



## INSYS Modem 230VAC

December 05

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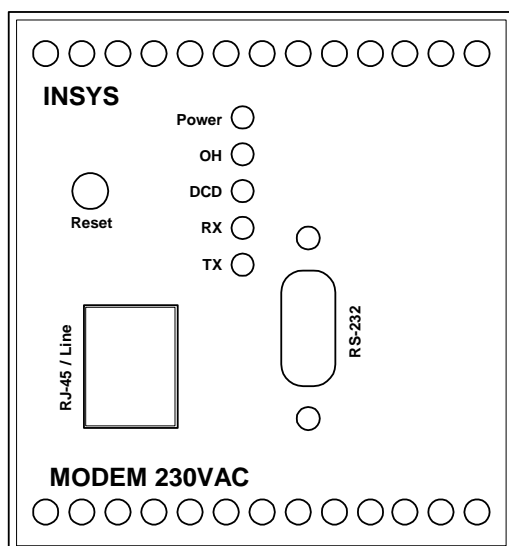
# 1 Mechanical Features

Weight	8.82 oz
Dimensions (maximum)	w x d x h = 70 x 110 x 75
Temperature range	32°F..131°F
Protection class	Housing IP 40/ Terminal IP 20
Humidity	0 - 95% non-condensing

**Note:** The modem INSYS 230VAC may not be used in wet environments.

## 1.1 Interfaces and Display Elements

Front view



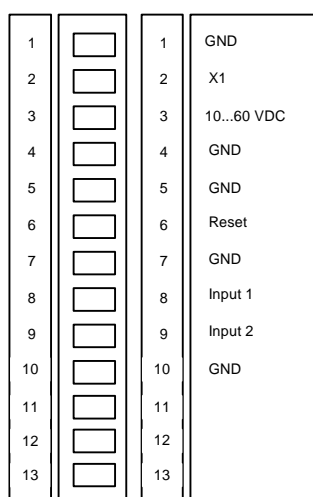
### 1.1.1 Display Elements

The INSYS Modem 230VAC possesses five LED's to indicate the operating state.

Name	Color	Off	on
Power	green	No supply voltage	Supply voltage available
OH (Off Hook)	yellow	Modem is offline	Modem is hooked to the phone line (online)
DCD (Data Carrier Detect)	yellow	No connection is established	Connection is established (Carrier detected)
RX (receive)	green	No data exchange	Date is exchanged via the modem
TX (transmit)	green	No data exchange	Date is exchanged via the modem

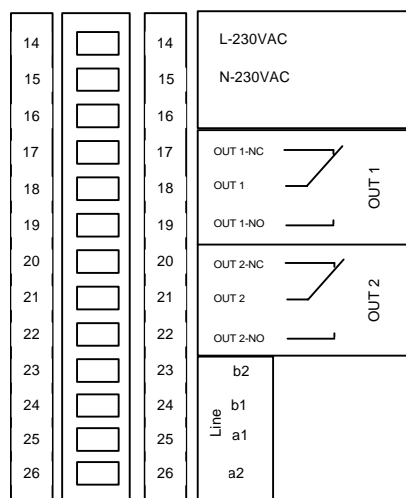
### 1.1.2 Terminal Layout

Terminal row on the top of the cover



	Terminal	Meaning
1	GND	Ground
2	X1	
3	10..60VDC	Power supply 10V / 60V DC
4	GND	Ground
5	GND	Ground
6	Reset	RESET
7	GND	Ground
8	Input 1	Alarm input 1
9	Input 2	Alarm input 2
10	GND	Ground
11		
12		
13		

Terminal row on the bottom of the cover



	Terminal	Meaning
14	L-230VAC	Power supply 230V
15	N-230VAC	Power supply 230V
16		
17	OUT1NC	Output 1 normally closed
18	OUT1COM	Output 1
19	OUT1NO	Output 1 normally open
20	OUT2NC	Output 2 normally closed
21	OUT2COM	Output 2
22	OUT2NO	Output 2 normally open
23	b2	Looped through telephone connection
24	b1	Phone line
25	a1	Phone line
26	a2	Looped through telephone connection

### 1.1.3 Power Supply

All data at nominal input, full load and 57 °F ambient temperature, if not marked otherwise. Limiting value tolerance are subject to usual fluctuation margins.

