

ANZ141/NET

Product Highlights

- | High-clarity LED display with ten brightness levels
- | AC or DC power supply
- | Synchronization with network-based NTP server, PTP master, or external time string in a variety of formats
- | Ease of configuration using the free Meinberg Device Manager tool



High-Accuracy Time & Date at a Glance

The ANZ141/NET allows the time & date provided by a high-accuracy source to be displayed directly via a high-visibility, high-contrast LED display that is readable in almost any conceivable lighting conditions and can be set to one of ten brightness levels.

The ANZ141/NET is synchronized by an NTP server or PTP master clock, and can also be synchronized to a compatible time string containing both the time and date via its DSUB9 serial interface ("COM port").

The integrated PTP slave capability supports both the C37.238-2017 Power and G.8265.1 Telecom profiles for use with industry-compliant PTP networks.

In the event of the upstream time reference failing for any reason, the ANZ141/NET will continue to operate reliably using the integrated real-time clock, and in the event of a loss of power to the ANZ141/NET, the real-time clock will continue to operate accurately off the integrated supercapacitor or an optional lithium cell battery.

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Network Connectivity

The ANZ141/NET features a physical interface that allows the device to be easily connected to any IP network. The network interface enables not only for communication with the NTP server or PTP master but also serves as an additional management interface for communication with the free Meinberg Device Manager Tool.

IEEE1588 PTP Support

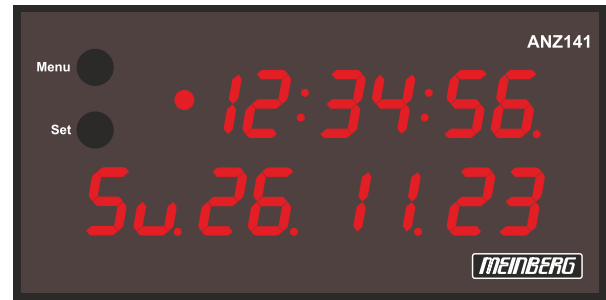
The ANZ141/NET provides a software-level PTP slave interface to allow it to synchronize to a PTP master.

PTP Versions	PTPv2 (IEEE1588-2008), PTPv2.1 (IEEE1588-2019)
IEEE1588-2008 Profiles	- Default E2E IEEE1588-2008 Profile - Default P2P IEEE1588-2008 Profile - Power IEEE C37.238-2017 - Telecom ITU-T G.8265.1
Clock Modes	- Multicast Slave - Unicast Slave

NTP Support

The ANZ141/NET provides NTPv4 client functionality with a full software implementation to allow it to acquire the time from a defined NTP server.

Management

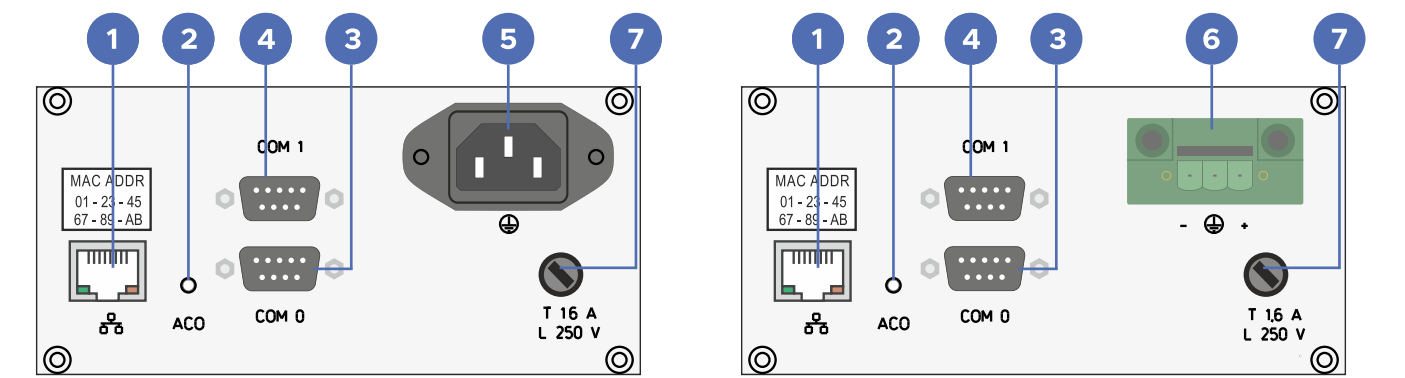


The ANZ141/NET can be mostly managed and monitored using the two buttons on the front panel that allow the device to be configured intuitively and easily with minimal effort.

