C3 Series - C320 Data Sheet

- Wide DC range 5-24V

- 20mm (0.8in) LCD display with RGB backlight

- Six 9 segment characters

- Versatile mounting options

- Tough, compact polyester overlay

- rinLINK connector

- NTEP/ OIML/ NMI approved

The C320 is Rinstrum's latest compact panel mount indicator that is ideal for use in mobile applications such as forklifts, platforms, inside truck cabs, crane scales and OEM applications. Ideal for basic weight-control or level-control functions using the general or advanced setpoints and checking weighing. Both functions offer an improved operator interface with the multi-coloured backlight. Like the R3 Series the C320 can be combined with a desk mount or IP65 boot to make a full housing unit that can be used on a desk or pole mounted. The C320 supports a new range of accessory cards. The communication cards offer increased options and expansion cards cover additional functions.

- Wide DC operation (5-24V)/ USB lead: to suit a variety of onboard OEM applications. The USB lead eliminates the need for third party power supplies saving on system complexity and cost.

- Two RS232 bidirectional serial ports: independently configurable for network, printing or remote display functions.

- Inputs and Outputs: Two digital inputs and two high-side digital outputs that are electrically isolated. Outputs are capable of driving low voltage DC actuators directly

- Onboard data storage: compliant to WELMEC 7.2 (alibi memory DSD)

- rinLINK: magnetically coupled link on front fascia for easy access in situ for updates/setup of the indicator, saving the installer time and effort.

- Flush polyester overlay with mechanical keys: no membrane key to wear out, easy to keep clean, fully sealed, durable chemical resistance, improves uv resistance.

- Printing: Multiple standard print dockets through to fully programmable print formats that can be easily created with the drag and drop configuration tool rinPRINT.

Advanced Setpoints

The C3 instruments support up to 8 setpoints with setpoints 1 and 2 linked to the onboard digital outputs. Setpoint status can be used to drive the onboard outputs directly, sound the buzzer, change display backlight colour or can be transferred to external control systems using modbus RTU or through field bus expansion. Setpoint functions include:

- OVER/UNDER target

- CHECKWEIGH: OVER, UNDER, PASS

- Status (motion, zero, net)

Setpoint outputs can be latched and reset from remote inputs or external control.

Accessory Cards

Optional accessory cards can be connected using the Accessory port to add more functionality to the C320 indicator.

Communication cards

- C3 Series RS232 Communications card - M6201

- C3 Series RS485 Communications card - M6203

- C3 Series 20 mA Current Loop Communications card - M6204

Expansion Cards
- C3 Analogue Output card - M6401 (K306 only)

Accessory card
- C3 Series Converter 0-10V/4-20mA Input (M4902)

Smart Weighing

The C320s bright, vivid backlight changes colour automatically as the pre-assigned target weights are reached.
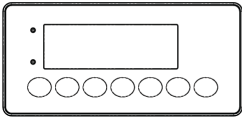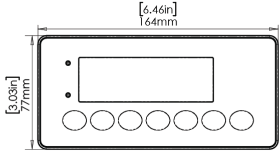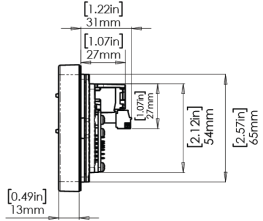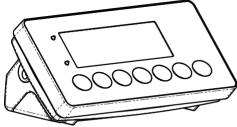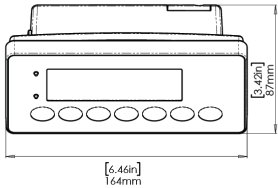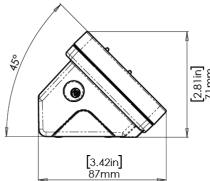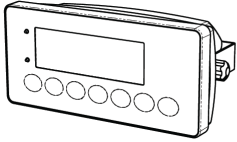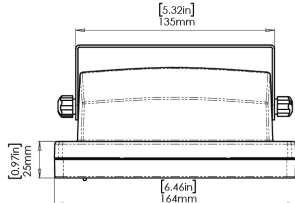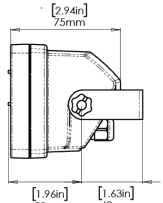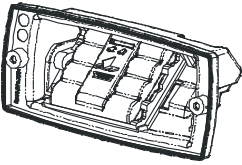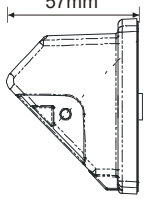
The operator knows immediately when they've reached the acceptable weight range based on the orange, green, or red color changes for UNDER, ACCEPT, or OVER weights.

