1310

programmable digital indicator system

Description

General
The 1310 is a desk, wall or panel (see Options) mounted indicator, which can be fully programmed to work exactly as customers require. The customer no longer needs to change their process to meet the limitations of the indicator.

Extensive connectivity is provided through ethernet and fieldbus options, or access via modem.

High resolution and fast signal processing of the 1310 enables rapid and precise weight measurement.

Ideal for recipe batch filling, parts counting, checkweighing, weighbridges database and product tracking, or combinations of the above.

With its built-in electronic tally roll archiving capability, the 1310 removes the need for the old conventional tally roll printer.

SimPoser
Custom software is made easy by the aid of SimPoser, a PC based programming package. SimPoser provides an easy to use program editor, downloader, print format configurator, product and simulator to aid the program testing prior to downloads.

Quick and easy to download any new configuration settings.

Up to eight weighing platforms of any type may be connected to the terminal, e.g. floor, bench, overhead-track, tanks and hoppers, etc.

These can be displayed independently or all at the same time.

Housed in a robust IP67 stainless steel case.

Apart from weight, other relevant customer information or customer terminology can easily be programmed into the scale with use of the five soft keys, these can be programmed to help guide the operator through the required operations with clear easy to read display prompts.

Specification

Keyboard

Data entry is via an alpha-numeric acid-resistant keyboard. All keys provide the user with tactile and audio feedback when pressed.

Operational Keys
Eight fixed operational keys and 11 alpha-numeric keys with mobile phone style alpha entry, which can be deactivated if required: Zero, Tare, Print, Units, Select, Enter, Escape, Clear, 0 - 9 and decimal point.

Avery Weigh-Tronix

Programmable Keys

Five programmable soft keys, which can be labelled for a selected operational routine.

For faster data entry there is also a range of plug in alpha-numeric keyboards available.
(See options)

Display

One 32 mm high x 125 mm wide cold cathode fluorescent backlit, white on blue, dot graphic display (64 x 240 dot layout) which is capable of displaying both graphic readings or an alpha-numeric reading depending upon the customers requirements.

Size

The display can be programmed to display one large alpha or numeric line of data or several smaller lines of data.

The 1310 offers a wide range of different graphic displays to aid the operator. These can range from individual pie/bar charts, to needle/tachometer style graphs.

Performance

Capacity Selection
Up to 10,000,000 selectable.

Increment Multiplier
1, 2, 5, 10, 20, 50.

