

## Service and Calibration Kit

### FEATURES

- Start-up calibrate and troubleshoot process weighing systems
- Simultaneous individual load cell measurement
- Pre-calibrated for mV/V, percent of load, and force units
- Includes instrument calibrator
- Remote connection cable assemblies
- Rugged portable suitcase design with shock mounting
- Troubleshooting procedures manual

### APPLICATIONS

- Field service
- Calibration
- Test and measurement

### DESCRIPTION

Start-up, commissioning, routine servicing, and calibration of process weighing systems can be simplified significantly using the FSK-40 Service and Calibration Kit. This complete kit is equipped with a four-channel load cell instrument, an instrument calibrator, a serial communication module, operation and servicing manuals, and a set of 10-foot remote connection cables. The entire assembly is housed in a rugged, portable suitcase with shock mounting.

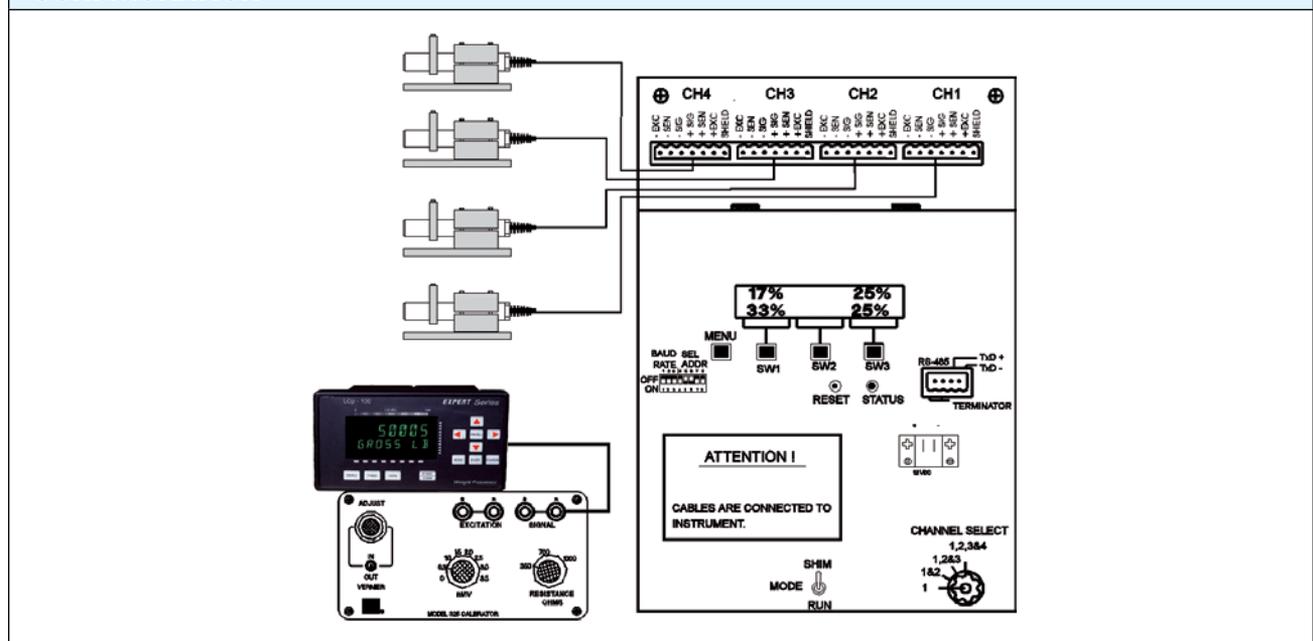
The core of the kit is the four-channel instrument that makes it possible to measure the output of each of up to four load cells simultaneously and independently. This powerful tool greatly reduces the time needed to identify mechanical restrictions, mechanically balance the system,



and isolate load cells for troubleshooting. The instrument is factory pre-calibrated to provide individual readout in mV/V, and percent of load or conventional units of force. In addition, the instrument is equipped with a serial port and adapter for logging of data on a PC or serial printer.

For troubleshooting and calibration of associated instrumentation, a precision calibrator is included. To facilitate easy remote connection to individual load cell cables inside a summing box, special 10-foot wiring harnesses with spring loaded connectors are included. Finally, a comprehensive manual describing the techniques professions use to properly configure, calibrate and troubleshoot weigh systems is also included.

