Technical Data Sheet

CENTURIO TOWER

MULTIPARAMETERS SYSTEM FOR COOLING TOWERS CONTROL

CENTURIO TOWER is the ideal and uncompromising solution for multi-parameter management through a single device with specific functions for the management of cooling towers such as pre-bleed, bleed, inhibitor dosage and blowdown.

The ease and safety you need and the elegant box designed by Giugiaro Design enclose a technological concentrate capable of carrying out every control and dosing activity even remotely. CENTURIO TOWER is equipped with a Linux operating system, a high-performance Arm® Cortex® A55 (ARMv8) 64 bit @ 1.8 GHz microprocessor, a large color touchscreen display, to give you total and simultaneous control.

Modbus | WiFi | NIMBUS by emec | RS-485 | USB PORT

- Parameters: conductivity, chlorine, pH, ORP, tracers, inductive conductivity, turbidity, potentiostatic, dissolved oxygen, level laser and mA Input.
- 10 modules available
- Real-time graphs
- Permanent data storage with system log
- USB Download
- Data import/export (backup & restore) via USB port to other CENTURIO.
- Internet connections (WIFI, 3G/4G, LAN), configuration and control by NIMBUS web app using PC, smartphone or tablet with any browser.
- MODBUS serial communication to be connected to other devices on RS485 networks and TCP/IP MODBUS, laser sensor.
- Remote software updating preserving settings and data.
- Simultaneous multiple view for probes reading
- N.O./N.C. Levels selection
- Working mode auto/manual/stop
- Permanent data storage with system log
- Stand-by input
- Different working modes (on/off, impulsive proportional, proportional pwm and fixed pwm)
- Timeout
- Programmable delay at dosing start-up (up to 99 minutes)
- PT 100 temperature compensation / built in probe
- Alarms and log report (hourly, daily, weekly, monthly).
- PEF LIGHT ALARM input

EXCLUSIVE FUNCTIONS FOR COOLING TOWERS MANAGEMENT AND CONTROL

- Pre-bleed for the reduction of the concentration of salts and dissolved solids in the water (TDS)
- Bleed / Blowdown for the control of scale, corrosion, bacterial growth, inefficiency of chemical inhibitors
- Multi-phase Biocide Dosage for the best real-time treatment aimed at eliminating microorganisms (bacteria, algae, fungi) from the main circuit
- Advanced management of water meters for incoming water treatment and during Bleed activity
- Inhibitor dosage and management

HARWARE

- Large 4.3" LCD Full Color Touchscreen Display
- High-performance ARM A55 microprocessor
- Large capacity storage for logging

SOFTWARE

- NIMBUS Remote Control
- Multi-language
- Cross platform software
- Communication WIFI - 3G/4G ETHERNET - MODBUS
- High performance with LINUX operating system

PARAMETERS

- 10 modules available
- MODBUS TCP/IP and RTU module included
- ETHERNET module included
- USB module included
- WIFI / GSM module sold as option
- 0/4-20 mA input module as option to control different parameters remotely

BOX

- Box design by GIUGIARO DESIGN
- New "EASY-MOUNT" system
- Designed for mounting on pipes
- Opening with side zipper

Via Donatori di Sangue, 1 - 02100 Rieti (Italy)
+39 074622841 | emecpumps.com

Specifications subject to change without notice | R2025

emec SIMPLE AS WATER

IQNET CERTIFIED MANAGEMENT SYSTEM
qualityaustria SYSTEM CERTIFIED
ISO 9001:2015 No.07728/0
ISO 14001:2015 No.00997/0
ISO 45001:2018 No.01121/0

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10 MODULES AVAILABLE

+ CORROSION
MPY
MILS PER YEAR

+ pH
0 - 14 pH

+ ORP
-999 +999 mV

+ CHLORINE
FREE
TOTAL
COMBINED

+ TEMPERATURE
0 - 100°C

+ mA INPUT
0/4-20 mA
analog input on board

+ TURBIDITY
40 NTU
400 NTU
4000 NTU

+ POTENTIOSTATIC
5 PPM

+ DISSOLVED OXYGEN
9.999 - 9999
PPM

+ LASER LEVEL
DIFFERENT
TANKS

+ CDIND
0.1 - 3 MS/CM
0.1 - 30 MS/CM

CONDUCTIVITY
0 - 300.0 µS
0 - 3000 µS
0 - 30 mS
0 - 300 mS

TECHNICAL DATA	
POWER SUPPLY	85-264 VAC; 50/60 Hz - 2 fuses protection (main power & controller)
AVERAGE CONSUMPTION	25 W
SETPOINT OUTPUTS	2 relays free contact, 6 powered (on/off), 8 for pulses dosing pump (NPN)
ANALOG OUTPUTS	6 0/4 - 20mA
INPUTS	2 for pulse sender water-mter, 1 flow sensor, 8 alarms channel, 1 standby
ENVIRONMENT TEMPERATURE	-10°C / 50°C (14°F / 122°F)
PROTECTION GRADE	IP65 - % working RH: 85% with ≤40 °C; 70% at 50 °C (non condensing)
POLLUTION LEVEL	2
CASE	ABS
TEST / CERTIFICATION	CE
DIMENSIONS	see draw
INSTALLATION	wall mounting (4 fixing points)
COMMUNICATION	ETHERNET / USB / MODBUS
OPTIONS [1]	• WIFI [2] • GSM/GPRS [2]

[1] On request
[2] For configuration features refer to the table at the end of the document.

