R457 – Data Sheet

- 100,000 d @ 0.25 µV/d
- IP66 stainless-steel housing
- Trade approved Australia and USA
- Built in Ethernet support
- Embedded Web Server
- Waterproof USB, Ethernet connectors
- Lua programmability
- Telnet/SSH remote access
- 16 x 350-ohm cells
- Built in RS232/RS485

The R457 series of indicators are designed with both the installer and operator in mind and cover a wide range of applications. R457 is an indicator in a full stainless steel IP66-rated housing with waterproof USB host, Ethernet connections and cable glands for load cell and accessory connections. The USB host on the front of the indicator can support a variety of USB devices including point of sale printer, keyboard or USB stick.

The Ethernet functionality includes an embedded web server to allow the operator remotely to monitor the instrument with any device with a web browser. For an example, you can view the current weight and status from your phone. The R457 carries Rinstrum's Lua based scripting engine which allows for a variety of Lua applications to be used.

- L401 General
- L404 Truck Weighing

The modular design allows for the installation to be commissioned with only the components required, saving on time and money. With upwards of 2 versions of firmware available the R457 indicator is an ideal indicator for dealers and distributors as it simplifies installer training and reduces stocking levels.

Flexibility is the key with its award winning modular accessory design. Modules include additional serial options, input/outputs, analogue outputs, external buttons, Alibi (Data Storage Device) and AC option.

Superior housings - R457 (stainless steel full housing) rated to IP66

The housing is designed with extra attention to detail to increase their reliability in the field, thereby reducing unplanned downtime and servicing costs. For example, the R457 uses a high impact polycarbonate lens to protect the LCD from knocks.

Simple setup - use the menu system directly via the alpha numeric keypad or the configuration utility View400 on a PC.

Operator friendly - large multi-segment display that uses logical prompts along with dedicated and programmable function keys. Printing can be tailored with custom record, docket or reports printouts. Primary display is 29mm (1.1") and secondary display 18mm.

Rugged Load Cell Input - Designed to take 16x320 ohm load cells; providing flexibility and reducing the need for summing hardware, simplifying the installation and saving money. The load cell input is protected with onboard transorbs to limit damage from external voltage surges.

Networking Capability - Support for Ethernet to improve integration into larger control systems

Web interface – Web interface to download weight transactions

Modules

The R457 flexibility is provided through its broad range of modules that are easy to configure and neatly connect into the rear of the indicator. 1 module slot of the R457 is equipped with M4223 Lua module as standard. There are 2 more module slots where an indicator can be equipped with only the features required for a given installation.

Ethernet (M4223) Standard

The R457 comes with M4223 Lua module as standard. This provides R457 Lua enabled functions such as Web servers, USB, Ethernet, etc.

The Ethernet Module provides 10/100 Base TX with auto negotiation (1 Raw bi-directional port and 10 Raw transmit only ports).

Robust Input/output Modules (M4301, M4311, M4321)

An R457 indicator can be equipped with up to 24 I/O. These I/O are electrically isolated, designed for direct connection into PLC's and can drive low voltage actuators directly.

- Isolated high side (400mA current source) drivers are capable of driving low voltage actuators directly or can be connected directly with PLC controllers.
- Each module has 8 digital I/O ports which are limited to maximum input voltage of 30V and can drive up to 400mA.
- Direct connection between I/O points is supported.
- Inputs are isolated to resist against system noise.

Button Module (M4302)

The Button Module provides 4 voltage free inputs for use with switches or thumbwheels. The voltage free inputs eliminate the need to wire up complicate input driver circuits.

Isolated Communication Modules

Communication modules are in addition the built in RS232/RS485 ports on the R457 indicator.

- **Fully isolated** and recommended for application where there is a risk of lightening or surges or where additional communication ports are required.
- M4201 RS232/RS232, M4202 RS232/RS485, M4203 RS485/RS485

Precise Robust Analogue Output Module (M4401)

The analogue module provides a 4-20mA or 0-10V analogue output and two digital I/O.

