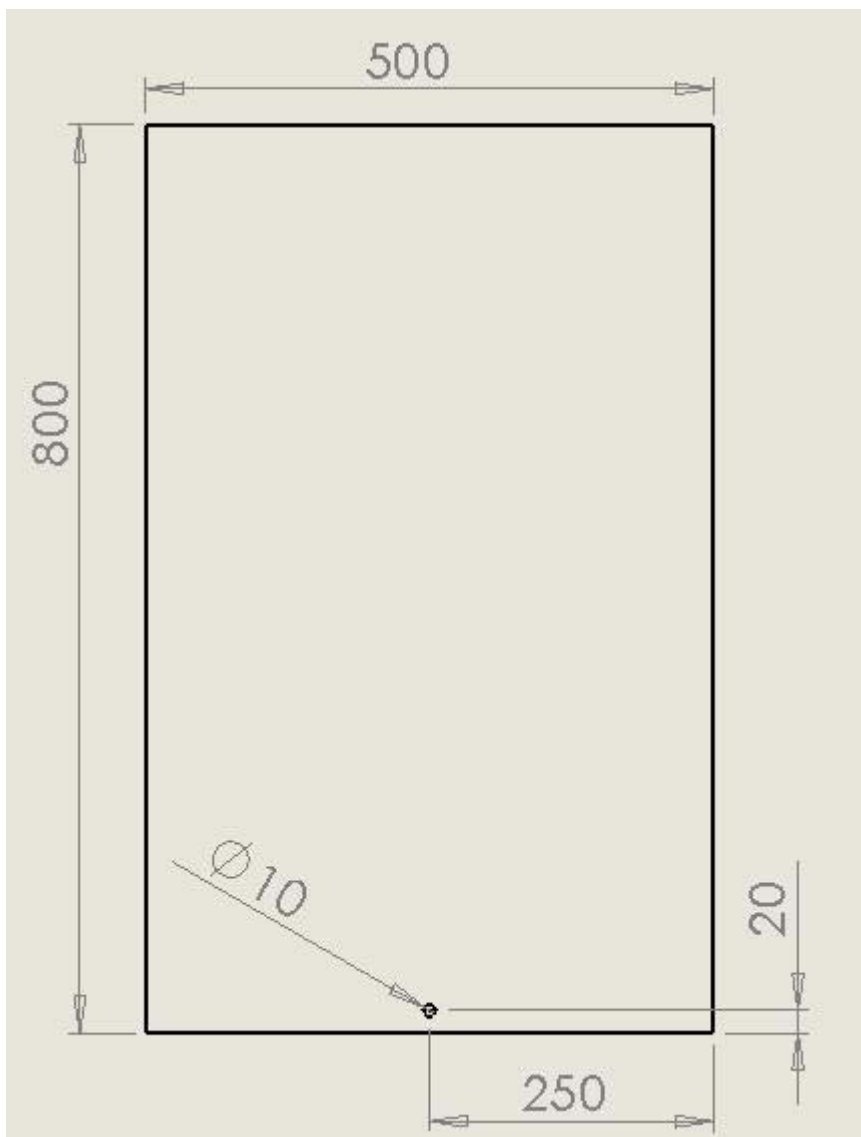


Fig. Paret del dipòsit d'entrada (el de sortida és igual) que toca amb l'exterior i va connectada a un tub.



