

MULTIPLE READING DIGITAL SYSTEMS

Digital controllers for measurement and control of two parameters, with temperature reading (° C or ° F).

LD MULTICHANNEL series is controlled by an "ENCODER".

Working mode can be set:

- on / off
- pulse proportional
- proportional PWM
- fixed PWM

Instruments connected in a network (up to 31 instruments) can be remotely controlled.

Combined with probes and probe holders, they can be assembled on panels to have a complete turnkey control system.

**REMOTE CONTROL**

Remote control is available with ETHERNET or GSM/GPRS configurations.

Remote control via: www.ermes-server.com.

SOFTWARE

English software available. Ask for French or Deutsch.

CUSTOMIZATION

Instruments can be customized with client logo on frontal panel.

STAND-BY**FLOW CONTROL INPUT****PERMANENT DATA STORAGE (WITHOUT BATTERY)**

System log on display.

AUTOMATIC TEMPERATURE COMPENSATION

With PT100 temperature probe.

DELAY

Programmable delay at dosing start-up (up to 60 minutes).

ALARMS

Alarms for: damaged probe; max dosage, flow, threshold, level (double level).

DISPLAY

Probe readings, alarms notification, network status (Ethernet; USB, GSM/GPRS) are shown on display.

PROBE READOUT MENU**PH PRIORITY DOSAGE**

pH priority dosage on second parameter.

mA OUTPUT

As option.

MODBUS

Modbus is a serial communication protocol for connecting instruments to other devices on RS485 network.

ALARM RELAIS

230 VAC output alarm.

DOUBLE SETPOINT

Relais set for 2 setpoint.

FLOCCULANT OUTPUT (230 VAC)

LDPHCL and LDPHRH only.

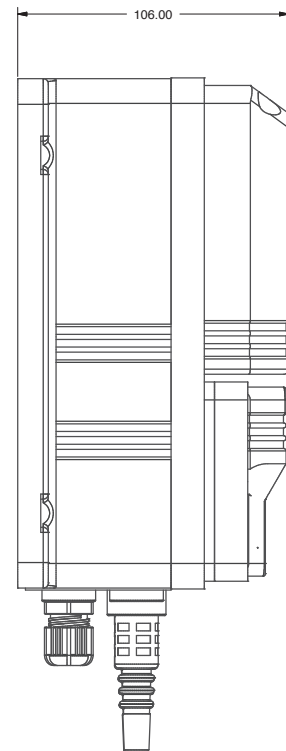
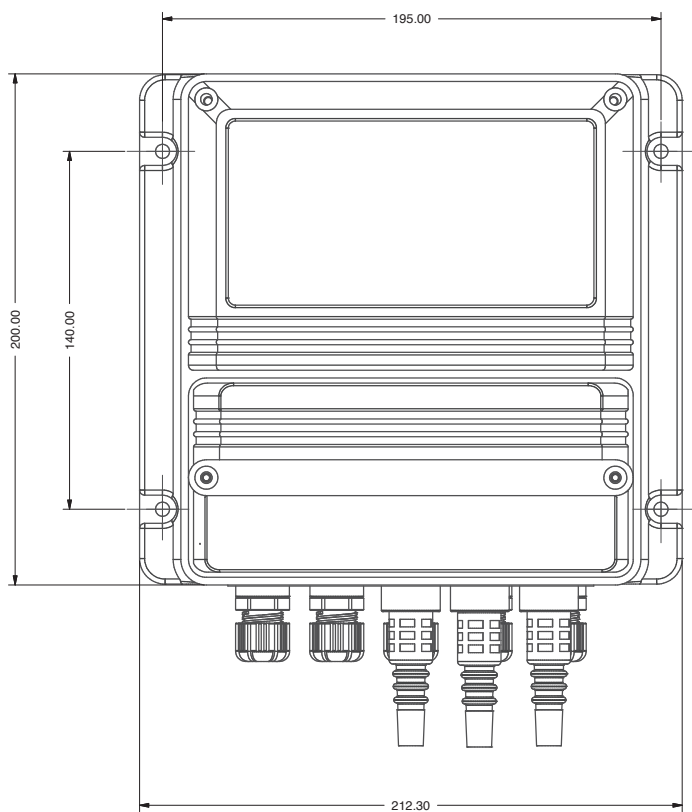
INTERNAL CLOCK**AUTOMATIC OR MANUAL DOSING ACTIVITY**