A number of functions (network configuration, NTP/PTP configuration, firmware updates, access to log files) require a network or serial connection* and the free management and monitoring tool Meinberg Device Manager (version 7.3 or better required).

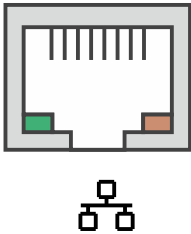
- * When integrating the ANZ141/NET into a network without DHCP, an initial serial connection is required to perform the initial network configuration.

Connectors



1 Network Interface

Connector Type	RJ45 10/100-BASE-T interface (Fast Ethernet) with link status LEDs
Network Protocols	IPv4 (with DHCP support)
Network Services	VLAN tagging with PCP QoS SNMPv1 for monitoring



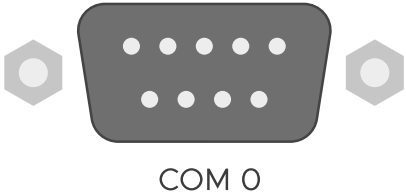
2 ACO Button

The ACO (Access Control Override) button is used to recover network access to the ANZ141/NET temporarily when the password has been lost. When pressed, it disables the password protection for network access for 60 seconds, allowing a connection to be established so that the password can be changed if necessary.

Please note that, for security reasons, it is not possible to engage the Access Control Override mechanism by any other means, nor is it possible to change the password over a serial connection.

3 RS-232/RS-422 Serial Port “COM0”

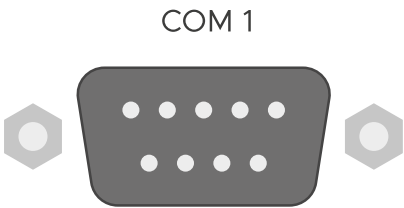
Pin	Function
2	RS-232 RxD (Receive)
3	RS-232 TxD (Transmit)
5	GND (Ground)
7	RS-422 TxD – (Transmit, Negative)
8	RS-422 TxD + (Transmit, Positive)



Connector Type	D-Sub 9-pin, Female
Transmission Methods	RS-232 (Input/Output), RS-422 (Output Only)
Supported Time Strings (Output)	Meinberg Standard, SAT, NMEA RMC, NMEA GGA, NMEA ZDA, NMEA RMC GGA (<i>RMC followed by GGA</i>), Uni Erlangen, Computime, Sysplex 1, SPA, RACAL, ION, ION Blanked, IRIG-J-1, ATIS, 6021, Freelance
Supported Time Strings (Input)	Meinberg Standard, Uni Erlangen, ATIS, SAT, Computime
Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200
Framing Options	7N2, 7E1, 7E2, 8N1, 8N2, 8E1
Supported Cable Type	Standard RS-232 (male) for time string I/O via RS-232 Modified RS-422 cable (male) for time string output via RS-422 (differential signaling)

4 RS-232/RS-422 Serial Port “COM1”

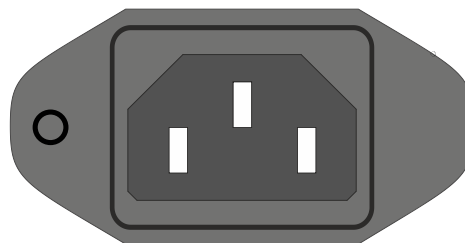
Pin	Function
2	RS-232 RxD (Receive)
3	RS-232 TxD (Transmit)
5	GND (Ground)
7	RS-422 RxD – (Receive, Negative)
8	RS-422 RxD + (Receive, Positive)