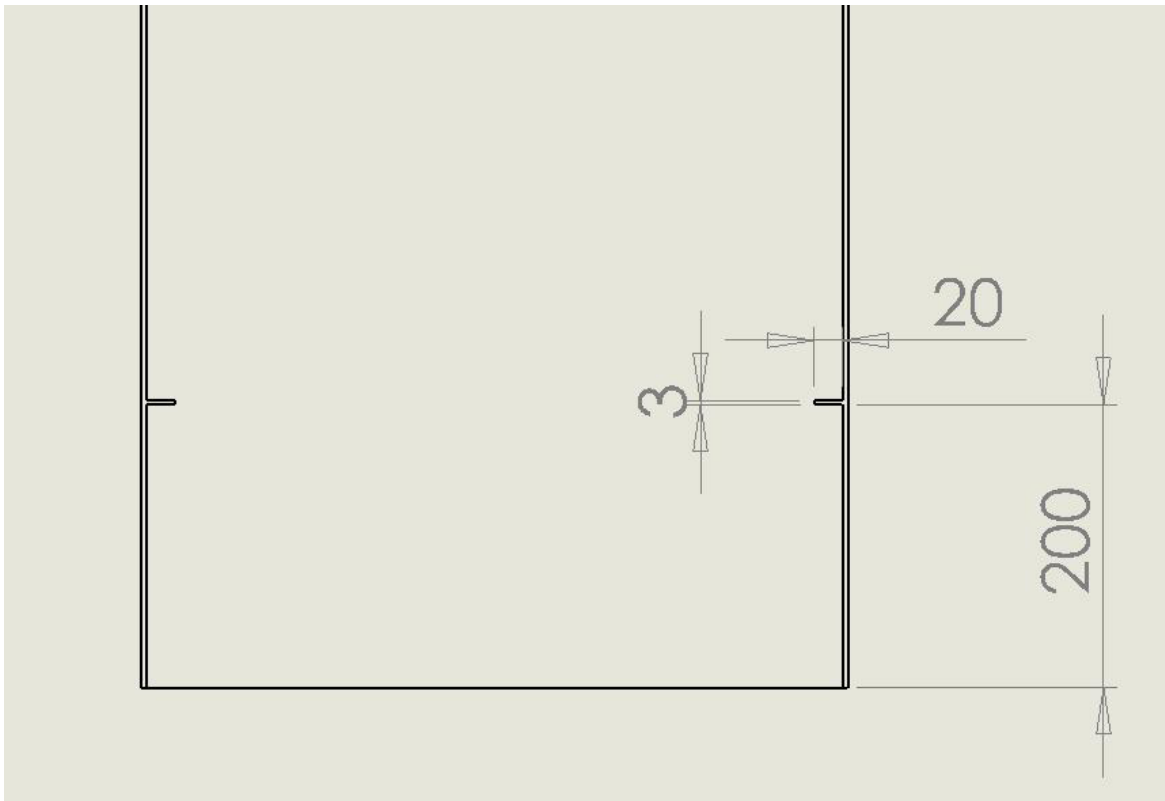


Fig. Vista en alçat amb detall de les pestanyes sobre les que es recolzen les plaques foradades.



Fitxes tècniques

Serie EI EPIK. INSTRUMENT D'ADQUISICIÓ TCP/RTU.



El és una família d'instrument industrial MODBUS RTU O TCP per l'adquisició de sensors analògics i/o digitals.

Models de les series utilitzades:

EI4A: 4 entrades analògiques

Tensió: 0-10 V

Corrent: 0-20 mA

Alimentació loop 4-20 mA (24 V)

EI4R: 4 entrades de termoresistències

Pt10, Pt50, Pt100, Pt500, Pt1000

Ni50, Ni20

Cu10, Cu120

NiFe604

Lectura del valor de la termoresistència

Potenciòmetre

Els dos models pertanyen a la versió Ethernet.

TIPUS I RANG DE TEMPERATURA			TIPUS RTD		
J	0 °C	1200 °C	Pt10	-200 °C	+850 °C
K	0 °C	1372 °C	Pt50	-200 °C	+850 °C
R	0 °C	1768 °C	Pt100	-200 °C	+850 °C
S	0 °C	1768 °C	Pt500	-200 °C	+850 °C



B	0 °C	1820 °C	Pt1000	-200 °C	+850 °C
E	0 °C	1000 °C	Ni50	-80 °C	+260 °C
T	0 °C	400 °C	Ni120	-80°C	+260 °C
N	0 °C	1300 °C	Cu10	-200 °C	+260 °C
			Cu120	-200 °C	+260 °C
			NiFe604	-200 °C	+204 °C
TIPUS D'ENTRADA ANALÒGICA			TIPUS D'ENTRADA DIGITAL		
0-10 V 0-20 mA Protecció ESD ± 15 kV Resolució 12 bit - 16 bit -24 bit (en funció del model)			Aïllat respecte el circuit a 3,5 kV REED, PROXIMITY, PNP, NPN, etc. Freqüència màxima 100 Hz Comptador d'ingrés 10 kHz Filtre 5-100 ms		
ALIMENTACIÓ			LED		
9-42 VDC insensible a la polaritat 7-36 VAC Aïllada a 2kV respecte la línia d'alimentació principal Interface rs485 aïllada a 3,5 kV, protegida a 15 kV Interface Ethernet aïllada a 3,5 kV, protegida a 15 kV			1 x senyalització d'alimentació 1 x TX 485 1 x RX 485 1 x connexió Ethernet 1 x Ethernet busy 4 x I/O digital		
COMPENSACIÓ EN FRED			CONFIGURACIÓ		
Per entrades analògiques TC, accessible a un software que visualitzi la temperatura de l'instrument amb una variació de $\pm 0,5$ °C sota el rang de funcionament (-20 °C fins 55 °C)			Via RS485 o Ethernet		

