FEMA

MANUFACTURING FOR INDUSTRIAL AUTOMATION

50 YEARS	CE	
1969-2019	CE Product	
Q Quality	5 YEARS	c UL us
ISO9001	Extended Warranty	UL LISTED

Small Catalog 2021-2022

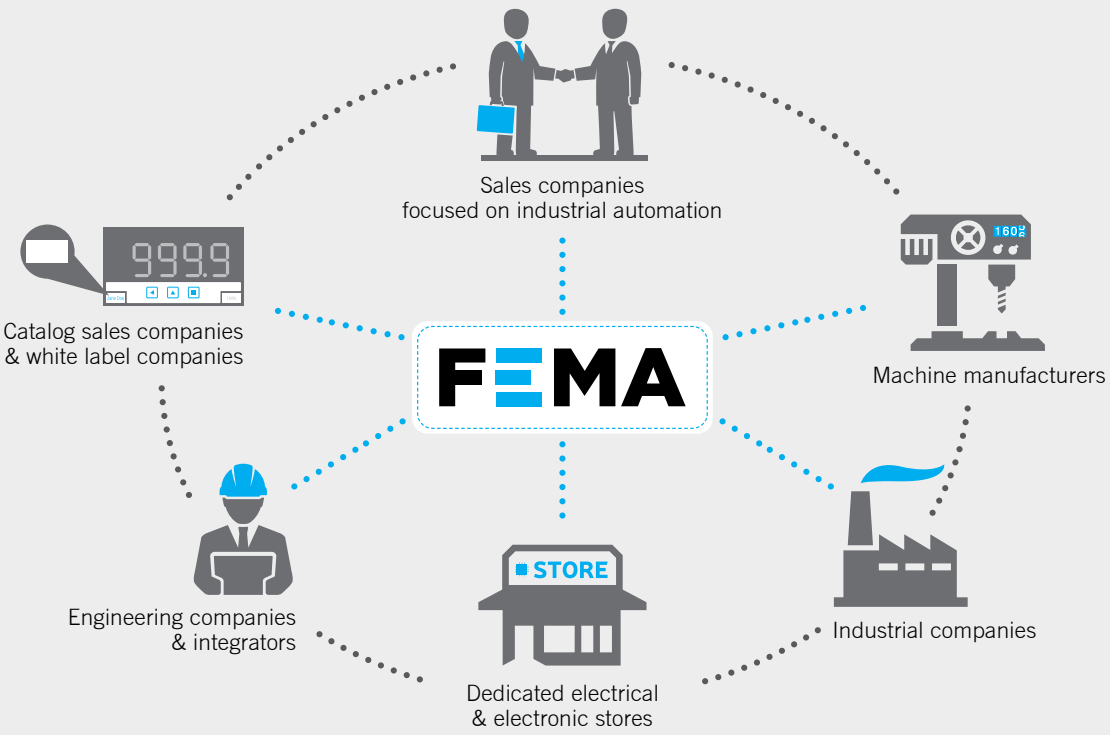
DIGITAL PANEL METERS
LARGE FORMAT METERS
ISOLATORS & SIGNAL CONVERTERS

Manufacturer of electronic instrumentation for the industrial automation field since 1969. FEMA provides to national and international companies with quality instrumentation, focusing into **the quality on the analog signal acquisition** and **isolation between circuits**.

With its main facilities located in Barcelona, FEMA **designs and produces** each instrument following a strict quality control. Today, **the reliability and quality of our instruments allows us to export more than 60% of our production world wide**, through **an extensive network of distributors and associated customers**.

With **more than 50 years** in the market **FEMA is recognized by its national and international customers** with their trust and confidence, and from external organizations, achieving its first official **ISO9001 Quality Certification** in 1999 and the **Best Export Award from the Chamber of Industry and Trade of Sabadell** in 1993.

With a wide catalog of instrumentation both for digital meters and for signals isolators and converters, **FEMA is the reliable partner** for your instrumentation needs**. For any additional information** about our Small Catalog, **check the FEMA General Catalog** or **visit our web page at www.fema.es**



SERVICES

URGENT ORDERS

Priority service for urgent orders. Material ready for delivery, at the agreed date and hour.