Decimal Point
Configurable to any of the eight positions relevant to the division size.
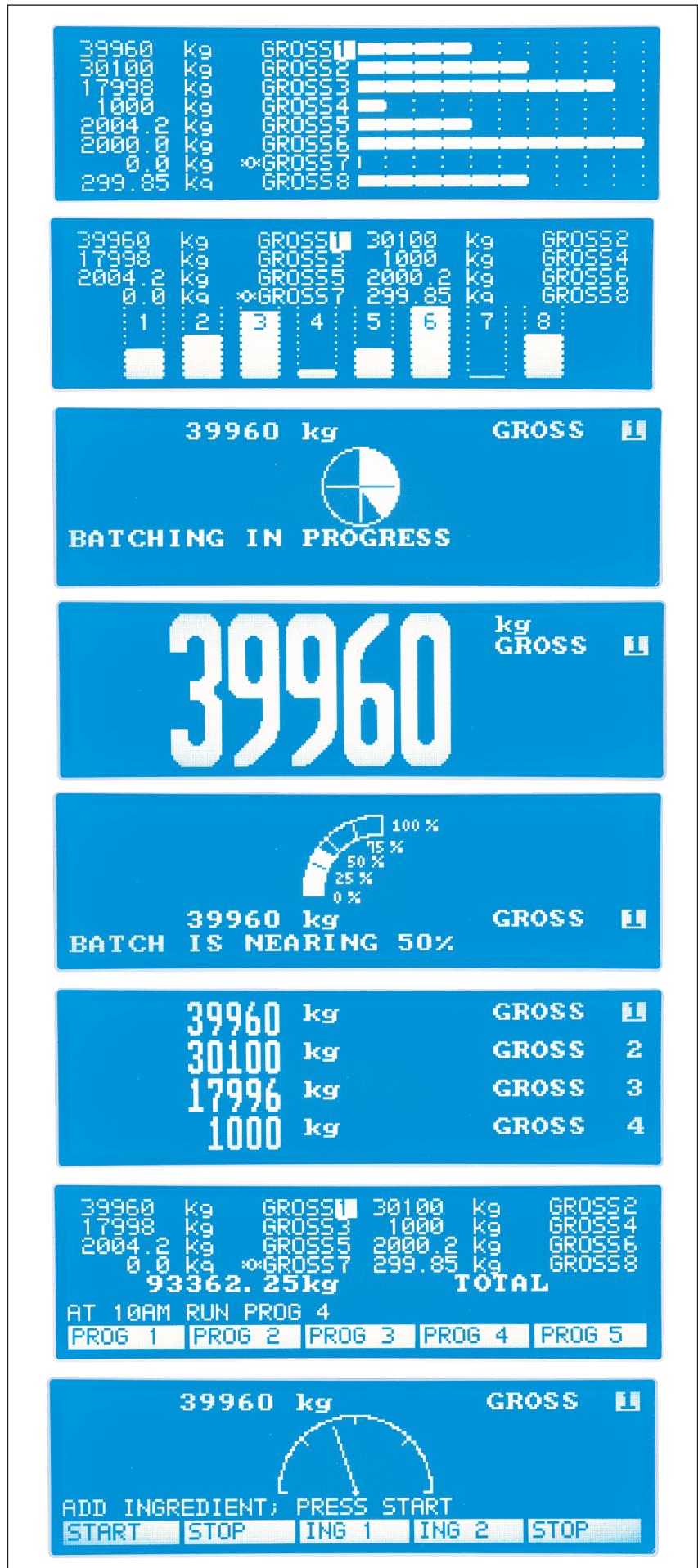
Units of Measure
Kilograms, grams, pounds ounces, and four programmable custom units.

Memory
The standard memory size is 1 MB, of which, 128 K is available for user data storage. This can be expanded up to 8 MB (see Memory Expansion Option).

Languages
Operation prompts in English, French, German, Spanish and Italian.

Examples of display.

Analogue Inputs

Number of Cells
Integrated signal amplifier for connection of up to 32, 350 ohms strain gauge load cells using four or six wire technology, i.e. up to eight x four load cell platforms.

Input Connections
Input connections are hardwired inside indicator. Depending upon application, some multi-inputs may also require external junction box.

Excitation/Voltage
10 Volts DC or 10 Volts AC square wave.

EC Approval
Weights and measures approved resolution of 6000 d, with internal resolution of 1,000,000.

Linearisation
10 linearisation points.

Digital Inputs

Number of Cells
One digital Quartzell.

Input Connections
Input connections are hardwired inside indicator.

EC Approval
Weights and measures approved resolution of 6000 d, with internal resolution of 1,000,000.

Analogue to Digital Converter

Type
Delta sigma converter.

Update Rate
The data is refreshed 60 times per second.

Resolution Displayed
10,000,000 increments.

Resolution - Internal
1,000,000 increments

Filter

Type
Harmonizer ™ Digital filtering is fully programmable to ignore noise and vibration.

Filter Application
Harmonizer ™ offers three types of filtering, the first allows six levels of filtering for adjustment to vibration frequency.

The second allows adjustment for amplitude, which is another critical characteristic of vibration or noise.

The last allows you to select a threshold, or a level of weight change at which the dampening is disabled. This speeds the weighing process because the scale reads quickly any weight changes that exceed the selected threshold value. The filter dampens any changes in weight caused by environmental noise that are less than the threshold value.

Zero

Setting
Keyboard push button.

Zero Range
For trade approved applications, the scale will only zero off any weight up to $\pm$ 2% of full capacity. For non-approved applications, this can be set to zero any weight up to 100% of full capacity.

Zero Indication
The zero symbol is displayed when the weight is within $1/4$ of a division of centre of the zero scale increment.

Zero Tracking
The zero tracking can be programmed to track the zero in either gross or net mode, as long as the weight being tracked remains within the zero tracking range.