- **Isolated** to resist against system noise and interference therefore reducing unnecessary callouts;
- **Precise** with a 400Hz (2.5msec) update rate and 1/65,000 resolution. The fast update and high D to A conversion rate give a smooth output curve which helps a PLC to see more realistic readings (2.5msec step)
- **Scalable** to suit the input on the PLC.
- **Two digital I/O** provided the same as the M4301

Data Storage Device Module (M4501)

- The Data Storage Module provides nonvolatile alibi memory storage (6M bytes) according to WELMEC 7.2 L. Compatible with later versions of software.

Accessories

Converter 0-10V/4-20mA Input (M4902)

Connects to the Load Cell Input on R400 series indicators for a voltage or current input. Useful where an indicator needs to take an input from load pins on a crane scale for example. Suitable for pressure, displacement or strain transducers that output 4-20mA or 0-10V analogue signals.
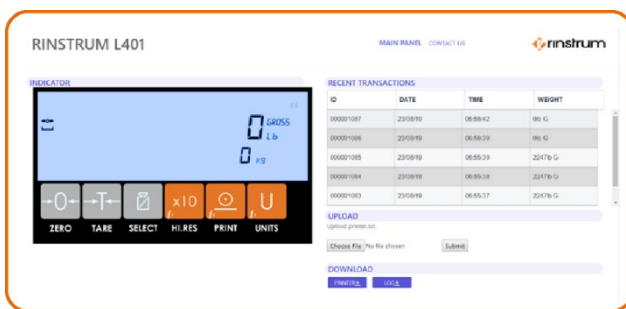
rin-LINK

The magnetically coupled rin-LINK on the front panel provides a convenient temporary connection to a laptop - no need to access rear of the indicator.

- Transfer of setup and calibration information
- Download of software upgrades

Relay Modules (M4901 and M4906)

The relay modules, used in conjunction with an I/O module, provide 8 voltage free relay outputs rated to 250VAC and 8A, available in either 12 or 24V.

- DIN rail mountable.
- Provides N/O (normally open) and N/C (normally closed) contacts for each output.

Smart Weighing

Web Interface

R457 series indicators have a sophisticated web interface that allows user to execute various smart weighing actions.

View Data Log

View ID, Date, Time, Weight data of last 10 transactions.

Upload Data Log

The fields to be logged can be entered in the headings of Log.csv file and uploaded to the indicator via web interface.
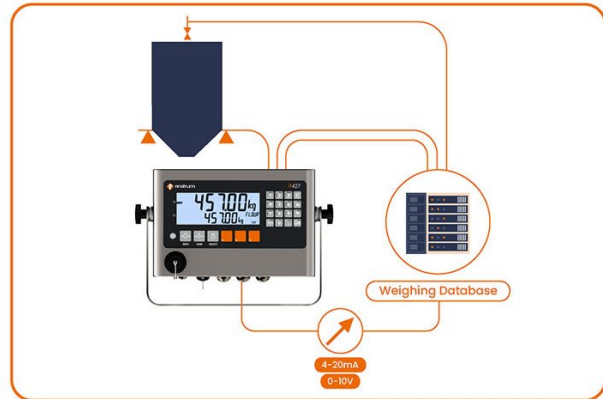
Customize Data log

Ability to edit print formats via printer.txt.

Download Data Log

One click data log download and Clear

…now that's smart weighing!

