PULSE EQ RC50 Integrated Dispenser

IDH 2814024

Operating Manual

Table of Contents

1 Please Observe the Following

1.1 Emphasized Sections

⚠ **Warning!**

Refers to safety regulations and requires safety measures that protect the operator or other persons from injury or danger to life.

! Caution!

Emphasizes what must be done or avoided so that the unit or other property is not damaged.

☞ **Notice:**

A notice gives recommendations for better handling of the unit during operation or adjustment as well as for service activities.

1.2 For Your Safety

⚠ For safe and successful operation of the unit, read these instructions completely. If the instructions are not observed, the manufacturer can assume no responsibility.

⚠ Do not expose the connecting cable to heat, oil, or sharp edges.

⚠ Make sure the Unit stands stable and secure.

⚠ Use only original equipment replacement parts.

⚠ Always disconnect the power supply before servicing the unit.

⚠ Observe general safety regulations for the handling of chemicals such as Loctite® adhesives and sealants. Observe the manufacturer's instructions as stated in the Safety Data Sheet.

☞ While under warranty, the unit may be repaired only by an authorized Loctite service representative.

1.3 Unpacking and Inspection

Carefully unpack the Loctite® EQ RC50 Integrated Dispenser I-4.0 and examine the items contained in the carton. Inspect the unit for any damage that might have occurred in transit. If such damage has occurred, notify the carrier immediately. Claims for damage must be made by the consignee to the carrier and should be reported to the manufacturer.

1.4 Packing List

- EQ RC50 Integrated Dispenser I-4.0 x 1
- Equipment Manual x 1
- Universal Power AC Adapter with Cord x 1
- Reservoir Tank Fitting: ¼ inch NPT x ¼ Inch Tubing x 1
- Bottle Holder x 1
- ¼" NPT to 6 mm inlet supply line connector x 1
- Anti-Bubbler Fitting and Tubing Kit x 1
- Footswitch x 1
- Bottle spacer disc x 1

1.5 Features

- Two independent digital timing channels that provide control of 2 pneumatic outputs
- Low level sensor alarm provides warning for adhesive bottle replacement
- Touch screen User Interface (UI) with color display and ease of use
- Two operating modes: Auto Timer and Continue mode.
- Equipped with a 0 to 7 bar (0-100psi) digital pressure regulator
- Integrated with I/O communication interface

- Powerful I4.0 function, to enable user to interact in real time via Wi-Fi, Bluetooth, or Ethernet

1.6 Field of Application (Intended Use)

The Loctite EQ RC50 Integrated Dispenser I-4.0 combines both a controller and a reservoir into a single unit. The controller provides 2 independent digital timing channels that provide control of 2 pneumatic outputs. These outputs can be used to control any Loctite automatic dispense valve or pneumatic hand-held applicator. The controller can be actuated either by the start/stop button on the front touch panel, a footswitch(included), or external start signal. It is capable of operating in a timed or continue mode for dot or bead dispensing applications. The reservoir can accommodate 50ml, 250ml, 500gram, 1 liter, and 2 kg adhesive packages which deliver adhesive to dispensing valves. The reservoir is equipped with low level sensor which can notify the operator that the adhesive package needs to be replace. The system also includes an integrated industry 4.0 function that enables easy remote monitoring by Wi-Fi, Bluetooth or ethernet.

With the EQ RC50 Integrated Dispenser I-4.0, anaerobic, UV Curing and cyanoacrylate adhesive can be dispensed.
The capacity of the EQ RC50 Integrated Dispenser I-4.0 is:

-500 gr. bottle for CA Products
-250 ml bottle for Anaerobics
-Bottle with a Φ124mm and a height of 250mm
-1 lb. bottle
-1 Liter bottle
-2kg bottle

2 Description

2.1 Theory of Operation

The EQ RC50 Integrated Dispenser I-4.0 is connected to an external pneumatic supply. The system is equipped with a 0 to 7 bar (0-100psi) digital pressure regulator that regulates the preset dispensing pressure of the reservoir and controls the dispensing during the selected dispensing time.

An uncovered bottle of Loctite product is placed directly into the EQ RC50 Integrated Dispenser I-4.0, the feedline is inserted into the product, and the reservoir lid is clamped in place.

It is then pressurized using clean, filtered dry air. Air within the reservoir will push down on the liquid in the bottle and force it through the product feed line to the dispensing valve.

The amount of product dispensed is controlled by four main factors:

-Amount of pressure in the reservoir

-Length of time the dispensing valve remains open

-Valve stroke

-Dispensing needle size

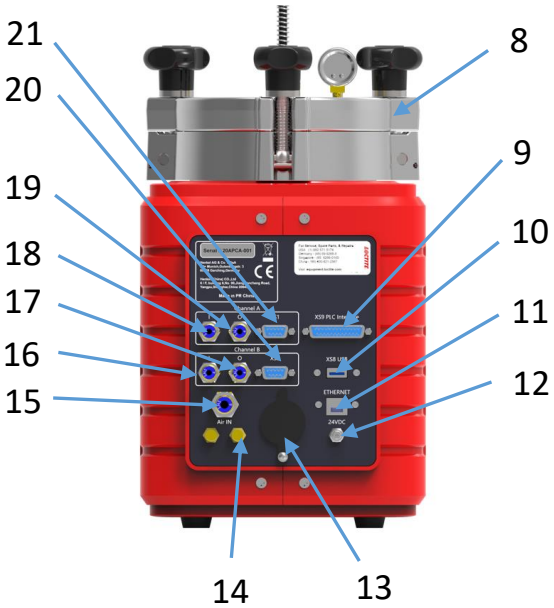
Time Mode:

1. Press the footswitch/ manual button to activate the system
2. The dispensing timer will be activated and start to dispense with preset dispensing time.
3. After the dispensing timer has reached the preset dispensing time, the dispensing will be stopped.

Continue Mode:

1. Press the footswitch/ manual button to activate the system
2. The system will start to dispense, and the dispensing timer will start to count the dispensing time.
3. Once the footswitch is released or press the manual button again, the dispensing will stop.

2.2 Display, operating elements and connections

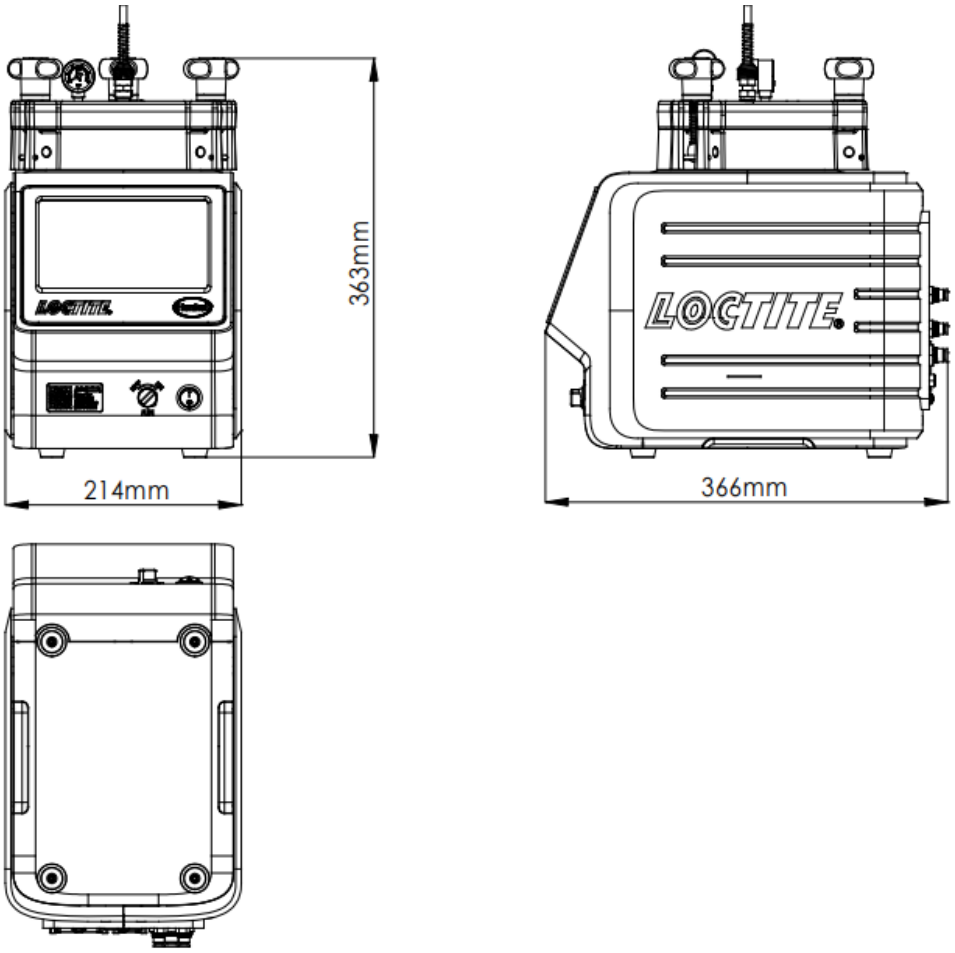


1. Power Switch ON/OFF
2. Air Pressure ON/OFF Switch
3. UI Screen
4. Valve Pressure Relief

5. Reservoir Pressure Gauge
6. Reservoir/Feedline Fitting
7. Reservoir Knob x 3
8. Reservoir Lid
9. Socket XS9 PLC Interface
10. Socket XS8 USB
11. ETHERNET
12. 24VDC Power In
13. Low Level Sensor
14. Silencer
15. Air Pressure In
16. Channel B ON Output
17. Channel B OFF Output
18. Channel A ON Output
19. Channel A OFF Output
20. Socket XS1 Channel B
21. Socket XS1 Channel A

3 Technical Data

Dimensions (W x H x D):	214x363x366 mm
Total weight: Kg (lbs.)	12 (26)
Power Supply:	110~240 VAC 50/60Hz
Internal control voltages:	24VDC
Power consumption:	Approx. 30 Watts
Pneumatic Supply:	Clean, dry air not to exceed 125psi (8.5bar). and filtered with a maximum of 50 micron.
Operating Temperature:	+10 ° C to +40 ° C (+50 ° F to +104 ° F)
Storage Temperature:	- 10 ° C to +60 ° C (+14 ° F to +140 ° F)



4 Installation

! Before using the equipment for the first time check it carefully for signs of external damage. If any shipping damage is found DO NOT USE THE EQUIPMENT – return it to your supplier immediately.