MULTIPLE READING DIGITAL SYSTEMS

MODELS

MEASURING PARAMETER	
LDPHCL	pH and Chlorine (or hydrogen peroxyde, ozone, peracetic acid, chlorine dioxide, bromine)
LDPHRH	pH and ORP
LDPHCD	pH and Conductivity
LDPHCDIND	pH and Inductive Conductivity (probe mod. ECDINDPT)
LDPHTORBH	pH and Turbidity (probe mod. ETORBH)
LDCLTORBH	Chlorine and Turbidity (probe mod. ETORBH)
LDPHDO	pH and Dissolved Oxygen

DIMENSIONS



MULTIPLE READING DIGITAL SYSTEMS

LDPHCL

LDPHCL	
MEASURING PARAMETER	pH / Chlorine (or hydrogen peroxyde, ozone, peracetic acid, chlorine dioxide, bromine)
RANGE	0-14 pH / chlorine based on probe model ¹
TEMPERATURE COMPENSATION	Chlorine and PH (with ECL6 only)
INPUT SIGNAL	BNC connector for pH - PCB for Chlorine
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
INPUT	Stand-by Flow PH+ level PH- level Chlorine level PH probe Chlorine probe Temperature probe
OUTPUT	2 proportional impulsive (pH) Proportional impulsive (Cl) Proportional on/off (pH) Proportional on/off (Cl) 3 mA output (pH, Cl, temperature) as option ² Flocculant output (230 VAC) General alarm
ENVIRONMENT TEMPERATURE	-10°C ... 50°C (14°F ... 122°F)
PROTECTION	IP65 - % working UR: 85% with ≤40 °C; 70% at 50 °C (non condensing)
POLLUTION LEVEL	2
ENCLOSURE	ABS
TEST/CERTIFICATION	CE
DIMENSIONS	refer to the drawing
WEIGHT	1,45 kg (3.1967 lb)
INSTALLATION	vertical wall (4 fixing holes)
OPTIONS ²	<ul style="list-style-type: none"> • mA output • 9-18 or 18-36 VDC power supply • ADVANCED USB configuration ³ • ETHERNET configuration ³ • GSM/GPRS configuration ³ • MODBUS configuration ³

¹ Probes:

ECL 1/2	0-2.000 mg/l CL2	free chlorine (inorganic)
ECL 1/5	0-5.00 mg/l CL2	
ECL 1/20	0-20.00 mg/l CL2	
ECL 1/200	0-200.0 mg/l CL2	
ECL 3S/10	0-10.00 mg/l CL2	free chlorine (organic and inorganic) for fresh water
ECL 3N/2	0-2.000 mg/l CL2	free chlorine (inorganic) for fresh water
ECL 9/200	0-200.0 mg/l H2O2	hydrogen peroxyde
ECL 10/1	0-0.5 mg/l O3	ozone
ECL 10/10	0-10.00 mg/l O3	

ECL 11/200	0-200.0 mg/l PAA	peracetic acid
ECL 11/2000	0-2000 mg/l PAA	
ECL 17	0-10.00 mg/l CL2O2	chlorine dioxide
ECL 18	0-10.00 mg/l CL2	free chlorine (inorganic)
EBR1/20	0-20.00 mg/l Br	bromine
OPEN AMPEROMETRIC CELLS		
ECL 4, 5, 6, 6E, 7, 12, 12E	0-10.00 mg/l CL2 or Br (ECL4-5-6)	free chlorine (organic and inorganic) (bromine for ECL4-5-6)

² On request.³ For configuration features refer to the table at the end of the document.

EMEC

ISO 9001:2008
ISO 14001:2004
OHSAS 18001:2007



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Features subject to change without notice
EN R1-10-15

MULTIPLE READING DIGITAL SYSTEMS

LDPHRH

LDPHRH	
MEASURING PARAMETER	pH / ORP
RANGE	0-14 pH / 0-1000 mV; resolution: 0,1
TEMPERATURE COMPENSATION	pH
INPUT SIGNAL	BNC connector for pH - BNC connector for ORP
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
INPUT	Stand-by Flow PH+ level PH- level ORP level PH probe ORP probe Temperature probe
OUTPUT	2 proportional impulsive(pH) Proportional impulsive (ORP) Proportional on/off (pH) Proportional on/off (ORP) 3 mA output (pH, ORP, temperature) as option ¹ Flocculant output (230 VAC) General alarm
ENVIRONMENT TEMPERATURE	-10°C ... 50°C (14°F ... 122°F)
PROTECTION	IP65 - % working UR: 85% with ≤ 40 °C; 70% at 50 °C (non condensing)
POLLUTION LEVEL	2
ENCLOSURE	ABS
TEST/CERTIFICATION	CE
DIMENSIONS	refer to the drawing
WEIGHT	1,45 kg (3.1967 lb)
INSTALLATION	vertical wall (4 fixing holes)
OPTIONS ¹	<ul style="list-style-type: none"> • mA output • 9-18 or 18-36 VDC power supply • ADVANCED USB configuration ² • ETHERNET configuration ² • GSM/GPRS configuration ² • MODBUS configuration ²

¹ On request² For configuration features refer to the table at the end of the document.

