



## lineScale 3

PPE Certified (CE and UIAA)  
Electronic Bluetooth Load Cell

### Quick Start Guide

QSG ver. 2.0



This quick guide will get you started with the basic, most frequent operating functions. Please refer to the overleaf instructions for MENU operation and available setup options. You will find downloads, certificates, manuals, and a knowledge-base on [www.linegrip.com/LS3](http://www.linegrip.com/LS3)



Long press to switch on / off.

Short press (when powered on) to enter the settings and configuration menu.

- Log settings
- Date & Time settings
- User settings
- Service Menu (Operate carefully in this menu! Wrong settings can render the LS3 inoperative!)



Short press to toggle the scan rate.

- 10Hz (100ms)
- 40Hz (25ms)
- 640Hz (1.5ms)
- 1280Hz (0,75ms)

Note: BT connection to smartphone app is possible with 10Hz and 40Hz setting only.

Long press to start onboard logging with the settings defined in the Log-Menu.

In the „User Settings“ you may activate the „Auto Power Off“ function, which is disabled by default. This will power off the LS3 automatically after a specified amount of time has passed since the last button press or load change was registered. The „Power save & lock“ function is set to 5 minutes by default because it will not affect or interrupt onboard logging or BT connection. When the display is „locked“ the LS3 will run about 4 times longer on a single battery charge. When the „lock symbol“ or „lock screen“ is displayed you can unlock the device by pressing the PWR & ZERO buttons simultaneously. With the same button combination you may manually lock the device anytime on the main screen (even while logging is active and running) to save power. Please refer to the online knowledge base or the downloadable PDF user manual for detailed operating instructions and LOG function explanation.



Short press to toggle display units.

- kN (kilonewton)
- lbf (pounds force)
- kgf (kilograms force)

Long press to toggle PEAK mode. The load display will freeze the highest value reached since the PEAK mode was activated.



Short press to set relative zero (in REL), reset MAX/MIN (in ABS), reset PEAK.

Long press to toggle REL(ative) / ABS(olute) mode. REL mode will show load value relative to the current set relative zero. ABS mode will always show the true / real load value relative to the calibrated absolute zero.



### NOTICE FOR PPE APPLICATION

Please fully read and understand the included PPE manual before using the LineScale-3 for PPE application!



#### Technical Specifications

- Working load limit (WLL): 30 kN (6700 lbf)
- Minimum breaking strength (MBS): 90 kN (22000 lbf)
- Recommended PPE max. load: 10 kN (2200 lbf)
- Max. measuring range: -10 % to 110 % of WLL
- Sensor scan rate (cycle rate): 1280Hz, 640Hz, 40 Hz, 10Hz
- Weight (incl. battery): 520 g (18.3 oz)
- Measurements (L x W x T): 190 x 90 x 20 mm
- Material body: High strain aviation aluminum alloy LY12CZ
- Display units: kN / kgf / lbf
- Display division (resolution): 0.01 kN / 1 kg / 2 lbf
- Measure error: less than ±0.5% (@3kN-15kN)
- Operating temperature: -10 to +40 °C
- Storage temperature: -20 to +70 °C
- Relative humidity: 10% to 80% RH
- Power: 3.7V 1600mAh rechargeable Li-Ion battery pack
- Operating endurance: ca. 50 hours continuous (24h w. bluetooth enabled)
- Bluetooth 4/5 interface (w. smartphone app)
- Protection Class: IP66 (splash & rain proof, **do NOT submerge in water!!!**)



Your devices Bluetooth MAC-Address is engraved above the display. This is used for unit identification in the smartphone app when multiple units are in Bluetooth reach, and it is also the serial number of your unit.

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Scan QR-code to download users manual, apps, firmware, certificates, and access FAQs.



When in Main-Menu, the top most row will display the date, firmware version, and time.

