

## Power Supply

The power supply of the TER-GX400 UMTS Terminal has to be a single voltage source of POWER 5V-30V capable of providing a peak during an active transmission. The TER-GX400 UMTS Terminal is protected from supply voltage reversal. An internal fuse ensures an electrical safety according to EN60950. This fuse is not removable. A fast acting fuse 0.8A with melting is necessary to use with the TER-GX400 UMTS Terminal at a 24V power supply system for vehicles. The power supply must be compliant with the EN60950 guidelines.

Pin	Signal name	Use
1	POWER	Input Power supply range 5-30V
2	Relay	Internal Relay leg A
3	GND	Ground
4	Relay	Internal Relay leg B

Table 1: Pin assignment of the plug for power supply and relay

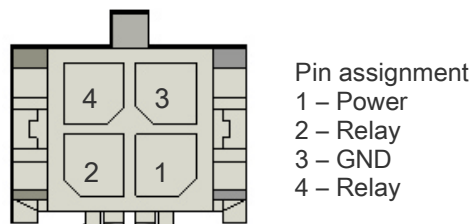


Figure 4: Male 4-pole plug for power supply and Relay output.

### 2.3.1 Supply voltage requirements

The DC power supply must be connected to the POWER input:

Input voltage range 5 - 30V DC

Nominal Voltage 12V DC

Power Supply current rating: min. 1,2A @12V

Power Supply ripple: max. 120mV

Input current in idle mode: 20mA @ 12V

Input average current in communication mode: 100mA @ 12V

## 2.4 RS-232 Interface

The serial interface of the TER-GX400 UMTS Terminal is intended for the communication between the GSM module and the host application. This RS-232 interface is a data and control interface for transmitting data, AT commands and providing multiplexed channels. EMC immunity complies with the vehicular environment requirements according to EN 301 489-7.

The user interface of the TER-GX400 UMTS Terminal is accessible from a Data Terminal Equipment DTE connected to the RS232 interface and it is managed by AT commands according to the GSM 07.07 and 07.05 specification and the supported commands are listed in the AT Commands Reference Guide.

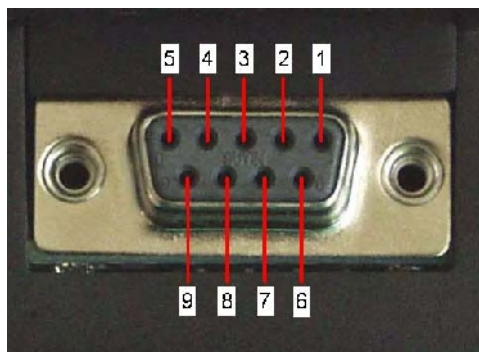


Figure 5: Pin assignment RS-232 (D-Sub 9-pole female)

Pin no.	Signal name	I/O	Function of application
1	DCD	O	Data Carrier Detected
2	RXD	O	Receive Data
3	TXD	I	Transmit Data
4	DTR	I	Data Terminal Ready
5	GND	-	Ground
6	DSR	O	Data Set Ready
7	RTS	I	Request To Send
8	CTS	O	Clear To Send
9	RING	O	Ring Indication

Table 2: D-Sub 9-pole female RS232

Connector type on the terminal is:

- RS-232 through D9-pin female
- Baud rate from 300 to 115.200 bit/s
- Short circuit (to Ground) protection on all outputs.
- Input voltage range: -12V to +12V

## 2.5 GPIO Interface

The GPIO interface provides via 6 pins RJ11 connector the following options:

- 2 analog inputs or 2 GPIO digital, internal jumpers selection.
- 2 open collector outputs or 2 GPIO digital, internal jumpers selection.
- 1 input power and 1 Ground

Pin assignment

- 1 – GND
- 2 – ADC1 or GPIO1
- 3 – ADC2 or GPIO2
- 4 – Open collector 1 or GPIO 3
- 5 - Open collector 2 or GPIO 4
- 6 – Input Power ( 12v )

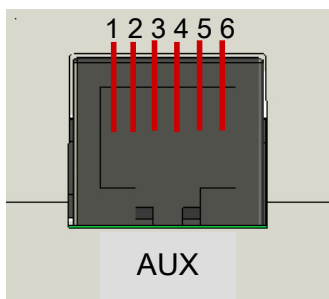


Figure 6: GPIO RJ11 plug (6-pole female)