MULTIPLE READING DIGITAL SYSTEMS

LDPHCD - LDPHCD IND

	LDPHCD	LDPHCD IND
MEASURING PARAMETER	pH / Conductivity with temperature reading (°C or °F)	pH / Inductive conductivity with temperature reading (°C or °F)
RANGE	0-14 pH / 0-300,0 µS 0-14 pH / 0-3000 µS 0-14 pH / 0-30,00 mS 0-14 pH / 0-300,0 mS	0-14 pH / 0-3,000 mS 0-14 pH / 0-30,00 mS 0-14 pH / 0-300,0 mS
TEMPERATURE COMPENSATION	pH e conductivity	
INPUT SIGNAL	BNC connector for pH - Morsettiera per conductivity	
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	
INPUT	Stand-by Flow PH+ level PH- level Conductivity level PH probe Conductivity probe Temperature probe	Stand-by Flow PH+ level PH- level Inductive conductivity level PH probe Inductive conductivity probe Temperature probe
OUTPUT	2 proportional impulsive (pH) Proportional impulsive (Conductivity) Proportional on/off (pH) Proportional on/off (Conductivity) 3 mA output (pH, Conductivity, temperature) as option ² General alarm	2 proportional impulsive (pH) Proportional impulsive (Inductive conductivity) Proportional on/off (pH) Proportional on/off (Inductive conductivity) 3 mA output (pH, Inductive conductivity, temperature) as option ² General alarm
ENVIRONMENT TEMPERATURE	-10°C ... 50°C (14°F ... 122°F)	
PROTECTION	IP65 - % working UR: 85% with ≤40 °C; 70% at 50 °C (non condensing)	
POLLUTION LEVEL	2	
ENCLOSURE	ABS	
TEST/CERTIFICATION	CE	
DIMENSIONS	refer to the drawing	
WEIGHT	1,45 kg (3.1967 lb)	
INSTALLATION	vertical wall (4 fixing holes)	
OPTIONS ¹	<ul style="list-style-type: none"> • mA output • 9-18 or 18-36 VDC power supply • ADVANCED USB configuration ² • ETHERNET configuration ² • GSM/GPRS configuration ² • MODBUS configuration ² 	<ul style="list-style-type: none"> • mA output • 9-18 or 18-36 VDC power supply • ADVANCED USB configuration ² • ETHERNET configuration ² • GSM/GPRS configuration ² • MODBUS configuration ²

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MULTIPLE READING DIGITAL SYSTEMS

LDPHTORBH

LDPHTORBH	
MEASURING PARAMETER	pH / Turbidity with temperature reading (°C or °F)
RANGE	0-14 pH / 0-9999 NTU
TEMPERATURE COMPENSATION	pH
INPUT SIGNAL	BNC connector for pH - PCB for Turbidity
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
INPUT	Stand-by Flow PH+ level PH- level Turbidity level PH probe Turbidity probe Temperature probe
OUTPUT	2 proportional impulsive(pH) Proportional impulsive (Turbidity) Proportional on/off (pH) Proportional on/off (Turbidity) 3 mA output (pH, Turbidity, temperature) as option ² General alarm
ENVIRONMENT TEMPERATURE	-10°C ... 50°C (14°F ... 122°F)
PROTECTION	IP65 - % working UR: 85% with ≤40 °C; 70% at 50 °C (non condensing)
POLLUTION LEVEL	2
ENCLOSURE	ABS
TEST/CERTIFICATION	CE
DIMENSIONS	refer to the drawing
WEIGHT	1,45 kg (3.1967 lb)
INSTALLATION	vertical wall (4 fixing holes)
OPTIONS ¹	<ul style="list-style-type: none"> • mA output • 9-18 or 18-36 VDC power supply • ADVANCED USB configuration ² • ETHERNET configuration ² • GSM/GPRS configuration ² • MODBUS configuration ²

¹ On request

² For configuration features refer to the table at the end of the document.