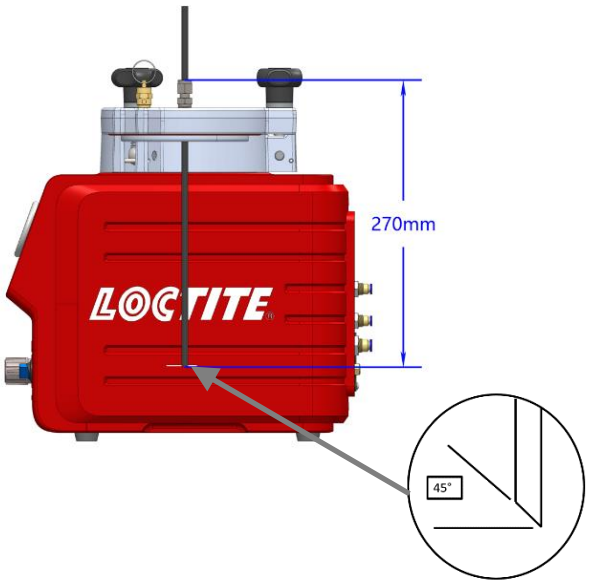
4.1 Environmental and Operating Conditions

- Keep the pneumatic hose to the dispense valve as short as possible for optimum dispense control.
- Keep product feedline as short as possible. The shorter the feedline the smaller the specific resistance and lower the dispensing pressure can be. Avoid kinking of the feedline.

- Use flexible pneumatic hoses and Loctite supplied product feedlines to prevent unnecessary loads on the fittings and to ensure compatibility.
- Ensure all pneumatic and product fittings are tight.
- No direct sunlight; no UV light.
- No condensing humidity.
- No splashing waters.
- No high magnetic and intense electric field.

4.2 Connecting the Unit

- Use only the cable and hose sets supplied.
- Connect Air pressure supply to pneumatic connection (15).
- Plug the AC power cord into Power inlet (12), which located in rear side of the EQ RC50 Integrated Dispenser I-4.0.
- For manual operation, plug the footswitch into the 9 pin D-sub connector marked XS1, located on the rear panel of the EQ RC50 Integrated Dispenser I-4.0.
- For automated control, connect external PLC output relay to pins one and nine of XS1.
- Insert feedline through the reservoir lid to the dimension shown below. Alternatively use the reference line shown on the housing to set the feedline length. Cut the end of the feedline at an angle as shown below.



- Connect dispensing valve(s).

- If two dispense valves are used, remove blanking plug from the reservoir lid and replace with additional reservoir/tube fitting.

4.3 Filling and Refilling the Product Reservoir

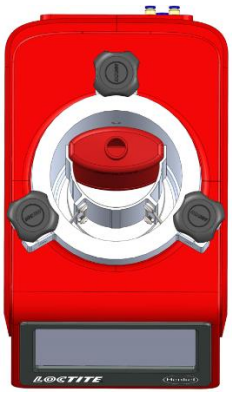
⚠ Warning!
Never fill the product directly into the reservoir!
The pneumatic and safety devices would become clogged and therefore ineffective!

⚠ Warning!
Before loosening the reservoir locking knobs (7), the EQ RC50 Integrated Dispenser I4.0 must be depressurized (pressure-free)!

When dispensing cyanoacrylate and an empty signal is shown, refill the product reservoir immediately, since air in the product line results in curing of the product!

Before loosening the reservoir knobs (7), the reservoir must be depressurized!
The reservoir is depressurized when the depressurizing valve (2) is in “OFF” position and pressure gauge (5) indicates no pressure.

• Loosen the reservoir knobs (7) and remove the lid (8).
• Check that there is no condensed moisture at the bottle or the sensor surface.
• Place the bottle in the bottle holder (see the right figure).
• Check that the product bottle inserted in the bottle holder is pressed again the level sensor.
• Insert the product feedline into the bottle and put on the lid (8).
• Uniformly tighten the reservoir knobs (7) by hand.
• Set the depressurizing valve (2) to “ON” position (pressurize).



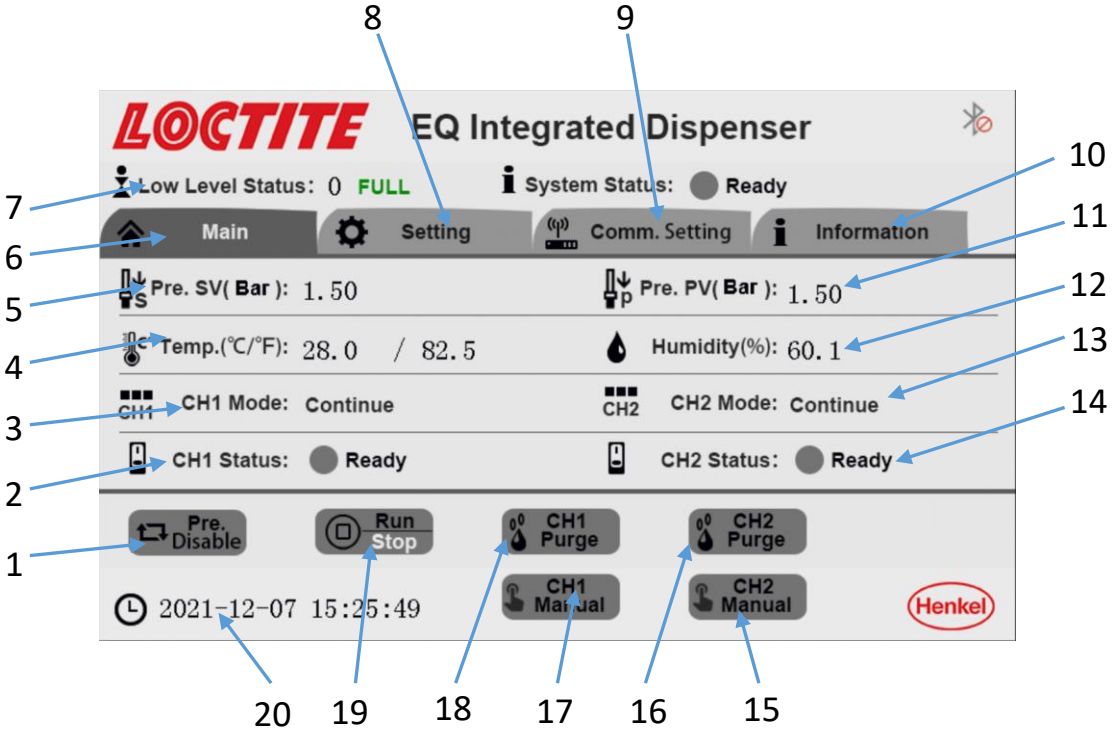
5 Operation

5.1 Turn on the Unit

!	Observe the operating manual of the EQ RC50 Integrated Dispenser I-4.0 used.

