

# RANGER 2100 Digital Indicator



- 30,000 divisions
- ultra slim - 23mm deep
- Optional S/S rear housing
- “RANGER-SMART” options
- large 27mm alpha LCD display
- super-bright LED back-lighting

The 2100 is the latest “intelligent” digital weight indicator from RANGER INSTRUMENTS. This high-tech unit uses surface mount components for extreme reliability and to achieve the ultra slim 23mm housing depth.

All 2100 indicators are fitted with “RANGER-SMART” options that are built into the unit but are not accessible until they are purchased. This allows a base model to be bought at a very reasonable price with the ability to be upgraded simply by entering a pass-code.

The large 27mm alpha LCD display has super-bright LED back-lighting allowing it to be used in all lightning conditions, including bright sunlight. The 2100 is suitable for general-purpose use but it can also be optioned to perform many specialised weighing functions.

The blank keypad button is used to control the special functions of the 2100; such as counting, totalising, intelligent batching, peak-hold and live-weight modes. To avoid operator confusion, labels are supplied to name this key to suit the current function in use.

The on-board clock/calendar/ram ensures zero, tare, totals and other critical data is not lost or corrupted during unexpected power interruptions. This unit can also remind the operator when the next Quality Assurance certification is due by intermittently flashing warning messages through the display.

The 2100 uses the very powerful sigma-delta A/D converter to ensure very stable and accurate weight readings are attained. The setup and calibration functions are fully digital with all settings displayed in plain English messages.

## Australian Made – Two Year Warranty

The Intelligent Batching option is for single material batching/filling operations using either single speed or dual speed (fast & slow) feeders. Batching accuracy is maintained by the automatic in-flight correction that is updated after every batch. There is also provision for automatic discharge on completion of the fill cycle.

There are three standard remote inputs that can be assigned to front key functions like zero, tare, etc. The current time can be shown in the secondary display.

The optional single port RS-232 serial output can be configured for automatic weight output, network communications or ticket printing.

### Standard features include:

- LED back-lighting (adj. brightness)
- 27mm alpha-numeric LCD display
- 3 remote inputs & lb/kg switching
- full digital setup and calibration
- 30,000 divs. @ 25 updates/sec.
- 6 wire loadcell wiring
- 5 linearising points
- clock/calendar/ram
- low power modes
- ON/OFF switch

### Available “RANGER-SMART” options:

- (0224) RS-232 serial output (single port)
- (0225) 3 outputs and check-weighing software (shared with standard inputs)
- (0226) Intelligent batching software
  - hold and peak-hold mode
  - live-weigh mode
  - totalising mode
  - counting mode

<b>PERFORMANCE</b>		
Display	Backlit alphanumeric LCD with six 27mm high digits	
Backlight	LED backlight with adjustable brightness	
Display resolution	Up to 30,000 divisions, minimum of 0.25 $\mu$ V/division	
Count-by	1, 2, 5, 10, 20, 50, 100	
Zero cancellation	+ / - 2.0mV/V	
Span adjustment	0.1mV/V to 3.0mV/V full scale	
Stability/Drift	Zero: < 0.1 $\mu$ V/ $^{\circ}$ C, Span < 10ppm/ $^{\circ}$ C, Linearity < 20ppm, Noise < 0.05 $\mu$ V p-p	
Operating Environment	Temperature -10 to +50 $^{\circ}$ C, humidity < 90% non condensing	
<b>DIGITAL</b>		
Setup and calibration.	Full digital with visual prompting in plain messages	
Memory retention	Full non-volatile operation	
Digital filter	Averaging from 1 to 100 consecutive readings	
Zero range	Adjustable from +/- 2% to +/-20% of full capacity	
<b>A/D CONVERTER</b>		
Type	24 bit Sigma Delta	
Resolution	8,388,608 internal counts.	
A/D Sync Filter	Fixed 25Hz, FIR filter > 80dB	
<b>LOAD CELLS</b>		
Excitation	8 volts for up to 8 x 350 ohm load cells (6 wire + shield)	
<b>SERIAL COMMS</b>		(Software option 0224)
Serial output	Single RS-232 as automatic transmit, network or printer drive	
<b>POWER INPUT</b>		
Standard	General	9..15VDC (60mA to 400mA depending on loadcells and backlight) ON/OFF key with override and "Auto-Off" software.
Options	AC (0330) DC (0331) Battery(0332)	AC Power: 110/240VAC 50/60Hz 10VA (inc 0329) DC Power: 12-24VDC 10VA (inc 0329) Rechargeable 12VDC Battery (inc 0329)
<b>DIMENSIONS</b>		
Body size	189mm (L) x 99 mm (H) x 23 mm (D)	
Panel cutout	Flush mounted with cable holes drilled separately (template provided)	
<b>FEATURES</b>		
Standard Features	Five point linearity correction	
	Assignable function key for operator use	
	3 remote inputs and lb/kg switching fitted as standard	
	Battery backed clock & calendar fitted as standard	
Approvals	NSC Approval Pending. C-tick approved.	
"RANGER-SMART" Software Options	0224 RS-232 serial output for Auto, Printing or Network 0225 3 outputs with check-weighing software (shared with remote inputs) 0226 Totalising, counting, hold/peak-hold, live-weight, intelligent batching	
Hardware Options	0110 12VDC 500mA Plug Pack Power Supply	
	0333 Desk/Wall Bracket	
	0227 Relay Output Module (requires 0225)	
	0329 Stainless Steel Rear Housing, Gasket and Desk/Wall Bracket	
	0121 Battery Charger Plug Pack Power Supply (12VDC 1A)	
	0223 2100 Viewer Software and cable	