R400 series

rinstrum
SMART WEIGHING SOLUTIONS

powerful flexible industrial weight controller

The **R**400 series of indicators are designed with both the installer and operator in mind and cover a wide range of applications. They are engineered and built to last with reliability being foremost. The modular design allows for the installation to be commissioned with only the components required, saving on time and money.

flexibility and simple setup

Flexibility is the key with its award winning modular accessory design. Modules include: additional serial options, input/outputs, analogue output, external buttons and battery or AC option.

Superior IP65 housings - available in both ABS and stainless steel, each with a high impact polycarbonate lens to protect the LCD from knocks.

Robust I/O - designed for direct connection into PLC's, or direct drive up to 400mA each with up to 32 I/O control points.

Simple setup - through the menu system, either directly using the alpha numeric keypad or through a configuration utility connected using a dedicated front panel optical communications port.

Operator friendly - large two line display (29mm and 18mm) that uses logical prompts along with dedicated and programmable function keys. Printing can be tailored with custom record, docket or report printouts.

reliability in the field

Superior housings

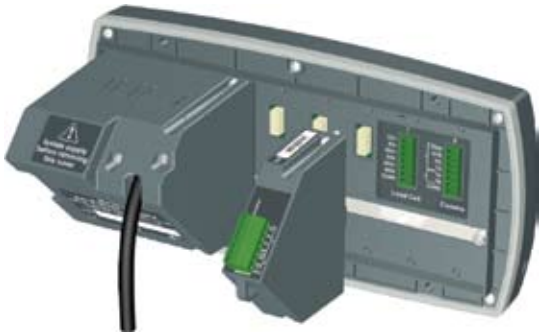
To provide flexibility to fit the environment two IP65 housing types are available: the **R**420 (ABS) and **R**423 (stainless steel). Both housings are designed with extra attention to detail to increase their reliability in the field, thereby reducing unplanned downtime and servicing costs.

R420	ABS Panel Mount	• Standard panel mount indicator with silicon keys • Optional desk stand and swivel pole/wall mount
R423	Stainless Steel Panel Mount	• Highly reliable keypad made from a PCB which uses gold plated contacts to reduce wear and avoid corrosion • Superior sealing of the lexan using high quality glue to last over time and protect against dust and water ingress

Application Software

The application software is specified by the K4xx designation. One of the unique features of the **R**400 series is the capacity to upgrade the application by simply purchasing the application software and swapping out the keypad overlay. This capability dramatically lowers stocking and maintenance costs.

R420-K401	Counting with piece weight entry Custom unit switching	The **R**420-K401 is a general purpose indicator with many advanced features: • Programmable printing for customized dockets and reports • Custom Unit Switching allows complete flexibility in the definition of alternative weighing units
R420-K402	Product storage Setpointing Analogue Output	The **R**420-K402 adds set pointing, analogue output and multiple-product configuration to the K401. • Powerful product configuration allows for parameters like setpoint targets, piece weights and units conversions to be stored for each product • Flexible setpoint configuration for improved system integration. Each setpoint can be individually configured to instrument status or weight target triggers
R420-K411	10 Batching stages Fill, Dump, Wait and Pulse stages 6 Materials 3 Speed Fill Fill correction using jogging or in-flight Dump to time or weight	The **R**420-K411 indicator provides a powerful and flexible batching controller. Dedicated batching keys and an intuitive interface make this product ideal as the primary control point for the system. • The multi-line display shows batch progress, current weight, target weights, material name along with dedicated batch status annunciators • Programmable printing for customized dockets and reports • Detailed reporting with material usage and batch statistics, along with QA records of every batch run when combined with the data logger • Batching operation flexibility where batch size can be varied by either weight or proportion and the operator can set number of batches to run



R420 with modules

Rugged Load Cell Input

- Designed to take 16x350 ohm load cells; providing flexibility and reducing the need for summing hardware, simplifying the installation and saving money
- Protected with onboard transorbs; designed to limit damage to the load cell input from external voltage surges

...all built into a 10,000 div trade approved indicator.