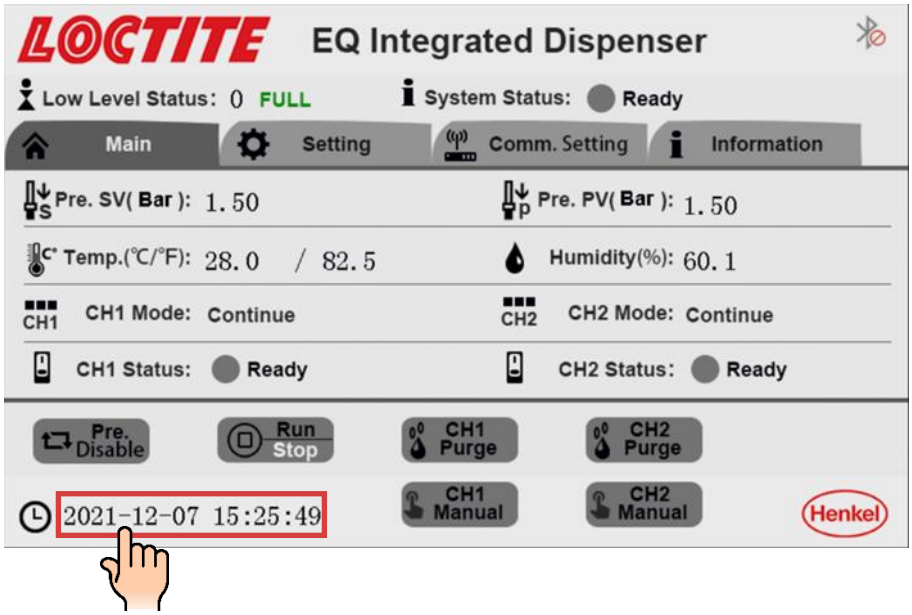
Turn the power switch (1) to ON

5.2 Main Page

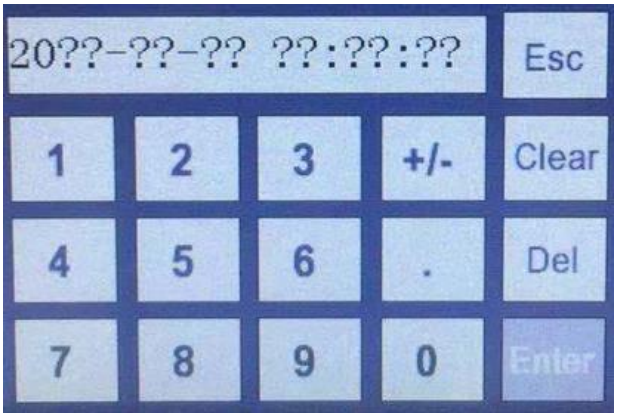


1. **Reservoir Pressure Disable/Enable**: 'Enable' pressurizes the reservoir and 'Disable' de-pressurizes the reservoir
2. **CH1 Working Status**: Four state indicators, 'Ready' means system is awaiting a start signal, 'Stop' means the system disables the output of each channel, 'Dispensing' means channel 1 is activated to dispense adhesive in preselected Timer/Continue mode, 'Alarm' means the system has an error for example product bottle empty, reservoir pressure out of range etc.
3. **CH1 Mode Selection**: Continue/Auto Timer operating mode selection
4. **Temperature** -Displays temperature value at the reservoir housing
5. **Pre. SV (Bar)**: Displays reservoir set pressure
6. **To Main page** – Page navigation
7. **Low Level Status**: Full/Empty is displayed to provide a warning when the adhesive bottle is becoming Empty
8. **To Parameter Setting page** – Page navigation
9. **To Communication Setting page** – Page navigation
10. **To Warning Message page** – Page navigation
11. **Pre. PV (Bar)**: Displays actual pressure within the reservoir
12. **Humidity** – Displays humidity value at the reservoir housing
13. **CH2 Mode Selection**: Continue/Auto Timer operating mode selection
14. **CH2 Working Status**: Four state indicators, 'Ready' means system is awaiting a start signal, 'Stop' means the system disables the output of each channel, 'Dispensing' means channel 1 is activated to dispense adhesive in preselected Timer/Continue mode, 'Alarm' means the system has an error for example product bottle empty, reservoir pressure out of range etc.
15. **CH2 Manual Mode**: Manually start a dispensing sequence for channel 2 dispense valve in preselected operating mode. The dispensing time in time mode corresponds to the set value of channel 2. In continue mode, the product is dispensed when press the button, the button will turn green at the same time. Press the button again to stop dispense, and the button goes grey.
16. **CH2 Purge**: Enables purge of channel 2 dispense valve
17. **CH1 Manual Mode**: Manually start a dispensing sequence for channel 1 dispense valve in preselected operating mode. The dispensing time in time mode corresponds to the set value of channel 1. In continue mode, the product is dispensed when press the button, the button will turn green at the same time. Press the button again to stop dispense, and the button goes grey.

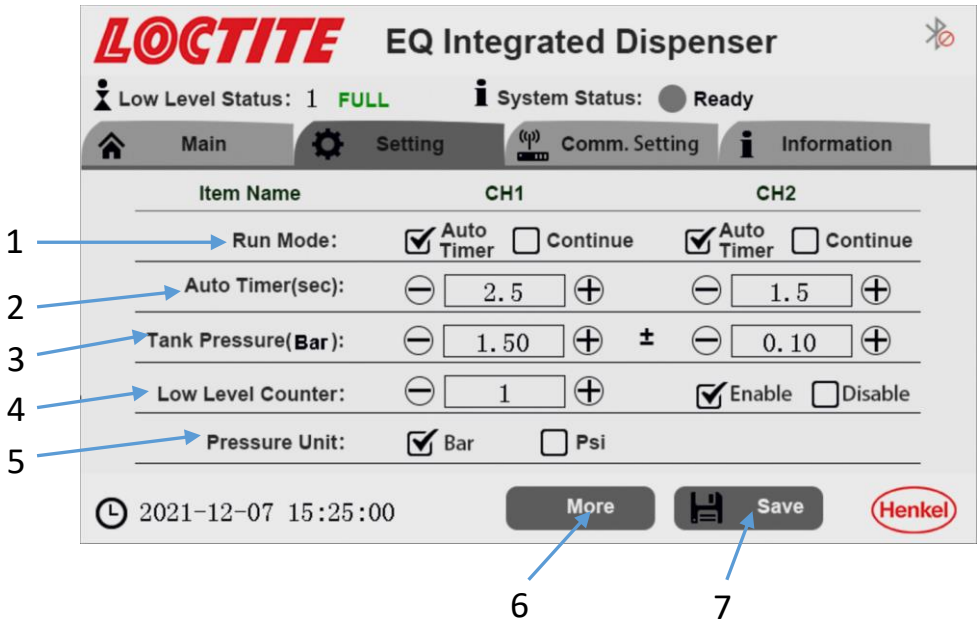
18. **CH1 Purge**: Enables purge of channel 1 dispense valve
19. **Working Mode Selection**: Run/Stop. 'Run' working mode enables the output for each channel, each channel can be operated via external controller, footswitch and remote monitoring; 'Stop' working mode disables the output for each channel, only enable purge for each channel.
20. **System Date/Time**: Actual time for use with data collection and analysis. Time and date are shown in this area. Press and hold on the date shown on the screen for minimum 3s, operator can edit time and data.



Enter date and time using keypad shown on the screen. Type in digits only, which replace from left to right the question marks. Date format ISO, yyyy-mm-dd. Press enter to save.



5.3 Parameter Setting Page



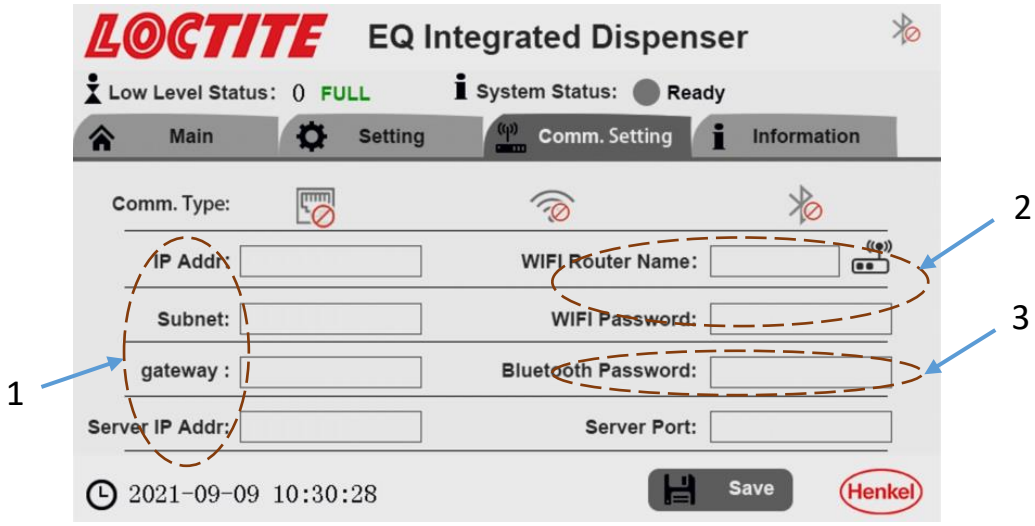
1. Run Mode selection: Auto Timer, Continue

Auto Timer Mode: This mode of operation is used for dot or drop dispensing. Operator can setup timer from 0~999s. the dispenser turns on with one press of the footswitch or input start signal via from the service, the dispensing will begin immediately and continue until the system times out.

Continue Mode: This mode of operation is used for the application of beads. Operator can engage the footswitch(s) to start dispensing and hold until the dispensing cycle is complete. When the footswitch is released, the dispensing will end immediately.

2. Auto Timer: Set the dispensing time for Channel A and Channel B in “Time” mode.
3. Reservoir Pressure setting
4. Low Level Counter setting: Set the number of cycles that are permitted after low level is detected. Once these cycles have elapsed, the system will not dispense.
5. Pressure Unit selection: Bar/ Psi.
6. More button – Enters calibration screen and password setting
   See section 5.7
7. Save Setting: Saves the changes.

