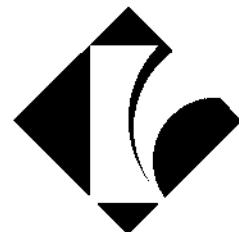


SMART WEIGHING SOLUTIONS



rinstrum

2100
Digital Indicator
Reference Manual

For use with Software Versions 2.0 and above

Table of Contents

1.	INTRODUCTION	6
1.1.	The Manuals Set.....	7
1.2.	Document Conventions.....	7
2.	SPECIFICATIONS	8
3.	OVERVIEW	9
4.	INSTALLATION	10
4.1.	Introduction	10
4.2.	Electrical Safety	10
4.3.	Panel Mounting	10
4.4.	DC Power Supply.....	10
4.5.	Load Cell Signals and Scale Build.....	11
4.6.	Connecting Shields	11
4.6.1.	Cable Shield Connection and Earthing.....	11
4.7.	Unused Pins.....	12
4.8.	Load Cell Connection	12
4.8.1.	6-Wire Connection	12
4.8.2.	4-Wire Connection	13
4.8.3.	ON/OFF Power Override	13
4.9.	Auxiliary Connection	14
4.9.1.	Inputs	15
4.9.2.	Outputs	15
4.9.3.	Manual Override of Outputs	15
4.10.	rin-SMART Software Options	16
4.10.1.	Procedure to Enter a Software Option Code into the 2100.....	16
4.10.2.	0224 Serial Communications RS-232: (SERIAL).....	16
4.10.3.	0225 Setpoint – 3 Input / 3 Output: (SETP).....	16
4.11.	Hardware Options	17
4.11.1.	0080 (RS-232 / RS-485 Converter)	17
4.11.2.	0227 (Relay Output Module)	17
4.11.3.	2100 Indicator Variants	17
4.11.4.	0330 (110/240 VAC Power Supply)	18
4.11.5.	0331 (12-24VDC Power Supply)	18
4.11.6.	0332 (Rechargeable Battery)	18
5.	DATA ENTRY	19
5.1.	Editing Annunciators	19
5.2.	Numeric Entry	19
5.3.	Selections and Options	20
6.	BASIC OPERATION	21
6.1.	Display and Controls	21
6.1.1.	Front Panel: Visual Display	21
6.2.	Operation Keys	22
6.2.1.	Primary Function	22
6.2.2.	Editing Function	22
6.2.3.	Stability Considerations	23
6.3.	ZERO Key.....	23
6.4.	TARE Key	23
6.5.	GROSS/NET Key.....	23
6.6.	PRINT/M+ Key	24
6.7.	FUNCTION Key	24
6.8.	POWER Key	24
7.	CONFIGURATION ISSUES	25
7.1.	General Setup Information	25
7.2.	Basic Weighing Terminology.....	25
7.3.	Filtering Techniques.....	26
7.3.1.	FIR (Finite Impulse Response) Filter and Reading Rate	26
7.3.2.	Digital Averaging	26
7.4.	Trade vs Industrial Mode.....	27

7.5.	Calibration Counter	27
7.6.	Passcodes	27
7.6.1.	Full Setup Passcode	27
7.6.2.	Operator Menu Setup Passcode	27
8.	SETUP	28
8.1.	Accessing Setup	28
8.1.1.	Incorrect Passcode Entered	28
8.1.2.	Full Setup Display Prompts	28
8.1.3.	Operator Menu Setup Display Prompts	29
8.2.	Exiting Setup	29
8.2.1.	Exiting Full Setup	29
8.2.2.	Exiting Operator Menu Setup	29
8.3.	Groups and Items	29
8.3.1.	GRP (Group)	29
8.3.2.	ITM (Item)	29
8.4.	Setup Menus	30
8.4.1.	BUILD (Scale Build)	30
8.4.2.	OPTION (Scale Options)	31
8.4.3.	CAL (Scale Calibration)	32
8.4.4.	SPEC (Special Settings Menu)	33
8.4.5.	SERIAL (Serial Communications Options)	35
8.4.6.	SET.PTS (Setpoint Settings)	36
8.4.7.	CLOCK (Clock Settings)	37
8.4.8.	TEST (Special Test Functions)	38
8.4.9.	FACTRY (Factory Adjustment Menu)	38
8.4.10.	– End – (Leaving Setup)	38
9.	CALIBRATION	39
9.1.	Performing a Digital Calibration with Test Weights	39
9.1.1.	ZERO (Zero Calibration Routine)	40
9.1.2.	SPAN (Span Calibration Routine)	40
9.2.	Using Linearisation	40
9.2.1.	ED.LIN (Edit Linearisation Points)	41
9.2.2.	CLR.LIN (Clear Linearisation)	41
10.	SERIAL OUTPUTS	42
10.1.	Automatic Weight Output from the 2100	42
10.2.	Networking the 2100	43
10.2.1.	Command Structure	43
10.2.2.	Command Types	43
10.3.	2100 Printing	45
10.4.	Master Serial Output	46
11.	SETPOINTS	47
11.1.	Connection	47
11.2.	Basic Setpoint Operation	47
11.2.1.	Configuring a Setpoint	47
11.3.	Setpoint Options	48
11.3.1.	TYPE (None, Active, Batch, Pass)	48
11.3.2.	SOURCE (Gross, Net, Reading, Held)	49
11.3.3.	DIRECTION (Over, Under)	49
11.3.4.	LOGIC LEVEL (High, Low)	49
11.3.5.	ALARM (None, Single, Double, Flash)	50
11.3.6.	D.TIME (Dump Time)	50
11.4.	Operator Parameters	50
11.4.1.	Targets	50
11.4.2.	Flight (In-Flight Weight)	50
11.4.3.	Hysteresis	50
11.5.	Setpoint Printing	51
12.	SPECIAL FUNCTIONS	52
12.1.	Introduction	52
12.1.1.	Cleaning	52
12.2.	Key Functions	52

12.2.1.	NONE (-).....	52
12.2.2.	UNITS (U)	52
12.2.3.	COUNT (C)	53
12.2.4.	HOLD (H) and PEAK (E)	53
12.2.5.	LIVE WT (L)	53
12.2.6.	TOTAL (S)	54
12.2.7.	BATCH (B)	54
12.2.8.	® BLANK (K)	54
13.	APPENDIX	55
13.1.	Setup Menu Quick Reference	55
13.2.	Error Messages.....	56
13.2.1.	Weighing Errors	56
13.2.2.	Battery Operation	56
13.3.	Diagnostic Errors	57
13.4.	Version 2.1 Software Updates.....	57
13.5.	Glossary Terms.....	58
13.6.	List of Figures and Tables.....	58
14.	INDEX	59

This is a “Table of Contents preview” for quality assurance

The full manual can be purchased from our store:

[https://the-checkout-tech.com/manuals/rinstrum/2100 reference manual.html](https://the-checkout-tech.com/manuals/rinstrum/2100%20reference%20manual.html)

And our free Online Keysheet maker:

<https://the-checkout-tech.com/Cash-Register-Keysheet-Creator/>

[HTTPS://THE-CHECKOUT-TECH.COM](https://THE-CHECKOUT-TECH.COM)