



Defender[®] 5000 Indicators Instruction Manual



TD52XW



TD52P

TABLE OF CONTENTS

1. INTRODUCTION	5
1.1 Safety Precautions	5
1.1.1 Relay Option Safety Precautions	5
1.2 Overview of Parts and Controls	6
1.3 Control Functions.....	9
2. INSTALLATION	10
2.1 Unpacking	10
2.2 External Connections.....	10
2.2.1 Scale Base with Connector.....	10
2.2.2 RS232 interface Cable to TD52P	10
2.2.3 AC Power to TD52P	10
2.2.4 AC Power to TD52XW.....	10
2.2.5 Battery Power.....	10
2.3 Internal Connections.....	11
2.3.1 Opening the Housing	11
2.3.2 Scale Base Without Connector	11
2.3.3 RS232 Interface Cable to TD52XW	13
2.3.4 MICRO SD Card Installation.....	14
2.4 TD52XW Rear Housing Orientation	14
2.5 Mounting Bracket	14
3. SETTINGS	15
3.1 Menu Structure	15
3.2 Menu Navigation.....	18
3.3 Calibration Menu	18
3.3.1 Zero Calibration	18
3.3.2 Span Calibration	19
3.3.3 Linearity Calibration	20
3.3.4 GEO Adjustment	21
3.4 Setup Menu	22
3.4.1 Capacity Unit.....	22
3.4.2 Range	22
3.4.3 Capacity	22
3.4.4 Graduation.....	23
3.4.5 Language	23
3.4.6 Power On Zero	23
3.4.7 Power On Unit	23
3.4.8 Key Beep.....	23

3.4.9 Transaction Counter	24
3.4.10 I/O Type	24
3.4.11 Reset	24
3.5 Readout Menu	24
3.5.1 Stability	24
3.5.2 Zero Range	24
3.5.3 Filter Level	25
3.5.4 Auto Zero Tracking	25
3.5.5 Auto Dim	25
3.5.6 ScreenSaver	25
3.5.7 Auto Off	25
3.5.8 Adjust Contrast	25
3.5.9 Reset	25
3.6 Discrete I/O	26
3.7 Weighing Unit	28
3.7.1 Gram (g)	28
3.7.2 Kilogram (kg)	28
3.7.3 Pound (lb)	28
3.7.4 Ounce (oz)	28
3.7.5 Pound: Ounce (lb: oz)	28
3.7.6 Tonne (Metric Tonne)	28
3.7.7 Ton (Short Ton)	28
3.7.8 Custom Unit (c)	28
3.8 GLP/GMP Menu	29
3.8.1 Date Format	29
3.8.2 Date	29
3.8.3 Time Format	29
3.8.4 Time	29
3.8.5 Project ID	29
3.8.6 Scale ID	29
3.8.6 Reset	30
3.9 Communication	30
3.9.1 RS232/2nd RS232 Configuration	30
3.9.2 Print Setup of RS232/2nd RS232	31
3.9.3 RS485 Configuration	34
3.9.4 Ethernet Configuration	34
3.9.5 Wifi Configuration	34
3.9.6 Bluetooth Configuration	34

3.9.7 Analog Configuration	34
3.10 Maintenance Configuration	34
3.11 Lock Key Configuration	34
4. OPERATION	35
4.1 Weighing	35
4.1.1 Application Setup	35
4.1.2 Auto Tare	35
4.1.3 Accumulation	36
4.1.4 ID Input	37
4.1.5 Input/Output (I/O) Setup	37
4.2 Counting	38
4.2.1 Set the Average Piece Weight (APW)	38
4.2.2 Application Setup	39
4.2.3 Accumulation	40
4.2.4 Input/Output (I/O) Setup	40
4.3 Check	41
4.3.1 Check Weighing (default)	41
4.3.2 Check Counting	42
4.3.3 Application Setup	43
4.3.4 Input/Output (I/O) Setup	44
4.4 Percent Weighing	44
4.4.1 Establishing a Reference Weight	45
4.4.2 Application Setup	45
4.4.3 Input/Output (I/O) Setup	46
4.5 Dynamic Weighing	47
4.5.1 Application Setup	47
4.5.2 Average Time Setup	49
4.5.3 Input/Output (I/O) Setup	50
4.5 Filling	51
4.5.1 Establishing target weights	51
4.5.2 Application Setup	51
4.5.3 Input/Output (I/O) Setup	52
5. SERIAL COMMUNICATION	54
5.1 Interface Command	54
5.2 RS232 Interface	54
5.3 Connecting to a Computer	55
5.4 Connecting to a Serial Printer	55
5.5 Printouts	55

5.6 Printout Examples	56
6. MICRO SD CARD/USB	57
6.1 Library	57
6.2 User	60
6.3 Alibi	63
6.4 Editable	64
7. LEGAL FOR TRADE	65
7.1 Settings	65
7.2 Verification	65
7.3 Sealing	65
8. MAINTENANCE.....	66
8.1 Model T52P Cleaning	66
8.2 Model TD52XW Cleaning	66
8.3 Troubleshooting	66
8.4 Service Information	67
9. TECHNICAL DATA	67
9.1 Specifications	67
9.2 Accessories and Options	69
9.3 Drawings and Dimensions	70
9.4 Table of Geo Values	71
10. COMPLIANCE	72
11. APPENDICES.....	74
11.1 Appendix A	74
11.2 Appendix B	76

1. INTRODUCTION

This manual contains installation, operation and maintenance instructions for the TD52P and TD52XW Indicators. Please read this manual completely before installation and operation.

