CENTURIO TOWER

CONTROL SYSTEM FOR COOLING TOWERS

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CENTURIO TOWER is the control instrument in cooling tower water treatment, with the ease and safety you need and with the stylish box designed by Giugiaro Design.

CENTURIO is equipped with a Linux operating system, a high-performance ARM A5 microprocessor, a large, touchscreen, color display, in order to give you total and simultaneous control.

Modbus **ERMES** RS-485 CE

- Parameters: conductivity, chlorine, pH, ORP, tracers, inductive conductivity, corrosion, mA Input.
- 5 channels to combine
- Real-time graphs
- Permanent data storage with system log
- USB Download
- Data import/export (backup & restore) via USB port to other CENTURIO.
- Internet connection (WIFI, 3G/4G or LAN), configuration and control by ERMES 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.
- Remote software updating preserving settings and data.
- Current feed & bleed display
- Simultaneous multiple view for probes reading
- N.O./N.C. Levels selection
- Inhibitor proportional dosing to wm1, wm2 or both

- Biocide proportional dosing to water meter
- Programmable biocide feed (max 10 per day), selection stop/no alarms for high/low feeding
- 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)
- Pre-bleed (educed water system conductivity before biocide dosing)
- Blow down (discharge control on conductivity values)
- Lockout (discharge valve locked for a settable time, after biocide dosage)
- Timeout (maximum discharge valve opening time)
- Programmable delay at dosing start-up (up to 99 minutes)
- PT 100 temperature compensation
- Alarms and log report (hourly, daily, weekly, monthly).

HARWARE
- Large 4.3" LCD Full Color Touchscreen Display
- High-performance ARM A5 microprocessor
- Large capacity storage for logging

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

PARAMETERS
- CENTURIO TOWER with conductivity measurement
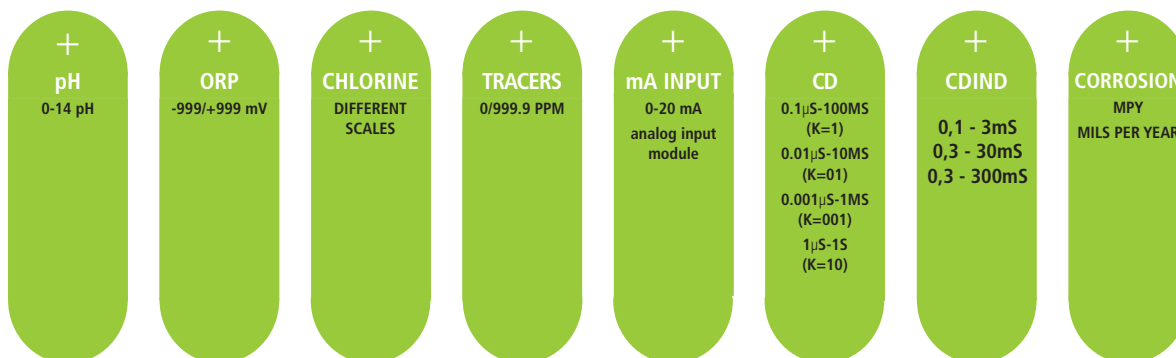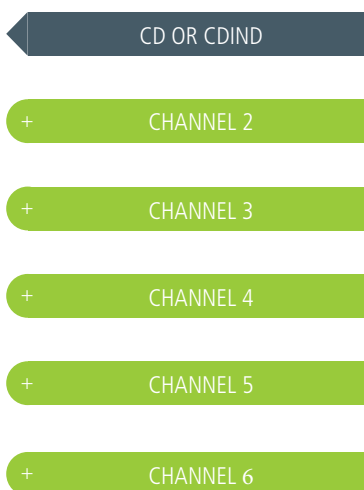- 5 Modular channels to combine
- MODBUS TCP/IP and RTU module included
- ETHERNET module included
- USB module included
- WIFI or GSM module as option
- 0-20 mA input module as option to control different

