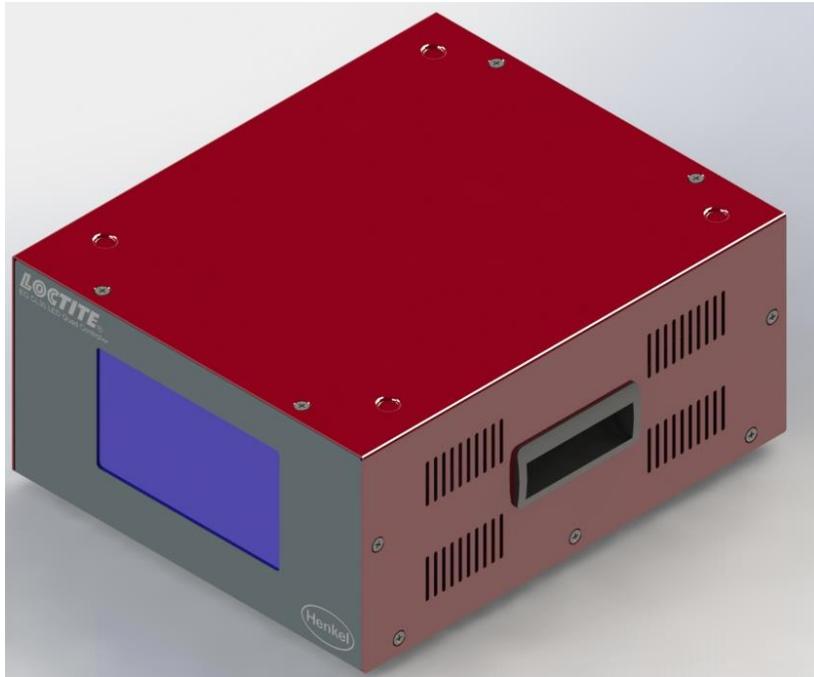


**LOCTITE**<sup>®</sup>

# 2257357 EQ CL30 LED Quad Controller

## Operating Manual



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## 1 Please Observe the Following

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### 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.

**WARNING!**

It is the responsibility of the user to ensure that all devices being driven by the LED Flood Controller are set-up in a safe manner.

The manufacturer is in no way responsible for injuries or damage to persons or property resulting from devices being driven by the LED Flood Controller.

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

Removing, bypassing or putting out of operation any of the safety devices can result in radiation damage to persons and damage to the unit and is therefore prohibited!

Do not look directly at LED-UV light, or at LED-UV light reflected in a mirror or other reflective surface. Doing so could cause eye damage.

Install the LED head in a way that humans are not exposed to LED-UV light.

Exposure could injure the skin or cause other injury.

If there is a risk of the LED-UV light being exposed to UV reflective light, place the product inside a cover with proper reflectance and heat characteristics to block that reflected light.

When operating the controller, set up the system so that the path of the LED-UV light is not at eye level.

It is strongly recommended to place a protective barrier around the product so that people cannot approach it while it is operating.

Wear protective UV glasses and other protective clothing during operation.

Never operate this product in a manner not described in this manual. Doing so risks exposure to LED UV light.

Damage to the power cord or the housing can result in contact with live electrical parts. Check the power cord and the unit before each use. If the power cord or the unit is damaged, do not operate! Replace a damaged power cord with a new one.

The unit may be opened and repaired only by authorized service personal.

### **1.3 Unpacking and Inspection**

Carefully unpack the Loctite® CL30 LED Quad Controller 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**

- 1.4.1 CL30 LED Quad Controller x 1
- 1.4.2 Equipment Manual x 1
- 1.4.3 Power Cord x 1

### **1.5 Features**

- 1.5.1 Capacity for up to four UV LED Heads.
- 1.5.2 Works with Loctite CL30 Flood Heads.
- 1.5.3 Touch screen HMI
- 1.5.4 3 running modes: Timer, Level and Advance.
- 1.5.5 3 languages available: English, Chinese and Japanese.
- 1.5.6 Friendly UI

## **1.6 Usage**

The Loctite CL30 quad controller is used with the CL30 365nm, 380nm, and 405nm LED flood heads for use with light cure products that cure when exposed to ultraviolet and/or visible light. The system can be operated manually, operated with the integrated timer, or controlled with an external switch. The system is designed for intermittent or constant duty cycle.