GLOBAL SHIPMENT

Shipments arranged every where in the world, with web tracking service for your information and security.

CUSTOMIZATION

Customization of the instrument or even instruments developed based on your requirements.

QUALITY

Quality instruments designed and manufactured in compliance with CE regulations.

PRE AND POST SALES SUPPORT

Our team identifies the instrument that best suits your needs and is ready for support at installation time.

EXTENDED 5 YEARS WARRANTY

Extended warranty from 2 to 5 years in all our products without additional cost through our web : www.fema.es

SERIES **M**

SERIES **K**

SERIES **S**

SERIES **B**

digital panel meters general industry applications

FEMA designs digital panel meters based on each particular signals needs on the industrial sector. Reliable instruments, with clear and sharp reading, variety of sizes, digits, colors, signals and options. The 'general industry applications' series has the instrument you need for your specific application, and FEMA is the reliable partner for your company.

The following table contains **information on series M, K, S and B**. For additional information, contact us or check our full catalog at **www.fema.es**

	SERIES **M**	SERIES **K**	SERIES **S**	SERIES **B**
	Series standard I Medium Extensive functions and performance Easy installation Intuitive programming menu	View up to 8 meters I King Extensive functions and performance Easy installation Intuitive programming menu	Compact size I Small Extensive functions and performance Easy installation Intuitive programming menu	Maximum view I Big Extensive functions and performance Flexible installation Intuitive programming menu
Digits	4, 5, 6	4	4	4, 6
Digit height	14 mm	20 mm	14 mm	60 mm 100 mm
Color	Red Green	Red	Red Green	Red Green
Reading	999999/-199999 99999/-99999 9999/-9999	9999/-1999	9999/-1999	999999/-199999 9999/-1999
Front size	96 x 48 mm	96 x 48 mm	72 x 36 mm	340 x 135 mm / 436 x 135 mm 542 x 166 mm / 740 x 166 mm
Deep	91 mm	91 mm	98 mm	80 mm
Power	H (85-265 Vac/dc) L (11-60 Vdc and 24/48 Vac)	H (85-265 Vac/dc) L (11-60 Vdc and 24/48 Vac)	H (85-265 Vac/dc) L (11-60 Vdc and 24/48 Vac)	H (85-265 Vac and 120-370 Vdc) L (11-36 Vdc)
Optional outputs	Relay outputs (1, 2, 3, 4 or 6) Transistor outputs (1, 2 or 3) SSR control outputs (1, 2 or 3) Analog outputs (1, 2 or 3) MODBUS RTU, RS-485, RS-232	Relay outputs (1, 2, 3, 4 or 6) Transistor outputs (1, 2 or 3) SSR control outputs (1, 2 or 3) Analog outputs (1, 2 or 3) MODBUS RTU, RS-485, RS-232	Relay outputs (1, 2 or 4) Transistor outputs (1 or 2) SSR control outputs (1 or 2) Analog outputs (1 or 2) MODBUS RTU, RS-485, RS-232	Relay outputs (1, 2, or 3) Transistor outputs (1, 2 or 3) SSR control outputs (1, 2 or 3) Analog outputs (1, 2 or 3) MODBUS RTU, RS-485, RS-232
Accessories	DIN rail mount Benchtop housing Adapter 96 x 96 mm Wall mount	DIN rail mount Benchtop housing Adapter 96 x 96 mm Wall mount	Adapter 72 x 72 mm Units labels	Remote keypad Panel junction protector
Other characteristics	Isolated circuits Modular architecture Plug-in screw terminals	Isolated circuits Modular architecture Plug-in screw terminals	Isolated circuits Modular architecture Plug-in screw terminals	View up to 25 and 50 meters Sturdy metallic IP65 housing Configurable from front keypad
Models and signals	Process PT100 and Thermocouples Counter, Ratemeter, Periodmeter Voltmeter AC and Ammeter AC Voltmeter DC and Ammeter DC Frequencymeter for AC lines Chronometer, Time counter Weight - Load cells For Potentiometers For MODBUS RTU protocol For RS-485 and RS-232 ASCII	Process PT100 and Thermocouples Counter, Ratemeter, Periodmeter Voltmeter AC and Ammeter AC Voltmeter DC and Ammeter DC Chronometer, Time counter Weight - Load cells For Potentiometers For MODBUS RTU protocol For RS-485 and RS-232 ASCII	Process PT100 and Thermocouples Counter, Ratemeter, Periodmeter Voltmeter AC and Ammeter AC Voltmeter DC and Ammeter DC Chronometer, Time counter Weight - Load cells For Potentiometers For MODBUS RTU protocol For RS-485 and RS-232 ASCII	Process PT100 and Thermocouples Counter, Ratemeter, Periodmeter Chronometer, Time counter Weight - Load cells For Potentiometers For MODBUS RTU protocol For RS-485 and RS-232 ASCII

