ER500 digital weighing indicator

product description

The ER500 is the ideal display instrument for high-precision and high-resolution measurement in process weighing, automation and control, as well as industrial testing. This versatile, all-in-one weighing system integrates an amplifier, analogue-to-digital converter, and indicator into a single device, thereby enhancing efficiency and simplifying setup. By connecting directly to our analogue load cells, it streamlines the measurement process for both static and dynamic tasks. The device is available in three versions, each tailored to a specific application and certified to the relevant OIML legal-for-trade standard.

Featuring selectable termination resistance, comprehensive functions, and calibration options, the ER500 caters to a wide range of industrial demands. It supports numerous interfaces, including the ASCII communication protocol, for seamless integration across diverse systems. Easy TS35/DIN rail mounting and MID 2 EMC compliance simplify installation in any industrial setting.

User-friendly management and configuration via the ER500's embedded web interface and Flintec's FDC software, readily available on our website.

available models

ER500-G	ER500-C	ER500-F
General Weighing	Check Weighing	Gravimetric Filling
Legal-for-trade	Legal-for-trade	Legal-for-trade
OIML R76	OIML R51	OIML R61

key features

OIML certified to 10,000 intervals

DIN/TS35 rail mountable, IP20

Conversion rate of 1200 samples/s

Accurate 24-bit sigma-delta ADC

6-Wire Technology and selectable input filters (FIR/IIR)

3x Digital Inputs (isolated) and 3x Digital Outputs (isolated).

Flintec FDC Application Software

RS232, RS485, Ethernet & USB

Modbus (RTU/TCP) & ASCII

Embedded Web Interface

Analogue Current & Voltage Outputs (isolated)

Selectable termination impedance

specifications

Model	ER500-G	ER500-C	ER500-F
Function	General Weighing	Check Weighing	Gravimetric Filling
Application modes	NAWI	AWI	AWI
Bridge Excitation	+5V$_{DC}$		
Sensor Configuration	4-Wire or 6-Wire		
Accuracy Class	III	XIII or XIIII or Y(a) or Y(b)	Class III – Ref Class X(0.5); X(1); X(2)
Verification Scale Intervals	10,000		
Minimum Input Sensitivity	0.05µV/d		
Certified Accuracy	0.2µV/vsi		
Weighing Range	Single Interval, Multi-Range or Multi-Interval 10,000/n x 10,000 (n = 1, 2, 3)		
Resolution (External)	±600,000		
Analogue Input Range	±15mV (±3mV/V @ +5VDC Excitation)		
Minimum Load-Cell Impedance	43Ω (e.g. 1x350Ω; 8x350Ω)		
Maximum Load-Cell Impedance	1,200Ω		
Linearity	±0.0005%		
Measurement Sampling Rate	2.5 to 1,200sps		
Calibration	Electronic Calibration in mV/V (eCal) or Test Weight(s)		
Digital Low-Pass Filter	FIR/IIR Filter (Dependant on settings)		
Weighing Functions	Zero, Gross, Tare, Net, Filters etc.		

Interface 1: USB

Protocol	USB CDC (Configuration & Setup Only)
Baud-Rate	Auto-Detected.

Interface 2: RS-232

Protocol	ASCII Characters
Baud-Rate	9.6k, 19.2k, 38.4k, 57.6k, 115.2k, 230.4k or 460.8kBits/s
Format	Full-Duplex (8-Data Bits; No Parity; 1-Start Bit, 1-Stop Bit)

Interface 3: RS-485

Protocol	ASCII Characters or Modbus Binary Data
Baud-Rate	9.6k, 19.2k, 38.4k, 57.6k, 115.2k, 230.4k or 460.8kBits/s
Format	8-bit Data, No Parity, 1-Start Bit, 1-Stop Bit (Full & Half Duplex)

Interface 4: Ethernet

Protocol	Ethernet TCP/IP (port 23) or Modbus TCP/IP (port 502)
Baud-Rate	10/100MBits/s (Isolated RJ-45).
Format	Setup via serial comms or panel keys – Default IP 192.168.1.100

Interface 5: Analogue Out

Analogue Current Output	0-20mA or 4-20mA, Isolated, max. 500Ω
Analogue Voltage Output	0-5V, 0-10V, ±5V, ±10V, Isolated 10kΩ

