

# 680 Synergy Plus

DIGITAL WEIGHT INDICATOR



**RICE LAKE**<sup>®</sup>  
WEIGHING SYSTEMS

[www.ricelake.com](http://www.ricelake.com)

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## The Next Generation of Configurable 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 washdowns, 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.

SALES AND TECHNICAL ASSISTANCE

#### STANDARD FEATURES

- Bright seven-digit, seven-segment LED display
- Battery backed time and date
- Full numeric keypad
- Three serial ports: two RS-232, one full duplex RS-485
- Numeric keyed entry allowed for tare and setpoint entry
- Formattable tickets
- Ethernet TCP/IP
- USB device
- Stainless steel IP69K enclosure
- Four onboard configurable digital I/O points, TTL logic

#### OPTIONS

- Analog Output: **Type:** Voltage or current output, 16-bit resolution  
**Voltage Output:** 0-5 VDC, 0-10 VDC, +/- 5 VDC, +/- 10 VDC  
**Voltage Load Resistance:** 1 K $\Omega$  minimum  
**Current Output:** 0-20 mA, 0-24 mA, 4-20 mA  
**Current Loop Resistance:** 1000 $\Omega$  maximum

#### SPECIFICATIONS

<b>POWER:</b>	Line voltages: 100-240 VAC Frequency: 50-60 Hz
<b>POWER CONSUMPTION:</b>	~2W (AC) with one 350 ohm load cell, 15W max
<b>EXCITATION VOLTAGE:</b>	$\pm 5$ VDC, 8 x 350 $\Omega$ or 16 x 700 $\Omega$ load cells
<b>ANALOG SIGNAL INPUT RANGE:</b>	-0,5 mV/V to +7 mV/V
<b>ANALOG SIGNAL SENSITIVITY:</b>	1 $\mu$ V/graduation recommended
<b>A/D SAMPLE RATE:</b>	6,25-120 Hz, software selectable
<b>RESOLUTION:</b>	Internal: 8.000.000 counts Display: 1.000.000
<b>SYSTEM LINEARITY / PI RATING:</b>	Within 0,01% full scale
<b>DIGITAL I/O:</b>	Four configurable I/O - 5V logic
<b>COMMUNICATION PORTS:</b>	Two RS-232 (three-wire) RS-485 (five-wire) USB (device) Ethernet (10/100)
<b>STATUS ANNUNCIATORS:</b>	Eight LED annunciators
<b>DISPLAY:</b>	Seven 2 cm tall, seven-segment digits
<b>KEYS/BUTTONS:</b>	Flat membrane panel, tactile feel (18 buttons plus ON/OFF)
<b>TEMPERATURE RANGE:</b>	Legal: -10°C to 40°C Industrial: -10°C to 50°C
<b>DIMENSIONS (W X H X D):</b>	30 cm x 22 cm x 10 cm
<b>WEIGHT:</b>	3 kg
<b>RATING/MATERIAL:</b>	Rating: IP69K Material: AISI 304 Stainless Steel
<b>WARRANTY:</b>	Two-year limited warranty
<b>EMC IMMUNITY:</b>	10 V/m

#### APPROVALS



Measurement  
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Approved



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