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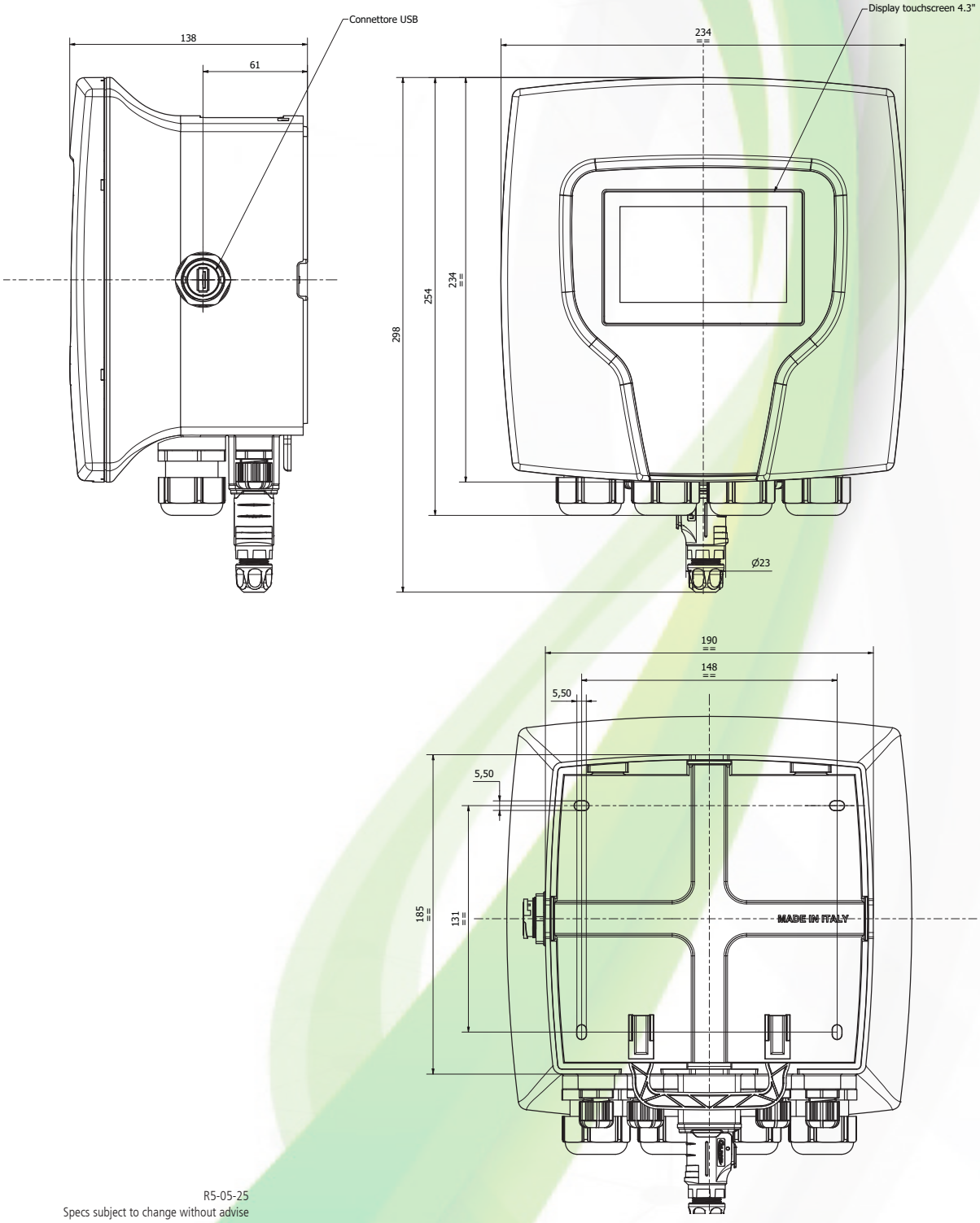
DIMENSIONS

mm



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CONFIGURATIONS

INSTRUMENT CONFIGURATION	PLUS	WHEN	REQUIREMENTS	FUNCTION
USB	USB output	You do not need a PC on your plant: you can download data log on a USB device	/	RS485 output to link other EMEC instruments Data Log on USB device
ETHERNET	LAN network between instrument and web	Remote control via WEB NIMBUS	LAN wiring (RJ-45)	RS485 output to link other EMEC instruments Web NIMBUS remote control (PC, smartphone or tablet) Alarm messages via email
MODBUS	Connection to other devices (PLC) via RS485	PLC plant management	/	PLC connection output for reading and modifying parameters
GSM/GPRS [1]	3G/4G modem between instrument and web	Remote control via WEB NIMBUS	Network coverage	RS485 output to link other EMEC instruments Web NIMBUS remote control (PC, smartphone or tablet) Alarm messages via email Alarm messages via SMS
WIFI [1]	WIFI network between instrument and web	Remote control via WEB NIMBUS	Network coverage	RS485 output to link other EMEC instruments Web NIMBUS remote control (PC, smartphone or tablet) Alarm messages via email

[1] Option