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## **2 Description**

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### **2.1 Theory of Operation**

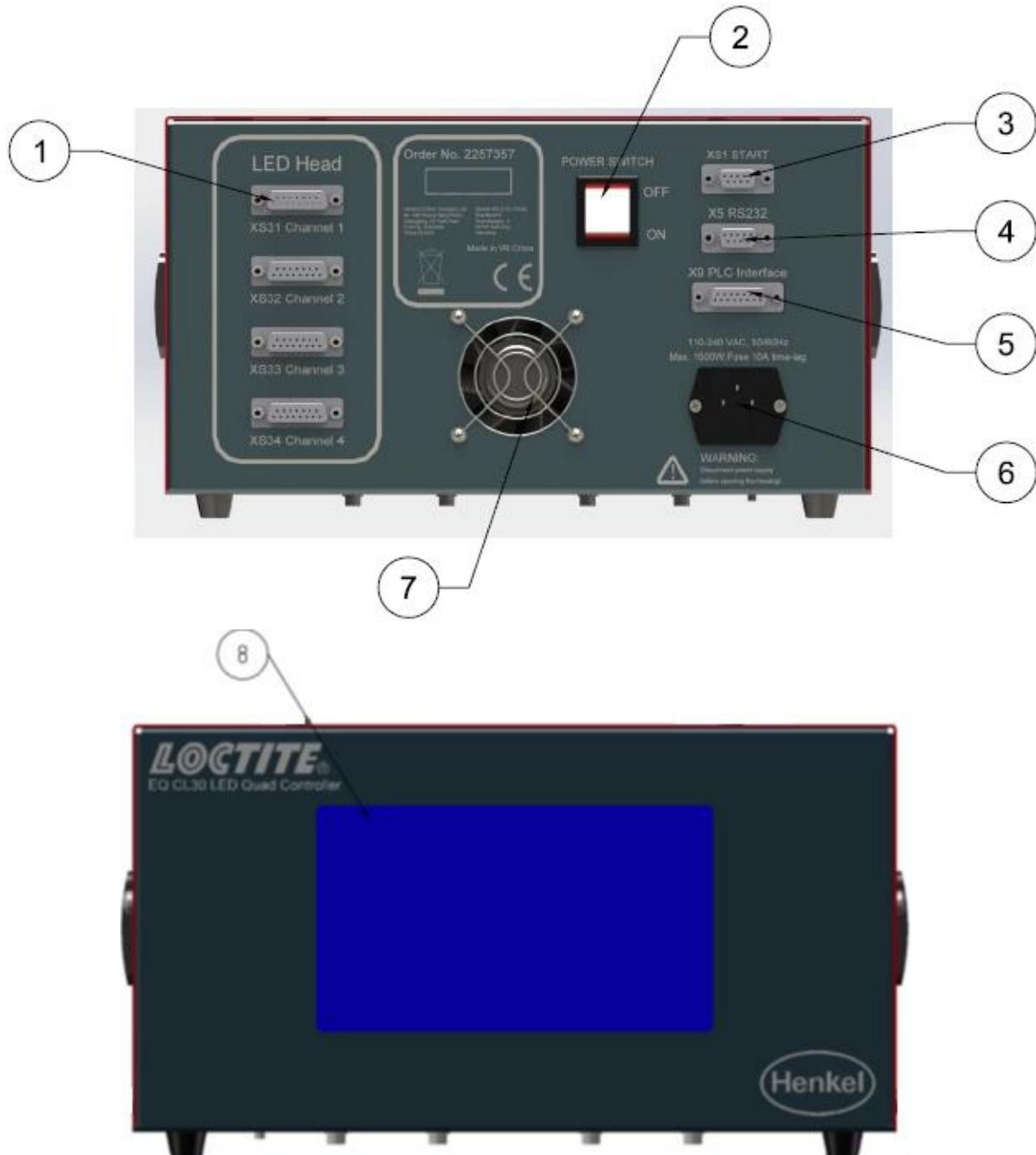
The CL30 LED Flood Controller provides electrical power to the LED's through the connecting cable (not included).

Indicator lights located on the front panel of the power supply provide visual confirmation that the LED's are in or out of their acceptable range. In the event of temperature fault the power supply will automatically shut down to protect the LED array.

When the cure cycle is initiated, light is immediately irradiated at or near maximum intensity from the LED's.

