## **201 Weight Transmitter**

## **DIN Rail Bracket and PLC Connectivity**













Cardinal Scale's model 201 weight transmitter is a fast, accurate instrument for process control-based static and dynamic weighing applications. The 201 is capable of powering up to eight 350-ohm load cells and comes with a 35-mm DIN rail mounting bracket. The USA-made 201 transmitter features a 0.5-inch-high, six-digit, transflective LCD display with up to seven different colors and is viewable in all lighting levels from direct light to total darkness. A variety of mounting options and ColorZONE control options make it ideal for quick visual verification of weight status.

The model 201 offers sample rates of up to 200 samples per second and standard communication protocols include serial interface RS232/RS485, mini USB-B, Analog (0-10V or 4-20mA), Ethernet TCP/IP, EIP, and Modbus TCP, making it easy to connect to a PC, PLC, and other smart devices. Four programmable digital inputs and outputs are included to make it even more flexible. Connectivity set-up is simple using the printed legend on the front of the 201 enclosure. Setup and calibration of the model 201 is fast and easy using both the on-screen indicator menu prompts or Web browser interface via IP address.

## **201 STANDARD FEATURES:**

- Push-button tare function
- · Gross, Tare, Net conversion
- High-resolution mode
- · StableSENSE adjustable filtering
- Gross and Net Accumulators
- SMA level 2 compliant serial communications (more information at www.scalemanufacturers.org)
- Field re-programmable via PC interconnection
- Remote display (requires optional cable and connectors)
- Over and Under checkweigher function with outputs (screen changes color based on weight condition)
- 7 selectable display screen colors: amber, green, red, blue, white, purple, and pink
- · Selectable Function key definition

SPECIFICATIONS	
Power Requirements	12-24 VDC @ 6w
Listed Accessory	The weight transmitter is intended to be used with Listed Information Technology Equipment
Enclosure Rating	IP-20 DIN Rail 35 mm, mounted in customer's enclosure with optional remote display mounting
Enclosure Size	4 inch W x 4.2 inch H x 1.9 inch D without connectors (101.6 mm W x 106.7 mm H x 48.3 mm D)
Operating Temperature	14 to 104 Fahrenheit (-10 to 40 Celsius)
Display Capacity	Six-digit, 7-segment, 0.5-inch/12.7-mm high with separate annunciators; OVER, UNDER, and ACCEPT backlight indicators, annunciators: IN1, IN2, IN3, IN4, OUT1, OUT2, OUT3, OUT4
Display Technology	Transflective LCD with RGB LED backlight
Load Cell Excitation	11.72VDC
Signal Input Range	.5mV min to 35mV max.
Load Cell Connection	4 or 6 wire (remote excitation sensing)
Minimum Cell Resistance	43.75 OHMS (8, 350-ohm load cells)
Division Value	Commercial: 1, 2, 5, 10, 20, 50 x 10, 1, .1, .01, .001 Non-Commercial: 0 - 99
Sensitivity	.5uV/scale division
Resolution	10,000 Divisions
Sample Rate	1 - 200 samples per second, selectable
Zero Range	+/- 2% to 100% Full Scale, selectable
Units of Measure	Pounds, Ounces, Kilograms, Grams
Keys	Six, Membrane Type: ZERO, TARE, NET/GROSS, F1, F2, F3
Approvals	Class III NTEP, Class III Measurement Canada, UL, CE

201 PLC CONNECTIVITY	
RS232 Serial	The 201 can be configured for continuous or on-demand weight requests. Commands may be sent for all weight functions such as ZERO, TARE, etc.
RS485 Serial	The 201 can be configured for continuous or on-demand weight requests. Commands may be sent for all weight functions such as ZERO, TARE, etc.
Digital Outputs	The 201 has four digital outputs that can be configured for checkweighing UNDER, ACCEPT, and OVER status.
Digital Inputs	The 201 has four digital inputs that can be configured to perform functions such as ZERO, TARE, GROSS/NET, UNITS, or PRINT. A PLC could be connected to these inputs to trigger these functions.
Analog Output	The 201 has capabilities for 0-10VDC and 4-20mA that can be configured to track the gross or net weight values.
Modbus TCP	The 201 supports Modbus/TCP to allow a PLC to receive weight and status information. The PLC may send commands such as ZERO and TARE to the 201 using Modbus/TCP.
Modbus RTU/ASCII	The 201 supports Modbus RTU/ASCII to allow a PLC to receive weight and status information. The PLC may send commands such as ZERO and TARE to the 201 using Modbus RTU/ASCII.
Ethernet Raw Socket	The 201 can be configured as a TCP/IP server to accept socket connections. The TCP/IP server port may be selected during set up.
USB Device	The 201 has a USB-B mini device connection, so it can be connected to a PC and, with the appropriate driver, will appear as a virtual COM.
Web Page Configuration and Diagnostics	The 201 includes a Web server that displays the current weight, digital and analog I/O states. The Web server allows remote configuration of various settings. The Web page also includes diagnostics of network connections that is useful for installation and troubleshooting of Modbus/TCP or Ethernet/IP.

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