Under and Over Range Indication
The display will be blanked out and an operator warning of this error will be shown on the display.

Tares

Three types of tare are available, each is 100% subtractive.

Type A
Semi-automatic, push button operated, with selectable negative weighing.
Cumulative tareing is possible.

Type B
Keyboard entered tare operated with negative weighing display.

Type C
Any number of separately stored tares with negative weight display can be programmed with the aid of SimPoser. All stored data will be retained when the power is turned off.

Interfaces

Supplied as standard with four bi-directional serial ports, suitable for linking to intelligent peripheral equipment such as computers, PLCs, printers, barcode scanners, alpha-numeric keyboards or network installations.

The first three ports provide RS232, RS485/422 and Quartzell, the fourth port provides RS232 and 20 mA current loop.

Trips

Four input/output (I/O) OPTO 22 control modules can be installed inside the indicator, or up to 64 I/O OPTO 22 control modules can be operated through an external trip relay box(es).

All trip setup and configuration can be programmed with the use of SimPoser.

Once the trip configuration is downloaded into the indicator, all trip values will be retained when power is off.

Internal Modem Option

The indicator has the option of an internal modem, providing access to the 1310 by telephone line.

Networking Options

Capabilities include monitoring and data collection via a web browser (HTTP), operational updates and error reporting via email (SMTP) and raw data transmission via FTP.

Fieldbus interfaces available: Device Net™, ProfiBus®, Control Net™, InterBus, ModBus Plus.

Ethernet 10/100 [ModBus TCP, TCP/IP (sockets), HTTP, SMTP, FTP, Ethernet/IP].

Analogue Output Options

The 1310 can drive up to eight fully isolated, programmable analogue outputs (selectable 0-20 mA, 0-24 mA, 0-5 VDC, ± 5 VDC, ± 10 VDC) This can be achieved by installing up to two analogue cards.

Four card options are available - single, dual, three and four channel.

Pulse Counter Options

The 1310 can drive up to 16 pulse counter inputs, ideal for conveyor speed monitoring (TTL 5VDC). This can be achieved by installing up to two pulse counter input cards.

Two card options are available - dual input and eight channel input.

Electronic Tally Roll Options

Trade approved, internal non-volatile memory. Dispenses, once and for all, with the need to connect tally roll printers to scales linked to PCs.

Typically 262,000 records may be stored using a 4 MB memory card. See Memory Expansion Options.

Multi-Scale Option Cards

Provided as multi-scale card and J-Box or card only. Up to two cards may be installed.

This allows the indicator to be connected to more than one scale. Installing the correct multi-scale option card(s), will allow the indicator to moinitor the data from up to eight remote weight platforms.

Memory Expansion Options

In addition to the 128 K standard user data memory, up to two expansion cards may be fitted. 1 MB and 4 MB cards are available, giving expansion options as follows: 1 MB, 4 MB, 5 MB, 8 MB.

Security

Service & Software Protection
Personal password protection is available within SimPoser to help safeguard your customised software and prevent any unauthorised service access or software poaching.

Real Time Clock
The indicator is fitted with a real time clock which allows the user to display and print the time and date.

The clock is battery backed and will remain functional in the absence of mains power.

Electrical Power Input

Voltage
230 V AC, 75 VA,
50/60 Hz single phase.

Tolerance
Voltage -15% to + 10%
Frequency ± 10%.

Cable Length
Two metres of mains cable supplied.

Isolation
Note: Mains earth lead must be connected to a safety earth.

Environment

Resistant to Dirt and Moisture
Protected to IP67.

Electrical Disturbance
Immune to electrical disturbance, including RFI as detailed in EN45501 : 1992.

Storage Temperature
-40° C to + 60° C.

Operating Temperature Range
0° C to +40° C.

Housing Options

Wall, Bench or Panel Mounted
The indicator is housed in a robust pickled and polished stainless steel case with an adjustable stainless steel desk, wall mounted bracket or an optional panel mount kit.

Approvals

All data relating to the performance of the indicator meets and exceeds the requirements of the of EN 45501 : 1992. European approval Accuracy class III Machines.

