LDS - LDS PLUS

Data Sheet

SINGLE READING DIGITAL SYSTEM

Digital controllers for measurement and control of a single parameter, with temperature reading (° C or ° F).

An accurate design has allowed to build on a series of instrument easy to program.
LDS and LDS PLUS series are controlled by an "ENCODER".
Working mode can be set:

- on / off
- pulse proportional *
- proportional PWM *
- fixed PWM *
- PID (only on LDS PLUS).

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.

* not on LDSTORBH.



R3-06-20

REMOTE CONTROL
Remote control is available with ETHERNET or GSM/GPRS configurations.
Remote control via: www.ermes-server.com.

SOFTWARE
English and French software available. Ask for Deutsch.

CUSTOMIZATION
Instruments can be customized with client logo on frontal panel.

STAND-BY AND 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 on LDS PLUS).

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

PROBE READOUT MENU

mA OUTPUT
As option.

WiFi Remote Control
As option.

ONLY FOR LDS PLUS

PROBE CLEANING
To obtain reliable results it is possible to connect a cleaning system, for example a probe cleaning system.

CIRCULATION PUMP
This function allows to supply a water circulation pump into the intake pipeline, increasing pressure.

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

mA WATER METER INPUT
As option.

ALARM RELAIS
230 VAC output alarm.

DOUBLE SETPOINT
Relais set for 2 setpoint.

mA OUTPUT

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

LDS - LDS PLUS

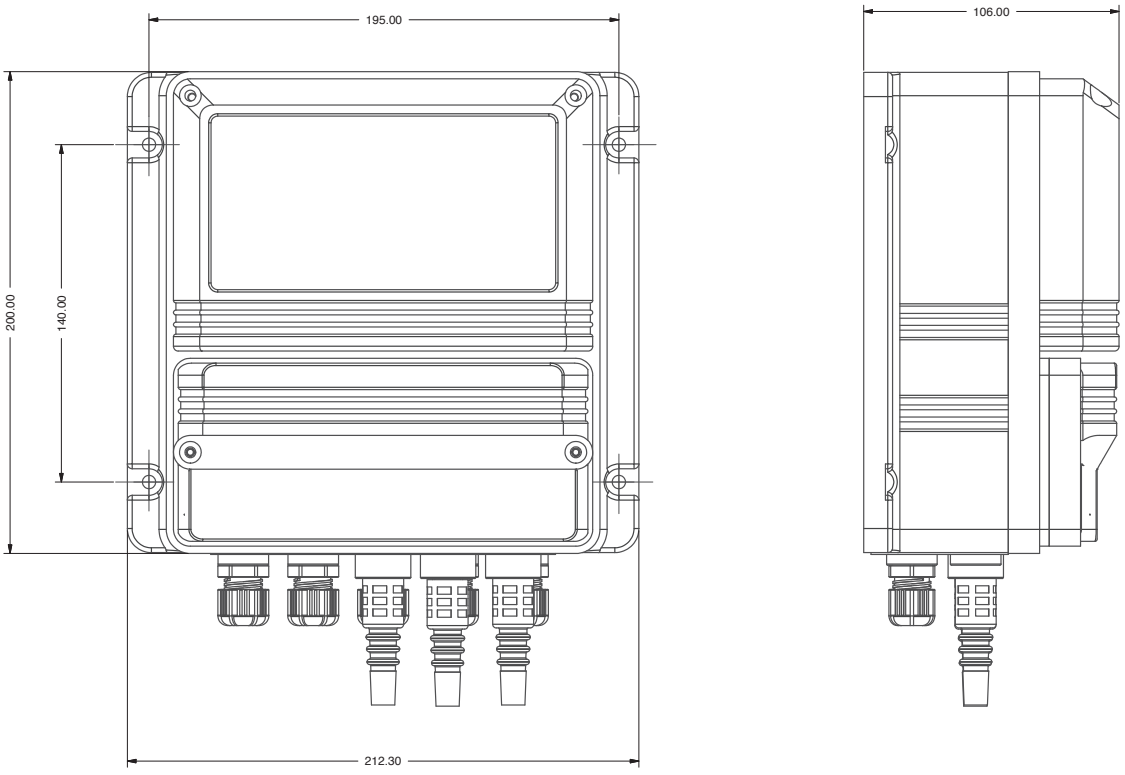
Data Sheet

SINGLE READING DIGITAL SYSTEM

MODELS

STANDARD	PLUS	PARAMETER
LDSPH	**LDSPH PLUS**	pH
LDSRH	**LDSRH PLUS**	ORP
LDSCL	**LDSCL PLUS**	Chlorine (chlorine measure based on the probe)
LDSCD	**LDSCD PLUS**	Conductivity
LDSCDIND	**LDSCDIND PLUS**	Inductive conductivity (ECDINDPT probe)
LDSTORBH	**LDSTORBH PLUS**	Turbidity (ETORBH probe)
LDSETORB2	**LDSETORB2 PLUS**	Turbidity (ETORB2 probe)
LDSDO	**LDSDO PLUS**	Dissolved Oxygen (EOLUM probe)
LDSTRC	**LDSTRC PLUS**	Tracers (ETRC probe)

