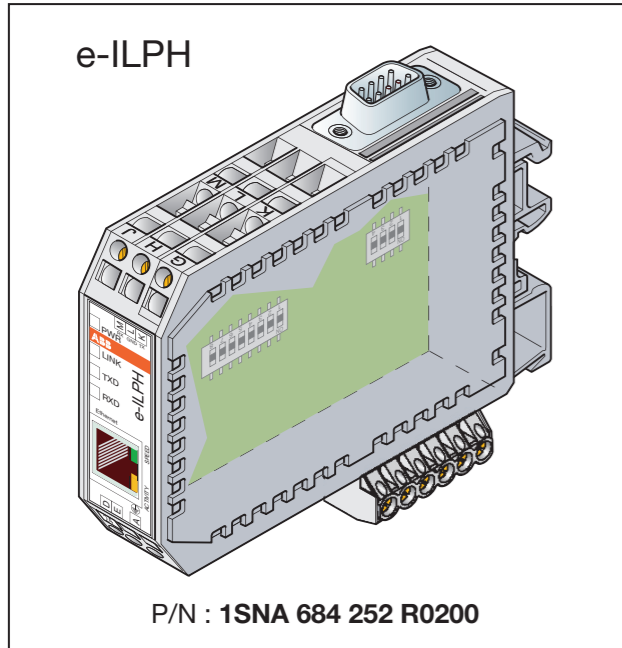


# Serial Data Converter e-ILPH

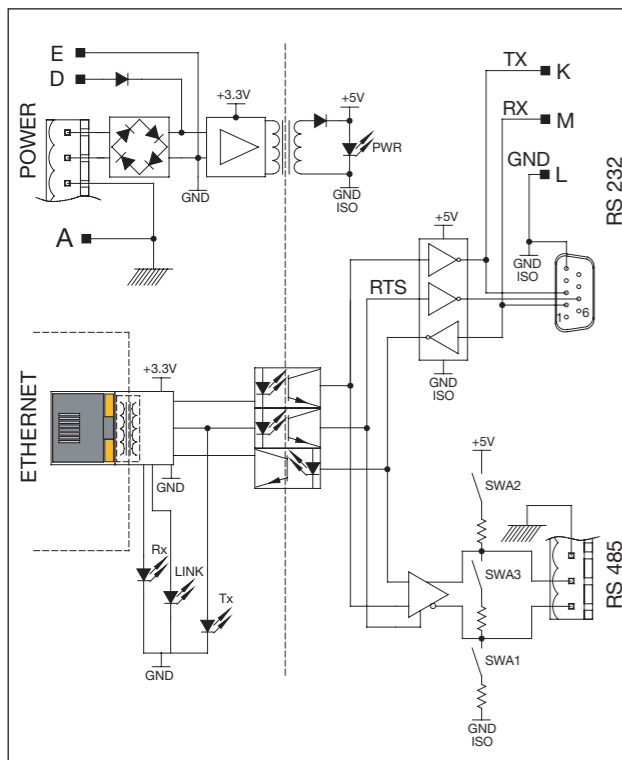
## ILPH RS 232 - RS 485 / Ethernet ISOLATED



### 1. General

This interface realizes the conversion between a RS 232 or/and RS 485 serial signal and a TCP/IP connection signal (RJ45 support for 10/100 Base T link), including a galvanic isolation. This interface could be used in slave MODBUS/TCP protocol (server mode), direct connection (tunnel) in server or client mode, and is able to send mail via SMTP protocol using simple HAYES command on the serial line.

