520 Digital Weight Indicator

Approvals

NATIONAL CONFERENCE WEIGHTS AND MEASURES NTEP

Measurement Canada Approved

C E (pending)

c UL us LISTED

OIML (pending)

ANOTHER *REVOLUTION* SOLUTION

PART # | **DESCRIPTION**
68715 .... 520 panel mount, 115 VAC
71873 .... 520 panel mount, 230 VAC
71868 .... 520 panel mount w/Euro 2-pin plug†, 230 VAC

†CEE 7/7 plug pattern

Applications

- Batching, checkweighing, or straight weighing applications
- High speed weighing
- Panel mount
- Peak hold
- Count mode

Standard Features

- Large 0.75" (19 mm), seven-digit Vacuum Fluorescent Display (VFD)
- 16 character 0.25" (6.3 mm) VFD prompting display
- Eight configurable operator prompts
- Three digital inputs and four digital outputs
- Selectable A/D measurement rates up to 120/second
- Two communication ports:
  EDP port—full duplex, RS-232 and RS-485
  Printer port—full duplex, RS-232 or 20 mA current loop
- Five programmable ticket formats for Gross, Net, Setpoints, Count, and EDP format
- 18 setpoint kinds
- Programmable stream print format
- Time and date
- Pushbutton or scrolled tare entry
- Over/accept/under checkweigh mode
- Front panel or serial configuration/calibration
- 5-point linearization calibration
- Millivolt calibration
- Gravitational compensation calibration
- Power for eight 350Ω load cells or sixteen 700Ω load cells
- Expansion port for option card
- Key functions: zero, gross/net, tare, units, print

Designed for process control, batching, checkweighing and custom applications, the 520 digital weight indicator delivers an exceptional combination of performance and value. Its panel mount enclosure is compact to conserve space in control panels and other custom system designs, allows convenient rear access for connections, and maintains a NEMA 4X/IP67 seal to protect electronics in dusty and washdown environments. Easy to read in light and dark environments, the 520 features a vacuum fluorescent primary weight display with large .75-inch characters. A 16-character prompting display can be programmed with up to eight different messages to guide operators through weighing processes. In addition, five multi-function keys can be configured to perform a variety of tasks such as setting time, date, keyed tare, setpoint and checkweigh information.

The 520 is loaded with performance-driven features that easily enable customization and system integration. It offers four TTL outputs controlled by 18 configurable setpoint kinds or two checkweigh types, as well as optional analog output. Operating at selectable A/D rates of up to 120 updates per second, the 520 quickly locks in weight data for optimal production rates. RATTLETRAP® two-stage digital filtering virtually eliminates noise and vibration that can interfere with obtaining stable weight data. Other value-added features include peak hold for capturing maximum values, time and date, a counting mode and an accumulator for material management and inventory tracking. In addition, Revolution™ Scale Software allows simple Windows®-based configuration of the 520 digital weight indicator.

Options/Accessories

67602 ....Analog output: selectable 0-10V, 0-20 mA, 4-20 mA
71986 ....Ethernet TCP/IP 10/100 Base-T module
65383 ....Ethernet TCP/IP 10 Base-T module (external)
68541 ....DeviceNet™ interface
68539 ....Allen-Bradley Remote I/O interface
68540 ....Profibus® DP interface
68386 ....BCD output
46030 ....Revolution Scale Software*
68973 ....Additional operating manual

ethernet connectivity

DeviceNet

ENCOMPASS ROCKWELL AUTOMATION AMERICAS PARTNER

PROFI BUS

* Revolution can be downloaded for FREE from the distributor section of our website at www.rlws.com
DeviceNet is a registered trademark of Open DeviceNet Vendors Association

NOTE: Because A-B Remote I/O, Profibus DP, DeviceNet, and Ethernet option boards interface with programs written by non-RLWS parties, please consult factory for latest technical updates before quoting.