The curing process begins when the adhesive is placed under the LED's. The two primary variables that control the curing process are the time of exposure and the strength of the light (irradiance). For a given irradiance, the exposure time required to fully cure the adhesive depends primarily on the properties of the adhesive and the optical properties of the substrate that the light is transmitted through.

## 2.2 Display, operating elements and connections



1. Socket XS3: LED Head
2. Power Switch ON/OFF
3. Socket XS1: Start (The footswitch is connected here).

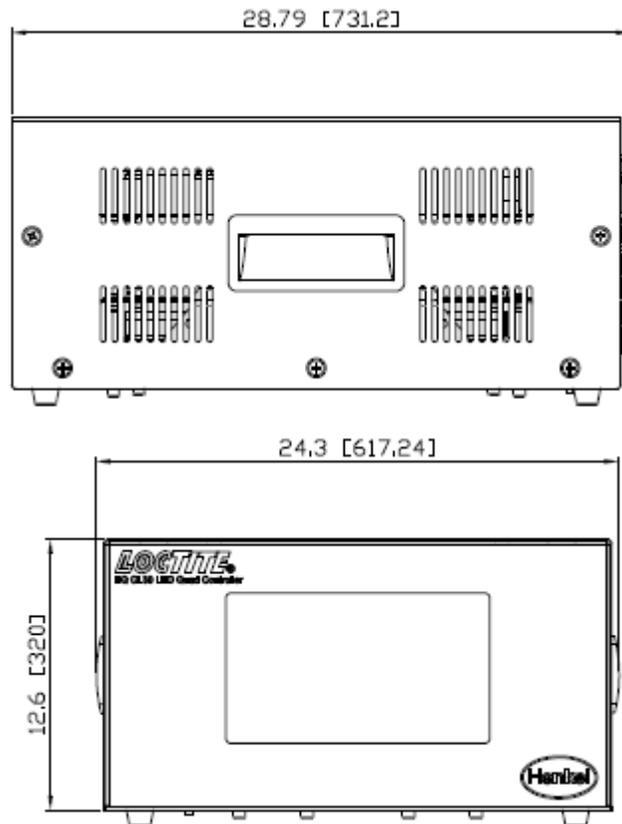
4. Socket XS5: RS232
5. Socket XS9: PLC Interface
6. Power Supplier Inlet and Fuse
7. Cooling Fan
8. Screen.

---

### 3 Technical Data

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Dimensions (L x H x W):	600x340x733.2
Total weight: lbs. (Kg)	12
Operating voltage:	110~240 VAC 50/60Hz
Power consumption:	1500 Watts
Operating Temperature:	+10 ° C to +40 ° C (+50 ° F to +104 ° F)
Storage Temperature:	-10 ° C to +60 ° C (+14 ° F to +140 ° F)



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## 4 Installation

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**!** 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

- No direct sunlight.
- Recommend operating temperature; +10 ° C to +40 ° C (+50 ° F to +104 ° F)
- No splashing water.
- No suddenly temperature changes, vibration and shocks.
- No high magnetic and intense electric.

### 4.2 Connecting the Unit

- Connect Sub D 9 pin connector of the footswitch 97201 or a higher-ranking controller to XS 1.
- Connect the 15 pin Sub D connector to the LED Head Array to XS 31~34.
- Connect power cord to the appropriate plug.

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## 5 Operation

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### 5.1 Electrical Connection

- Plug the female end of the LED power cable into the 15 pin D-sub connector located on the rear panel of the LED Array housing. Plug the male end into the 15 pin D-sub connector located on the rear panel of the controller. Make sure that the connections at both ends are secure.
- Plug the AC power cord into the back of the controller and connect to power source.
- For manual operation, plug the footswitch into the 9 pin D-sub connector marked XS1, located on the rear panel of the CL30 controller.

- For automated control, connect external PLC output relay to pins one and nine of XS1.

