

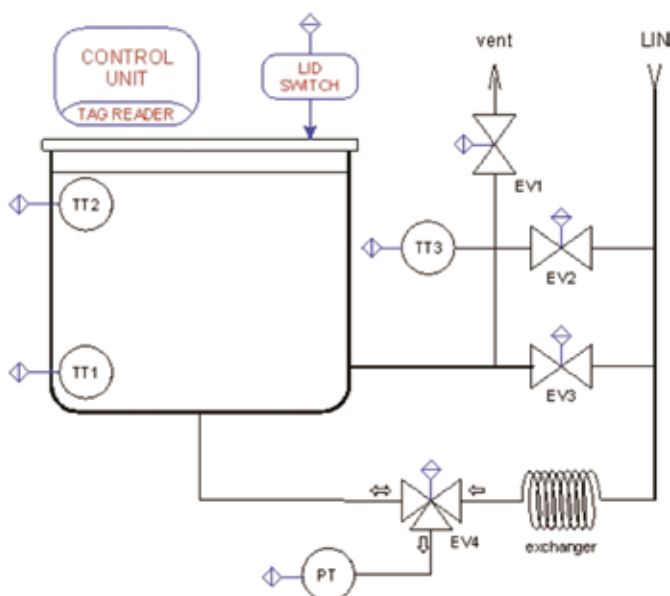
CRYOBIOCARE



Monitoring and control system for cryopreservation freezer

The CrioBiocAre unit, manufactured by Ambra Sistemi and installed on CryoBa, supports the following functions:

- ▶ Wide display 4 lines x 20 characters with led backlight
- ▶ Temperature, level and daily LN2 freezer consumption monitoring with abnormal and excessive consumption alarms
- ▶ Programmable alarm set points for high and low temperature, minimum and maximum level
- ▶ Solenoid valves control for LN2 automatic filling, bypass and washing
- ▶ Alarm signaling through blinking visual indicator (red LED) and acoustic signal activation with stop button and recovery time
- ▶ Filling management coordinate by remote
- ▶ Programming by rotary encoder with button integrated
- ▶ Unauthorized opening freezer alarm management through TAG and Lid-Switch sensor
- ▶ Visual indication of Modbus data communication in progress (COM) and fault conditions (FAIL)
- ▶ Events and alarm storage in non-volatile memory
- ▶ Output contacts for solenoid valves control
- ▶ Output contacts for alarm signaling
- ▶ Wi-Fi interface configurable as point to point (AD HOC), DHCP and static IP, webserver and transparent data protocol



Typical application:
temperature control, level, filling management
for cryopreservation tanks

CRYOBIOCARE



TECHNICAL FEATURES

POWER SUPPLY	230 V ac 50/60 Hz., Pmax. 25 VA, fusibile 0,5 A
VISUAL INDICATION	Display: 4 lines x 20 characters, backlight Alarm: red LED high efficiency 20x10 mm Fail: Red led diam. 5 mm COM: Yellow led diam. 5 mm
ALARM SOUND	Magnetic speaker, max 95 dB @ 1 meter
MONITORING	<ul style="list-style-type: none"> - n° 2 temperature: range -200 / -100 °C sensor PT1000 (TT1, TT2) - n° 1 temperature: range -200 / + 40 °C sensor PT1000 (TT3) - level: pressure transmitter (PT) or capacitive sensor - level: n° 4 level switch PTC for immersion - Lid-switch: proximity switch - transponder: codification 125 KHz (tag) through integrated decoder
AUXILIARY OUTPUT SWITCH	N°5 free relay contacts , Vmax: 230V, Imax: 100 mA - Low Battery, Min. Level, Max. Level, High Temperature, Cumulative
SOLENOID VALVES CONTROL	N°4 free relay contacts, Vmax: 230Vac, Pmax: 20W - Output solenoid control EV1, EV2, EV3, EV4
USER CONNECTION	<ul style="list-style-type: none"> - Power supply connector 230 Vac: 4 contacts - Output alarm connector: 10 contacts - Modbus RTU / RS485 interface connector: 5 contacts
HOUSING	User interface unit: Aluminum IP65, dim. 200x170x(h)90 mm Control power unit: Aluminum IP65, dim. 255 x 219 x(h)93 mm
LOCAL NETWORK INTERFACE	Modbus protocol on insulated bidirectional RS485
COMMUNICATION BOARD	FLYPORT board for Wi-Fi communication
WEIGHT	User interface unit: 700 gr Control power unit: 1,3 Kg
OPERATING TEMPERATURE	0...65°C
REFERENCE STANDARDS AND DIRECTIVES	CEI-EN50081-1, CEI-EN50082-1, CEI-EN60601-1 DE 73/23/EC, DE 89/336/EC