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

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6 CHANNELS AVAILABLE AND 7 MODULES TO CHOOSE FROM

CD OR CDIND

+	CHANNEL 2
+	CHANNEL 3
+	CHANNEL 4
+	CHANNEL 5
+	CHANNEL 6

| + **pH** 0-14 pH | + **ORP** -999/+999 mV | + **CHLORINE** DIFFERENT SCALES | + **TRACERS** 0/999.9 PPM | + **mA INPUT** 0-20 mA analog input module | + **CD** 0.1µS-100MS (K=1) 0.01µS-10MS (K=01) 0.001µS-1MS (K=001) 1µS-1S (K=10) | + **CDIND** 0,1 - 3mS 0,3 - 30mS 0,3 - 300mS | + **CORROSION** MPY MILS PER YEAR |

TECHNICAL FEATURES	
POWER SUPPLY	85-264 VAC; 50/60 Hz
AVERAGE CONSUMPTION	25 W
ON/OFF OUTPUT	2 relays; 5A @ 230 VAC (fuse protected)
ALARM OUTPUT	85-264VAC alarm output
ENVIRONMENT TEMPERATURE	-10°C ... 50°C (14°F ... 122°F)
PROTECTION	IP65 - % working RH: 85% with ≤40 °C; 70% at 50 °C (non condensing)
POLLUTION LEVEL	2
ENCLOSURE	ABS
TEST/CERTIFICATION	CE
DIMENSIONS	refer to the drawing
INSTALLATION	vertical wall (4 fixing holes)
COMMUNICATION	ETHERNET / USB / MODBUS
OPTIONS [1]	• WIFI configuration [2] • GSM/GPRS configuration [2]

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

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SYSTEM

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

CONTROL SYSTEM FOR COOLING TOWERS

DIMENSIONS

mm

138.00

253.75

234.50

234.50

151.00 (Max)

145.00 (Min)

131.20

129.70 (Min)

132.70 (Max)

148.00

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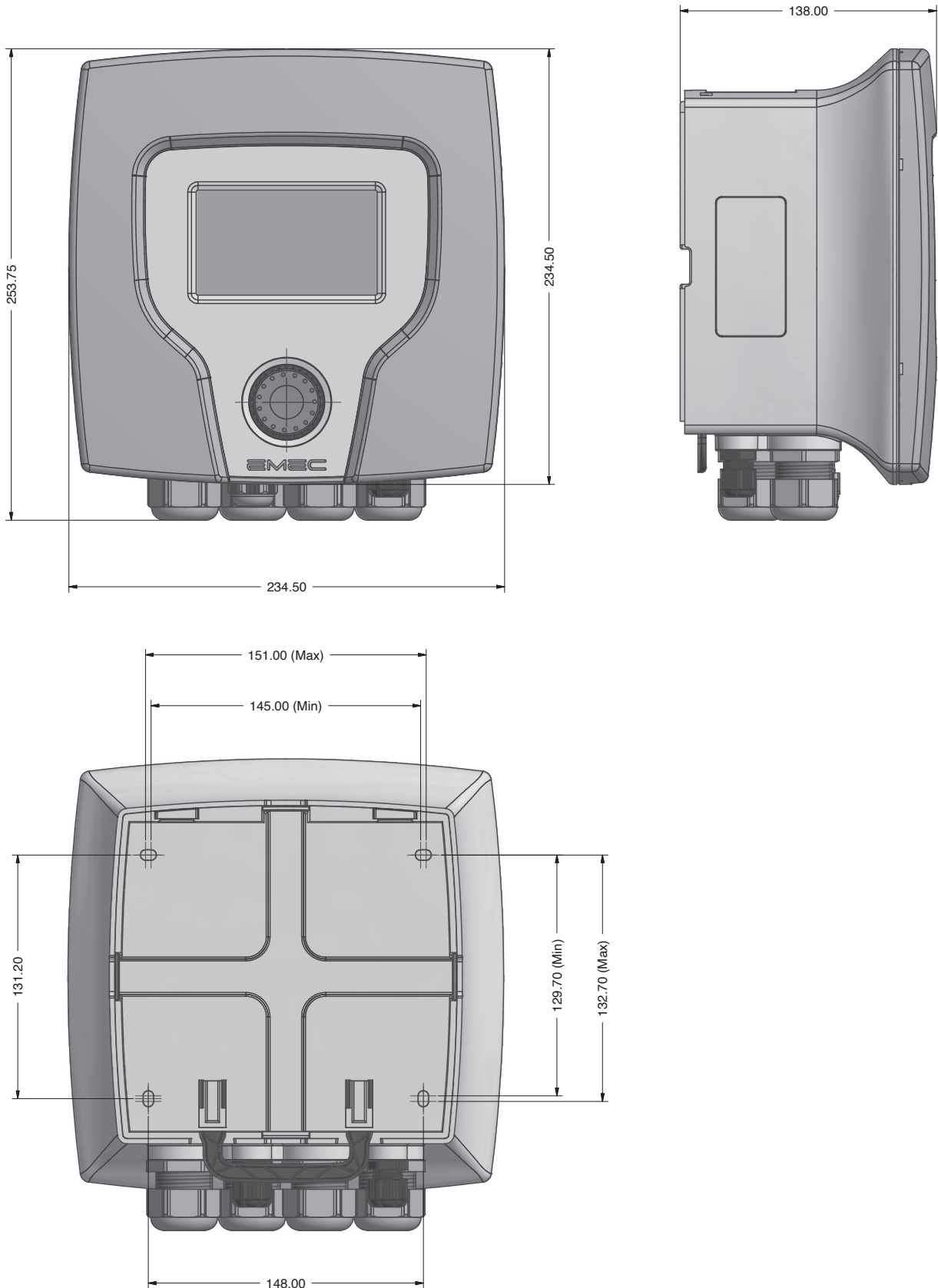
pH MODULE	
MEASURING PARAMETER	pH
RANGE	0-14 pH; resolution: 0,01
TEMPERATURE COMPENSATION	PT100
INPUT SIGNAL	PCB
INPUT	Stand-by Flow pH level pH probe Temperature probe
OUTPUT	1 relay output (pH) 1 Opto coupled output (pH) Alarm output (relay)