R457 – L401 – Data Sheet

- Counting with piece weight entry

- Custom unit switching

- Set pointing

- Reporting

- Custom printing

- PLC integration

- Web interface

The L401 is a general-purpose indicator suitable for weigh bridges, general trade weighing, multiple indicator weighing systems and process control. The Scale Entry/Exist features make the L401 ideal for unmanned weigh bridges.
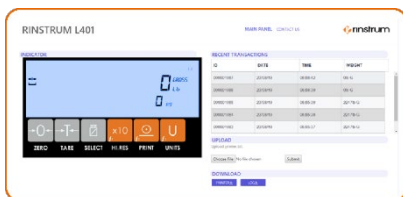
Transaction Log in .csv format

USB event to copy .csv file to USB and clear local copy upon user approval

Web interface enabling viewing weight data and password protected downloading and clearing of Log.csv file

Programmable printing for customized dockets and reports can support two separate printers

- Comprehensive print tokens allow for all instrument data to be printed in a variety of formats
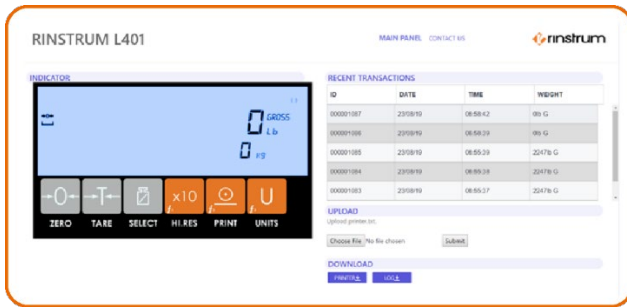- Custom print strings can be assigned to multiple instrument events, for example long and short press of a print key.

Custom Unit Switching allows for complete flexibility

- programme for standard weight units (kg, lb, t etc) or
- define alternative weighing units for your application (litres or force for example)

Flexible set point configuration for improved system integration. A set point can be individually configured to instrument status or weight target triggers. Each set point can be:

- independently configured for a given function
- associated with a given output
- configured for high or low logic
- defined to use a given weight source – Gross, Net, Alternate Units or Piece count

The large multi-line display assists the operator by displaying current weight and total weight and product name.

Smart Weighing

Web Interface

L401 includes an easy-to-use web interface for the user to interact with the weighing system.

View Data Log

See the data of the last 10 weight transactions.
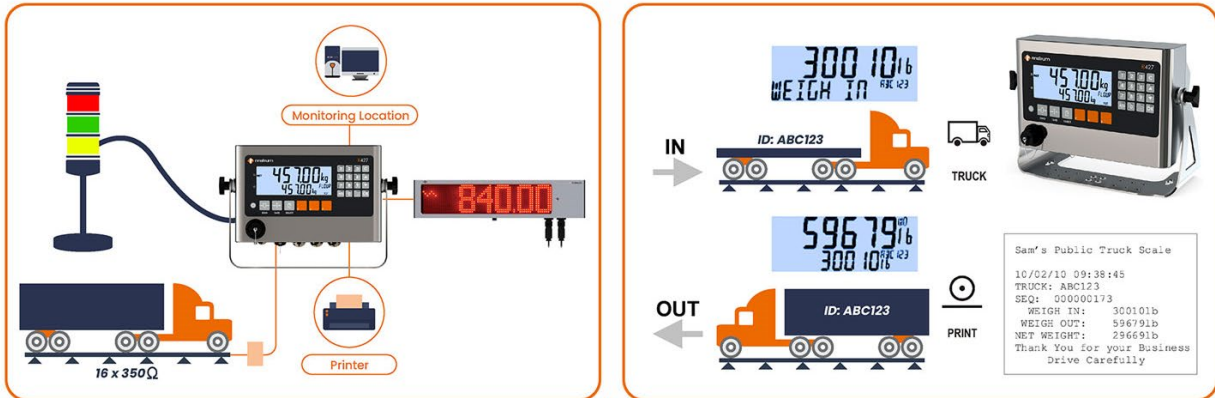
Upload Data Log

Upload field names to the indicator via the web interface

Download Data Log

One click data log download and Clear

…now that's smart weighing!