DIMENSIONS mm



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LDSPH - LDSPH PLUS

	LDSPH	LDSPH PLUS
MEASURING PARAMETER	pH	
RANGE	0-14 pH; resolution: 0,01	
TEMPERATURE COMPENSATION	PT100	
CONTROL	/	PID
INPUT SIGNAL	PCB	
POWER SUPPLY	240VAC 50/60Hz ; 12 or 24VDC (specify on order)	
AVERAGE CONSUMPTION	25 W	
ON/OFF OUTPUT	2 relays; 5A @ 230 VAC (fuse protected)	
ALARM OUTPUT	(same as power supply) alarm output	
INPUT	Stand-by Flow pH level pH probe Temperature probe	Stand-by Flow pH level pH probe Temperature probe Water meter mA water meter [1]
OUTPUT	1 relay output (pH) 1 Opto coupled output (pH) 2 mA output (pH & Temperature) [1] Alarm output (relay)	2 relay output (pH) 2 Opto coupled output (pH) 1 relay output for probe cleaning 1 relay output for circulating pump 3 mA output (pH & Temperature, PID) Alarm output (relay)
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	
WEIGHT	1,45 kg (3.1967 lb)	
INSTALLATION	vertical wall (4 fixing holes)	
OPTIONS [1]	• mA output • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WiFI configuration [2] • GSM/GPRS configuration [2]	• mA water meter input • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WIFI 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.

LDSRH - LDSRH PLUS

	LDSRH	LDSRH PLUS
MEASURING PARAMETER	ORP	
RANGE	0-1000 mV; resolution: 0,1	
TEMPERATURE COMPENSATION	/	
CONTROL	/	PID
INPUT SIGNAL	PCB	
POWER SUPPLY	240VAC 50/60Hz ; 12 or 24VDC (specify on order)	
AVERAGE CONSUMPTION	25 W	
ON/OFF OUTPUT	2 relays; 5A @ 230 VAC (fuse protected)	
ALARM OUTPUT	(same as power supply) alarm output	
INPUT	Stand-by Flow ORP level ORP probe Temperature probe	Stand-by Flow ORP level ORP probe Temperature probe Water meter mA water meter [1]
OUTPUT	1 relay output (ORP) 1 Opto coupled output (ORP) 2 mA output (mV & Temperature) [1] Alarm output (relay)	2 relay output (mV) 2 opto coupled output (mV) 1 relay output for probe cleaning 1 relay output for circulating pump 3 mA output (mV & Temperature, PID) Alarm output (relay)
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	
WEIGHT	1,45 kg (3.1967 lb)	
INSTALLATION	vertical wall (4 fixing holes)	
OPTIONS [1]	• mA output • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WiFI configuration [2] • GSM/GPRS configuration [2]	• mA water meter input • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WIFI 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.

LDSCL - LDSCL PLUS

	LDSCL	LDSCL PLUS
MEASURING PARAMETER	Chlorine	
RANGE	0-10 mg/l	
TEMPERATURE COMPENSATION	/	
CONTROL	/	PID
INPUT SIGNAL	PCB	
POWER SUPPLY	240VAC 50/60Hz ; 12 or 24VDC (specify on order)	
AVERAGE CONSUMPTION	25 W	
ON/OFF OUTPUT	2 relays; 5A @ 230 VAC (fuse protected)	
ALARM OUTPUT	(same as power supply) alarm output	
INPUT	Stand-by Flow Chlorine level Chlorine probe Temperature probe	Stand-by Flow Chlorine probe Chlorine level Temperature probe Water meter mA water meter [1]
OUTPUT	1 relay output (Cl) 1 Opto coupled output (Cl) 2 mA output (Cl & temperature) [1] Alarm output (relay)	2 relay output (Cl) 2 opto coupled output (Cl) 1 relay output for probe cleaning 1 relay output for circulating pump 3 mA output (Cl & temperature, PID) Alarm output (relay)
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	
WEIGHT	1,45 kg (3.1967 lb)	
INSTALLATION	vertical wall (4 fixing holes)	
OPTIONS [1]	• mA output • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WiFI configuration [2] • GSM/GPRS configuration [2]	• mA water meter input • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WIFI 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.