Connector Type	D-Sub 9-pin, Female
Transmission Methods	RS-232 (Input/Output), RS-422 (Input Only)
Supported Time Strings (Output)	Meinberg Standard, SAT, NMEA RMC, NMEA GGA, NMEA ZDA, NMEA RMC GGA (<i>RMC followed by GGA</i>), Uni Erlangen, Computime, Sysplex 1, SPA, RACAL, ION, ION Blanked, IRIG-J-1, ATIS, 6021, Freelance
Supported Time Strings (Input)	Meinberg Standard, Uni Erlangen, ATIS, SAT, Computime
Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200
Framing Options	7N2, 7E1, 7E2, 8N1, 8N2, 8E1
Supported Cable Type	Standard RS-232 (male) for time string I/O via RS-232 Modified RS-422 cable (male) for synchronization to time string reference via RS-422 (differential signaling)

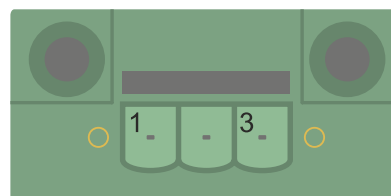
5 AC Power Connector

Connector Type	IEC 60320 C13 ("Kettle lead")
Nominal Input Voltage Range (U_N)	100–240 V AC
Rated Input Voltage Range (U_{max})	85–264 V AC
Nominal Current (I_N)	0.15 A
Nominal Frequency Range (f_N)	50–60 Hz
Rated Frequency Range (f_{max})	47–63 Hz
Maximum Output Power (P_{max})	15 W
Maximum Heat Output	51.19 BTU/h



6 DC Power Connector

Connector Type	3-pin MSTB
Pin Assignment	1: + 2: PE 3: –
Nominal Input Voltage (U_N)	48 V DC
Rated Input Voltage Range (U_{max})	20–60 V DC
Nominal Current (I_N)	0.22 A
Maximum Output Power (P_{max})	10 W
Maximum Heat Output	34.13 BTU/h



7 Fuse

Fuse Type	IEC 60127 Cartridge Fuse
Rated Voltage	250 V
Trigger Delay	T (Timelag)
Rated Current	1.6A (AC and DC)



T 1.6 A
L 250 V

Display Specifications

Segmentation	14-digit alphanumeric LED display 12 digits as 8-segment units, 2 digits as 14-segment units, each digit 13/14 mm in height
Brightness	Ten levels

Enclosure Specifications

Enclosure Material	Extruded aluminum case
Dimensions	144 mm x 72 mm x 132 mm (<i>W x H x D</i>)
Control Panel Cutout	140 mm x 68 mm (<i>W x H</i>)

Real-Time Clock Specifications

Power Source	Powered by ANZ141 power supply unit during operation Goldcap capacitor provides 150 hours of real-time clock operation when powered down (CR2032 lithium battery may be optionally fitted to provide 10 years of real-time clock operation when powered down)
Accuracy	1×10^{-6} (while powered on and after 24 hours of synchronous operation) 3×10^{-5} (while powered off and running off internal capacitor or optional lithium battery)

Miscellaneous Technical Information

Power Consumption (Typical)	3 W
Supported Operating Temp.	0 to 50 °C (32 to 122 °F)
Supported Humidity Conditions	Max. 85 % at 30 °C (86 °F)

Miscellaneous Support & Compliance Information

Technical Support	Free lifetime support via telephone and email, including firmware updates
Warranty	Three-year warranty, extendable upon request
Firmware Updates	Firmware is field-upgradeable; updates can be installed directly from the unit or via a remote network connection. Software updates are provided free of charge for the lifetime of your Meinberg product.
Conformity Declarations	CE, UKCA
RoHS Compliance	The product is fully RoHS-compliant.
WEEE Status	The purchase of this product is considered to be a “B2B” transaction (non-household product) for the purposes of the European Union Waste of Electrical and Electronic Equipment Directive; the product falls under Category 6, “Small IT and Telecommunications Equipment”. For disposal, it must be returned to the manufacturer to ensure WEEE compliance. Any transportation expenses for returning this product (at end-of-life) must be covered by the end user, while Meinberg will cover the costs for the waste disposal itself.