R457 – L404 Truck Weighing – Data Sheet

- 9999 Truck IDs (Products)
- Preset Tare and accumulation data on each Truck ID
- Single and two pass weighing
- Alpha-numeric Truck ID names
- Programmable printing
- Drive up to 16x350ohm load cells
- Simple two button operation
- Web interface
-

Weigh in screen

Weigh out with preset tare

The L404 is designed specifically for truck weighing. It allows for a range of operational scenarios all in one setup, from weigh-in/weigh-out to stored truck ids. The dedicated Truck ID button and Print button simplify the operator interface. Additionally, the alpha-numeric keypad allows for easy entry of tare weight and Truck IDs. With 9999 Truck IDs available it is suitable for applications with truck fleets of up to 9999.
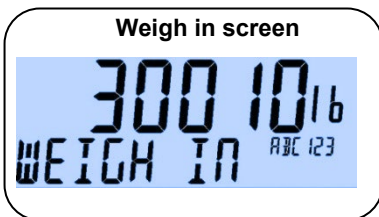
Clicker Truck Selection

Remote display Support

2 Indicator Mode

USB/serial/Windows Printer Support

Truck, Destination and **Product database** (optional)

The following operational scenarios can all be handled on the one setup:

- Print the weight of the truck on the scale
- Weigh a truck in a single pass using its tare weight
- Weigh a known truck with a stored Truck ID and preset tare and accumulate the statistics on that truck ID.
- Two pass weighing with a weigh in followed by a weigh out. The ticket will show time/date weigh-in, weigh-out and net weights.
- Automatic temporary Truck ID to simplify weigh-in/weigh-out for fast weighing throughput. The temporary Truck ID is removed once the weigh-out is complete.

R457 Indicator is ideal for weigh bridges:
- Isolated communication modules for excellent protection against lightning
- All accessory modules, including the power supply, can be swapped without recalibration.
- Indicator configuration and setup can be reused and easily uploaded using the opto-link on the front panel.
- Pre-calibration using mV/V saving time on full calibration

L404 Truck WEIGHr Web Interface

Smart Weighing

The L404 operation builds on years of experience working with specialist truck scale manufactures to streamline weigh bridge operation and simplify the operator experience.
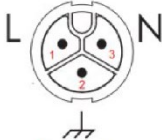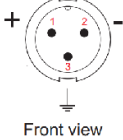
- Easy to use 9999 truck database
- Web interface
- Remote display support
- QWERTY keyboard support
- Optional Clicker System for truck selection

…now that's smart weighing!