SERIES **C**

EC4-ZR3

SERIES **V**

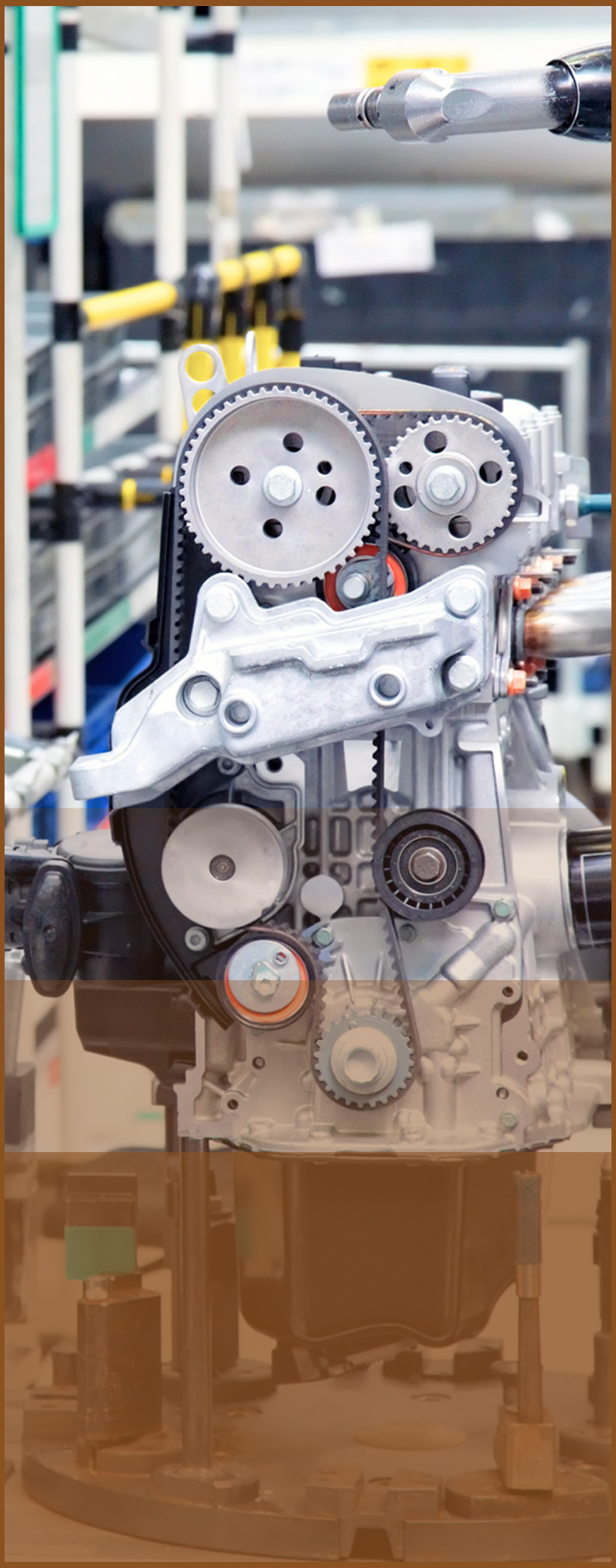
INST. **L35**

digital panel meters series OEM for industry

FEMA digital panel meters from the OEM series are designed to achieve a competitive price while acquiring a wide range of different signals in a single configurable instrument. Modularity, price and specifications makes OEM series a range of instruments highly competitive.

