

Weight Indicator

FEATURES

- Large six-digit LED display (0.8 in, 21 mm)
- Built-in weighing and counting modes
- Alibi memory retains last 100k transactions
- Drives up to 10 x 350 Ω load cells (4/6 wires) or 20 x 700 Ω load cells
- Two serial ports (RS232) for printing and networking, including various serial stream formats
- Selectable standard Digital I/O with four dry-relay outputs/two opto-isolated inputs
- Standard RS 485, full duplex Interface
- Compatible with digital load cell interface
- 20 mA serial port for a remote display
- Stainless steel enclosure (IP67)
- Custom ticket printing—gross, net and setpoint format can be customized up to 300 characters and print time and date, unit ID, and consecutive ticket number
- Accumulation—weights are totaled, with armed print function
- Batching—up to eight batch steps with latched or continuous outputs for gross, net and delay setpoint. Actions include trip high or low, wait for standstill, print, accumulate and tare
- Keyed tare—preset tare value can be entered when the gross weight is at zero
- Local/remote—remote unit displays weight and transmits key press commands to the local unit
- User and operator password protection
- Audit trail tracking
- Time and date
- Plug and play ready for option card interchange

OPTIONS

- Rechargeable battery 5.3 A/h, 18 h operation
- Analog output 0/2–10 VDC or 0/4–20 mA
- Additional digital I/O card, four dry-relay outputs/two opto-isolated inputs for setpoints and batching
- Ethernet TCP/IP and USB 2.0 board



APPLICATIONS

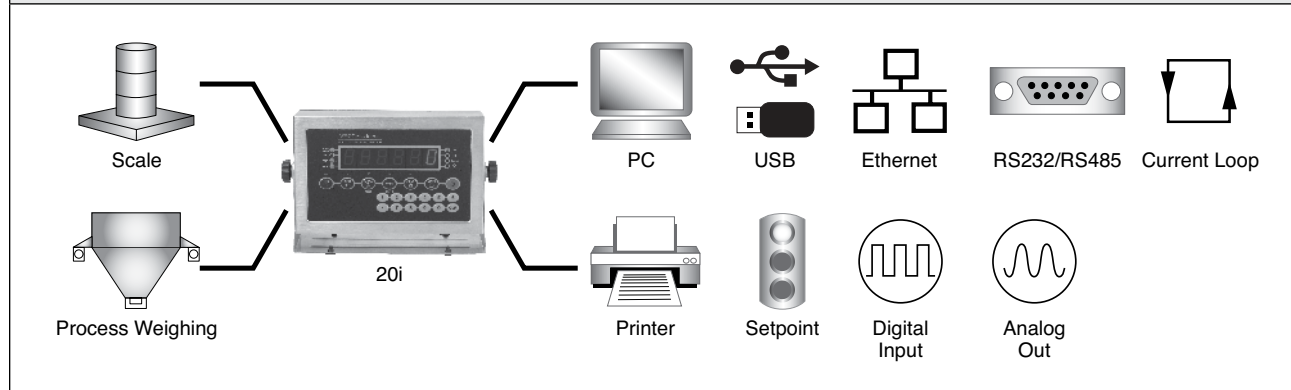
- Bench and floor scales
- Counting scales
- Inventory control
- Process weighing
- Truck scales
- Various industrial systems

DESCRIPTION

The INTUITION 20i is a versatile, general-purpose weight indicator, with a wide range of industrial and commercial applications. The seven-key panel enables easy operation, calibration, and setup of the instrument. Two password protection levels allow both the user and operator to access the instrument's setup and configuration menu. An integral printer interface allows easy, programmable, ticket formatting. Automatic date and time storage with the real-time clock option clearly documents all printout records.

A broad range of communication interfaces allows streaming and printing in several channels.

CONFIGURATION



Weight Indicator

SPECIFICATIONS**PERFORMANCE****Resolution**

Selectable up to 100000 dd

Conversion Speed

5–40 samples per second (selectable)

Sensitivity

0.5 $\mu\text{V}/\text{Vsi}$ for approved scales,
0.1 $\mu\text{V}/\text{Vsi}$ for non-approved scales

Full Scale Range

Up to 4 mV/V (20 mV)

Analog Input Range

1 mV/V–4 mV/V

Linearity

Within 0.01% of full scale

Excitation

+5 V \pm 0.1 VDC with sense (6 wires)

Number of cells

Up to 10 x 350 Ω load cells

Filters

Rolling average or adaptive filter (selectable)

Offset Drift

\leq 13 nV/ $^{\circ}\text{C}$

Span Drift

\leq 13 ppm/ $^{\circ}\text{C}$

A/D Converter Type

Sigma-Delta, ratiometric

Count By

x1, x2, x5, x10, x20, x50

Decimal Point

Between any digits of the weight display

Calibration Methods

Dead load and span with optional post calibration tuning of mV/V values

Weighing Functions

Automatic zero tracking, motion detection, overload and underload detection, auto-zero on power-up, manual zero, manual tare, preset tare, net mode, unit selection (lb/kg/oz/tn/t/g)

Operating Modes

Normal (weigh), piece counting, configuration setup, user menu setup, test

Supported Applications

Custom ticket printing, basic weighing, accumulation, batching mode (up to 8 setpoints), preset tare, local and remote

Supported Features

Time and date, ALIBI memory (100k weight registrations), audit trail tracking, unit ID, sleep mode with automatic wakeup

ENVIRONMENTAL**Operating Temperature**

-10°C to $+40^{\circ}\text{C}$ (14°F to 104°F)

Storage Temperature

-25°C to $+70^{\circ}\text{C}$ (-13°F to $+158^{\circ}\text{F}$)