LDSCD - LDSCD PLUS

	LDSCD	LDSCD PLUS
MEASURING PARAMETER	Conductivity with temperature reading (°C or °F)	
RANGE	0 - 300,0 µS 0 - 3000 µS 0 - 30,00 mS 0 - 300,0 mS	
TEMPERATURE COMPENSATION	PT100	
CONTROL	/	PID
INPUT SIGNAL	PCB	
POWER SUPPLY	240VAC 50/60Hz ; 12 or 24VDC (specify on order)	
AVERAGE CONSUMPTION	25 W	
ON/OFF OUTPUT	2 relays; 5A @ 230 VAC (fuse protected)	
ALARM OUTPUT	(same as power supply) alarm output	
INPUT	Stand-by Flow Conductivity probe Temperature probe	Stand-by Flow Conductivity probe Temperature probe Water meter mA water meter [1]
OUTPUT	2 relay output (Conductivity and alarm) 2 mA output (Conductivity and temperature) [1] Alarm output (relay)	2 relay output (Conductivity) 2 opto coupled output (Conductivity) 1 relay output for probe cleaning 1 relay output for circulating pump 3 mA output (Conductivity and temperature, PID) Alarm output (relay)
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	
WEIGHT	1,45 kg (3.1967 lb)	
INSTALLATION	vertical wall (4 fixing holes)	
OPTIONS [1]	• mA output • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WiFI configuration [2] • GSM/GPRS configuration [2]	• mA water meter input • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WIFI 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.

LDSCD IND - LDSCD IND PLUS

	LDSCD IND	LDSCD IND PLUS
MEASURING PARAMETER	Inductive conductivity with temperature reading (°C or °F)	
RANGE	0 - 3000 µS 0 - 30,00 mS 0 - 300,0 mS	
TEMPERATURE COMPENSATION	PT100	
CONTROL	/	PID
INPUT SIGNAL	PCB	
POWER SUPPLY	240VAC 50/60Hz ; 12 or 24VDC (specify on order)	
AVERAGE CONSUMPTION	25 W	
ON/OFF OUTPUT	2 relays; 5A @ 230 VAC (fuse protected)	
ALARM OUTPUT	(same as power supply) alarm output	
INPUT	Stand-by Flow Sonda conducibilità Temperature probe	Stand-by Flow Sonda conducibilità Temperature probe Water meter mA water meter [1]
OUTPUT	2 relay output (Conductivity and alarm) 2 mA output (Conductivity and temperature) [1] Alarm output (relay)	2 relay output (Conductivity) 2 opto coupled output (Conductivity) 1 relay output for probe cleaning 1 relay output for circulating pump 3 mA output (Conductivity and temperature, PID) Alarm output (relay)
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	
WEIGHT	1,45 kg (3.1967 lb)	
INSTALLATION	vertical wall (4 fixing holes)	
OPTIONS [1]	• mA output • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WiFI configuration [2] • GSM/GPRS configuration [2]	• mA water meter input • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WIFI 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.

LDSETORB 2 - LDESTORB 2 PLUS

	LDSETORB 2	LDSETORB 2 PLUS
MEASURING PARAMETER	Turbidity with temperature reading (°C or °F)	
RANGE	0 / 40,00 NTU 0 / 400,0 NTU 0 / 4000 NTU	
TEMPERATURE COMPENSATION	PT100	
CONTROL	/	PID
INPUT SIGNAL	PCB	
POWER SUPPLY	240VAC 50/60Hz ; 12 or 24VDC (specify on order)	
AVERAGE CONSUMPTION	25 W	
ON/OFF OUTPUT	2 relays; 5A @ 230 VAC (fuse protected)	
ALARM OUTPUT	(same as power supply) alarm output	
INPUT	Stand-by Flow Turbidity probe Temperature probe	Stand-by Flow Turbidity probe Temperature probe Water meter mA water meter [1]
OUTPUT	2 relay output (NTU and probe cleaning) 2 mA output (NTU and temperature) [1] Alarm output (relay)	2 relay output (NTU) 2 opto coupled output (NTU) 1 relay output for probe cleaning 1 relay output for circulating pump 3 mA output (NTU and temperature, PID) Alarm output (relay)
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	
WEIGHT	1,45 kg (3.1967 lb)	
INSTALLATION	vertical wall (4 fixing holes)	
OPTIONS [1]	• mA output • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WiFI configuration [2] • GSM/GPRS configuration [2]	• mA water meter input • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WIFI 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.