The following table contains **information on series C, EC4, V and L35**. For additional information, contact us or check our full catalog at **www.fema.es**

	SERIES **C**	**EC4-ZR3**	SERIES **V**	INSTRUMENT **L35**
	Universal input signal with universal power supply	'FULL EQUIP'	Compact size with universal power supply	Miniature size instruments
Digits	4 and 6	4	4	3 1/2
Digit height	14 mm	14 mm	14 mm	10 mm
Color	Red	Red	Red	Red
Reading	9999 / -1999 and 999999/-199999	9999/-1999	9999 / -1999	1999/-1999
Front size	96 x 48 mm	96 x 48 mm	72 x 36 mm	48 x 24 mm
Deep	91 mm	91 mm	75 mm	68 mm
Power	U (18-265 Vac/dc)	U (18-265 Vac/dc)	U (18-265 Vac/dc)	10-30 Vdc
Optional outputs	Relay outputs (1 or 2) Analog output Modbus RTU output	4 relay outputs SPST (included) 1 analog output (included)	- - -	- - -
Accessories	DIN rail mount Benchtop housing Adapter 96 x 96 mm Wall mount	DIN rail mount Benchtop housing Adapter 96 x 96 mm Wall mount	Adapter 72 x 72 mm	- - -
Other characteristics	Multi signal in a single instrument View up to 5 meters Configurable from front keypad Optional relays, analog and Modbus RTU Protection IP50, IP65 Isolated circuits	Instrument 'Full Equip' with 4 relays SPST and 1 isolated analog output included as standard Multi signal in a single instrument Configurable from front keypad Protection IP65 Isolated circuits	Compact size View up to 5 meters Configuration keypad behind the front filter Protection IP52 Isolated circuits Plug-in screw terminals	Miniature size View up to 4 meters Potentiometer based Plug-in screw terminals Anti reflexive front filter
Models and signals	Voltmeter AC and DC up to 600 Vac/dc Ammeter AC and DC up to 5 Aac/dc Process Temperature probes Pt, Ni, NTC, PTC and thermocouples Frequency meter up to 100 Hz Resistances and Potentiometers Flow meter	Voltmeter AC and DC up to 600 Vac/dc Ammeter AC and DC up to 5 Aac/dc Process Temperature probes Pt, Ni, NTC, PTC and thermocouples Frequency meter up to 100 Hz Resistances and Potentiometers	Voltmeter AC and DC up to 600 Vac/dc Ammeter AC and DC up to 5 Aac/dc Process Temperature probes Pt, Ni, NTC, PTC and thermocouples Frequency meter up to 100 Hz Resistances and Potentiometers	Process and Vdc



NEW
2021

SERIES **MBR**

NEW
2021

C UL US
LISTED

SERIES **UL**

NEW
2021

SERIES **LP4**

EM60-TH

digital panel meters special series

Within the 'special series' section are several examples of developments for specific industrial needs, High levels of quality and performance, each instrument fulfills specific needs : UL listed instruments, loop powered units, ratemeter with internal timer for applications with preventive maintenance and bar metersare some examples of our range of special instruments.

The following table contains **information on Series MBR, UL, LP4 and EM60-TH**. For additional information, contact us or check our full catalog at **www.fema.es**