Superior Diagnostics and Support

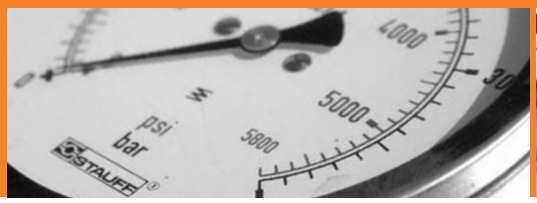
Diagnostic tools and features to assist the installer in system commissioning and maintenance.

- Hardware configuration report summarises how the indicator hardware is setup, providing a record for maintenance purposes or fault finding
- Force Output and Test Input functions allow the installer to specifically test I/O to assist in site setup
- Modules can be swapped in and out without recalibration of the indicator, saving time and effort
- An LED on each I/O provides a visual status;
- Overload counter to review if the scale has been overloaded to assist in maintenance
- The magnetically coupled infra-red port on the front panel provides a convenient temporary connection to a laptop for simplified setup when combined with Rinstrum's PC configuration software, Viewer

Versatile Power Options - DC, AC and battery	The wide DC operating range eliminates the need for third party power supplies saving on system complexity and cost. The rechargeable battery version is design to achieve maximum time between recharges.
Precise Robust Analogue Output	• The analogue output module provides a 4-20mA or 0-10V analogue output • Isolated so as to resist against system noise and interference therefore reducing unnecessary callouts • Precise with a 400Hz (2.5msec) update rate and 1/65,000 resolution
Input/Output Modules	The indicator can be configured with up to 32 I/O. Direct connection between I/O points is supported and the inputs are isolated to resist against system noise. These high side (400mA current source) drivers are capable of driving low voltage actuators directly or can be connected directly with PLC controllers.
Additional Serial Communications Ports	Fully isolated: RS232/RS232, RS232/RS485, RS485/485
Button Module	Provides four (4) voltage free inputs for use with switches or thumbwheels.
DIN Rail Mount Relay Outputs	The optional relay outputs are used with R42x input/output modules to provide eight (8) voltage free relay outputs rated to 250VAC and 8A.

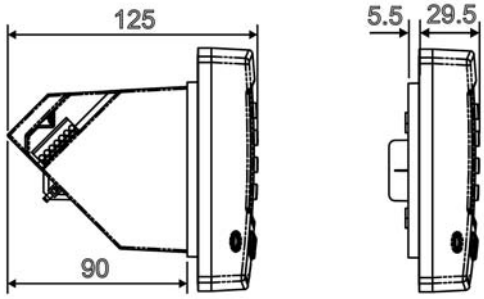
R400 series

THAT'S WEIGHING SMART

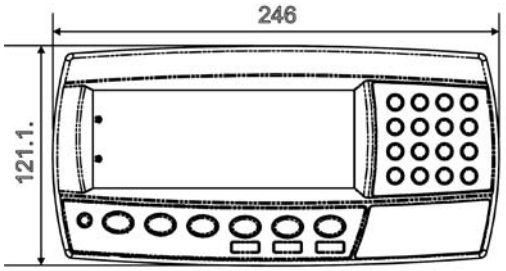


R420 Dimensions

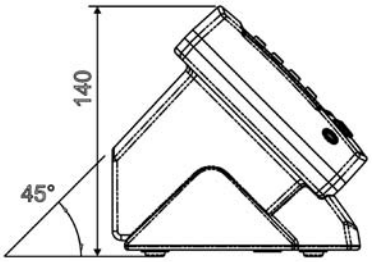
Side View - with Module - without module