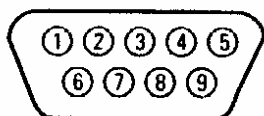
Power supply: 230V DC  
 Power input: approx. 5 W (during connection)

#### alternative:

Power supply: 10...60 V DC  
 Power input: approx. 2.5 W (during connection)  
 Current consumption:

Input voltage	Current (closed/circuit)	Current (connection)	Maximum startup current
10 V DC	200 mA	240 mA	300 mA
24 V DC	100 mA	110 mA	150 mA

## 1.2 Layout of the 9-pin D-SUB jack



Description of the signals on the 9-pin D-SUB connector on DCE side:

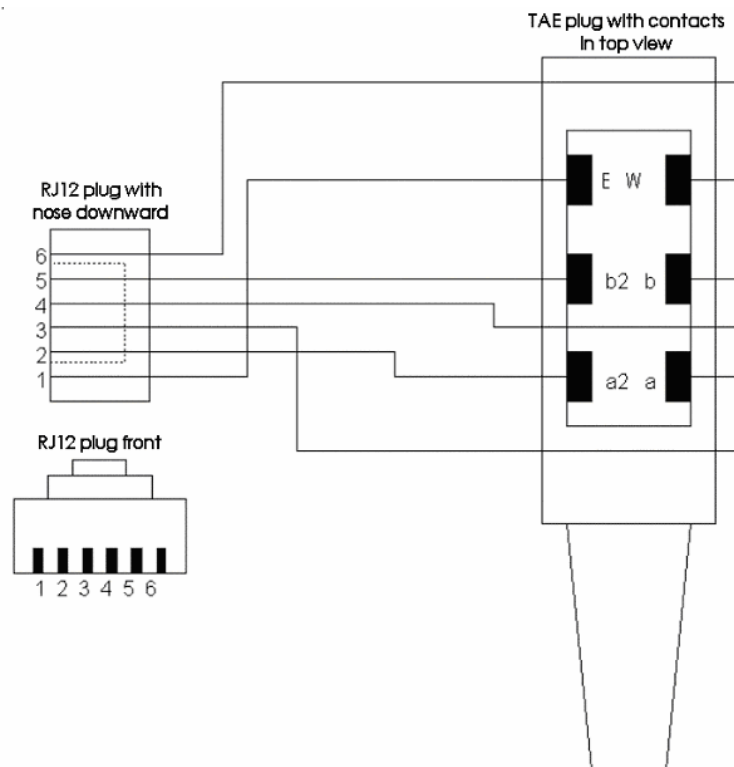
9-pin D-Sub DCE Pin No.	Description	Function	CCITT V-24	EIA RS232	DIN 66020	E/A DCE to DTE
1	DCD	Data Carrier Detect	109	CF	M5	O
2	RXD	Receive Data	104	BB	D2	O
3	TXD	Transmit Data	103	BA	D1	I
4	DTR	Data Terminal Ready	108	CD	S1	I
5	GND	Ground	102	AB	E2	
6	DSR	Data set ready	107	CC	M1	O
7	RTS	Request to send	105	CA	S2	I
8	CTS	Clear to send	106	CB	M2	O
9	RI	Ring Indication	125	CE	M3	O

Interface speed of the INSYS Modem 230VAC

Baud rate in bps					
300	600	1.200	2400	4800	9600
14.400	19.200	28800	38400	57600	115200

The baud rate indicates the transmitted bits per second.