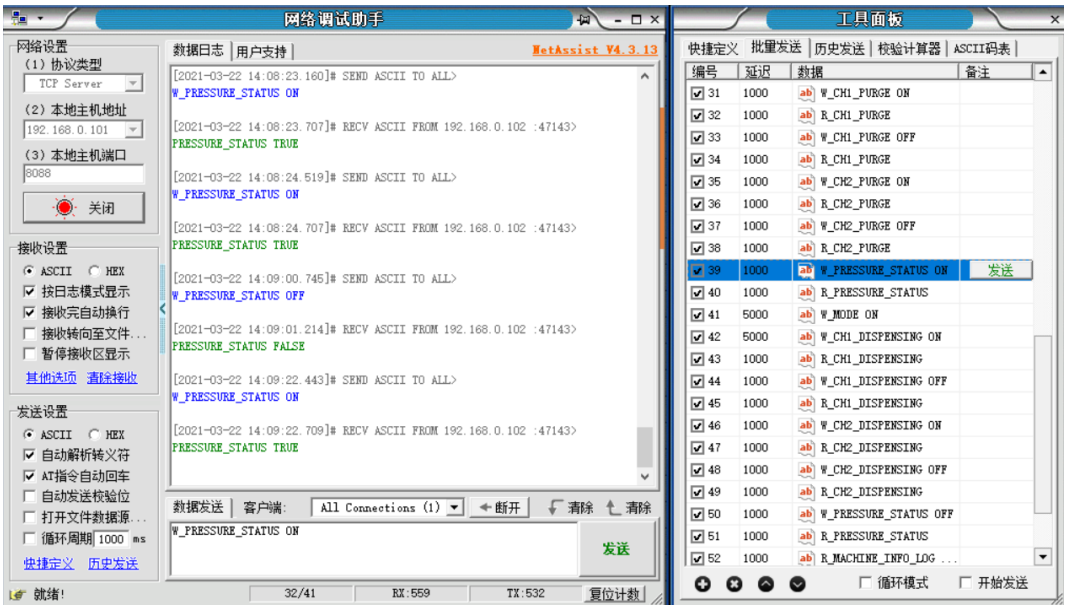
5.4 Communication Setting Page



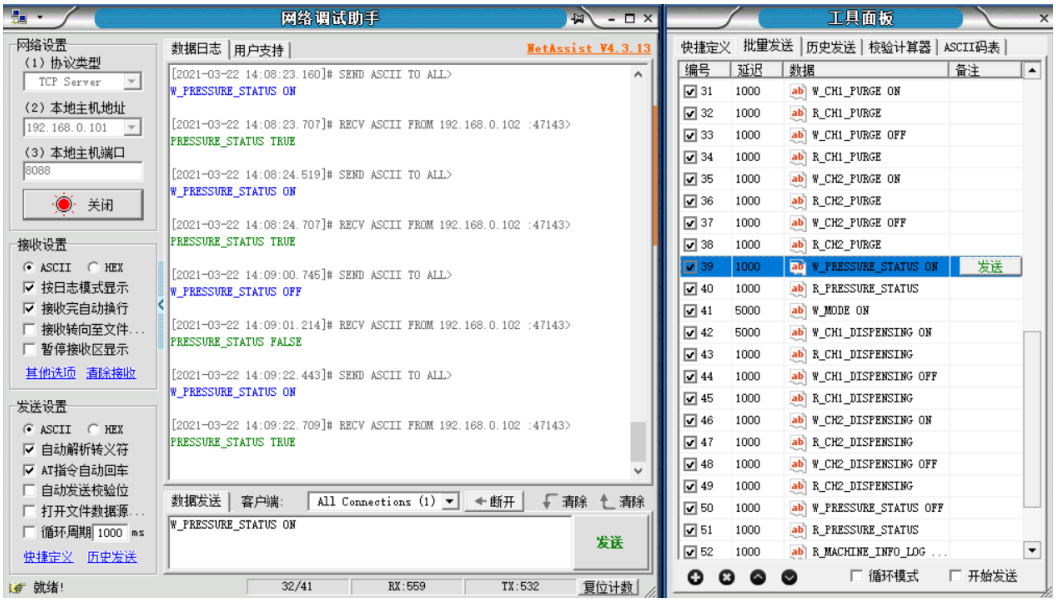
The dispensing system includes an integrated industry 4.0 function that enables easy remote monitoring by Wi-Fi, Bluetooth or ethernet.

Introduction to the set-up and configuration using an example based on the NetAssist program to test the I-4.0 function for the EQ RC50 Integrated dispenser. NetAssist network debugging assistant is a network testing tool integrating TCP server + client. It is a common and necessary professional tool in network application development and testing.

1. Ethernet communication function testing
    - Setup the laptop as a server (specify static IP address for server), connect laptop to router, build a LAN.
    - Connect reservoir to LAN via ethernet (Using crossline connect directly to the laptop if there is no router), specify IP address/ subnet mask, gateway for EQ RC50 Integrated dispenser, Open software Netassist on laptop.
    - Enable connection on software.
    - Send command on software page, check the status or response on EQ RC50 Integrated Dispenser I-4.0 User Interface.



2. WiFi communication function testing
    - Setup the laptop as a server (specify static IP address for server), connect laptop to router, build a LAN.
    - Connect Reservoir to LAN via WiFi.
    - Open Netassist on laptop, specify WiFi name for EQ RC50 Integrated dispenser, enable connection on software.
    - Send command on software page, check the status or response on EQ RC50 Integrated Dispenser I-4.0 User Interface.



3. Bluetooth communication function testing
    - Click the Bluetooth selection button, Connect a smartphone to EQ RC50 Integrated Dispenser via Bluetooth.
    - Install APP BLUTOOTHASSIST on the smartphone (Android system)
    - Test command on the APP BLUTOOTHASSIT, check the status or response on EQ RC50 Integrated Dispenser I-4.0 user Interface.

Refer to the table below for the test commands which used to remote monitor by Wi-Fi, Bluetooth or ethernet.

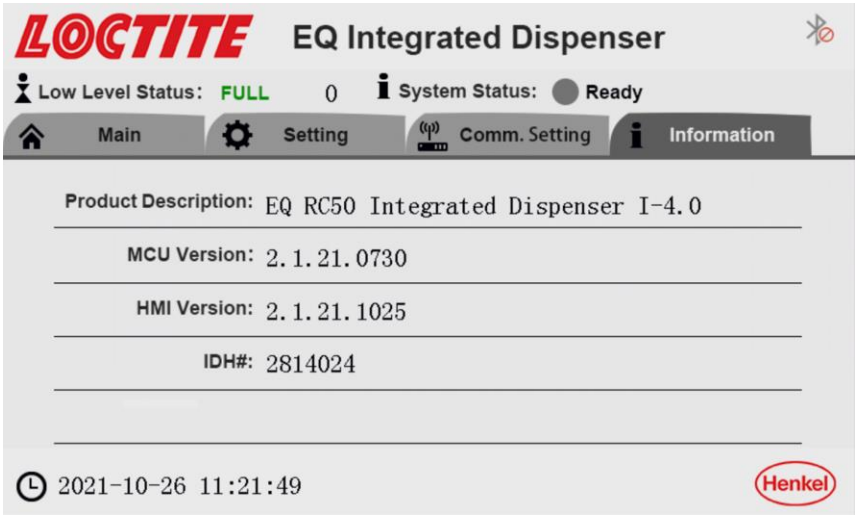
Command	**Keying Command**	**Feedback on Page**		
System Status Request Command				
S_STATUS	S_STATUS	Run: True	✓	Connection built
S_TEM_HUM	S_TEM_HUM	TEM:24, Hum:33	✓	Temperature:24, Humidity: 33
S_LOW_LEVEL_STATUS	S_LOW_LEVEL_STATUS	S_LOW_LEVEL_STATUS LOWER	✓	Same as shows on reservoir page (See section 5.3)
S_PRESSURE	S_PRESSURE	PRESSURE 1.50	✓	Same as shows on reservoir page (see section 5.3), 1.5 bar
Parameter Edit Command				
W_MODE	W_MODE ON	MODE TRUE		Mode is "RUN"
	W_MODE OFF	MODE FALSE		Mode is "STOP"
W_CH1_MODE	W_CH1_MODE TIMER	CH1 TIMER	✓	CH1's mode set to TIMER, shows on page (see section 5.3).
W_CH2_MODE	W_CH2_MODE TIMER	CH2 TIMER	✓	CH2's mode set to TIMER, shows on page (see section 5.3).
W_CH1_TIMER	W_CH1_TIMER 4	CH1_TIMER 4.00	✓	CH1's timer set to 4s
W_CH2_TIMER	W_CH2_TIMER 2.5	CH2_TIMER 2.50	✓	CH2's timer set to 2.5s
W_TARGET_PRESSURE	W_TARGET_PRESSURE 1.5	Target Pressure 1.50	✓	Target pressure set to 1.5

W_PRESSURE_RANGE	W_PRESSURE_RANGE 0.5	TARGET_PRESURE 0.50	✓	PRESSURE RANGE set to 0.5
W_PRESSURE_UNIT	W_PRESSURE_UNIT BAR	PRESSURE_UNIT BAR	✓	PRESSURE UNIT BAR
W_LOW_LEVEL_COUNT	W_LOW_LEVEL_COUNT 1	LOW_LEVEL_COUNT 1	✓	LOW LEVEL COUNT Set to 1
W_LOW_LEVEL_EN	W_LOW_LEVEL_EN EN	LOW_LEVEL_EN TRUE	✓	LOW LEVEL EN Opened
W_CH1_PURGE	W_CH1_PURGE ON	CH1_PURGE TRUE	✓	CH1 PURGE Opened
W_CH2_PURGE	W_CH2_PURGE ON	CH2_PURGE TRUE	✓	CH2 PURGE Opened
W_CH1_DISPENSING	W_CH1_DISPENSING ON	CH1_DISPENSING TRUE	✓	CH1 DISPENSING Opened
W_CH2_DISPENSING	W_CH2_DISPENSING ON	CH2_DISPENSING TRUE	✓	CH2 DISPENSING Opened
W_PRESSURE_STATUS	W_PRESSURE_STATUS ON	PRESSURE_STATUS TRUE	✓	PRESSURE STATUS Opened
Status/Parameter Reading Command				
R_MODE	R_MODE	MODE TRUE	✓	Mode is "RUN"
R_CH1_MODE	R_CH1_MODE	CH1 TIMER	✓	CH1's mode is TIMER, shows on page (see section 5.3).
R_CH2_MODE	R_CH2_MODE	CH2 TIMER	✓	CH2's mode is TIMER, shows on page (see section 5.3).
R_CH1_TIMER	R_CH1_TIMER	CH1_TIMER 4.00	✓	CH1's timer is 4s
R_CH2_TIMER	R_CH2_TIMER	CH2_TIMER 2.50	✓	CH2's timer is 2.5s
R_TARGET_PRESSURE	R_TARGET_PRESSURE	Target Pressure 1.50	✓	Target pressure is 1.5
R_PRESSURE_RANGE	R_PRESSURE_RANGE	TARGET_PRESURE 0.50	✓	PRESSURE RANGE is 0.5
R_PRESSURE_UNIT	R_PRESSURE_UNIT	PRESSURE_UNIT BAR	✓	PRESSURE UNIT BAR
R_LOW_LEVEL_COUNT	R_LOW_LEVEL_COUNT	LOW_LEVEL_COUNT 1	✓	LOW LEVEL COUNT is 1
R_LOW_LEVEL_EN	R_LOW_LEVEL_EN	LOW_LEVEL_EN TRUE	✓	LO LEVEL EN Opened
R_CH 2 _PURGE	R_CH 2 _PURGE	CH1_PURGE TRUE	✓	CH1 PURGE Opened

R_CH 1 _PURGE	R_CH 1 _PURGE	CH2_PURGE TRUE	✓	CH2 PURGE Opened
R_CH 1 _DISPENSING	R_CH 1 _DISPENSING	CH1_DISPENSING TRUE	✓	CH1 DISPENSING Opened
R_CH 2 _DISPENSING	R_CH 2 _DISPENSING	CH2_DISPENSING TRUE	✓	CH2 DISPENSING Opened
R_PRESSURE_STATUS	R_PRESSURE_STATUS	PRESSURE_STATUS TRUE	✓	PRESSURE STATUS Opened

Full details and guide for use of full I-4.0 capability are available in the supplementary set-up instruction document.

