

EA310 Analogue Amplifier



product description

The EA310 is an accurate, economical analogue amplifier designed for straightforward weighing and force-measurement applications. It delivers your choice of a 4–20mA current or 0–10V voltage output, with a high-resolution 16-bit D/A converter and approximately 65,000 counts of external resolution for precise, stable signal conversion.

Built around a 24-bit Delta-Sigma A/D converter, the EA310 provides 5VDC excitation for up to six 350Ω load cells, supports 4- or 6-wire connection, and accepts a bipolar $\pm 4\text{mV/V}$ input. Setup and calibration are handled entirely from the front panel using a rotary switch and push buttons, with optional digital filtering configurable via the free FDC PC software over USB.

Housed in a compact DIN-rail enclosure (EN60715, IP20) and operating from a 9–32VDC supply across a -25 to $+70^\circ\text{C}$ range, the EA310 is a reliable, low-drift choice for panel and cabinet installations where a clean analogue signal is all that's needed.

applications

Tank, silo, hopper and vessel contents monitoring

Platform, floor and bench scales, and general industrial/process weighing

Feeding load cell signals to a PLC, PAC or DCS in agricultural and material-handling systems

key features

Analogue output: 4–20mA or 0–10V, selectable

16-bit very-low-drift D/A converter with around 65,000-count external resolution

24-bit Delta-Sigma A/D with $\pm 0.015\%$ linearity

5VDC excitation for up to 6x 350Ω load cells

4 or 6-wire, bipolar ($\pm 4\text{mV/V}$) load cell input

Front-panel setup and calibration via rotary switch and push buttons

Digital filter selection via free FDC PC software over USB

Compact DIN-rail enclosure (EN60715, IP20)

Wide -25 to $+70^\circ\text{C}$ operating range with low long-term drift



RoHS
compliant



specifications

Model	-	EA310
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Analogue Output

Current	mA	4-20
Voltage	V	0-10
D/A converter	-	16-bit very low drift
External resolution	Counts	65,535

Load Cell Interface

Minimum bridge resistance	Ω	58 (6x 350)
Excitation	V	5
Connection	-	4 or 6 wire (external jumpers for 4-wire)

A/D Conversion

Input signal range	mV/V	± 4
A/D Converter	-	24-bit Delta-Sigma
Linearity	%	± 0.015
Internal resolution	Counts	16,000,000
External sampling rate	SPS	80, 200 or 600
Digital Filter	-	3x Running Average option

Setup & Communication

Mode selection	-	Via rotary switch
Calibration	-	Via rotary switch and push buttons
Setpoint adjustment	-	-
Indicator LEDs	-	RUN & ERROR
PC software	-	FDC
Digital communications	-	USB

Power Supply

DC supply only	V	9 to 32
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Digital Input

Type	-	-
Max input voltage	V	-
Min threshold voltage	V	-
Input impedance	kΩ	-

Digital Set-point Outputs

Type	-	-
Max voltage	V	-
Max current	A	-

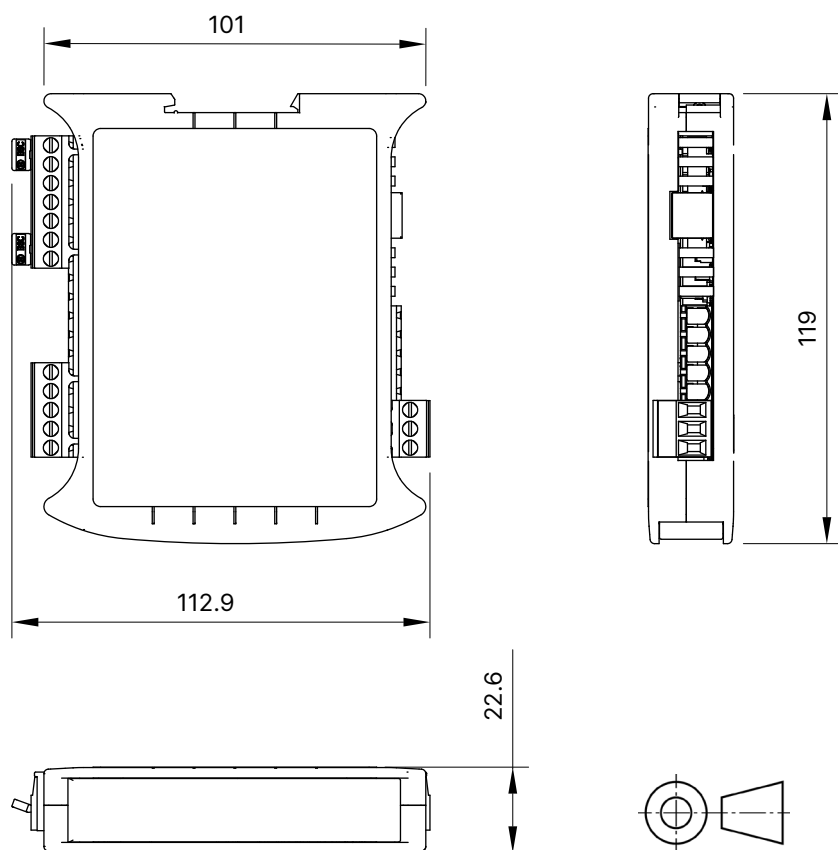
Environmental & Enclosure

Operating temp range	°C	-25 to +70
Storage temp range	°C	-25 to +70
Humidity	%RH	Max 85, non-condensing
Enclosure	-	DIN-rail mount EN60715, IP20

Approvals & Standards

EMC	-	EN61326-1
RoHS	-	EN IEC 63000:2018

product dimensions (mm)



Dimensions and specifications are subject to change without notice.