MULTIPLE READING DIGITAL SYSTEMS

LDCLTORBH

LDCLTORBH	
MEASURING PARAMETER	Chlorine / Turbidity with temperature reading (°C or °F)
RANGE	chlorine based on probe model ¹ / 0-9999 NTU
TEMPERATURE COMPENSATION	Chlorine
INPUT SIGNAL	PCB for Chlorine - PCB for Turbidity
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
INPUT	Stand-by Flow Double Cl level Turbidity level Cl probe Turbidity probe Temperature probe
OUTPUT	2 proportional impulsive (Cl) Proportional impulsive (Turbidity) Proportional on/off (Cl) Proportional on/off (Turbidity) 3 mA output (Cl, Turbidity, temperature) as option ² General alarm
ENVIRONMENT TEMPERATURE	-10°C ... 50°C (14°F ... 122°F)
PROTECTION	IP65 - % working UR: 85% with ≤40 °C; 70% at 50 °C (non condensing)
POLLUTION LEVEL	2
ENCLOSURE	ABS
TEST/CERTIFICATION	CE
DIMENSIONS	refer to the drawing
WEIGHT	1,45 kg (3.1967 lb)
INSTALLATION	vertical wall (4 fixing holes)
OPTIONS ¹	<ul style="list-style-type: none"> • mA output • 9-18 or 18-36 VDC power supply • ADVANCED USB configuration ² • ETHERNET configuration ² • GSM/GPRS configuration ² • MODBUS configuration ²

¹ Chlorine probe:

ECL 1/2	0-2.000 mg/l CL2
ECL 1/5	0-5.00 mg/l CL2
ECL 1/20	0-20.00 mg/l CL2
ECL 1/200	0-200.0 mg/l CL2
ECL 3S/10	0-10.00 mg/l CL2
ECL 3N/2	0-2.000 mg/l CL2
ECL 9/200	0-200.0 mg/l CL2
ECL 10/1	0-0.5 mg/l CL2
ECL 10/10	0-10.00 mg/l CL2
ECL 11/200	0-200.0 mg/l CL2

ECL 11/2000	0-2000 mg/l CL2
ECL 17	0-10.00 mg/l CL202
ECL 18	0-10.00 mg/l CL2
EBR1/20	0-20.00 mg/l Br
OPEN AMPEROMETRIC CELLS	
ECL 4, 5, 6, 6E, 7, 12, 12E	0-10.00 mg/l CL2 o Br

² On request.

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MULTIPLE READING DIGITAL SYSTEMS

LDPHDO

LDPHDO	
MEASURING PARAMETER	pH / Dissolved Oxygen with temperature reading (°C or °F)
RANGE	0-14 pH / 0-9,999 mg/l O ₂ 0-14 pH / 0-99,99 mg/l O ₂ 0-14 pH / 0-999,9 mg/l O ₂ 0-14 pH / 0-9999 mg/l O ₂
TEMPERATURE COMPENSATION	pH
INPUT SIGNAL	BNC connector for pH - PCB for Dissolved Oxygen
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
INPUT	Stand-by Flow PH+ level PH- level Dissolved Oxygen level PH probe Dissolved Oxygen probe Temperature probe
OUTPUT	2 proportional impulsive (pH) Proportional impulsive (Dissolved Oxygen) Proportional on/off (pH) Proportional on/off (Dissolved Oxygen) 3 mA output (pH, Dissolved Oxygen, temperature) as option ² General alarm
ENVIRONMENT TEMPERATURE	-10°C ... 50°C (14°F ... 122°F)
PROTECTION	IP65 - % working UR: 85% with ≤40 °C; 70% at 50 °C (non condensing)
POLLUTION LEVEL	2
ENCLOSURE	ABS
TEST/CERTIFICATION	CE
DIMENSIONS	refer to the drawing
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OPTIONS ¹	<ul style="list-style-type: none"> • mA output • 9-18 or 18-36 VDC power supply • ADVANCED USB configuration ² • ETHERNET configuration ² • GSM/GPRS configuration ² • MODBUS configuration ²

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CONFIGURATIONS

INSTRUMENT Configuration	PLUS	WHEN	REQUIREMENTS	FUNCTION
BASIC (standard)	/	For local control only	/	RS485 output to link other EMEC instruments or a PC
ADVANCED 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 or a PC 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 or a PC Web ERMES remote control (PC, smartphone or tablet) Alarm messages via email
GSM/GPRS	GPRS modem between instrument and web	Remote control via WEB ERMES	Network coverage	RS485 output to link other EMEC instruments or a PC Web ERMES remote control (PC, smartphone or tablet) Alarm messages via email Alarm messages via SMS
MODBUS	Connection to other devices (PLC) via RS485	PLC plant management	/	PLC connection output for reading and modifying parameters