Approval for 6000 d.
EC Approval No: UK 2678 type approval certificate.

Options

The following are scale input cards and junction boxes:

1. One Additional Scale Input
Part No: 52959-2016
This allows two scales to be controlled from one indicator.

2. Two Additional Scale Inputs
Part No: 52959-2024
This allows three scales to be controlled from one indicator.

3. Three Additional Scales Inputs
Part no: 52959-2032
This allows four scales to be controlled from one indicator.

4. Four Additional Scale Inputs
Part No: 52959-2057
This allows five scales to be controlled from one indicator.

5. Five Additional Scale Inputs
Part No: 52959-2065
This allows six scales to be controlled from one indicator.

6. Six Additional Scale Inputs
Part No: 52959-1067
This allows seven scales to be controlled from one indicator.

7. Seven Additional Scale Inputs
Part No: 52959-2073
This allows eight scales to be controlled from one indicator.

The following card only options are also available:

One additional scale (card only).
Part No: 52959-2081

Two additional scales (card only).
Part No: 52959-2099

Three additional scales (card only).
Part No: 52959-2107

Four additional scales (card only).
Part No: 52959-2115

A maximum of two cards may be fitted.

8. One Channel Analogue Output Card
Part No: 52959-1158
This allows one analogue output to be driven from the indicator.

9. Dual Channel Analogue Output Card
Part No: 52959-1166
This allows up to an additional two analogue outputs to be driven from the indicator.

10. Three Channel Analogue Output Card
Part no 52959-1174
This allows up to or an additional three analogue outputs to be driven from the indicator.

11. Four Channel Analogue Output Card
Part No: 52959-1182
This allows up to an additional four analogue outputs to be driven from the indicator.

12. SSCU8 External Input/ Output Card Only
Part No: 47183-0018
SSCU8 relay card, can hold up to eight OPTO 22 I/O control modules, with a maximum of up to eight SSCU8 I/O cards per 1310 indicator.

13. Mild Steel SSCU8 Input/ Output Box
Part No: W130/47192-0017
Housed in a robust mild steel painted box, each SSCU8 external I/O box can hold up to eight OPTO 22 I/O control modules, with a maximum of up to eight SSCU8 I/O boxes per 1310 indicator.

14. Stainless Steel SSCU8 External Input/Output Box
Part No: 47192-0025
Housed in a robust stainless steel box, each SSCU8 external I/O box can hold up to eight OPTO 22 I/O control modules, with a maximum of up to eight SSCU8 I/O box per 1310 indicator.

15. 1 MB Memory Expansion Card
Part No: 52961-1014

16. 4 MB Memory Expansion Card
Part No: 52961-1048

17. External PS2 QWERTY Keyboard
Part No: 52951-0018
Suitable for office type environments.

18. External QWERTY Spill Resistant Keyboard (RS232)
Part No: W130/47854-0016
Suitable for the more industrial type environments. IP65 rated.

19. SimPoser Software
UPC 1310KT0000SP00
This SimPoser program development suite offers easy to use program editor, down loader, print format configurator and product simulator.

20. SimPoser Cable
Part No: W130/47355-0010
Enables software applications to be transferred from PC to indicator.

21. Internal Modem
Part No: 52960 -1015

22. Device Net
Part No: 52959 -1190

23. ProfiBus
Part No: 52959 -1232

24. Control Net
Part No: 52959 -1224

25. InterBus
Part No: 52959 -1208

26. ModBus Plus
Part No: 52959 -1240

27. Ethernet 10/100
Part No: 52959 -1257
(ModBus/TCP, TCP/IP, HTTP, SMTP, FTP, Ethernet/IP).

28. Ethernet (ModBus/TCP, TCP/IP)
Part No: 52959-1216

29. Two channel Pulse Counter Input Card
Part No: 52959-1315
This will allow the 1310 to monitor two pulse counter units.