3x Logical Inputs

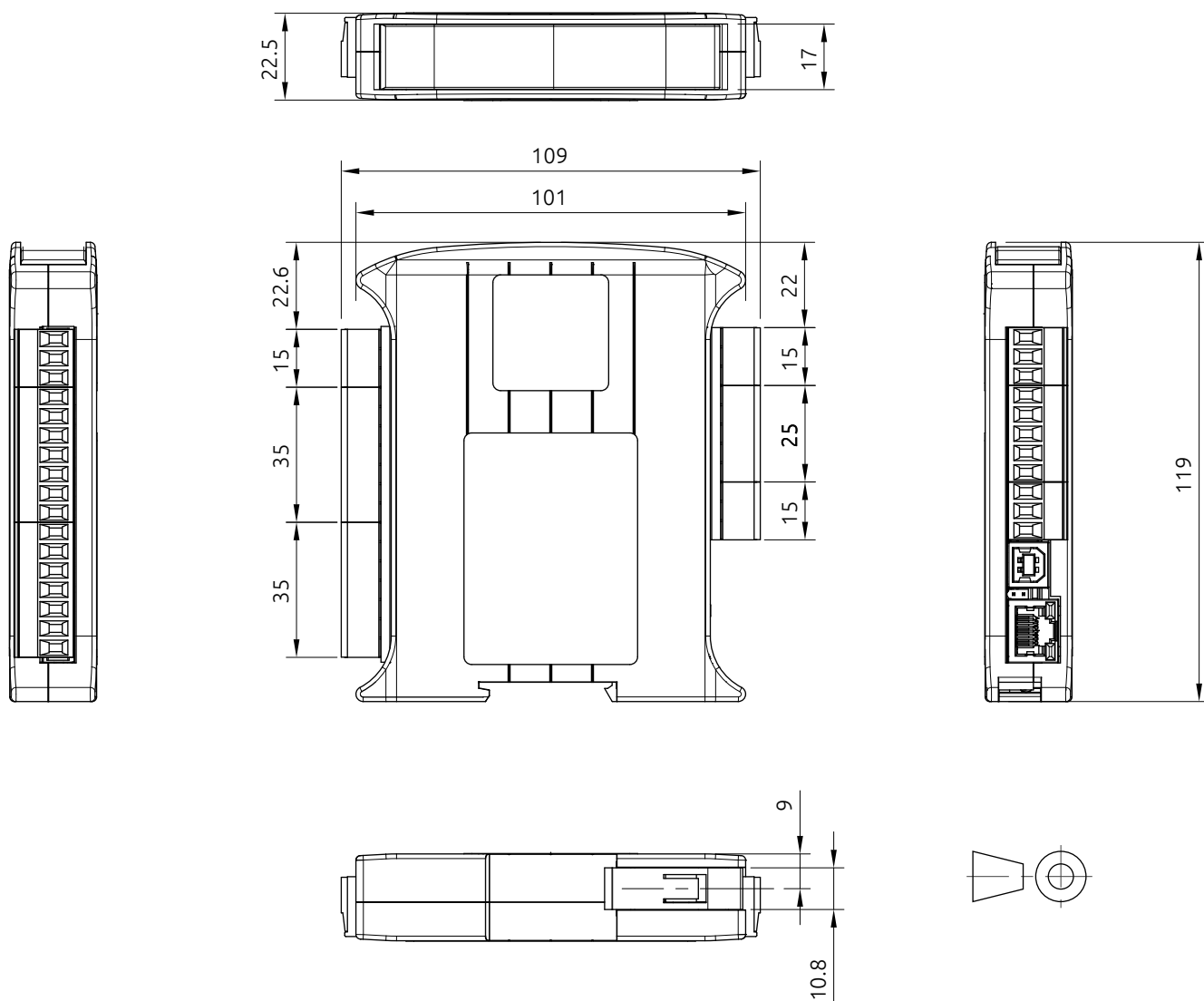| Maximum Input Voltage	$+32V_{DC}$
Threshold Voltage (approx.)	$>+6V_{DC}$
Input Impedance (approx.)	≥10kΩ

3x Logical Outputs

Maximums	+32V, 500mA (External pull-up required)
Output Configuration	Semiconductor Relay, Common GND, Isolated Output

General

Power Supply	+9VDC to +32VDC, <4W
Operating Temperature Range	-15°C to +55°C at 85% RH max. Non-condensing
Storage Temperature Range	-30°C to +70°C
Weight	170g approx.
Dimensions (L x W x D)	119mm x 109mm x 22.5mm
Mounting	IEC 60715 / TS35
Protection Rating	IP20

product dimensions (mm)

Dimensions and specifications are subject to change without notice.