Line Converter from RS-232 to RS-485/RS-422

FEATURES

- Asynchronous data transmission
- Automatic Baud Rate Adaption
- Transmission rates up to 115,2 Kbaud
- Distance up to 1200m
- Point-to-Point or Multipoint connection



- 3-way 2000 Vca Insulation
- Serial connection over removable terminals
- DIN rail mounting

APPLICATIONS

- Connection of RS-232 devices
to RS-485 or RS-422 devices
- RS-232 link extension
- Noise rejection in industrial environments

GENERAL INFORMATION

The EC42 is an interface converter between RS-232 and RS485/422 serial lines. It allows a full electric insulation through the lines with an effective industrial environments noise rejection. The 2000Vca insulation between input, output and power supply is obtained by using optoisolators over the data line and an isolated DC/DC converter as power supply. It has been designed to operate on a RS-422 full-duplex serial lines over two twisted pairs or on a RS-485 half-duplex over one twisted pair, at a transmission rate from 0.75 to 115.2 kbaud. An important feature of EC 42 is that it is able to automatically adapt its transmission rate, with no need for pre-setting. In addition, the RS-232 interface doesn't need Hand-Shake signals (RTS / CTS). The device, housed in a strong plastic case suitable for DIN rail mounting, uses a connection system based on removable terminal blocks, to permit an easy installation and maintenance. The EC42 converter, designed, manufactured and tested in strict accordance with quality assurance standards UNI EN ISO9001/2000, is full compliant with CEE/336/89 directive about Electromagnetic Compatibility (EMC), and the CE mark is proof of its compliance.

TECHNICAL SPECIFICATIONS (Typical @25°C, nominal conditions)

Compliant with EIA RS232 , RS422 and RS485

Transmission rates from 0.75 to 115.2 kbaud

Distance/Rate 1,2 Km @ 38,4 kbaud

2 Km @ 19,2 kbaud

3 Km @ 9,6 kbaud



4 Km @ 4,8 kbaud

5 Km @ 2,4 kbaud

7 Km @ 1,2 kbaud

Line Impedance Typical 100 Ohm

Allowed RS485 Multipoint devices 32 Max

Power consumption 35 mA Max. @ 24 Vcc

Power supply 0 - 30 Vcc

9 - 18 Vca (18-24 Vca on query)

3-way insulation 2000 Vca, 50 Hz, 1 min.

Electromagnetic Compatibility (EMC) Compliant with EN50081-2 and EN50082-2

RS232 connection DB9 and screw terminal blocks

RS422 and RS485 connection Screw terminal blocks

Operating Temperature - 20 ÷ 70 °C

Storage Temperature - 40 ÷ 100 °C

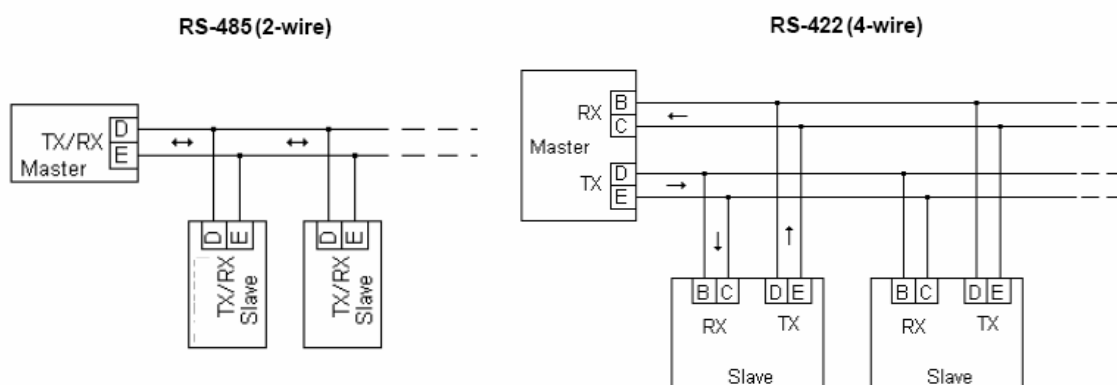
Relative Humidity (non condensing) 0 ÷ 90 %

