

## 420 Plus

Digital Weight Indicator



### Standard Features

- LED display, 0.8 in (20.3 mm), six-digit, seven-segment
- Full numeric keypad
- NEMA Type 4X/IP66 stainless steel washdown enclosure
- Power for eight 350 ohms load cells or 16, 700 ohms load cells
- Configurable analog to digital measurement rate
- Primary/secondary units configuration: lb, kg, ounces, short tons, metric tons, grams or none
- Two independent communication ports:  
(2) full duplex, (1) unidirectional active 20 mA current loop
- Standardized EDP command sets
- Programmable ticket formats up to three 300-character printouts
- Full front-panel digital calibration and configuration
- Universal mounting stand
- Three-stage digital filtering
- Consecutive transaction numbering
- Two digital inputs, two digital outputs
- Time and date
- Count mode
- Two setpoints, free running
- Keyed tare
- Accumulator
- Configurable with Revolution® software

### Approvals



Measurement  
Canada  
Approved



### Specifications

#### Power, AC:

Line voltages: 100-240VAC  
Frequency: 50-60 Hz  
Power consumption: 1.5A at 115VAC (8W)  
0.75A at 230VAC (8W)

#### Power, DC:

Line voltages: 9-36VDC DC input  
Power consumption: 1.5A Max

#### Excitation Voltage:

+5VDC 8 x 350Ω or 16 x 700Ω load cells

#### Analog Signal Input Range:

-0.5 mV/V - 4.5 mV/V

#### Analog Signal Sensitivity:

0.3 μV/graduation minimum,  
1.5 μV/grad recommended

#### A/D Sample Rate:

7.5 to 60 Hz software selectable

#### Resolution:

Internal: 8 million internal graduations  
Display: 100,000 displayed graduations

#### System Linearity / PI Rating:

Within 0.01% of full scale

#### Digital I/O:

Two inputs with eight functions  
Two outputs, 250 mA max sink

#### Circuit Protection:

RFI, EMI, ESD protection

#### Communication Ports:

EDP port: Full duplex RS-232  
Printer port: Full duplex RS-232 or simplex active  
20 mA current loop  
Both ports: 38400, 19200, 9600, 4800, 2400, 1200,  
600, 300bps; 7 or 8 data bits; even, odd, or no parity

#### Display:

0.8 in (20 mm), six-digit super red light emitting diode  
(LED) display, seven-segment, digits

#### Status Annunciators:

Designators for: Center of zero, stand still, gross, net,  
lb, kg, count, tare

#### Keys/Buttons:

21-key flat membrane panel

#### Temperature Range

Certified: 14°F to 104°F (-10°C to 40°C)  
Operating: 14°F to 122°F (-10°C to 50°C)

#### Weight:

6.1 lb (2.8 kg)

#### Rating/Material:

Enclosure: NEMA Type 4X/IP66, heavy gauge  
stainless steel

#### Warranty:

Two-year limited warranty

#### Approvals:

NTEP CC 04-076, Class III/IIIL 10,000d  
Measurement Canada AM-5554, Class III/IIHD  
10,000d  
EU Test Certificate TC004, 10,000d  
UL/cUL Listed  
CE marked

## Part Number/Price

Part #	Description	Est. Weight	Price
85124†	420, 115 VAC	10 lb	\$795.00
85125††	420, 230 VAC	10 lb	\$795.00
85126††	420, 230 VAC CE marked/OIML approved	10 lb	\$795.00
85656	420, 9-36 VDC nominal	10 lb	\$895.00
88652†	420 Plus, 115 VAC w/quick connect (Required cable 53640)	10 lb	\$850.00
88653††	420 Plus, 230 VAC w/quick connect (Required cable 53640)	10 lb	\$850.00

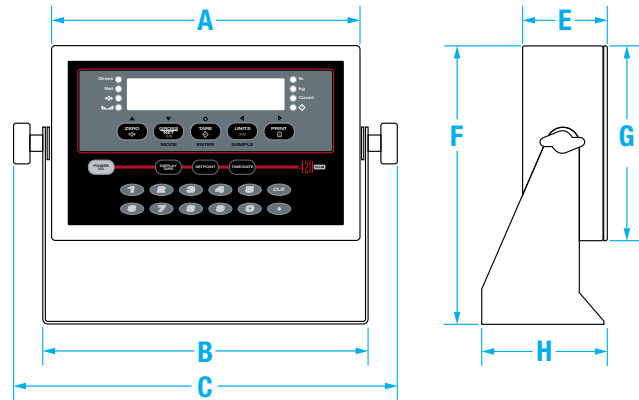


## Options/Accessories

Part #	Description	Price
85659	Analog output: selectable 0-10V, 4-20 mA	\$308.00
52948**	Panel mount kit	\$155.00
77925*	Revolution® scale software	\$35.00
85127	Additional operating manual	\$27.00
92777	Filter, PreVent™ vent kit	\$30.00
91895	Quick Connect, female connector and cable, 17 in	\$22.00
53640	Quick Connect, male connector and cable, 20 ft	\$40.00
Primary Component Parts		
88835	Board assembly	\$516.00
84397	Overlay membrane panel	\$62.00
76556	Power supply, auto switching	\$52.00
132750	DC/DC converter, 9-36VDC	\$150.00
85791	Fuse, 2.5A, 5 mm x 20 mm	\$3.15