LDSTORB - LDSTORB PLUS

	LDSTORB	LDSTORB PLUS
MEASURING PARAMETER	Turbidity with temperature reading (°C or °F)	
RANGE	0 - 40,00 NTU	
TEMPERATURE COMPENSATION	PT100	
CONTROL	/	PID
INPUT SIGNAL	PCB	
POWER SUPPLY	240VAC 50/60Hz ; 12 or 24VDC (specify on order)	
AVERAGE CONSUMPTION	25 W	
ON/OFF OUTPUT	2 relays; 5A @ 230 VAC (fuse protected)	
ALARM OUTPUT	(same as power supply) alarm output	
INPUT	Stand-by Flow Turbidity probe Temperature probe	Stand-by Flow Turbidity probe Temperature probe Water meter mA water meter [1]
OUTPUT	2 relay output (NTU and probe cleaning) 2 mA output (NTU and temperature) [1] Alarm output (relay)	2 relay output (NTU) 2 opto coupled output (NTU) 1 relay output for probe cleaning 1 relay output for circulating pump 3 mA output (NTU and temperature, PID) Alarm output (relay)
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	
WEIGHT	1,45 kg (3.1967 lb)	
INSTALLATION	vertical wall (4 fixing holes)	
OPTIONS [1]	• mA output • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WiFI configuration [2] • GSM/GPRS configuration [2]	• mA water meter input • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WIFI configuration [2] • GSM/GPRS configuration [2] • Modbus configuration [2]

LDSDO - LDSDO PLUS

	LDSDO	LDSDO PLUS
MEASURING PARAMETER	Dissolved oxygen with temperature reading (°C or °F)	
RANGE	0 - 9,999 mg/l O_2 0 - 99,99 mg/l O_2 0 - 999,9 mg/l O_2 0 - 9999 mg/l O_2	
TEMPERATURE COMPENSATION	PT100	
CONTROL	/	PID
INPUT SIGNAL	PCB	
POWER SUPPLY	240VAC 50/60Hz ; 12 or 24VDC (specify on order)	
AVERAGE CONSUMPTION	25 W	
ON/OFF OUTPUT	2 relays; 5A @ 230 VAC (fuse protected)	
ALARM OUTPUT	(same as power supply) alarm output	
INPUT	Stand-by Flow Dissolved oxygen probe Temperature probe	Stand-by Flow Dissolved oxygen probe Temperature probe Water meter mA water meter [1]
OUTPUT	1 relay output (Dissolved oxygen) 2 mA output (Dissolved oxygen & Temperature) [1] Alarm output (relay)	2 relay output (Dissolved oxygen) 2 opto coupled output (Dissolved oxygen) 1 relay output for probe cleaning 1 relay output for circulating pump 3 mA output (Dissolved oxygen & Temperature, PID) Alarm output (relay)
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	
WEIGHT	1,45 kg (3.1967 lb)	
INSTALLATION	vertical wall (4 fixing holes)	
OPTIONS [1]	• mA output • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WiFI configuration [2] • GSM/GPRS configuration [2]	• mA water meter input • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WIFI 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.

LDSTRC - LDSTRC PLUS

	LDSTRC	LDSTRC PLUS
MEASURING PARAMETER	Tracers	
RANGE	0-999.9 ppm; resolution: 0,1 ppm	
TEMPERATURE COMPENSATION	/	
CONTROL	/	PID
INPUT SIGNAL	PCB	
POWER SUPPLY	240VAC 50/60Hz ; 12 or 24VDC (specify on order)	
AVERAGE CONSUMPTION	25 W	
ON/OFF OUTPUT	2 relays; 5A @ 230 VAC (fuse protected)	
ALARM OUTPUT	(same as power supply) alarm output	
INPUT	Stand-by Flow Trc level Trc probe Temperature probe	Stand-by Flow Trc level Trc probe Temperature probe Water meter mA water meter [1]
OUTPUT	1 relay output (Trc) 1 Opto coupled output (Trc) 2 mA output (Trc & Temperature) [1] Alarm output (relay)	2 relay output (Trc) 2 opto coupled output (Trc) 1 relay output for probe cleaning 1 relay output for circulating pump 2 mA output (Trc & Temperature, PID) Alarm output (relay)
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	
WEIGHT	1,45 kg (3.1967 lb)	
INSTALLATION	vertical wall (4 fixing holes)	
OPTIONS [1]	• mA output • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WiFI configuration [2] • GSM/GPRS configuration [2]	• mA water meter input • 12 or 24VDC power supply • ADVANCED USB configuration [2] • ETHERNET or WIFI configuration [2] • GSM/GPRS configuration [2] • Modbus configuration [2]

CONFIGURATIONS

	PLUS	WHEN	REQUIREMENTS	FUNCTIONS
BASIC	/	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	GSM 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
WIFI	WIFI network 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
MODBUS	Connection to other devices (PLC) via RS485	PLC plant management	/	PLC connection output for reading and modifying parameters

You can **CUSTOMIZE** configurations adding external modules.

MIXED CONFIGURATIONS allows to connect instruments to ERMES software in multiple ways: directly, locally and remotely. Those configurations extend connection capacity.
If you already use EMEC instruments and you want use ERMES web application, contact our **customers service**.