Dimensions (W x H x T) in mm 101 x 119 x 22,5

Weight 100 g. circa

WIRING DIAGRAMS





The EC42 device can be connected in a point-to-point or multi-point network, in a RS-485 (half-duplex) or RS-422 (full-duplex) configuration. The multi-point network allows a maximum of 32 devices, covering a maximum distance of 1.2 Km at a transmission rate of 115.2kbaud. Asynchronous serial data transmission doesn't need the use of a particular protocol, character format or transmission rate. Wiring diagrams illustrate two multi-point Master-Slave networks, in 2 or 4 wire configuration. The same connections between Master and Slave can be used in a point-to-point network. The module can be powered with a DC voltage between G and H pins, or with an AC voltage between I and J pins.

VERSIONS

EC42-2w model is recommended for point-to-point or multi-point networks in RS-485 (2-wire) configuration but it can be used also in RS-422 configuration, because it can adapt itself automatically to both configurations. EC42-4w model is recommended for point-to-point or multi-point networks in RS-422 (4-wire), because it is designed to avoid the "echo" effect between the slaves in the net, that in some applications can be undesired.

Smart signal conditioner for four RTD analog inputs with RS485 communication. EI-4RD

FEATURES

- Sensor-to-Computer interface for remote data acquisition, with ASCII or MODBUS RTU/ASCII protocol
- four RTD analog inputs
- RS485 serial communication
- Input signal configurable from remote host



- 2000Vac 3-way galvanic insulation
- EMC compliant - CE mark
- Only 22,5 mm thin profile housing
- DIN rail mount

APPLICATIONS

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

GENERAL INFORMATION

EI - 4R signal conditioner converts the analog input signal to engineering units and transmits the data in ASCII format to the remote terminal through (the RS-485 port. It is able to handle input signals from RTDs, Resistors and Potentiometers and it is configured from the remote host by sending the configuration data on the serial line RS-485. The input signals which can be handled are listed in the apposite table illustrated in the following page. There are available two different protocols: the standard ASCII based protocol, composed by short, simple and intuitive commands, which allows a fast development of the plant management software with simple languages like VisualBasic, C, Delphi. The command set is compatible with similar devices available on the market. The MODBUS (RTU or ASCII) protocol, known as a spread standard in Field-Bus, is useful for efficient and reliable management of a plant with great quantity of variables. Thank to this standard, it is possible to directly interface EI series to the larger part of PLCs and SCADAs applications available on the market, with the possibility to connect on the same net EI devices with other different devices (PLC. Operator Panels, CNC, etc...). The device is built around a microprocessor core which, over the various tasks performed, has the management of a 16bit A/D converter , connected to a 4 channel MUX, which is dedicated to the acquisition of the input signal with the needed accuracy. 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. 3-way galvanic insulation between input, output and power supply is obtained by means of photocouplers and transformers in such a way to guarantee 2000Vac insulation. The input channels are not insulated between them. The management of the device and the message exchange with it are performed through simple commands sent to its communication port. The EI - 4A module, designed, manufactured and tested in strict accordance with the quality



assurance standard UNI EN ISO 9001/2000, 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 extinguishing plastic container which, thank to its thin profile of 22.5 mm only, allows a high density mounting on DIN rail.

TECHNICAL SPECIFICATIONS (Typical @25°C, nominal conditions)

ANALOG INPUT

RTD Excitation Current 0.370mA

Lead wire resistance influence < 0,05%/Ohm (50 Ohm max) for 3-wires RTD/Resistors

CHARACTERISTICS & PERFORMANCES

Linearity Error +/-0,2% for RTDs

Calibration Error +/-0,1% of F.S

Thermal Drift +/-0,005%/°C

Reverse polarity protection 60 Vcc max.

Sampling time 0.5 to 2.0 sec. depending on channels number (on query)

Supply Voltage 10 to 30 Vcc

Supply Power 1W @ 24 Vcc

3-way Insulation 2000 Vac, 50 Hz, 1 min.

Warm up time 3 min.