\* Revolution can be downloaded for free at [www.ricelake.com](http://www.ricelake.com)

\*\* Panel mount kit is not NEMA rated, consult factory for modifications.



Dimensions			
A	9.50 in (241 mm)	E	3.12 in (79 mm)
B	10.02 in (255 mm)	F	8.57 in (217 mm)
C	11.80 in (300 mm)	G	6.00 in (152 mm)

# 120/120 Plus

## Digital Weight Indicator



### Standard Features

#### 120

- LED display, 0.8 in (20.3 mm) six-digit, seven-segment
- Configurable analog to digital measurement rate
- Power for four 350 ohms load cells
- Primary/secondary units configuration: lb, kg, ounces, grams
- Five-button operation
- Two independent communication ports: (1) full duplex, (1) unidirectional or active 20 mA current loop
- Standardized EDP command sets
- Programmable ticket format up to two 180-character printout
- Full front-panel digital calibration and configuration
- Tilt stand
- Three-stage digital filtering
- Consecutive transaction numbering
- Time and date (volatile)

#### 120 Plus

- LCD display, 0.8 in (20.3 mm) six-digit, seven-segment
- Internal rechargeable lithium battery and wall adapter
- Power save feature for 700 hours of battery life
- Ten stored tare values
- Display hold (based on three second average)
- Time and date
- Configurable with Revolution® software

### Approvals



Measurement  
Canada  
Approved



### Specifications

#### Power:

##### 120/120 Plus:

Line voltages: 115 or 230 VAC  
Frequency: 50 or 60 Hz

##### 120 Plus: (estimated battery life)

60 hours with 1 x 350Ω, 40 hours with 4 x 350Ω  
Charge time eight hours

#### Excitation Voltage:

5 VDC, 4 x 350Ω or 8 x 700Ω load cells

#### Analog Signal Input Range:

-0.6 mV/V - 3.0 mV/V

#### Analog Signal Sensitivity:

0.3 μV/graduation minimum,  
1.5 μV/grad recommended

#### A/D Sample Rate:

120: 3 to 30 Hz, software selectable

120 Plus: 30 Hz

#### Resolution:

Internal: 1 million internal graduations  
Display: 10,000 displayed graduations

#### System Linearity / PI Rating:

Within 0.01% of full scale

#### Circuit Protection:

RFI, EMI, ESD protected

#### Load Cell Connection:

Cord grip entry  
Detachable plug (optional)

#### Serial Output:

EDP port: Full duplex RS-232  
Printer port: Output-only RS-232 or active 20 mA current loop  
Both ports: 9600, 4800, 2400, 1200, 600, 300bps;  
Seven or eight data bits; even, odd or no parity

#### Status Annunciators:

120/120 Plus: Center of zero, stand still, gross, net, lb, kg, oz, g

120 Plus: Battery, setpoint 1 and 2, Hold

#### Display:

120: 0.8 in (20 mm), six-digit red light emitting diode (LED) display, seven-segment digits

120 Plus: 0.8 in (20 mm) six-digit LCD with backlight, seven-segment digits

#### Keys/Buttons:

120: Five-key flat membrane panel, tactile feel

120 Plus: Zero, tare, preset tare, hold, gross/net, units, numeric 0-9, clear, enter/print

#### (Optional) Digital I/O:

120 Plus: Requires option card

24 volt source  
Three digital inputs  
Two digital outputs

#### Temperature Range

Certified: 14°F to 104°F (-10°C to 40°C)

Operating: 14°F to 122°F (-10°C to 50°C)

#### Rating/Material:

Enclosure: heavy gauge ABS

#### Weight:

2.6 lb (1.2 kg)

#### Warranty:

One-year limited warranty

#### Approvals:

NTEP CC 03-059, Class III/IIIL 10,000d  
Measurement Canada AM-5517,  
Class III/IIHD 10,000d

EU Test Certificate TC7028 (120) Class III, 10,000d

EU Test Certificate TC7626 (120 Plus) Class III,  
10,000d

CE marked