

680 Synergy Series Digital Weight Indicator



As of: Friday, August 29, 2025



Standard Features

- LED display
- Battery backed time and date
- Full numeric keypad
- Multiple communication ports
- 20 setpoint, 22 configurable types
- Numeric keyed entry for tare and setpoint entry
- Formattable tickets
- Four onboard configurable digital I/O points, TTL logic
- Built-in batch presets
- Local/remote

Options

- Analog output: 16-bit resolution, 0-10 VDC, 0-20 mA, 4-20 mA
- RJ45 Ethernet connector

Note: IP Rating is IP66 with RJ45 option. Rating is valid only when the cover is in place, not in use.

Approvals



Measurement
Canada
Approved



EU
LEGAL
FOR TRADE
CERTIFIED





**National
Measurement
Institute**



WARNING:
Cancer and
Reproductive
Harm
California
Proposition
65

The Next Generation of Digital Scale Indicators

Rice Lake's configurable 680 Synergy Series indicator combines powerful features found in advanced instrumentation with easy-to-use functions of more basic indicators. Designed with the customer in mind, the 680 is suitable for real-world, industrial environments. Tackle general purpose weighing, straightforward automation and a wide range of applications with the 680 Synergy Series.

Powerful Functions Backed by Advanced Communication

With eight setpoints and four digital I/O, the 680 can perform basic batching and filling operations. Design a multi-step procedure and run it automatically from beginning to end with the 680's configurable batch engine. Users can also customize printed tickets with formattable gross, net, setpoint and auxiliary print formats. The 680 also supports multiple onboard communication options, cutting costs and providing connection to multiple devices such as printers and computers.

Durable, IP69K Construction

Constructed with durable 304 stainless steel and able to withstand harsh wash-downs, the 680 maximizes process efficiency in virtually any environment or application. An IP69K rating ensures the 680 can stand up to high-pressure, high-temperature washdowns found in food processing environments.

680 Synergy Series Specifications

Power:

Line voltages: 100 to 240 VAC
Frequency: 50 to 60 Hz

Power Consumption:

2W (AC) one 350 ohm load cell, 15W max

Excitation Voltage:

10 VDC (± 5 VDC), 8 \times 350 ohm or 16 \times 700 ohm load cells

Analog Signal Input Range:

-5 mV to +70 mV

Analog Signal Sensitivity:

1 μ V/graduation recommended

A/D Sample Rate:

6.25 to 120 Hz, software selectable

Resolution:

Internal: 8,000,000 counts
Display: 1,000,000

System Linearity:

Within 0.01% full scale

Digital I/O:

Four configurable I/O - 5 V logic

(Optional) Analog Output:

16-bit resolution, voltage output 0-10 VDC, current output 0-20 mA/4-20 mA

Communication Ports:

Two full-duplex RS-232
RS-485/422 (five-wire)
Micro USB (device)
Ethernet TCP/IP (10/100)

Annunciators:

Eight LED annunciators

Display:

Seven 0.8 in tall, seven-segment digits

Keys/Buttons:

Flat membrane panel, tactile feel (18 buttons plus ON/OFF)

Dimensions:

(L \times W \times H)
11.58 \times 4.05 \times 8.57 in
(294 \times 103 \times 218 mm)

Temperature:

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

Rating/Material:

IP69K (IP66 with RJ45)
AISI 304 stainless Steel

Weight:

6.25 lb (3 kg)

Warranty:

Two-year limited

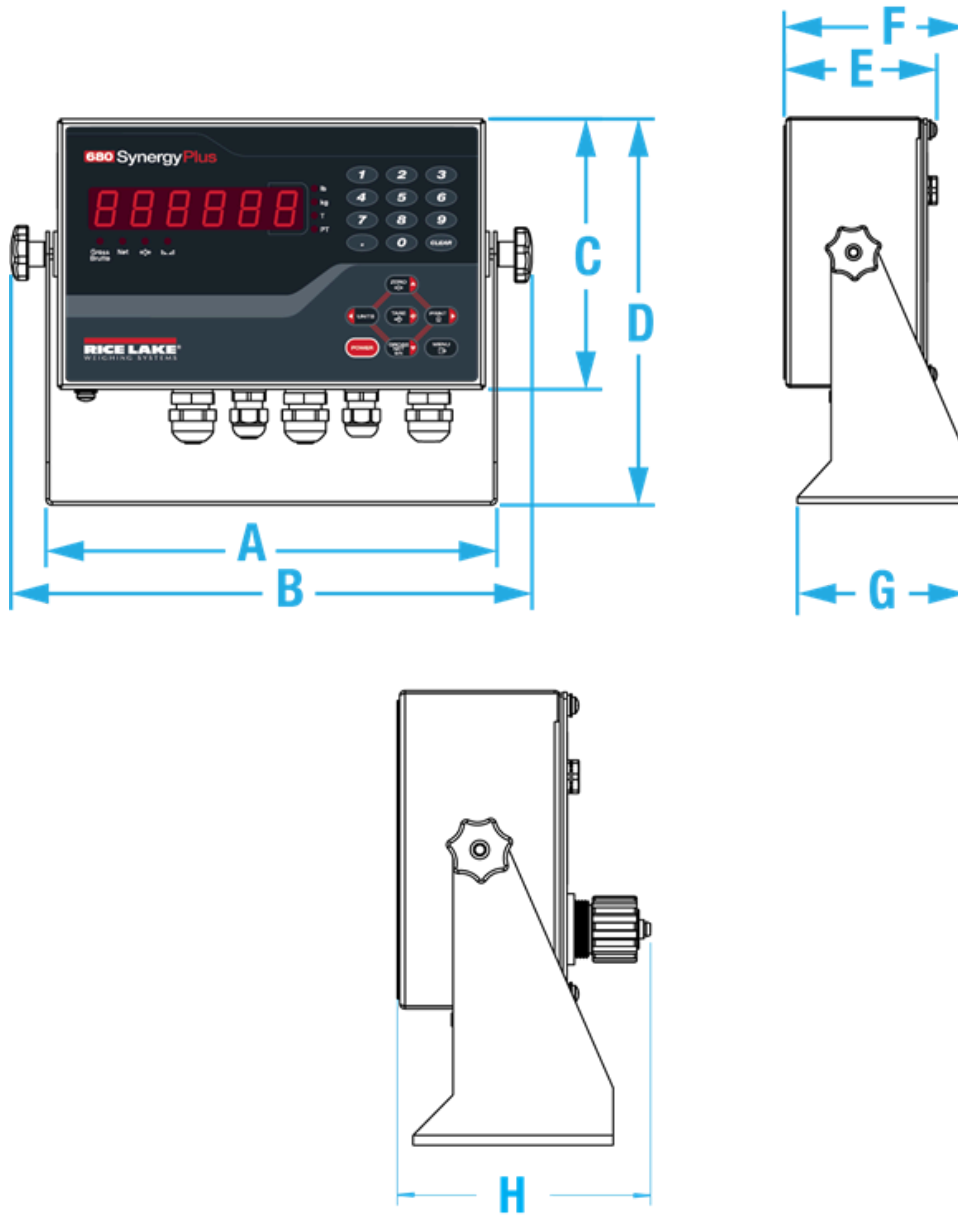
EMC Immunity:

10 V/m

Approvals:

NTEP 19-021, Class III/IIIL, 10,000d
Measurement Canada AM-6121C
OIML R76/2006-A-NL1-19.56
NOM
EU Eval Certificate TC11562
CE Listed
UKCA
cULus Listed
IEC
NMI

680 Synergy Series Dimensions



Dimensions			
A	10.02 in (255 mm)	E	3.40 in (86 mm)
B	11.58 in (294 mm)	F	4.05 in (103 mm)
C	6.00 in (152 mm)	G	3.80 in (97 mm)
D	8.57 in (218 mm)	H	4.74 in (120 mm)

Parts

Part # Description

115-230 VAC

193152 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply, US Power Cord

193153 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply, Europe Power Cord

196326 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply, UK Power Cord

196327 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply, AUS Power Cord

9-36 VDC (Not UL approved)

193154 Indicator,680 Plus Universal LED Display, 9-36VDC Power Supply

With Analog Output Card

195176 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply with Analog Option Card, US Power Cord

195177 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply with Analog Option Card, European Power Cord

196539 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply with Analog Option Card, UK Power Cord

196538 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply with Analog Option Card, AUS Power Cord

With External RJ45 Connector (IP rating is IP66 with RJ-45 option)

200183 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply, US Power Cord With RJ-45

200184 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply, Europe Power Cord With RJ-45

200185 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply, UK Power Cord With RJ-45

200186 Indicator,680 Plus Universal LED Display, 115-230VAC Power Supply, AUS Power Cord With RJ-45

Options

Part # Description

195084 Ind Opt,Analog Output 68x Series/iQube3, Install Kit

151099 Panel,Mount Option 480/680 Indicator,Gasketed Non-NEMA Seal.

223864 Knob, Star M6x1.0 304 SST

195684 Board ASSY,Replacement 680 CPU with battery installed for field replacements

194477 Parts Kit,680/682 Indicators