Electromagnetic Compatibility (EMC) EN50081-2 and EN50082-2 compliant

Operating Temperature - 10 ÷ 60 °C

Storage Temperature - 40 ÷ 85 °C

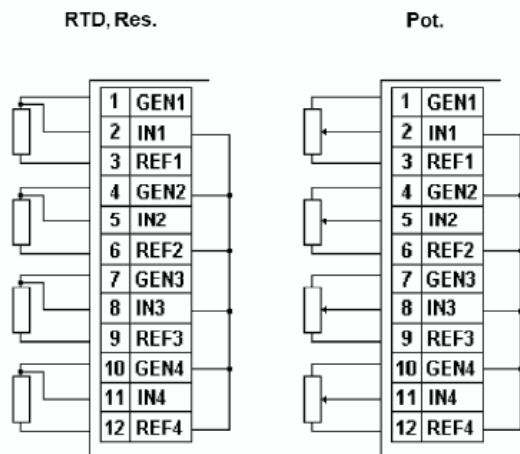
Relative Humidity (non condensing) 0 ÷ 90 %

Dimensions (W x H x T) in mm 100 x 120 x 22.5

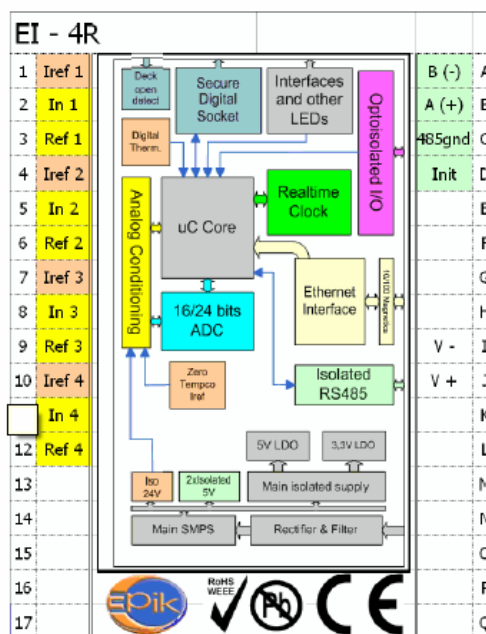
Weight 100 g. approx



WIRING DIAGRAM



BLOCK DIAGRAM



Smart signal conditioner for four V or mA analog inputs with RS485 communication. EI-4A

FEATURES

- Sensor-to-Computer interface for remote data acquisition, with ASCII o MODBUS RTU/ASCII protocol
- four V or mA analog inputs
- RS485 serial communication
- Input signal configurable from remote host
- 2000Vac 3-way galvanic insulation
- EMC compliant - CE mark
- Only 22,5 mm thin profile housing



- DIN rail mount

APPLICATIONS

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

GENERAL INFORMATION

EI - 4A signal conditioner converts the analog input signal to engineering units and transmits the data in ASCII format to the remote terminal through (the RS-485 port. It is able to handle Voltage (up to 10Vdc) or Current (up to 20mA) input signals and it is configured from the remote host by sending the configuration data on the serial line RS-485. The input signals which can be handled are listed in the apposite table illustrated in the following page. There are available two different protocols: the standard ASCII based protocol, composed by short, simple and intuitive commands, which allows a fast development of the plant management software with simple languages like VisualBasic, C, Delphi. The command set is compatible with similar devices available on the market. The MODBUS (RTU or ASCII) protocol, known as a spread standard in Field-Bus, is useful for efficient and reliable management of a plant with great quantity of variables. Thank to this standard, it is possible to directly interface DAT3000 series to the larger part of PLCs and SCADAs applications available on the market, with the possibility to connect on the same net DAT3000 devices with other different devices (PLC. Operator Panels,

CNC, etc...). The device is built around a microprocessor core which, over the various tasks performed, has the management of a 16bit A/D converter , connected to a 4 channel MUX, which is dedicated to the acquisition of the input signal with the needed accuracy. 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. 3-way galvanic insulation between input, output and power supply is obtained by means of photocouplers and transformers in such a way to guarantee 2000Vac insulation. The input channels are not insulated between them. The management of the device and the message exchange with it are performed through simple commands sent to its communication port. The EI - 4A module, designed, manufactured and tested in strict accordance with the quality assurance standard UNI EN ISO 9001/2000, 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 extinguishing plastic



container which, thank to its thin profile of 22.5 mm only, allows a high density mounting on DIN rail.

TECHNICAL SPECIFICATIONS (Typical @25°C, nominal conditions)

INPUT & OUTPUT

Input Impedance >100 KOhm for Voltage, <50 Ohm for Current

Lead wire resistance influence < 0,8 uV/Ohm

CHARACTERISTICS & PERFORMANCES

Linearity Error +/-0,1% of F.S.

Calibration Error +/-0,05% of F.S

Thermal Drift +/-0,005%/°C

Reverse polarity protection 60 Vcc max.