1.1 Safety Precautions



For safe and dependable operation of this equipment, please comply with the following safety precautions:

- Verify that the input voltage range printed on the data label matches the local AC power to be used.
- Make sure that the power cord does not pose a potential obstacle or tripping hazard.
- Use only approved accessories and peripherals.
- Operate the equipment only under ambient conditions specified in these instructions.
- Disconnect the equipment from the power supply when cleaning.
- Do not operate the equipment in hazardous or unstable environments.
- Do not immerse the equipment in water or other liquids.
- Service should only be performed by authorized personnel.
- The TD52XW is supplied with a grounded power cable. Use only with a compatible grounded power outlet.

1.1.1 Relay Option Safety Precautions

This equipment may have an optional Discrete I/O board installed. This option allows external devices to be controlled by the Indicator.



CAUTION: ELECTRICAL SHOCK HAZARD. REMOVE ALL POWER CONNECTIONS TO THE INDICATOR BEFORE SERVICING OR MAKING INTERNAL CONNECTIONS. THE HOUSING SHOULD ONLY BE OPENED BY AUTHORIZED AND QUALIFIED PERSONNEL, SUCH AS AN ELECTRICAL TECHNICIAN.

Before making connections to the Relay terminals, remove power from the system. If the system contains an optional rechargeable battery system, be sure that the **ON/CLR Off** button is used to fully turn off the system after removing the AC power plug.

More detailed installation instructions are included with the Discrete I/O kit at the time of purchase.

1.2 Overview of Parts and Controls

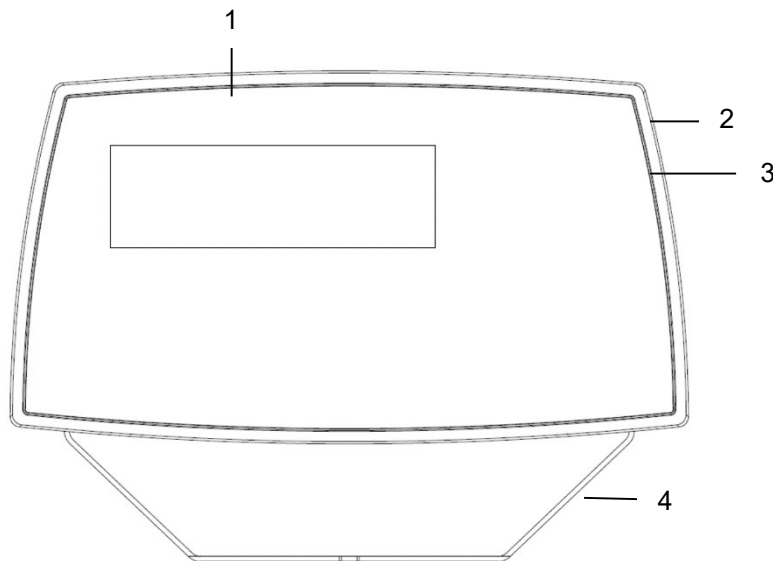


TABLE 1-1 TD52P PARTS

Item	Description
1	Data Label
2	Front Housing
3	Control Panel
4	Mounting Bracket
5	Screws (4)
6	Adjusting Knobs (2)
7	Security Screw
8	Accessory Cover
9	Rear Housing
10	Power Connector
11	RS232 Connector
12	Load Cell Connector

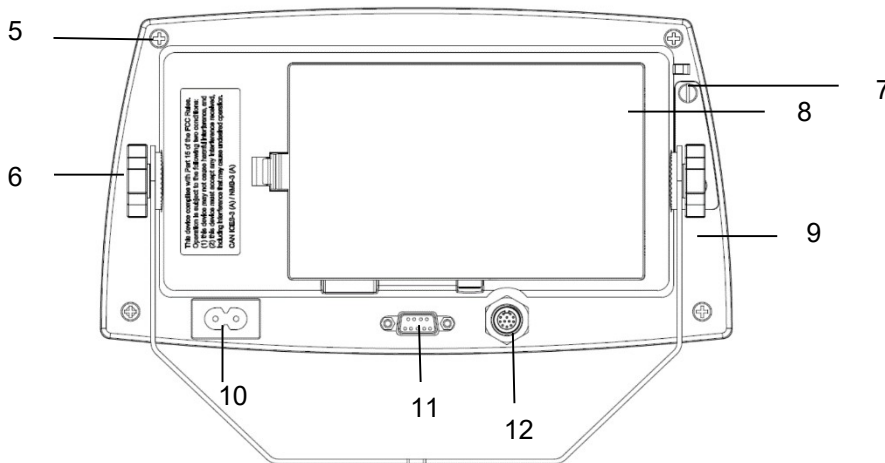


Figure 1-1 TD52P Indicator