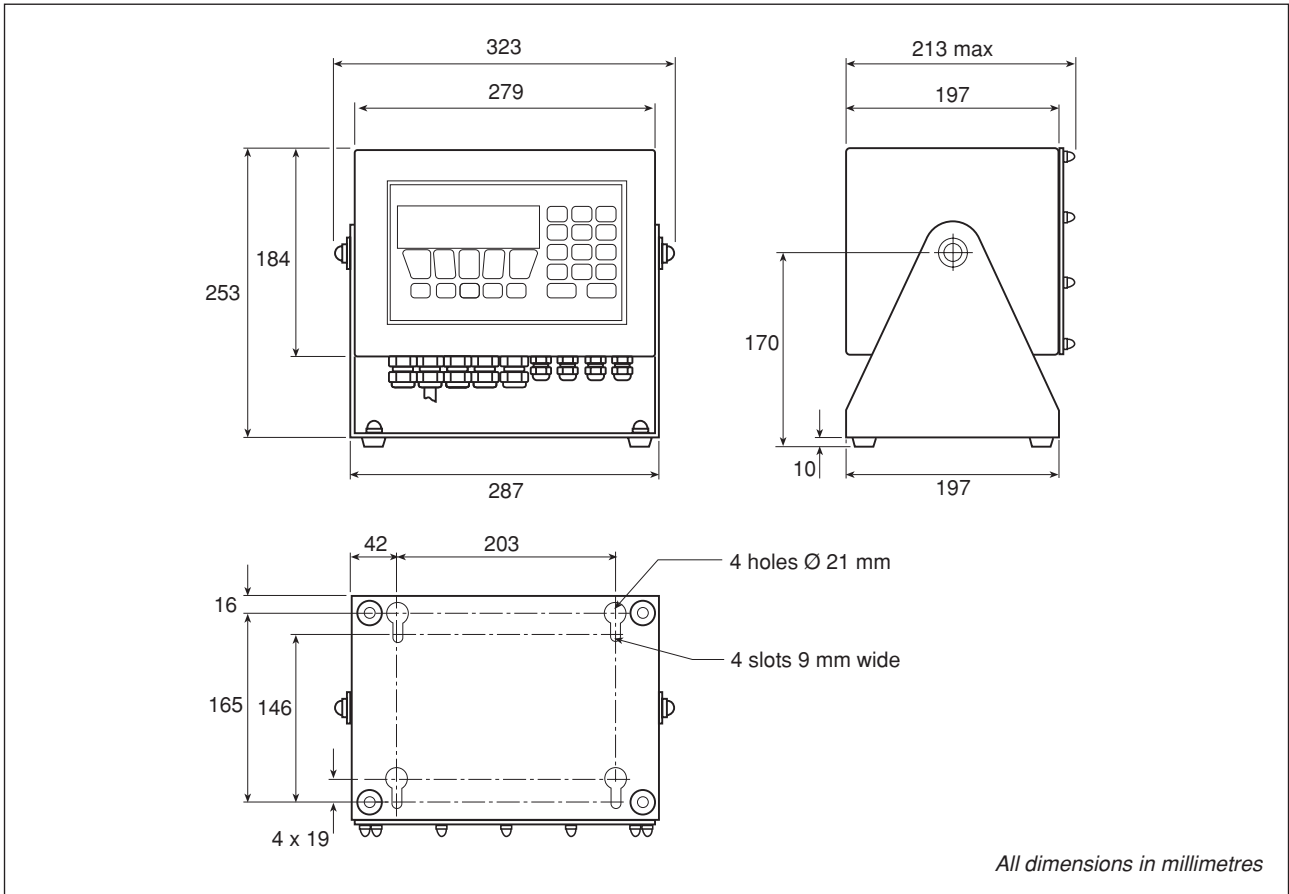### 30. Eight Channel Pulse Counter Input Card
Part No: 52959-1349
This will allow the 1310 to monitor eight pulse counter inputs.

31. Panel Mount Kit
UPC 1310KT0000PM00
Framework and gasket enables the mounting of a 1310 in various cabinets.

Dimensions

All dimensions in millimetres

Weight

7.7 kg

Shipping Specification

Net
7.7 kg

Gross
9.5 kg

Measurement
400 mm x 350 mm x 330 mm.

Harmonised Commodity Code
842390 00 0.

Your local distributor:

Avery Weigh-Tronix

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