ORP MODULE	
MEASURING PARAMETER	ORP
RANGE	-999/+999 mV; resolution: 0,1
INPUT SIGNAL	PCB
INPUT	Stand-by Flow ORP level ORP probe Temperature probe
OUTPUT	1 relay output (ORP) 1 Opto coupled output (ORP) Alarm output (relay)

CHLORINE MODULE	
MEASURING PARAMETER	Chlorine
RANGE	0-10 mg/l
INPUT SIGNAL	PCB
INPUT	Stand-by Flow Chlorine level Chlorine probe Temperature probe
OUTPUT	1 relay output (Cl) 1 Opto coupled output (Cl) Alarm output (relay)

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CONTROL SYSTEM FOR COOLING TOWERS

CONDUCTIVITY MODULE	
MEASURING PARAMETER	Conductivity with temperature reading (°C or °F)
RANGE	0.1µS-100mS (K=1) 0.01µS-10mS (K=01) 0.001µS-1mS (K=001) 1µS-1S (K=10)
TEMPERATURE COMPENSATION	PT100
INPUT SIGNAL	PCB
INPUT	Stand-by Flow Conductivity probe Temperature probe
OUTPUT	2 relay output (Conductivity and alarm) Alarm output (relay)

INDUCTIVE CONDUCTIVITY MODULE	
MEASURING PARAMETER	Inductive conductivity with temperature reading (°C or °F)
RANGE	0-3.000 µS 0-30.000 µS
TEMPERATURE COMPENSATION	PT100
INPUT SIGNAL	PCB
INPUT	Stand-by Flow Sonda conducibilità Temperature probe
OUTPUT	2 relay output (Conductivity and alarm) Alarm output (relay)

TRACERS MODULE	
MEASURING PARAMETER	Tracers
RANGE	0-999.9 ppm; resolution: 0,1 ppm
INPUT SIGNAL	PCB
INPUT	Stand-by Flow Trc level Trc probe Temperature probe
OUTPUT	1 relay output (Trc) 1 Opto coupled output (Trc) Alarm output (relay)

mA MODULE	
MEASURING PARAMETER	0-20 mA analog generic input module (editable measuring unit)
INPUT SIGNAL	PCB
INPUT	Stand-by Flow level Temperature probe
OUTPUT	1 relay output 1 Opto coupled output Alarm output (relay)

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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 ERMES	LAN wiring (RJ-45)	RS485 output to link other EMEC instruments Web ERMES 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 ERMES	Network coverage	RS485 output to link other EMEC instruments Web ERMES 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 ERMES	Network coverage	RS485 output to link other EMEC instruments Web ERMES remote control (PC, smartphone or tablet) Alarm messages via email

[1] **Option**

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