Specifications

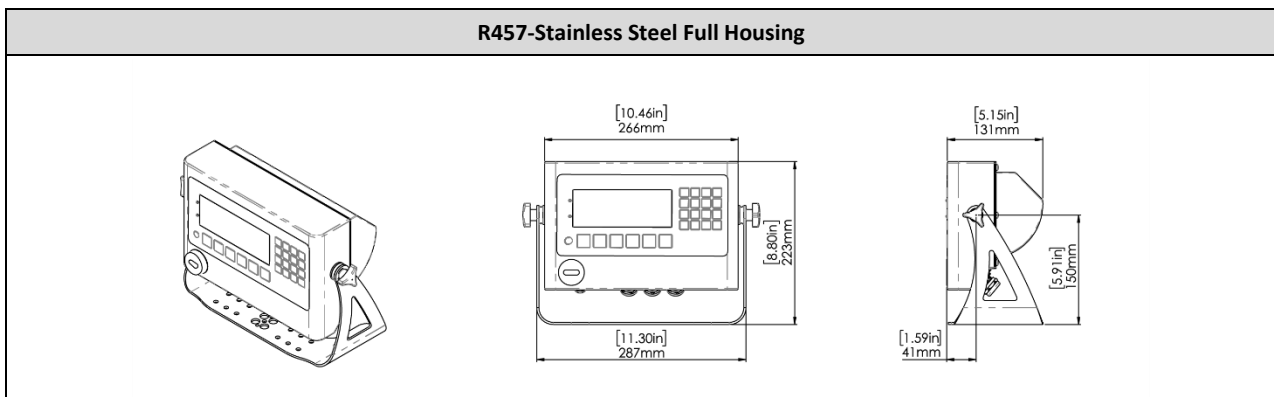|			
Resolution	Up to 100,000 d, minimum of 0.25uV/d		
Approvals	10,000 d @0.7uV/d NMI(S-463),		
	III/III L NTEP 08-720		
	FCC, CE, C-tick		
Zero Cancellation	+/- 2.0mV/V		
Span Adjustment	0.1mV/V to 3.0mV/V		
Excitation	7.4V for up to 16 x 350 or 32 x 700-ohm load cells (4-wire or 6-wire plus shield)		
	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 (14 °F to 122 °F)		
	Humidity: <90% non-condensing		
Display	LCD with 4 alpha-numeric displays and LED backlighting:		
	Primary display: 6 x 28.4mm (1.12") high digits with units and annunciators		
	2nd display: 9 x 17.6 mm (0.7") digits with units		
	3rd display: 8 x 6.1 mm (0.2") digits		
	4th display: 4 x 7.6 mm (0.3") digits		
Setup and Calibration	Fully 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, 3 pin AC connector, AC Power cord provided	
		Input: 110/240VAC 50/60Hz Output: 12VDC 15VA	
	DC	DC power supply, 3 pin DC connector, Optional DC plug pack (12VDC 2.5A)	
Optical Data Communications	Magnetically coupled infra-red communications		
	Conversion cables available for RS232 or USB		
Correction	10-point linearity correction		
Serial Outputs	Serial 1A: RS-232 serial port for remote display, network or printer supports.		
	Serial 1B: RS485 transmit only for remote display		
	Transmission rate: 1200, 2400, 4800, 9600, 19200, 57600 baud		
Assignable Function Keys	3		
Operating Modes	Single Range, Dual Range and Dual Interval		
Battery Backed Clock Calendar	Battery life 10 years minimum		
Ethernet	1 x waterproof Ethernet connection		
USB	1 x waterproof USB host connection		
Application Software	**L401**		**L404**
Functions	Custom printing, custom unit switching, counting, manual hold, peak hold, auto output totalizing		Weighbridge, Single pass weighing, Two pass weighing, Dedicated truck key, Custom printing, Clicker support, Multiscale functionality, Temporary Truck IDs
Products/Recipes	9999 Transactions		9999 Trucks
Analogue Output * (M4401)	1		1
Set points*	24		
Additional Communications *	Module: RS232/RS232 Module: RS232/RS485 Module: RS485/RS485		
Button Input *	4 Buttons		
Data Storage Device * (M4501)	1		
Housing			
Case Materials	Stainless Steel		
Packing Weights	Indicator: 3.5kg (123.5 oz)		
Environmental IP Rating	IP66		
Lua Scripting			
Application packages	Embedded Lua scripting offering enhanced functionality through a range of application packages (L401, L404)		
Web server	Embedded web server for remote access		
Customization	Customization through Rinstrum supported		

*Optional modules

Power Connector (AC)	Power Connector (DC)
LTW AC Power Input Socket: **Male** (Indicator End) 1. Line Brown 2. Earth Green 3. Neutral Blue Front view	LTW DC Power Input Socket: **Male** (Indicator End) 1. DC+ Red 2. DC- Black 3. Earth Green Front view

USB (Front)

Ethernet (Back)

Bracket* Stainless Steel Desk/Wall/Post Mounting

AC Power Cable*		
A10081	Cable - AU	
A10082	Cable - UK	
A10083	Cable - US	
A10084	Cable - EU	
DC Plug Pack**		
A10101	Plug pack - AU	
A10102	Plug pack - UK	
A10103	Plug pack - US	
A10104	Plug pack - EU	

* Provided with standard product

** Optional

R457-Stainless Steel Full Housing

Specifications are subject to variation for improvement without notice. Illustrations are indications only and variation may be evident between products.