… now that's smart weighing!

Specifications

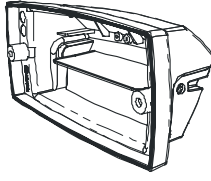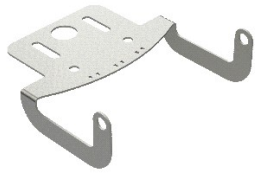| Indicator	C320	C350	C357
Trade Approval	NTEP 23-090 / NMI S869 / OIML R76-2006-A-NL1-24.26	NTEP 23-090 / NMI S869	
Resolution	Up to 100,000 divisions, minimum of 0.1uV/division Trade: Up to 10,000 divisions, minimum of 0.33uV/division		
Zero Cancellation	± 2.0mV/V		
Span Adjustment	0.1mV/V to 5.0mV/V full scale		
Excitation	5V for up to 8 x 350-ohm load cells (4-wire or 6-wire plus shield) Max total load cell resistance: 3,500Ω		
A/D Type	24bit Sigma Delta with 8,388,608 internal counts, 50 updates/second		
Operating Environment	Temperature: −10° to +50°C ambient (14° to 122° F), Humidity: <90% non-condensing		
	IP65 when panel mounted	IP66, IP68, NEMA 4	IP66, IP68, IP69K, NEMA 4X
Display	RGB Backlit LCD with six 20mm (0.8") high digits with units and annunciators, 9 segment	RGB Backlit LCD with six 50.8mm (2") high digits with units and annunciators, 9 segment	
Setup and Calibration	Fully digital with visual prompting in plain messages		
Digital Filter	IIR low pass filter		
Zero Range	Selectable from ± 2% to ± 100% Full Scale		
Standard Power Input	5 to 24VDC, 4.8, 9.6,12 and 24V batteries (2.5 VA max) ON/OFF key with memory feature		
Variants — AC	AC Plug pack: 110/240VAC 50/60Hz in 12VDC 1.5A out	AC Line Cord: 110/240VAC 50/60Hz in 12VDC 1.5A out	
Variants — DC		DC: 5 to 24VDC (2.5 VA max)	
Variants — Battery	4 x AA batteries (G Version or using M6001 accessory)	-	
Case Materials	Resin Alloy	Resin Alloy	Stainless Steel
Packing Weights	Panel Mount Indicator: 0.25kg (9oz), Full Housing: 0.42kg (14.8oz)	3.8kg/ 8.4lbs	5.5kg/ 12.1lbs
Optical Data Communications	rinLINK - magnetically coupled infra-red communications Conversion cables available for USB		
Firmware Features	**K301**	**K304**	**K306**
Input/Outputs	-	2 isolated inputs	
	-	2 isolated, smart FET outputs (400mA total at 50VDC)	
Serial Outputs	-	2 x RS232 automatic transmit, network or printer outputs. Transmission rate: 2400-115200 baud	
Battery Backed Clock Calendar	-	Battery life 10 years minimum	
Set points	-	8 (Basic)	8 (Advanced)
Data Storage	-	Alibi WELMEC 7.2 DSD	
		-	CSV Log
Keys US Region	Power/ Zero/ Tare/ Select/ Units Switching (lb/ kg/ oz/ g/ t/ TN/ lb:oz/custom) plus two assignable function keys		
Keys ROW Region	Power/Zero/Tare/Select plus three assignable function keys		
Other	Manual hold, livestock filtering, x10 mode HiRes, linearisation		
	-	Custom printing, peak hold, counting, accumulation, medical filtering, check weighing, mimic/ remote display, mV/V calibration, ring network (rinCMD), auto tare	
Accessory Cards			
Communications cards	RS485, RS232, Current loop		
Expansion Cards	-		0..10V, isolated 16 bit output analogue output 4-20mA

Specifications may change at any time without notice.

C320 Panel Mount

C320-G with AA Battery Boot, Desk Stand and Plug Pack

C320-H with Fully Sealed Boot, Plug Pack and Stainless Steel Bracket

C320 Black Boots	
M6001	**M6003**

C320 Brackets		
M3014	**M3002**	**M3021**

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