### 2. Schematic Diagram



### 3. Technical specifications

Power supply	24 V AC/DC	Redundant 24 V DC
Power supply voltage limit	10 V AC to 24 V AC 10 V DC to 34 V DC	10 V DC to 34 V DC
Tolerance	-10 %, +10 %	
Information	1 yellow "power on" Led	
Protection	Alternative current	Polarity inversion
Consumption	< 2 Watt (on whole range)	
Galvanic isolation	RS 232-RS 485 750 V DC Ethernet 1500 V AC	
Connection	Screw-type plug-in connector 5.08 mm	Screw connection (D, E, A)

### RS 232 and RS 485 Link

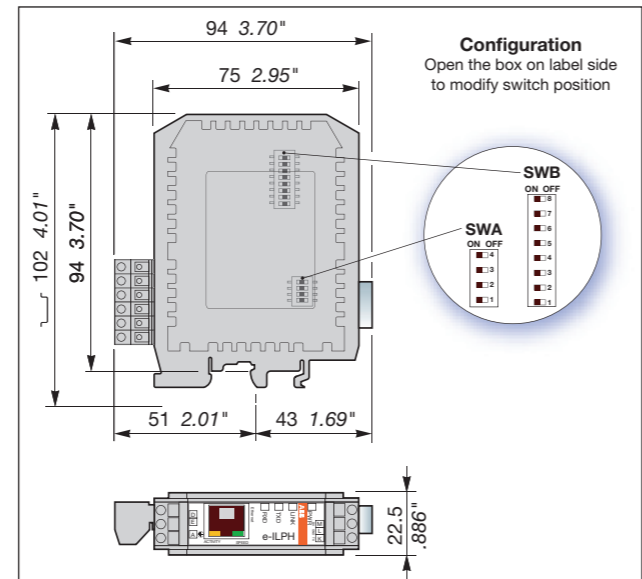
	EIA RS 232 C/ CCITT V24/V28	EIA RS 485
Max. speed/Distance	115200 Bauds/ 15m	115200 Bauds/ 1200m
Galvanic isolation	750 V DC	
Information	2 green Led (RxD, TxD)	
Connection	SubD9 or screw connection	Screw-type plug-in connector up to 31 receivers simultaneously
Transmitter can communicate with :	1 receiver	

### Ethernet Link

Interface	Ethernet 10 Base-T or 100 Base-TX
Connector	RJ45
Speed	10/100 Mbit/s, auto sensing
Distance	100 m to next switch or hub with CAT5 cable
Galvanic isolation	1500 V AC
Information led	Activity / Speed, LINK (TCP connection)

### Physical characteristics

Operating temperature	0 to +60 °C
Storage temperature	-20 to +70 °C



### 4. Default parameters

Modbus TCP slave mode	
Speed: 9600 Bauds	
8 Bits, 1 Stop Bit, No parity	
Control of flux: No	
IP Address: 10.33.152.76	
Automatic programming: yes	
Asynchronous list: No	
SWB-1 to ON: soft configuration enable	

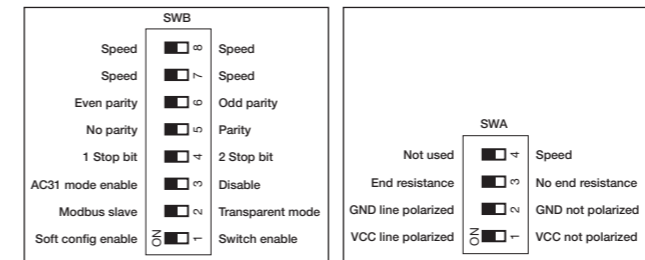
### 5. Configuration

Two modes are available to configure this product:

- **Switch mode:** **SWB-1 to OFF**  
(Even if you use the switch configuration you have to configure the IP Address by software Cf. chap 5.2 Configuration by software).
- **Software mode:** **SWB-1 to ON**  
(All parameters configured by soft)

### 5.1 Configuration by Switch

Open the box on label side to modify switch position



- SWB-2** ON MODBUS/TCP slave mode  
OFF Tunnel mode (transparent mode)
- SWB-3** ON Enable to program the AC31  
OFF Disable to Program AC31
- SWB-4** ON 1 Stop bit  
OFF 2 Stop bits
- SWB-5** ON No parity  
OFF Parity
- SWB-6** ON Even parity  
OFF Odd parity