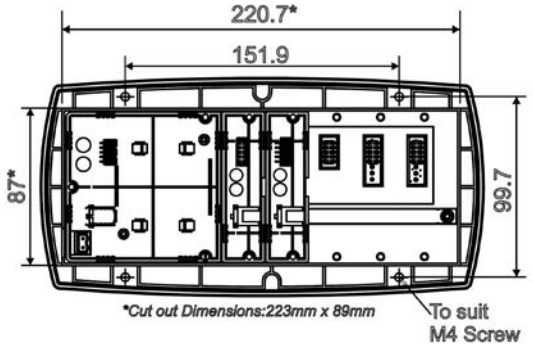
Front View



Side View with Boot and Stand

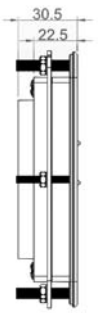


Rear View

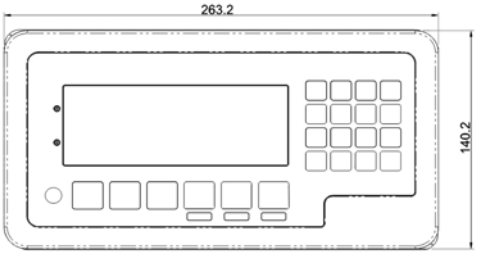


R423 Dimensions

Side View



Front View



Resolution		Up to 100,000 divisions, minimum of 0.25mV/division		
Approvals		FCC, CE, C-tick, Trade Approval Australia NMI(S-463) 10,000 d @0.7uV/d Trade Approval Europe OIML R76 10,000 d @0.7uV/d		
Zero Cancellation		+/- 2.0mV/V		
Span Adjustment		0.1mV/V to 3.0mV/V		
Excitation		7.4V for up to 16 x 350 or 32 x 700 ohm load cells (4-wire or 6-wire plus shield) Maximum total load cell resistance: 1,000 ohms		
A/D Type		24bit Sigma Delta with ±8,388,608 internal counts		
Operating Environment		Temperature: –10 to +50∞C ambient Humidity: <90% non-condensing Storage: –20 to +50∞C ambient IP65 when panel mounted or with rear boot (otherwise IP40)		
Display		LCD with 4 alpha-numeric displays and LED backlighting: Primary display: 6 x 28.4mm high digits with units and annunciators 2nd display: 9 x 17.6 mm digits with units 3rd display: 8 x 6.1 mm digits 4th display: 4 x 7.6 mm digits		
Setup and Calibration		Full digital with visual prompting in plain messages		
Digital Filter		Sliding window average from 0.1 to 30.0 seconds		
Zero Range		Adjustable from +/-2% to +/-20% of full capacity		
Standard Power Input		12 to 24VDC (15 VA max) - ON/OFF key with memory feature		
Variants	AC	AC power supply Input: 110/240VAC 50/60Hz Output: 12VDC 15VA		
	Battery	2.5AH NiMH rechargeable battery pack Charger Input: 110/240VAC 50/60Hz Output: 12VDC		
Optical Data Communications		Magnetically coupled infra-red communications Conversion cables available for RS-232 or USB		
Correction		10 point linearity correction		
Serial Outputs		Serial 1A: RS-232 serial port for remote display, network or printer supports. Serial 1B: RS-485 transmit only for remote display Transmission rate: 2400, 4800, 9600 or 19200 baud		
Assignable Function Key		3		
Operating Modes		Single Range, Dual Range and Dual Interval		
Battery Backed Clock Calendar		Battery life 10 years minimum		
Application Software		K401	K402	K411
Functions		Custom printing, custom unit switching, counting, manual hold, peak hold, auto output and totalising		Printing, auto output 6 Material, Inflight and Jogging Correction, 3 Speed Fill, Up to 10 Batching Stages Fill, Dump Wait and Pulse stages
Setpoints		-	8	
Analogue Output		-	1 (Optional Module)	
Additional Communications		-	Optional Modules RS232/RS232 RS232/RS485 RS485/RS485	
Button Input		-	4 Buttons (Optional Module)	
		R420	R423	
Case Materials		ABS Panel Mount	Stainless Steel Flush Mount	
Packing Weights		Indicator: 1kg	Indicator: 1.2kg	
Optional Mounting		ABS desk mount Stainless steel pole mount Stainless steel desk/wall mount	-	

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