Sampling time 0.5 to 2.0 sec. depending on channels number (on query)

Supply Voltage 10 to 30 Vcc

Supply Current <= 35 mA @ 24 Vcc

3-way Insulation 2000 Vac, 50 Hz, 1 min.

Warm up time 3 min.

Electromagnetic Compatibility (EMC) EN50081-2 and EN50082-2 compliant

Operating Temperature - 10 ÷ 60 °C

Storage Temperature - 40 ÷ 85 °C

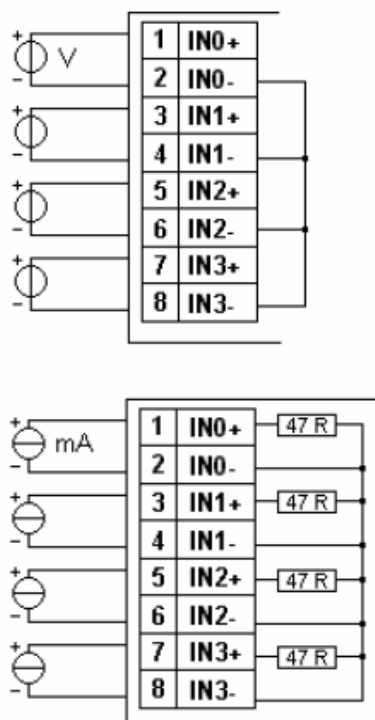
Relative Humidity (non condensing) 0 ÷ 90 %

Dimensions (W x H x T) in mm 100 x 120 x 22.5

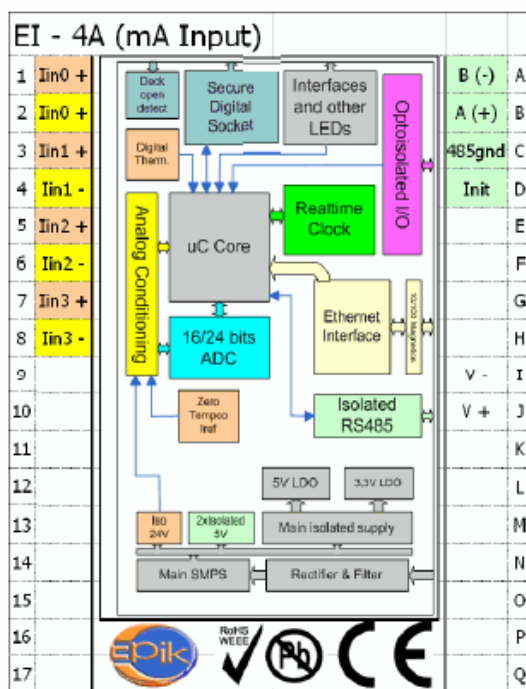
Weight 100 g. approx



WIRING DIAGRAM



BLOCK DIAGRAM



FRIGEDOR REG SELECTA: unitat refrigeradora per banys

Tensió d'alimentació 230 V 60 Hz.



Codi	3001214
Rng de regulació °C	-20/+20
Altura	41
Ancho	21
Fondo	34
Potència calorífica	A 20°C 276 W
Potència HP	1/5
Consum W	285
Pes kg	14



Refrigerador equipat amb un compressor hermètic, amb condensador ventilat, serpenti de refrigeració en espiral, amb regulador de temperatura i sonda Pt100.

Mesures del serpenti:

Longitud tub: 900 mm

Longitud serpenti: 150 mm

Diàmetre serpenti: 45 mm

BOMBA PERISTÀLTICA DINKO D-25VXi DE DIVERSOS CAPÇALS

La bomba D-25VXi està acompanyada de diversos capçals que permeten accedir al tub per la seva extracció quan s'hagi de substituir per desgast o per esterilització. Aquesta bomba és de capçal 45 i s'ha d'extreure la tapa que va fixada a pressió.



Funcionament: 230V/50-60 Hz. 1 Amp.

Tabla de fluxes (intervals de regulació)

Capçal	0,5	0,8	1,6	3,2	4,0	4,8	6,4	Diàmetre tub (mm)
45-2r	0,1-1,0	0,3-2,4	2,3-11	5-34	7-50	-	-	Flux ml/min per capçal
50-2r, 80rpm	0,7-2,7	2-4,5	4-18	12-75	21-110	26-145	50-250	
50-2r, 240rpm	2-8	6-13	11-55	37-220	65-330	80-435	150-750	