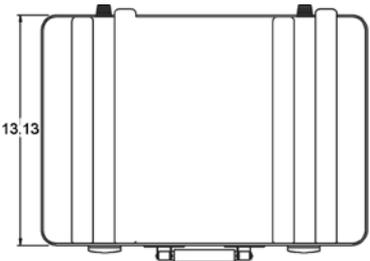
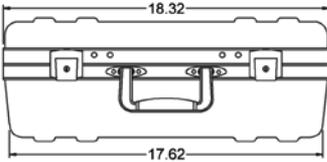
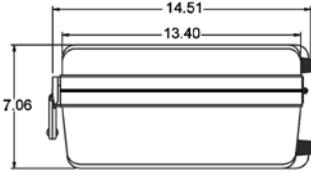
### CONFIGURATION



Service and Calibration Kit

| SPECIFICATIONS                                      |   |                    |
|---|---|--------------------|
| PARAMETER   | VALUE   |                    |
| <b>PERFORMANCE</b>                                  |   |                    |
| Internal Resolution                                 | 4,194,304 total counts                            |                    |
| Max. Display Resolution                             | 3,000,000 total counts                            |                    |
| Max. Resolution/Channel                             | 750,000 counts                                    |                    |
| Conversion Speed                                    | 50 ms (20 updates/s)                              |                    |
| Sensitivity (Noise)                                 | 0.0011% full scale<br>(max ±16 counts w/o filter) |                    |
| Full Scale Range                                    | 35 mV/channel                                     |                    |
| Dead Load Range                                     | 100%  |                    |
| Input Impedance                                     | 10 MΩ, min. per channel                           |                    |
| Load Cell Excitation                                | 10 V 2 × 350 Ω load cells,<br>65 mA/channel max.  |                    |
| Remote Sense  | user configurable – each channel                  |                    |
| Linearity   | ±0.0015% of full scale                            |                    |
| Calibration Repeatability                           | 0.3 μV per count                                  |                    |
| Software Filter (Std.)                              | 50 to 6400 ms                                     |                    |
| Dynamic Digital Filter                              | multi-variable to 64 seconds (opt.)               |                    |
| <b>TEMPERATURE COEFFICIENT</b>                      |   |                    |
| Span/Zero   | ±2 ppm/°C   |                    |
| Step Response                                       | one conversion                                    |                    |
| Common Mode Rej.                                    | 100 db @ 60 Hz                                    |                    |
| Normal Mode Rej.                                    | 100 db above 35 Hz                                |                    |
| <b>ENVIRONMENT</b>                                  |   |                    |
| Operating Temperature                               | –10°C to 55°C (12°F to 131°F)                     |                    |
| Storage Temperature                                 | –20°C to 85°C (–4°F to 185°F)                     |                    |
| Humidity  | 5 to 90% RH, non-condensing                       |                    |
| Voltage   | 117/230 V ±15% 50/60 Hz                           |                    |
| Power   | 12 W max.   |                    |
| Parameter Storage                                   | EEPROM  |                    |
| EMI/RFI   | Shielded from typical industrial interference     |                    |
| PARAMETER   | VALUE   |                    |
| <b>ENCLOSURE</b>                                    |   |                    |
| Dimensions  | see outline dimensions below                      |                    |
| <b>INTERNAL DISPLAY / OPERATOR INTERFACE</b>        |   |                    |
| High-Contrast Vacuum Fluorescent                    | 2 columns of 20 characters each                   |                    |
| Interface   | 4 “soft buttons”                                  |                    |
| <b>DIGI-SYSTEM NETWORK</b>                          |   |                    |
| Type  | RS 485 Half Duplex (Multi-Drop)                   |                    |
| Baud  | 9.6k, 28.8k, and 56.7k                            |                    |
| Data Format   | proprietary                                       |                    |
| <b>STANDARD SIMPLEX DATA OUTPUT (TRANSMIT ONLY)</b> |   |                    |
| Type  | RS 485 (Simplex)                                  |                    |
| Baud  | 1200 or 9600                                      |                    |
| Data Format (Selectable)                            | ASCII 7 data bits<br>even parity<br>stop bit      |                    |
| <b>TERMINAL / COMPUTER INTERFACE</b>                |   |                    |
| Interface Type                                      | RS 485 Half Duplex (Standard)                     |                    |
| Baud  | 1200 or 9600                                      |                    |
| Protocol  | Duplex Command/Response                           |                    |
| Data Format   | ASCII 7 data bits<br>even parity<br>stop bit      |                    |
| <b>WEIGHT</b>                                       |   |                    |
| Complete Case                                       | approx. 19 lb                                     |                    |
| <b>CALIBRATION</b>                                  |   |                    |
|   | <b>Indicator</b>                                  | <b>Calibrator</b>  |
| Recalibration Interval                              | 1 Year  | 1 Year             |
| Stability   | 0.005% FS/year                                    | <<0.02% range/year |

BLH Nobel is continually seeking to improve product quality and performance. Specifications may change accordingly.

| DIMENSIONS in inches  |   |   |
|---|---|---|
|  |  |  |



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