Relative Humidity

0–95% RH, non-condensing

DISPLAY AND KEYBOARD**Display**

6 digits, 7 segments, LED

Digit Height

20 mm

Status Enunciators

Gross, net, center of zero, standstill, kg/primary units, lb/secondary units, counting, preset tare

Keypads

7-functions + 12 numeric keys (standard)

ELECTRICAL**Voltage**

230 VAC @ 50/60 Hz

Current (typical)

2 A

Power Consumption (typical)

11 W

Battery Operation (Optional)

3.7 V, 5300 mA/h internal rechargeable battery, discharge time 18 h; standby time 56 h (1 x 350 Ω load cell, no options installed)

DIGITAL INPUTS AND OUTPUTS**X2 Logic Input per Board**

2 inputs, opto-isolated, up to 24 V input, active-low

X4 Logic Output per Board

4 outputs, dry-relay contacts, rating: 2 A, 30 VDC (up to 2 x I/O boards can be installed)

Without removing the standard digital I/O, user can have additional digital I/O as an option making a total of 8 logic outputs (dry-relay contact) or 4 opto-isolated voltage inputs.

SERIAL COMMUNICATION**Serial Port 1 or 2**

RS-232, programmable

Serial Port 3

RS485, programmable
4/6 wires, fully isolated

Baud Rate

9600–19200 bps, full duplex
7/8 data bits, even/odd/none

Weight Indicator

Applications

Printer output, weight output, EDP output, local-remote protocols, and continuous output, remote printer

Ethernet Port (Optional)

TCP/IP server and client with DHCP

Applications

Printer output, weight output, EDP output, continuous output, remote printer

USB 2.0 Port (Optional)

Host PC Device (OTG)

Applications

Printer output, weight output, EDP output, Load and save configuration data to flash drive

Note: The Ethernet and USB ports are located on the same optional board.

ENCLOSURE—STAINLESS STEEL

Dimensions (L x H x D)

9.5 in x 6 in x 2.75 in
24 cm x 15 cm x 7 cm

Mounting

Tilt mount

Protection

IP67

Wiring Connections

Cable glands

APPROVALS (ACCURACY CLASS III)

OIML R-76

10000d single interval
Test certificate no.TC8084

CE Marking

ANALOG OUTPUT (OPTIONAL)

Resolution

16 bit DAC

Voltage Output

0–10 V

Current

0–20 mA or 4–20 mA

Linearity

Voltage Output: 0.01% of full scale

Current Output: 0.08% of full scale

Offset Drift

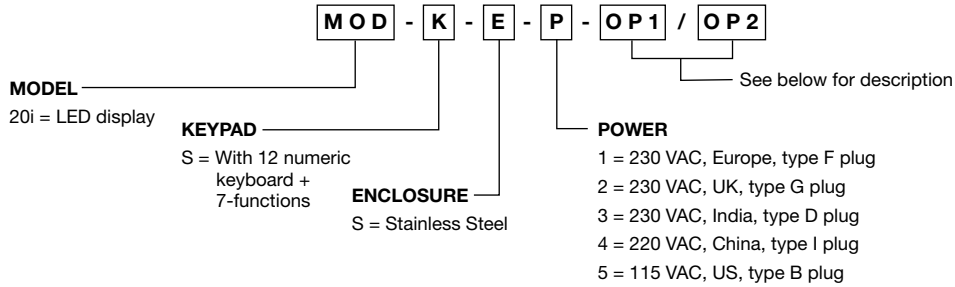
Voltage Output: ± 2 ppm/C° of full scale

Current Output: ± 3 ppm/C° of full scale

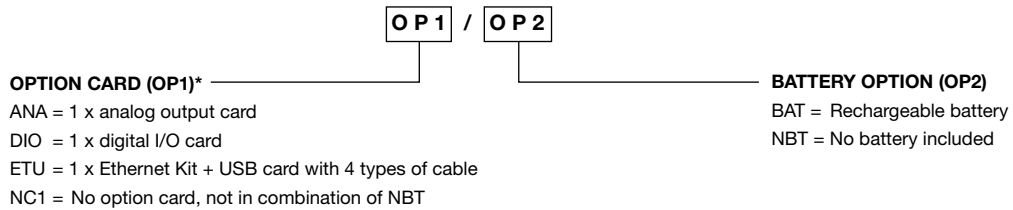
Ordering Information is on next page.

Weight Indicator

ORDERING INFORMATION FOR INTUITION 20i



Standard units will come with RS 485 and D I/O as default.



***CARD OPTION RESTRICTIONS**

- Maximum of up to two option cards per device can be installed at one time.
- Option card(s) selected in this section will be shipped with the main unit, unassembled.
- See the "Spares and Components" section below for additional card purchase.

Example Completed Part Numbers:

20i-S-S-1-NC1-NBT is the part number for a standard, unmodified 20i indicator with the correct power option for the European region.
 20i-S-S-4-ANA-BAT: unit comes with 220 VAC, China, type I plug; analog O/P card; and with battery, unassembled.
 20i-S-S-2-ETU-NBT: unit comes with 230 VAC, UK, type G plug; USB card with 4 different cable types; and it does not come with a battery.

SPARES AND COMPONENTS



- | | |
|---|--|
| RTSP0070 = Bracket for option cards (supports up to two card slots) | RTSP0600 = Digital I/O card installation kit |
| RTSP0580 = USB and Ethernet card installation kit | RTSP0090 = Rechargeable battery |
| RTSP0590 = Analog output card installation kit | RTSP0870 = RS485 card installation kit |



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