### SWB-7 and SWB-8 (Choose in the table beside the communication speed)

SWB-7	SWB-8	Speed
Off	Off	9600
On	Off	38400
Off	On	57600
On	On	115200

### SWA-1 and SWA-2

- ON Line polarized (GND for SWA-2, VCC for SWA-1)
  - OFF Line not polarized
- SWA-1 and SWA-2, have to be on same position

- SWA-3** ON RS 485 End bus adaptor resistance  
OFF No RS 485 End bus adaptation

- SWA-4** Not used

### 5.2 Configuration by Software

- Values are validated by pressing "Enter" key.
- Corrections could be done by "Backspace" key before "Enter" is pressed.
- For each parameter, actual value is indicated into parenthesis, to keep this value, press "Enter" key.
- Choice Y or N (Yes/No values) could be done in capital or small letters.

### Set up menu with TCP connection:

- With TELNET: Click on Start / Execute. Enter command TELNET 10.33.152.76 (or IP address already modified). The menu appears. Type "Enter", configuration menu is started.
- With HYPERTERMINAL: Launch HyperTerminal windows, set communication "TCP/IP (Winsock)", set IP address and port "23".

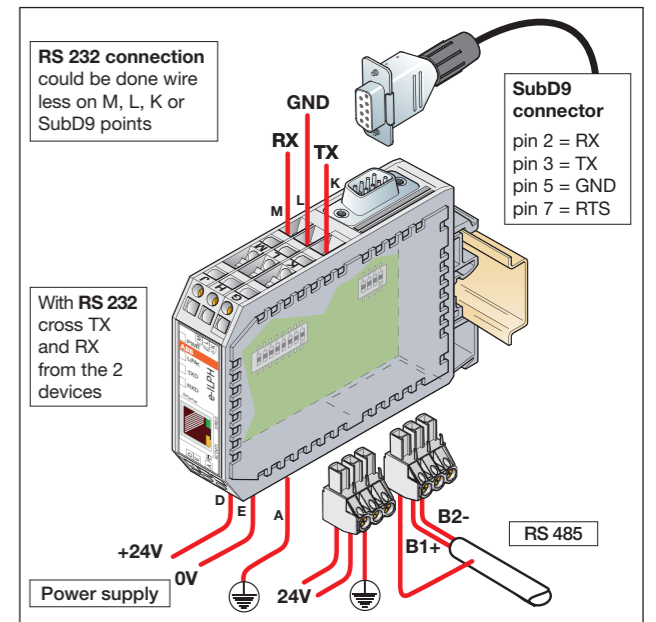
### Set up with serial connection:

Connect PC to RS 232 (if SubD9 connector is used, connect with a cross cable). Always set serial parameter to 9600 baud, 8 bits, no parity, 1 stop bit, no flux control. Switch off e-ILPH, press "x" key and maintain this key press while power on the e-ILPH. Then menu mode is displayed after few seconds.

### Menu description

- 0 - Network configuration: IP address, input address, gateway...
- 1 - Serial Line Parameters: Speed, characters, parity...
- 2 - Operation Mode: Slave MODBUS/TCP, Transparent server or client, mail mode...
- 3 - Factory defaults
- 4 - Exit without save
- 5 - Save and Exit
- 6 - English/French.

### 6. Connection



### 7. Visualization

<b>PWR</b>	Lights with power supply ON
<b>LINK</b>	Lights during active TCP connection
<b>TXD</b>	Lights during emission on serial port
<b>RXD</b>	Lights during reception on serial port
<b>SPEED</b>	Amber color: 10 base-T connection Green color: 100 base-TX connection
<b>ACTIVITY</b>	Momentary amber color, half duplex activity Momentary green color, full duplex activity

### 8. Special functions

- **Concentrator mode (Asynchronous):** In Modbus/TCP, e-ILPH is used with an exchange table and concentrates the information.
- **AC31 programming:** e-ILPH could be used to program point to point, the 40/50 series via TCP/IP connection in switching to programming mode.

For more information please contact your seller or find the complete documentation 1SNB 002 323 R2100 on the ABB.com