5.5 Equipment Information Page



1. Product Description – EQ RC50 Integrated Dispenser, I-4.0
2. MCU software version
3. HMI software version
4. Product IDH number

5.6 Set-up Configurations

5.6.1 Auto Timer Mode (Single dispense valve)

- Connect electrical and pneumatic supplies and dispense valve as described in section 4.2
- Place adhesive bottle in the reservoir as described in section 4.3
- Enter Setting page, select “ Auto Timer ” mode for channel A or Channel B.
- Click the value 999.99 , this can be performed using the direct numerical input function to set dispensing time for channel A or channel B. Click the ‘+’/ ‘-’ to increase/reduce the value by one step, the dispensing time is adjustable from 0.0 to 999.9s.
- Set the reservoir pressure and acceptable range, the pressure can be changed from 0.00 to 8.00 bar. Optionally set the pressure unit bar/psi if necessary.
- Set the number of cycles for Low Level Counter that are permitted after low level is detected. The system will not dispense once low level is detected when the low level counter function is disabled.
- Click “ Pre. Enable ” button to pressurise the reservoir and select “ Run Stop ” run working mode. The system is ready for dispensing in “Time” mode.

5.6.2 Auto Timer Mode (Two dispense valves)

- Connect electrical and pneumatic supplies and dispense valve as described in section 4.2
- Place adhesive bottle in the reservoir as described in section 4.3
- Enter Setting page, select “ Auto Timer ” run mode for channel A and channel B.
- Click the value 999.99 , this can be performed using the direct numerical input function to set dispensing time for channel A and channel B. Click the ‘+’/ ‘-’ increase/reduce the value by one step, the dispensing time is adjustable from 0.0 to 999.9s.
- Set the reservoir pressure and acceptable range, the pressure can be changed from 0.00 to 8.00 bar. Optionally set the pressure unit bar/psi if necessary.

- Set the number of cycles for Low Level Counter “” that are permitted after low level is detected. The system will not dispense once low level is detected when the low level counter function is disabled.
- Click “ Pre. Enable ” button to pressurise the reservoir and select “ Run Stop ” run working mode. The system is ready for dispensing in “Time” mode.

5.6.3 Continue Mode (Single dispense valve)

- Connect electrical and pneumatic supplies and dispense valve as described in section 4.2
- Place adhesive bottle in the reservoir as described in section 4.3
- Enter Setting page, select “ Continue ” run mode for channel A or Channel B
- Click the “+”/”- “increase/reduce the value or enter direct numerical input to set the reservoir pressure and acceptable range,
- Set the number of cycles for Low Level Counter that are permitted after low level is detected. The system will not dispense once low level is detected when the low level counter function is disabled.
- Click “ Pre. Enable ” button to pressurise the reservoir and select “ Run Stop ” run working mode. The system is ready for dispensing in “Continue” mode.

5.6.4 Continue Mode (Two dispense valves)

- Connect electrical and pneumatic supplies and dispense valve as described in section 4.2
- Place adhesive bottle in the reservoir as described in section 4.3
- Enter Setting page, select “ Continue ” run mode for channel A & Channel B.
- Click the “+”/”- “increase/reduce the value or enter direct numerical input to set the reservoir pressure and acceptable range,
- Set the number of cycles for Low Level Counter that are permitted after low level is detected. The system will not dispense once low level is detected when the Low Level Counter function is disabled.
- Click “ Pre. Enable ” button to pressurise the reservoir and select “ Run Stop ” run working mode. The system is ready for dispensing in “Continue” mode.

5.7 Adjusting the Level Sensor

☞ **Notice:**

The level sensor is set in manufacturing and can be adjusted according to the type of product used and the size of the bottle, and orientation of the basket with spacers if required. If small bottles are used the supplied Bottle spacer disc can be placed in the base of the reservoir to raise the height of the bottle to reduce the residual adhesive in the bottle when low level is used.

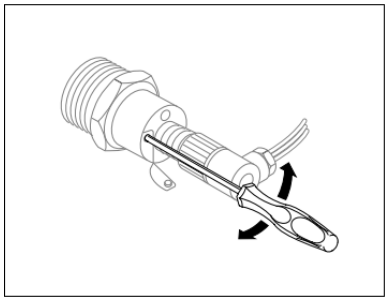
Before adjusting the Level Sensor

- Remove the plastic cap from the rear of the EQ RC50 Integrated Dispenser I-4.0.
- Empty a bottle of the product you use.
- Leave as much residue in the bottle as is required in order to prevent air getting into the product feedline.
- Insert the product bottle into the reservoir. For small bottles use bottle holder. For 250ml product bottle, pay attention to ensure the bottle is aligned with the level sensor.

- Check that the product bottle inserted into the bottle holder is pressed against the level sensor. Only then the correct adjustment of the level sensor is possible.

Procedure to Adjust the Level Sensor:

- Switch the power switch (1) ON.
- Remove the metal screw from the level sensor.
- With an electrician's screwdriver, find the point at which the sensor switches to the condition inactive. The LED is "OFF".
- Check this adjustment with a full bottle and an empty bottle again.
- Refit the metal screw to the level sensor.
- Put the plastic cap back.



☞ **Notice:**

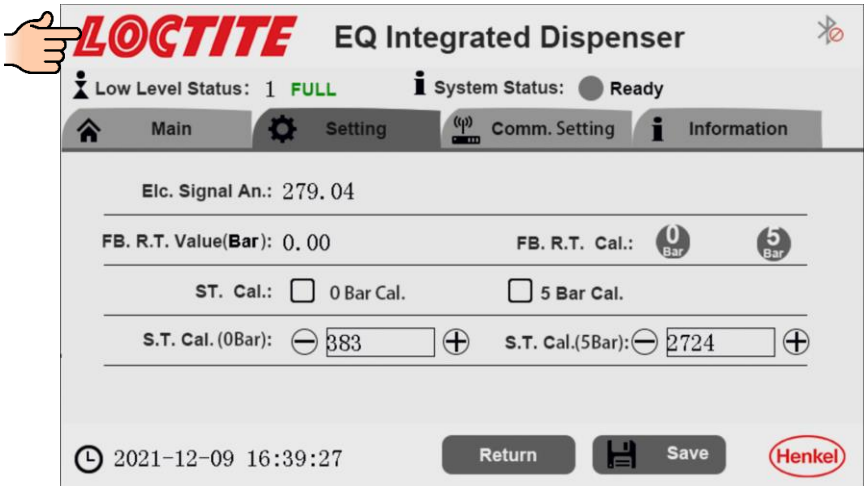
The correct adjustment is exactly the point when the sensor switches OFF.

Do not go beyond that point!

5.8 More settings

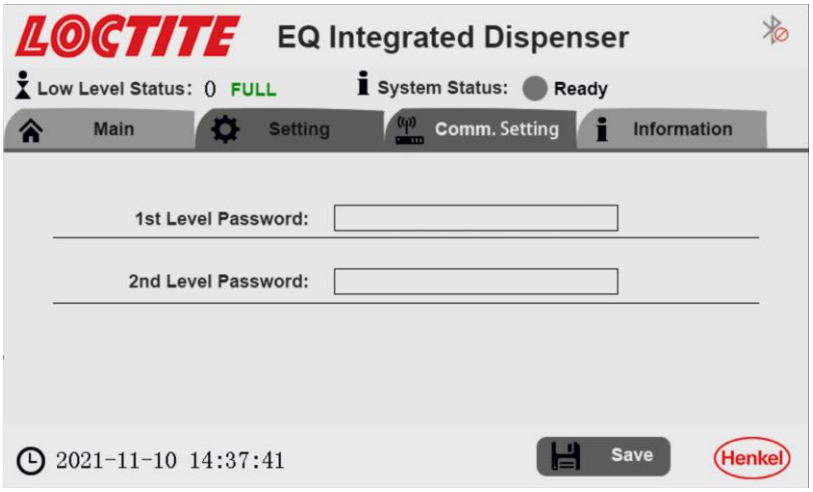
5.8.1 Password setting

The EQ RC50 Integrated Dispenser can set two level passwords, Click the hidden button “ LOCTITE “in the upper left corner of the pressure calibration page to enter the password setting page as shown below.



The first level password is to protect entry to the Setting page and Comm. Setting page. Factory password – 888888.