	SERIES **BAR**	SERIES **UL**	**LP4**	**EM60-TH**
	Bar graph reading	Listed UL, multisignal	Loop powered	Ratemeter with timer
Digits	BAR leds	4	4	6
Digit height	30 segments	14 mm	14 mm	14 mm
Color	Red	Red	Red	Red
Reading	0/100 % horizontal 0/100 % vertical	9999 / -1999	9999/-1999	999999/-199999 RPM 99.23.59 days or 99.59.59 hours
Front size	96 x 48 mm	96 x 48 mm	96 x 48 mm	96 x 48 mm
Deep	91 mm	91 mm	91 mm	91 mm
Power	U (18-265 Vac/dc)	U (18-265 Vac/dc)	Loop powered	H (85-265 Vac/dc) L (11-60 Vdc and 24/48 Vac)
Optional outputs	Relay outputs (1 or 2) Analog output	Relay outputs (1 or 2) Analog output Modbus RTU output	---	Relay outputs
Accessories	DIN rail mount Benchtop housing Adapter 96 x 96 mm Wall mount		DIN rail mount Benchtop housing Adapter 96 x 96 mm Wall mount	Adapter 96 x 96 mm
Other characteristics	BAR led reading View up to 5 meters Configurable from front keypad Optional relays and analog Protection IP65 Isolated circuits	Multi signal in a single instrument View up to 5 meters Configurable from front keypad Optional relays, analog and Modbus RTU Protection IP50, IP65 Isolated circuits	Configurable from front keypad Protection IP50 and IP65	Impulse signals (NPN, PNP, ...) for RPM reading Internal time counter with alarm to manage preventive maintenances. Configurable from front keypad Protection IP65 Isolated circuits
Models and signals	Process and Potentiometers	Voltmeter AC and DC up to 600 Vac/dc Ammeter AC and DC up to 5 Aac/dc Process Temperature probes Pt, Ni, NTC, PTC and thermocouples Frequency meter up to 100 Hz Resistances and Potentiometers	4/20mA process signals	NPN and PNP with 2 and 3 wires Includes excitation voltage 2 relay outputs to signal excessive speed and / or maintenance time reached

NEW
2021

SERIE I4

SERIE I3

SERIES ISC

SERIES CCT-100

signal converters & isolators

Signal converters with galvanic isolation, for a wide range of electrical signals of common use in industry. From simple process isolators without configuration needs, up to more complex units for all type of signals : temperatures, process, voltages AC and DC, currents AC and DC, frequencies, resistances, etc.

The following table contains **information on series I3, ISC, CCT-100 and CCT-55**. For additional information, contact us or check our full catalog at **www.fema.es**

	Series Industry		Series OEM	
	SERIES **I4**	SERIES **ISC**	SERIES **I3**	SERIES **CCT-100**
	Signal converters and isolators	Signal converters and isolators	Signal converters and isolators	Isolator
Signal output	4/20 mA, 0/10 Vdc and others	4/20 mA, 0/10 Vdc, …	4/20 mA, 0/10 Vdc	Same as input
Mount	DIN rail mount	DIN rail mount	DIN rail mount	DIN rail mount
Power	U (18-265 Vac/dc)	0 (230 Vac) 1 (115 Vac) 6 (24 Vdc)	U (18-265 Vac/dc)	Loop powered
Other characteristics	Multisignal instrument for process, temperatures, electrical (Vac, Vdc, Aac, Adc and power frequency) and load cells. Isolated input-output-power Easy configuration with codes Advanced configuration with configuration menu. Configuration with front key pad	Wide range of signals Isolated input-output-power High level of isolation Configurable with front potentiometers and jumpers	Multisignal instrument for process, temperatures, resistances and potentiometers Isolated input-output-power Easy configuration with codes Configuration system hidden behind the front cover	Series OEM Loop powered No configuration needed Output same as input
Models and signals	For process, temperatures, resistances and potentiometers. For electrical signals (Vac, Vdc, Aac, Adc and power frequency). For impulse signals. For load cells	Process Pt100 Thermocouple J Thermocouple K Thermocouple T Thermocouple E Thermocouple S Thermocouple R Voltages DC Voltages AC Currents DC Currents AC Potentiometers Resistances Frequencies Load cells	1 single model for : - Process - Pt100, Pt500, Pt100 - Thermocouples J, K, N, E, T, R, S - Ni100, Ni1000 - NTC - Potentiometers - Resistances	Process in mA

FEMA

INSTRUMENTATION FOR INDUSTRIAL AUTOMATION

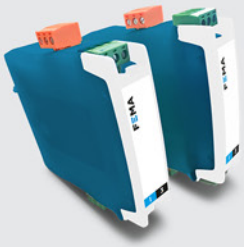
PANEL METERS . SIGNAL CONVERTERS. LARGE FORMAT

DIGITAL PANEL METERS
Series Industry

SIGNAL CONVERTERS
Isolated

LARGE DISPLAYS
Series Industry

PANEL METERS . SERIES OEM
Low Cost



CONVERTERS . SERIES OEM
Low Cost

LARGE DISPLAYS
Series Special

SPECIAL INSTRUMENTS
Series Special

DATA ACQUISITION
Series Industry

'CUSTOMIZED' INSTRUMENTS

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