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

LINE VOLTAGES:
115 or 230 VAC

POWER CONSUMPTION:
160 mA @ 115 VAC
80 mA @ 230 VAC

FUSING (F1 & F2):
115 VAC: 2 x 160 mA TR5 subminiature fuses, Wickmann Time-Lag 19374 Series, UL Listed, CSA Certified and Approved

230 VAC: 2 x 80 mA TR5 subminiature fuses, Wickmann Time-Lag 19372 Series, UL Recognized, Semko and VDE Approved

FULL SCALE INPUT SIGNAL:
± 78 mV

EXCITATION VOLTAGE:
10 ± 0.5 VDC, eight x 350Ω or sixteen x 700Ω load cells

SENSE AMPLIFIER:
Differential amplifier with 4- and 6-wire sensing

ANALOG SIGNAL INPUT RANGE:
0.3 mV/V – 7 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 μV/graduation @ 7.5Hz,
1.5 μV/graduation recommended @ 120Hz

A/D SAMPLE RATE:
7.5 – 120Hz, software selectable

INPUT IMPEDANCE:
200 MΩ, typical

NOISE (USABLE MINIMUM LSB):
0.3 μV p-p

INTERNAL RESOLUTION:
Approximately 8,000,000 counts @ 23 usable bits

DISPLAY RESOLUTION:
100,000 dd

INPUT SENSITIVITY:
10 nV per internal count

SYSTEM LINEARITY:
0.01% of full scale

ZERO TEMPERATURE:
150 nV/°C, maximum

SPAN TEMPERATURE:
± 3.5 ppm/°C, maximum

CALIBRATION METHOD:
Software, constants stored in EEPROM

COMMON MODE VOLTAGE:
± 0.8V in unbalanced condition

COMMON MODE REJECTION:
120 dB minimum @ 50 or 60 Hz

INPUT OVERLOAD:
± 12 V continuous, static discharge protected

EMI/RFI PROTECTION:
Signal, excitation, and sense lines protected by capacitor bypass and filtering elements

ANALOG OUTPUT:
Optional: fully isolated, voltage or current output
Voltage output: 0-10 VDC
Load resistance: 1KΩ minimum
Current output: 4-20 mA
External loop resistance: 500Ω maximum

MICROCOMPUTER:
Hitachi H8/3002 main processor @ 14.74756 MHz

DIGITAL INPUTS:
3 inputs, TTL or switch closure, active-low

DIGITAL OUTPUTS:
4 outputs, current limited darlington pair with TTL pull-up, 40V withstand

DIGITAL FILTER:
Two stage software selectable: 1–256, enhanced Rattletrap® hybrid digital filtering

EDP PORT:
Full duplex RS-232 or RS-485

PRINTER PORT:
Full duplex RS-232 or active 20mA current loop output, 2 wire

BOTH PORTS:
300, 600, 1200, 2400, 4800, 9600, 19,200 bps; 7 data bits with even or odd parity; 8 data bits with no parity; two stop bits on transmit, one stop bit on receive

DISPLAY:
Vacuum fluorescent display (VFD), 7-digit, 14-segment primary weight display. Two 5 x 7 dot matrix digits for units, alphanumeric entry mode designators. 16-character dot matrix display for additional symbols, user prompts

KEYBOARD:
5-key membrane panel

OPERATING TEMPERATURE:
Legal: 14°F to 104°F (-10°C to 40°C)
Industrial: 14°F to 122°F (-10°C to 50°C)

STORAGE TEMPERATURE:
-13°F to 158°F (-25 to 70°C)

HUMIDITY:
0-95% relative humidity

WEIGHT:
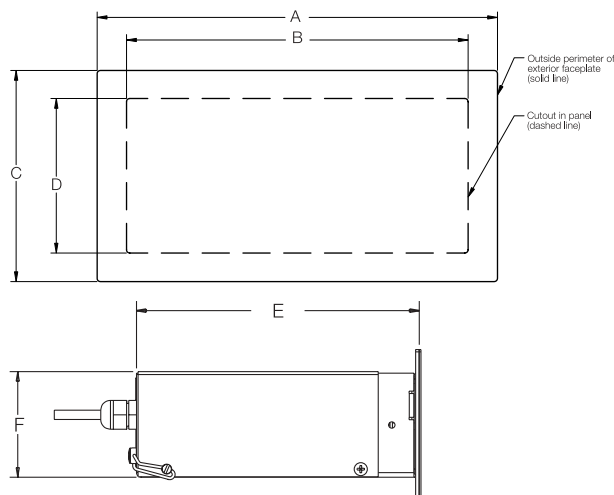6 lb (2.7 kg)

RATING/MATERIAL:
NEMA 4X/IP65 exterior panel surface only stainless steel

APPROVALS:
NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC# 01-087; Measurement Canada approved, AM-5425; CE and OIML pending; UL & CUL listed

WARRANTY:
2-year limited warranty

DIMENSIONS			
A =	7.36" (186.9 mm)	D =	2.84" (72.1 mm)
B =	6.22" (157.9 mm)	E =	7.35" (186.6 mm)
C =	3.88" (98.5 mm)	F =	2.75" (69.8 mm)