The second level is to protect entry to the pressure calibration page and password change page. Factory password – 654321.

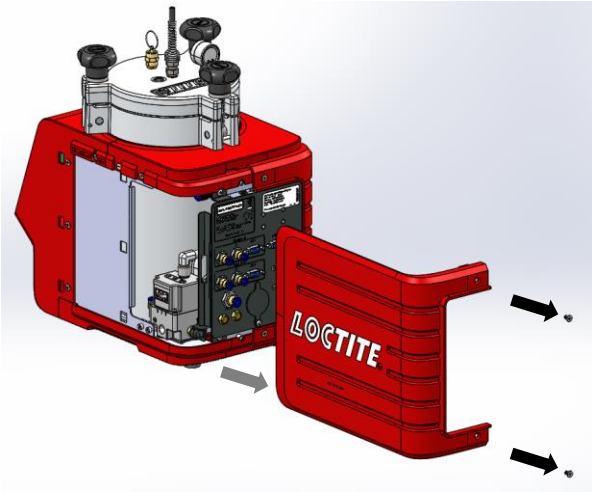


The password must be created using up to 20 numbers (or blank). It is important to record any changes to the password. If the password is forgotten the Firmware has to be reloaded via Loctite equipment Services to unlock the Settings functions.

5.8.2 Pressure calibration process

This is to calibrate the displayed pressure value with the value from the internal proportional valve. This calibration is done during the manufacturing process therefore only required to be calibrated if the set pressure differs from the measured pressure in the main screen, the internal PCB is changed, or the firmware is updated. Instructions are shown below.

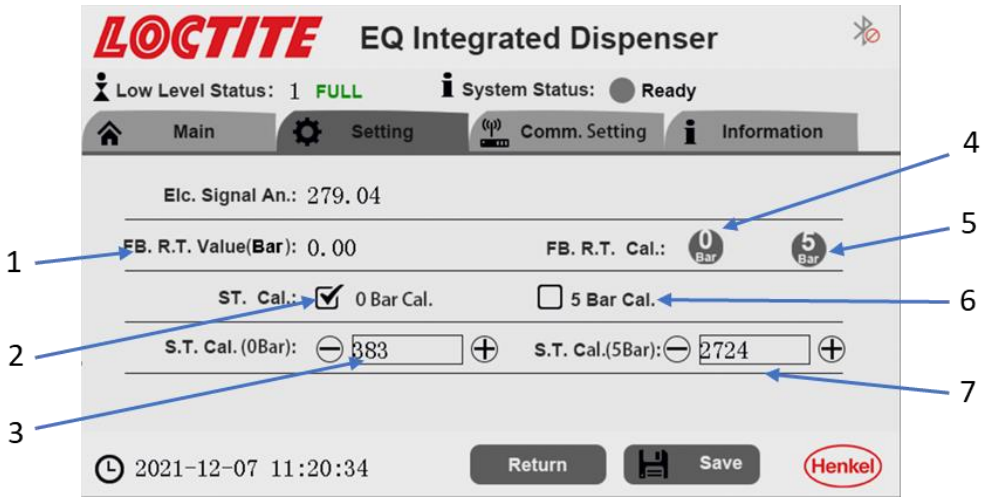
Connect air pressure supply to pneumatic connection (15) and switch ON. Note that the reservoir will be pressurized and vented during the procedure. Remove the two screws then gently draw out the right-side cover backward of the reservoir shown in the picture below.



Ensure reservoir pressure is disabled (button is grey) 

in the Main screen before the pressure calibration. Follow the below steps for pressure calibration.

Enter Setting screen



- "Select 0 bar Cal. **(2)** for ST. Cal. (Set calibration), then check the actual value of digital regulator (internal parts in the reservoir, see the right figure).

- Compared the difference between the actual value of digital regulator and '0 bar', then click "+"/"-"(**3**) to increase/decrease the value until the reading of "actual value of digital regulator" is "0" bar. For larger changes, touch the number field (**3**) and enter a new value directly.

  Note that the 0 bar setting is the critical one, there is a range of about 0 – 370 of the number, where the reading is close to 0(the prop reading always shows a small increase, it is acceptable that there is some uncertainty of the display reading of about +/- 0.02bar(0.0002Mpa) considering the accuracy of pressure regulator.). The correct adjustment is achieved by increasing the number field (**3**) until the prop regulator starts to increase from zero point.

- Click the " 0 Bar " **(4)** to record the actual reading as 1st "reference" point.
- "Select 5 bar Cal. **(6)** for ST. Cal., it will take several 10s for the pressure to stabilize after setting to 5 bar. then check the actual value of digital regulator.

- Compared the difference between the actual value of the digital regulator and preset ‘5 bar’, then click “+”/ “- “(**7**) to increase/decrease the value until the reading of “actual value of digital regulator” is “5 bar”.
- Click the “  ” (**5**) to record the actual reading as 2nd “reference” point.
- Press button Save to save all adjusted parameters.

Note: The display reading is in bar and prop. regulator is in mPa (factor of 10, e.g., 5 bar = 0.5 mPa). If a difference in the calibration values is displayed, repeat the calibration procedure to do calibration again.

6 Application Hints

As with all adhesives, performance depends on conditions of use. Suggestions or recommendations contained herein are for guidance only since actual conditions of use are outside the supplier’s control.

6.1 Shutdown for Longer Periods of Non-use (>recommended idle time)

- Disconnect the pneumatic supply from the controller.
- Clean the product hose and dispensing valve.

Recommended maximum idle times for different products are shown below:

Adhesive	**Maximum idle time for dispensing Systems**
Anaerobic	2 weeks
Cyanoacrylate	1 week
UV-acrylate	2 weeks
Acrylate	1 week
Epoxy	2 weeks
Activator	n.a.
Primer	n.a.

6.2 Returning to Operation after Longer Periods of Non-use

- Reconnect the pneumatic supply to the controller.
- Check the installation according to Chapter 4.
- Return to operation according to Section 5.1.~5.7.

7 Troubleshooting

⚠ Before proceeding with any repair or maintenance operation disconnect the EQ RC50 Integrated Dispenser I-4.0 from the main electricity supply.

Malfunction	Possible Cause	Corrective
No display appears on the screen	Main power cable is disconnected	Check that the main power cable is connected to an AC source.
	Main switch is not turned on	Turn on the main switch, located on the base of the Front panel.
	Fuse break	Check the fuse in power inlet.
Pressure not displayed on User Interface	Pneumatic supply not connected	Check pneumatic supply and connections
	Reservoir inner cable is disconnected	Check inner cable connection from Reservoir
	EQ RC50 Integrated Dispenser I-4.0 is defective	Contact Henkel Service
No start signal	XS1 cable connection is not secure.	Switch the power switch to the position O (OFF). Tighten the screws of the plug. Switch the power switch to the position I (ON).

Malfunction	Possible Cause	Corrective
No start signal	Footswitch defective	Replace the Footswitch
	No communication.	Check the networking or call Henkel Service.
No product, too little or too much product	Dispensing pressure not set correctly.	Adjust dispensing pressure setting.
	Pressure hose not properly connected.	Connect air pressure hose correctly.
	Luer-Lock tip cap not removed.	Replace Luer-Lock tip cap with a dispensing needle.
	Dispensing needle clogged, too small or too large.	Replace dispensing needle.
	Dispensing valve not correctly connected or defective.	Check the dispensing valve (see instruction manual for dispensing valve).
	Product reservoir not switched on.	Check product reservoir.
	Product reservoir is empty.	Refill product reservoir (see Section 4.3).
Air bubble in the product	Product reservoir is empty.	Refill product reservoir (see section 4.3).
	Product hose not correctly connected.	Connect product hose correctly.
	Dispensing valve not correctly connected or defective.	Check the dispensing valve (see instruction manual for dispensing valve).
	Product reservoir pressure is too high.	Lower pressure and increase dispensing time.
Pressurized air escapes between reservoir housing and reservoir lid.	Reservoir Knob is not tightened.	Tighten the reservoir knob
	O-ring leaks.	Grease or replace the O-ring.

8 Care and Maintenance

8.1 Care

-Occasionally the O-ring at the reservoir lid should be lubricated with the silicone grease. This will prolong the life of the O-ring.

☞ **Notice:** Clean hands after application of grease to ensure surfaces to be bonded are clean.

-Clean the sensor surface as required.
-Both the bottle surface and the sensor surface must be free of condensed moisture!

8.2 Cleaning

-Prior to extended idle times or when changing of the product type, clean the product hose and the dispensing valve.
-Loosen reservoir locking knobs (7) and remove the reservoir lid (8).
-Clean product residue from the outside of the feedline hose.
-Remove the product bottle and insert a container with approx. 0.5 liter of cleaning agent.
-Put on the reservoir lid (8) and uniformly tighten the reservoir locking knobs (7).
-Operate the dispenser continuously until dry air streams out of the dispensing valve (see operating instructions for the dispensing valve).
-Remove the empty cleaning agent container.

8.3 Maintenance

-Check the reservoir knobs and the product feed line on the regular basis. If there is any sign of cracks, replace them!
-Clean, dry, filtered air must be used. If it is not, the solenoids on the controller will be fouled over time.

☞ **Notice:** If the required air quality is not achieved, install a Loctite® filter regulator. In the US order a 5 μm filter using Part Number 478603. In Europe or Asia, order a 10 μm filter using Part Number 88649. The unit requires no special care and maintenance.