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Main Menu	Sub Menu <i>(w. sample setting)</i>	Item <i>(possible settings)</i>	
<b>Log</b>	Clear log memory NO	Sure delete all logs? NO YES	
	Onboard logging ON	Onboard logging ON OFF	
	Overwrite oldest log ON	Overwrite oldest log ON OFF	
	Capture start trigger 1.00 kN	Set start trigger x.xx 00000 for none	
	Capture end trigger 12.00 kN	Set end trigger x.xx 00000 for none	
	Scan rate 40 Hz	Set scan rate 10 Hz, 40 Hz, 640 Hz, 1280 Hz	
	Max log rec time 180 sec.	Set max log rec time xxxxx	
	Min log rec time 10 sec.	Set min log rec time xxxxx	
	Pre-capture rec time 5 sec.	Set pre-capture time xxxxx 00000 for none	
	Logging type Continuous logging	Set logging type Continuous logging Single log	
	Return		
<b>Date/Time</b>	Date format	Date format dd.mm.yy yy/mm/dd	
	Date 01.10.21	Set date dd.mm.yy or yy/mm/dd	
	Time 16:45:00	Set time hh:mm:ss	
	Return		
<b>User Settings</b>	Auto power off 5 min.	Set auto power off Off, 1, 3, 5, 10, 20, 30, 60	
	Power save & lock 300 sec.	Set power save & lock Off, 10, 30, 60, 100, 200, 300, 600	
	Power save lock level Max power save	Power save lock level Min power save Medium power save Max power save	
	Auto zero tracking 1 div.	Set zero tracking Off, 0.5, 1, 2, 3, 5, 10	
	UART Baud rate 230400 bps	Set UART Baud rate 9600, 38400, 230400, 460800 bps	
	Return		
<b>Service</b>  <b>WARNING</b> Operate carefully in the Service Menu! <u>Wrong settings can render the LS3 inoperative!</u>  <b>Please note:</b> There is NO factory reset option for the CALIBRATION!  If the calibration process is conducted with invalid values or without a true calibrated reference, the LS3 will no longer show accurate loads. A professional calibration with a calibrated tensile machine will be needed to restore LS3 function.	Reset abs zero	Reset abs zero now? NO YES	
	Set absolute zero	Cal. abs. zero now? NO YES	
	Simple calibration	Start simple cal now? NO YES	
	Linear calibration	Start linear cal now? NO YES	
	Calibrate accel. 9.792 N/kg	Set cal. accel. x.xxxx	
	User acceleration 9.807 N/kg	Set user accel. x.xxx	
	Battery voltage 3.985 V	No setting, value for information only.	
	AD internal code 3513	No setting, value for information only.	
	Bluetooth MAC addr. F0:F8:F2:6A:D1:8D	No setting, value for information only.	
	Factory reset	Factory reset will delete ALL memory and reset all log + user values! Sure to continue? NO YES	
	Return		
	<b>Exit</b>		

**Buttons function for navigation and setting**

Enter item: NO is highlighted, press ← to return without deleting. Select ▼ YES and press ← to clear log memory and return to Sub-Menu

Enter item: current setting is highlighted Select ▲▼ ON or OFF (same as LOG button) press ← to set and return to Sub-Menu

Enter item: current setting is highlighted Select ▲▼ ON or OFF press ← to set and return to Sub-Menu

Enter an Item: the current set value is **edited per digit** press ← to set value first digit is highlighted change digit with ▲▼ and ← to set next digit is highlighted change digit with ▲▼ and ← to set repeat same for all digits on last digit press ← to set value and return to Sub-Menu

Enter all zeroes (00000) for no triggers or recording press ← to set and return to Sub-Menu press PWR to abort edit and return to Sub-Menu

Enter Scan Rate: current setting is highlighted Select ▲▼ 10, 40, 640, 1280Hz (same as SPEED button) press ← to set and return to Sub-Menu

Max Log Rec, Min. Log Rec, Pre-Capture will show the defined time setting for the respective selected Scan Rate

Enter item: current setting is highlighted Select ▲▼ Continuous or Single press ← to set and return to Sub-Menu

Press ← to exit Sub-Menu, and return to Main-Menu

Enter item: current setting is highlighted Select ▲▼ to toggle date format press ← to set and return to Sub-Menu

Same button function as "edited per digit" above

Same button function as "edited per digit" above

Press ← to exit Sub-Menu, and return to Main-Menu

Enter item: current setting is highlighted Select ▲▼ to toggle Minutes for Power Off press ← to set and return to Sub-Menu

Enter item: current setting is highlighted Select ▲▼ to toggle Seconds for Power Save & Lock press ← to set and return to Sub-Menu

Enter item: current setting is highlighted Select ▲▼ Min, Medium or Max for Power Save Level press ← to set and return to Sub-Menu

Same button function as select value

Same button function as select value

Press ← to exit Sub-Menu, and return to Main-Menu

Enter item: NO is highlighted, press ← to return Select ▼ YES press ← to reset abs. 0 and return to Sub-Menu

Enter item: NO is highlighted, press ← to return Select ▼ YES press ← to cal abs. 0 and return to Sub-Menu

Enter item: NO is highlighted, press ← to return Select ▼ YES press ← to start simple 2-point calibration

Enter item: NO is highlighted, press ← to return Select ▼ YES press ← to start linear 3-point calibration

Same button function as "edited per digit" above

Same button function as "edited per digit" above

**Menu operation tip:**  
Press the PWR button at any time during item setting to abort the setting operation, and return to the Sub-Menu without saving any changes to the current item ;-)

From Sub-Menu press PWR to return to Main, from Main-Menu press PWR to exit Menu.

Enter item: NO is highlighted, press ← to return Select ▼ YES press ← to reset the LS3 to factory defaults & erase memory. NOTE: this will NOT reset the calibration values!!!

Press ← to exit Sub-Menu, and return to Main-Menu

Press ← to exit menu, and return to display screen