## 1.3 Phone Interface



Layout of the RJ12 connector at the TAE cable

Pin	Name	Pin	Name
1	NC	4	a1
2	NC	5	b1
3	a2	6	b2

### Description:

**a1, b1:** The incoming phone lines (e.g. outside line or private branch exchange).  
**a2, b2:** are used to connect a phone in series. In idle state, they are connected to a1 and b1 via a loop current connector. a2 and b2 are detached as soon as the modem uses the line.



## 2 Reset

A reset is possible via the screw terminal marked **Reset**, using an external device. A low potential must be applied at the terminal for at least 3 seconds.

Alternatively, the reset key should be pressed at least 3 seconds to trigger a reset.

## 3 Digital Inputs and Outputs

### 3.1 Alarm input

LOW 0 .. 1 V

HIGH 4 .. 12 V

Input current from LOW to internal +5V: Type 0.5 mA

### 3.2 Switch Output

Potential-free relay switches

maximum switch voltage: 30 V (DC) / 42 V (AC)

maximum current load: 1 A (DC) / 0.5 A (AC)

## 4 Transmission Standards / Protocols

- V.34+, V.34, V.32bis, V.32, V.22, V.22bis, V.21, V.23, BELL-Norm 103, 212
- Fax Class 1, Fax Class 2
- Data compression according to MNP2-4, V.42bis LAPM, MNP 10, 10EC
- Error correction according to MNP5 and V.42

## 5 Approvals

The modem INSYS Modem 336 230VAC bears the CE symbol of conformity. On account of its design and implementation it is in compliance with the currently valid versions of the following EC directives:

- 89/336/EEC (EMC directive)
- 73/23/EEC (Low voltage directive)
- 91/263/EEC (Telecommunications devices directive)

Approvals:

- R&TTE
- CTR 21 (Europe)
- CE
- Approval number CE 0682X

## 6 Safety Instruction

- The device will not be operational when a power failure occurs. We recommend providing a separate circuit for the INSYS Modem. If other devices experience short circuits, the INSYS Modem will thus not be rendered inoperative.
- The installation must be performed by a certified electric specialist to rule out the endangering of people and objects.
- We recommend installing suitable overvoltage protection.
- All areas that can be opened are maintenance areas. Unauthorized opening of maintenance areas and inappropriate repairs may endanger users.
- Liquids seeping into the modem may result in the destruction of the modem.

## 7 Declaration of Conformity



### Declaration of Conformity

This declaration is valid for following product: **INSYS Modem 336 230 VAC**

**Equipment:**

**Type: Analog Modem**

Hereby the equipment is confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility 89/336/EEC and the Council Directive relating to Low Voltage 73/23/EEC as well as the Council Directive R&TTE 1999/5/EG.

The following company is responsible for this declaration:

**INSYS Microelectronics GmbH  
Waffnergasse 8  
93047 Regensburg**

The measurements were carried out in accredited laboratories.

For the evaluation of above mentioned Council Directives for Electromagnetic Compatibility, Low Voltage and R&TTE following standards were consulted:

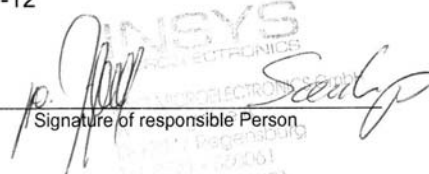
DIN EN 55022: 1998-04 class B  
DIN EN 55024: 1999-05  
(DIN EN 61000-4-2: 2001-12, DIN EN 61000-4-3: 2001-12, DIN V ENV 50204: 1996-06,  
DIN EN 61000-4-4: 2002-07, DIN EN 61000-4-5: 2001-12, DIN EN 61000-4-6: 2001-12,  
DIN EN 61000-4-8: 2001-12, DIN EN 61000-4-11: 2001-12)

DIN EN 61000-3-2: 2001-12  
DIN EN 61000-3-3: 2002-05

DIN EN 60950: 2001-12

CTR21

Regensburg, 30.05.2005  
Date / Place

  
Signature of responsible Person

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