9 Accessories and Spare Parts

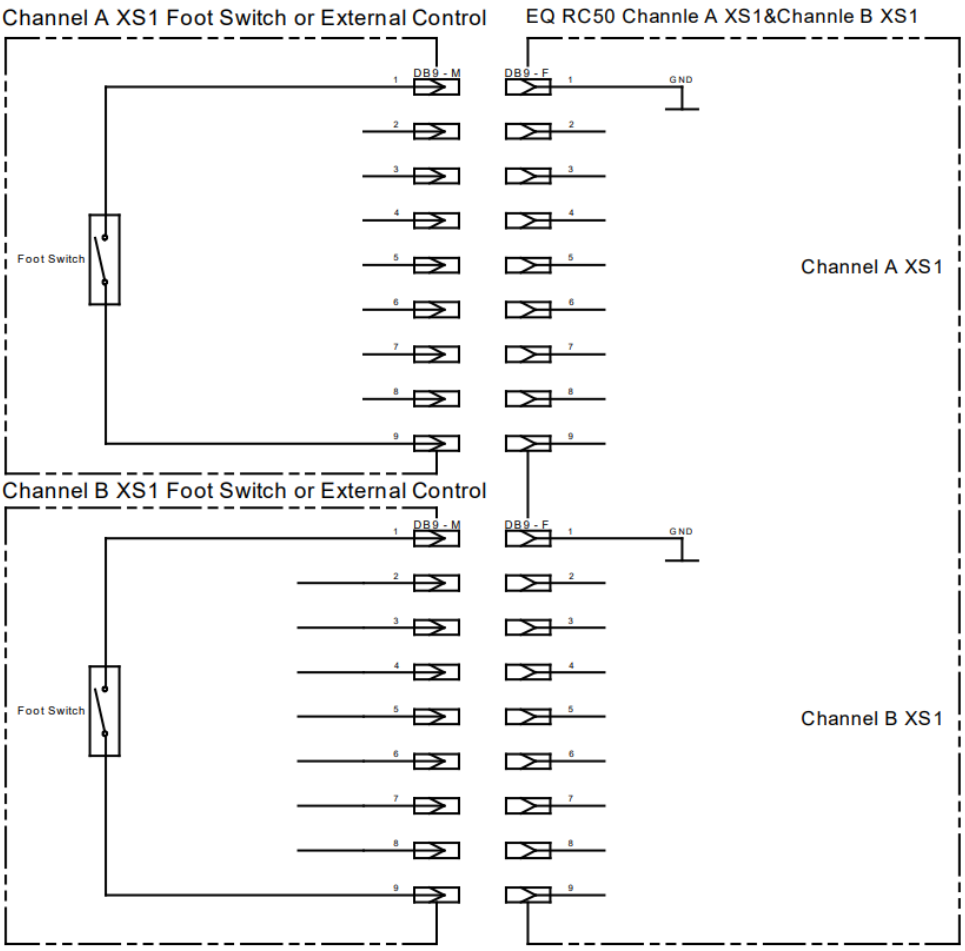
Item	Description	IDH#
Spare Parts		
1	Reservoir/feedline Tank Fitting, ¼ inch NPT x ¼ inch Tubing	360636
2	Footswitch	88653
3	¼ inch O.D. Black PE Teflon Lined feedline Tubing (10mtr/33ft length)	142646
4	Reservoir Lid O-ring	478505
5	Pressure Safety Relief Valve	360462
6	Anti-Bubbler Kit, 2 Adapters & 2 Sleeves	478569
7	Silicone Grease, 6 Gram Tube	88722
Accessories		
1	Loctite Air Filter, Regulator, Gauge (Mechanical version) - US	478603
	Loctite Air Filter, Regulator, Gauge (Mechanical version) – EU/Asia	88649

10 Diagrams

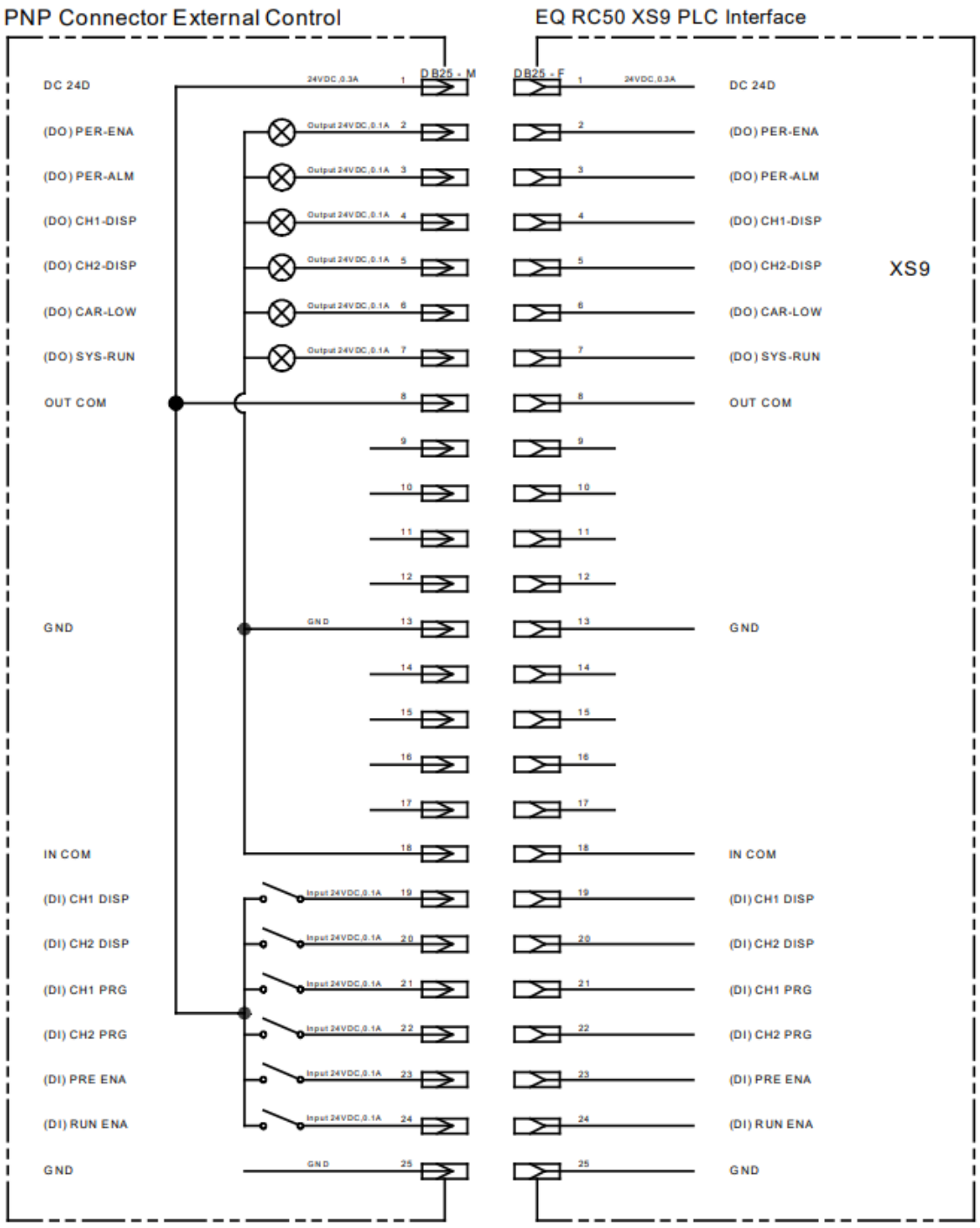
XS1: Start

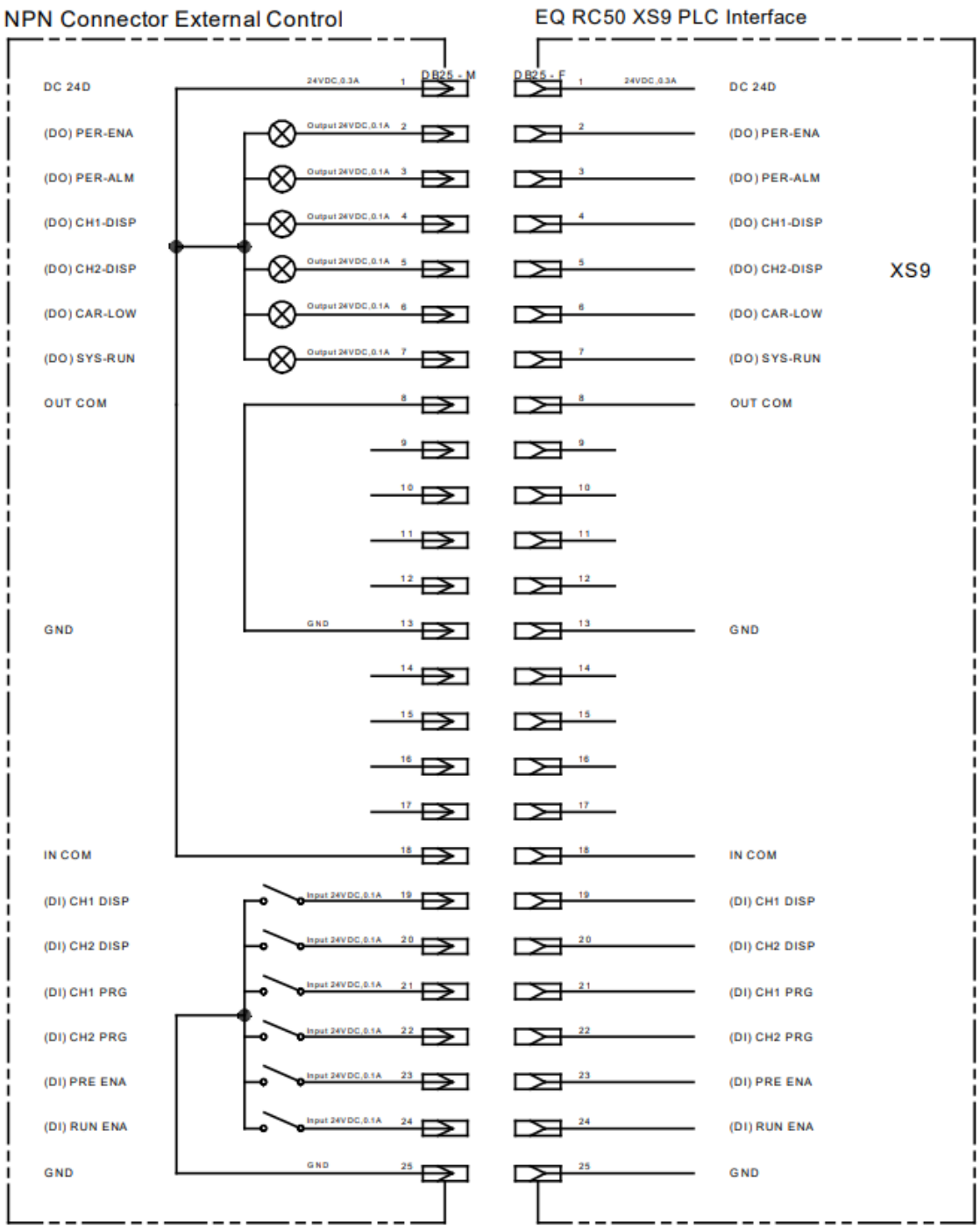
⚠ Warning!

