

RANGER 5100

Digital Indicator

- animal weighing
- hold & peak hold
- counting & totalising
- alpha-numeric keypad
- large back-lit LCD display
- intelligent batching option



The 5100's multi-function design and its impressive list of standard features permits it to competently perform most weighing applications. Optional outputs for serial & analog transmissions, setpoints and stand-alone intelligent batching are also available.

This unit is fitted with an alpha/numeric keyboard and a custom built, 20mm LCD display with back-lighting for use in all lighting conditions -including direct sunlight.

The blank key is for operator functions, supplied labels are used to name the key to suit the current application: "count", "show total", "start", "show peak", "manual jog" etc.

In batching operations, the 5100 sets a new standard for the term "operator friendly" with recipe codes and material names being stored/recalled in full alpha-numeric text up to 6 characters long, ie Cement, Flyash, Sand, Water, etc.

The 5100 stores up to 100 recipes in memory, each with its own pre-set tare value if required. The operator can easily adjust the batch size from 0.1% to 1000% of the stored recipe. This percentage adjustment allows the equivalent of 10,000 separate batch sizes to be readily recalled & batched at any time.

The auto-inflight and auto-jogging software ensures accurate filling of all materials, including those with inconsistent flow characteristics.

The 5100 also has both statistical data and full batch logging available for both viewing through the display and/or printing or downloading to external devices.

There are 6 relay status annunciators to show which relay outputs are currently active. The secondary 3 1/2 digit display can indicate the percentage completion of the current product, the recipe number of the current batch or used as a real time clock to display the time.

Australian Made – Two Year Warranty

The totalising and counting functions have also been greatly enhanced; up to 100 product ID's can be stored and recalled by alpha/numeric codes and it is now possible to get product totals listing number of items, total weight and the average weight (globally or by individual codes).

Manual filling applications using setpoint functions without the need for relays (such as concrete batch plants using a front-end loader to manually fill aggregate bins with various materials) are also well catered for. Up to 20 different materials and their weights can be stored/recalled in a single recipe. If required, individual relays can be globally assigned for all materials as a "fill in progress" output, or "tolerance error" or "batch complete" etc.

For multiple setpoint applications (up to 20 different feeders), the Ranger 5100 has in-built software to communicate directly with various Mitsubishi and National PLC's. The 5100 instructs the PLC via the serial port which relays should be energised/switched.

The 5100 retains all the outstanding performance characteristics of the Ranger 5000 with 100,000 divisions available @ 60 updates per second and there are single range, dual range and dual interval modes. There is even a direct mV/V input mode for calibrating large silos and vessels without using test weights.

The "adjustable everything" approach to the 5100's programming even allows for the serial data strings to be formatted on-site to suit specific customer requirements. The printed data output can also be formatted to suit existing pre-printed weight tickets and even allows for two lines of customer header information to be inserted.

The on-board clock/calendar/ram-backup ensures critical zero, tare, counting and batching data is not lost or corrupted during an unexpected power shutdown. This unit also can also remind the operator when the next Quality Assurance certification is due.

PERFORMANCE		
Display	Backlit LCD with 20mm, 6 digit primary display	
Display resolution	Up to 100,000 divisions, minimum of 0.15 $\mu\text{V}/\text{division}$	
Count-by	1, 2, 5, 10, 20, 50, 100 (Entered in Displayed Weight)	
Operating modes	Single Range, Dual Range, Dual Interval and Direct mV/V	
Zero cancellation	+ / - 2.0mV/V	
Span adjustment	0.1mV/V to 3.0mV/V full scale	
Stability/Drift	Zero: < 0.1 $\mu\text{V}/^\circ\text{C}$, Span < 10ppm/ $^\circ\text{C}$, Linearity < 20ppm, Noise < 0.05 μV p-p	
Operating Environment	Temperature -10 to +50 $^\circ\text{C}$, humidity < 90% non condensing	
DIGITAL		
Setup and calibration.	Full digital with visual prompting in plain messages	
Memory retention	Full non-volatile operation	
Digital filter	Averaging from 1 to 200 consecutive readings	
Zero range	Adjustable from 4% to 100% of full capacity	
A/D CONVERTER		
Type & Resolution	24 bit Sigma Delta, 8,388,608 internal counts.	
A/D Sync Filter	Adjustable, 15 to 60 cycles /second, FIR filter > 80dB	
LOAD CELLS		
Excitation	8 volts for up to 8 x 350 ohm load cells	
Load cell connection	6 wire + shield	
SERIAL COMMS		(Factory License option)
Serial outputs	Dual RS-232, plus RS-422/RS-485	
Capabilities	Automatic transmit, network, or printer drive	
Clock	Battery backed clock & calendar fitted	
DIMENSIONS		
Body size	135mm wide x 65mm high x 105mm deep, front bezel is 180mm wide x 82mm high.	
Panel cutout	DIN 43 700 - 137(+1)mm wide x 68(+1)mm high	
Power Supply	DC	12/24VDC 10VA
	AC	86 - 260VAC 48 - 62 Hz 8VA
OPTIONS		
Setpoint option card	4 x isolated 50volt, 500mA open collector transistor drives and 4 x isolated digital inputs (5V to 28V).	
Combo option card	-10 to10 V or 4-20mA opto isolated analogue output, two outputs and one input as per the Setpoint option card.	
No. of option slots	One standard. (12-24VDC units can be ordered with 2 slots)	
FEATURES		
		Approval pending for OIML 6000 divisions. C-tick approved.
		Five point linearity correction
		Adjustable anti-vibration filter
		Comprehensive batching operation (requires setpoint accessory card, combo card, or PLC and Licenses). (PLC interface allows 6,14 or 22 relays)
		Modbus protocol support (license option)