Never connect external voltage on pin1 or pin9! Permanent board damage will result.



XS9: PLC Interface




NPN Connector External Control
EQ RC50 XS9 PLC Interface
DB25 - M
DB25 - F
XS9
DC 24D
(DO) PER-ENA
(DO) PER-ALM
(DO) CH1-DISP
(DO) CH2-DISP
(DO) CAR-LOW
(DO) SYS-RUN
OUT COM
GND
IN COM
(DI) CH1 DISP
(DI) CH2 DISP
(DI) CH1 PRG
(DI) CH2 PRG
(DI) PRE ENA
(DI) RUN ENA
GND
24VDC,0.3A
Output 24VDC,0.1A
Input 24VDC,0.1A

11 Warranty

Henkel expressly warrants that all products referred to in this Instruction Manual for Loctite® EQ RC50 Integrated Dispenser I-4.0 (hereafter called “Products”) shall be free from defects in materials and workmanship. Liability for Henkel shall be limited, as its option, to replacing those Products which are shown to be defective in either materials or workmanship or to credit the purchaser the amount of the purchase price thereof (plus freight and insurance charges paid therefor by the user). The purchaser’s sole and exclusive remedy for breach of warranty shall be such replacement or credit.

A claim of defect in materials or workmanship in any Products shall be allowed only when it is submitted in writing within one month after discovery of the defect or after the time the defect should reasonably have been discovered and in any event, within (12) months after the delivery of the Products to the purchaser. This warranty does not apply to perishable items, such as fuses, filters, lights, etc.. No such claim shall be allowed in respect of products which have been neglected or improperly stored, transported, handled, installed, connected, operated, used or maintained. In the event of unauthorized modification of the Products including, where products, parts or attachments for use in connection with the Products are available from Henkel, the use of products, parts or attachments which are not manufactured by Henkel, no claim shall be allowed.

No Products shall be returned to Henkel for any reason without prior written approval from Henkel. Products shall be returned freight prepaid, in accordance with instructions from Henkel.

NO WARRANTY IS EXTENDED TO ANY EQUIPMENT WHICH HAS BEEN ALTERED, MISUSED, NEGLECTED, OR DAMAGED BY ACCIDENT.

EXCEPT FOR THE EXPRESS WARRANTY CONTAINED IN THIS SECTION, HENKEL MAKES NO WARRANTY OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, WITH RESPECT TO THE PRODUCTS.

ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND OTHER WARRANTIES OF WHATEVER KIND (INCLUDING AGAINST PATENT OR TRADEMARK INFRINGEMENT) ARE HEREBY DISCLAIMED BY HENKEL AND WAIVED BY THE PURCHASER.

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12 Declaration of Conformity

Certificato di esame UE del tipo

EU-type examination certificate

n. ECM RED 2021-QC15 rev. 0

Rilasciato i sensi della direttiva 2014/53/UE – Allegato III Mod. B
Issued according to 2014/53/EU directive – Annex III mod. B

Fabbricante
Manufacturer

Ragione Sociale *Company Name*	Henkel (China) Co., Ltd.
Indirizzo *Address*	No.189 Guoyuan Highway, Zhuqiao Town, Pudong New District, Shanghai, China
Apparecchiatura radio *Radio equipment*	EQ RC50 Integrated Dispenser I-4.0
Marchio commerciale *Brand name*	LOCTITE
Tipo di trasmissione *Types of transmission*	WIFI 2.4GHZ, / Bluetooth version 2.0 Single Mode

ECM, Organismo Notificato n° 1282, in relazione agli obblighi derivanti dall'applicazione della procedura di valutazione della conformità di cui art. 17 della direttiva 2014/53/UE del Parlamento Europeo e del Consiglio del 16 aprile 2014, dichiara che il fabbricante ha presentato la documentazione tecnica relativa all'apparecchiatura radio su descritta.

ECM, Notified Body No. 1282 in accordance with procedure stated in the article 17 of Directive (EU) No 2014/53 of the European Parliament and of the Council of 16 April 2014, declares to the applicant that presented the technical documentation related to the radio equipment referred above.

L'esame della documentazione permette ad ECM di dichiarare che l'apparecchiatura radio è conforme alle prescrizioni delle seguenti norme armonizzate e specifiche tecniche che conferiscono presunzione di conformità ai requisiti essenziali della direttiva 2014/53/UE.

The documentation exam allows ECM to declare that the radio equipment complies with the provision given the following harmonized standard and technical specification which give the presumption of conformity to the requested essential requirements of the 2014/53/EU directive.

Subject	Name	Version/Issue	Test Report
Safety RED, Article 3.1a	EN 62368-1:2014+A11:2017	/	B-S210838455
Health RED, Article 3.1a	EN IEC 62311:2020	/	B-S210838453
EMC RED, Article 3.1b	EN 55032:2015/A11:2020, EN 55035:2017/A11:2020; EN IEC 61000-3-2:2019 EN 61000-3-3:2013/A1:2019	/	B-E210838456
Radio Spectrum RED, Article 3.2	ETSI EN 300 328 ETSI EN 301 489-1 ETSI EN 301 489-17	V2.2.2 (2019-07) V2.2.3 (2019-11) V3.2.4 (2020-09)	B-E210838454, B-E210838462 B-E210838456

Nel caso in cui vengano apportate modifiche all'apparecchiatura radio (anche se minime), il presente certificato decade.

Where any modifications are made on the radio equipment (even minimal), this certificate void.

Valsamoggia (BO)
Data - *Date* 08/10/2021

Timbro

Firma autorizzata
Authorized signature

(Amanda Payne - Deputy Manager)

Scadenza - *Expiry date* 07/10/2026

Questo certificato è basato sul rapporto di valutazione confidenziale n° RVC RED 2021-QC15
This certificate is based on the confidential evaluation report no. RVC RED 2021-QC15

Ente Certificazione Macchine srl
Via Ca' Bella 243 – Loc. Castello di Serravalle – 40053 Valsamoggia (BO)
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Allegato al
Certificato di esame UE del tipo
EU-type examination certificate
n. **ECM RED 2021-QC15 rev. 0**

Rilasciato i sensi della direttiva 2014/53/UE – Allegato III Mod. B
Issued according to 2014/53/EU directive – Annex III mod. B

CARATTERISTICHE TECNICHE
TECHNICAL CHARACTERISTICS

Software version	E3
Type of equipment and/or classification	2814024
Description	EQ RC50 Integrated Dispenser I-4.0
Power supply	AC 110-230V,50/60Hz
Radio Interface	UART-Wifi
Supply voltage	DC 12/24V
Frequency range	2402MHz-2480MHz
Harmonized frequency (Y/N)	Y
Output power	40W
Supply voltage	AC 110-230V by charger
Antenna type	Internal Antenna

Storia del certificato -Certificate history

1. This is the original certificate
2. ---

Questo certificato, incluso l'allegato, può essere riprodotto solo integralmente e senza alcuna variazione.
This certificate, annex included, can only be reproduced in its entirety and without any change.

FINE DEL CERTIFICATO – *END OF CERTIFICATE*

Ente Certificazione Macchine srl
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Verification of Compliance

Certificate Number: B-R210838452
RoHS Directive 2011/65/EU Annex II amending Annex (EU)2015/863 and amending Annex (EU)2017/2102

Beide Compliance Laboratory

Holder.....:	Henkel (China) Co.,Ltd.
Address.....:	No.189 Guoyuan Highway,Zhuqiao Town,Pudong New District,Shanghai,China
Manufacturer....:	Same As Holder
Product.....:	EQ RC50 Integrated Dispenser I-4.0
Trademark.....:	LOCTITE
Model No.....:	2814024

The submitted products have been tested by us and found to be in compliance with the listed European Directives.

EN 50581:2012

The test results apply only to the particular sample tested and to the specific tests carried out. Technical Report and documentation are at the Holder's disposal.

This certificate applies specifically to the sample investigated in our test reference number only.

CE

Certification Manager
Date: Sep.23,2021

COMMON SEAL

Company No.07113804

Beide (Shenzhen) Product Service Limited

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Manual P/N: n/a, Rev A, Date: 08/18/2021