### 5.2 Turn on the Unit

**!** Observe the operating manual of the LED head used.

Turn the power switch 2 to ON

### 5.3 Main Page



1. Channel

2. LED head status:

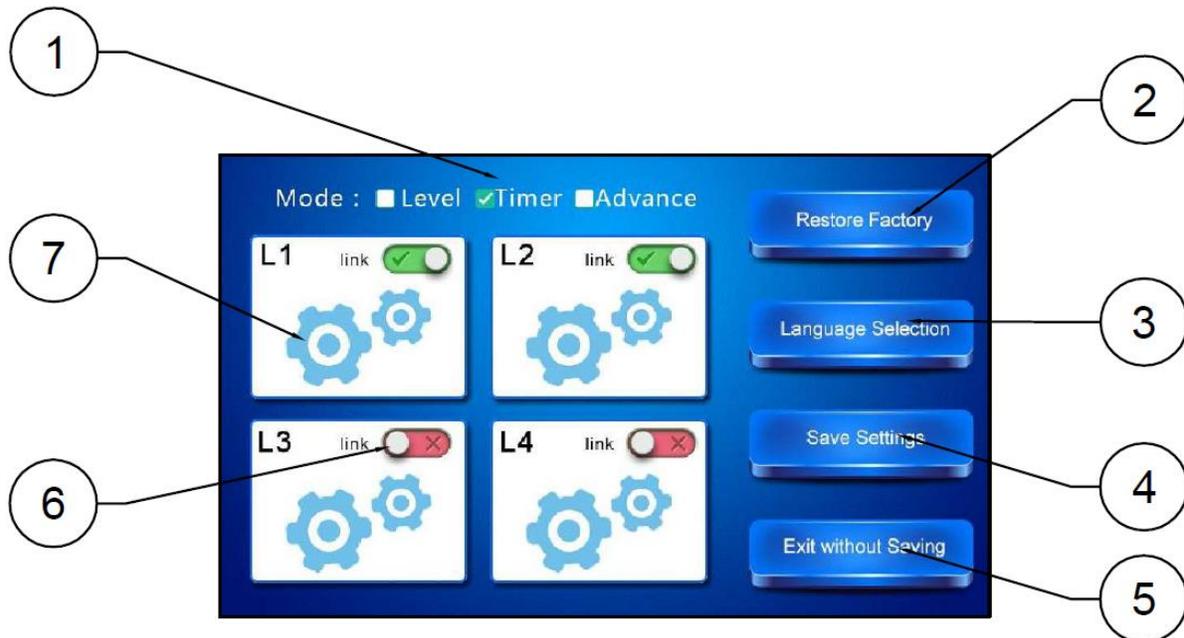
ON	
OFF	
DISCONNECTED	

3. LED head running Mode: LEVEL, TIMER, ADVANCE

4. Intensity percentage

5. Time
6. To Control Operation page
7. To Warning Message page
8. To Help information
9. To Parameter Setting page

## 5.4 Parameter Setting Page



### 1. Running Mode selection: Level, Timer or Advance

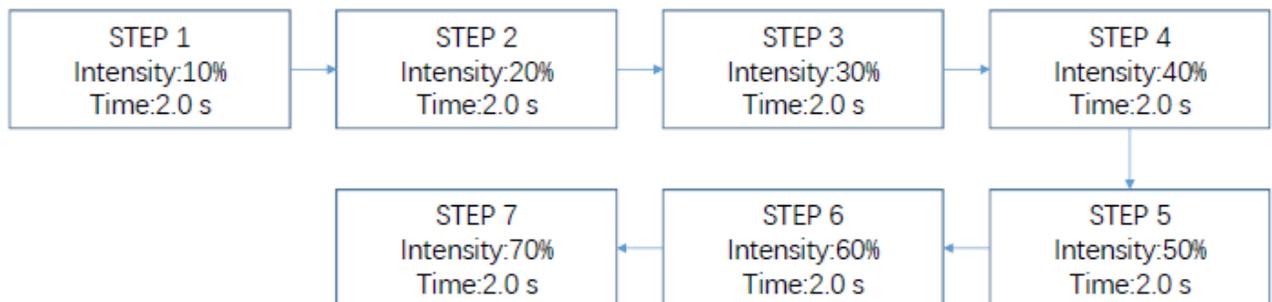
Timer Mode: Operator can setup timer from 0~999s. When timer is 0, LED head will run a continue mode. Which means, LED head turns on with one click of the footswitch or input signal, and turn off with one click again. If Timer is not 0, with one click, LED head will turn on until time goes to 0.

Level Mode: Operator can setup intensity percentage for each channel. Click the footswitch on and hold, LED head will turn on until foot switch is released.

Advance Mode: Operator needs to define STEP, INTENSITY and TIME. Also CYCLE Number and Step Number is necessary here.

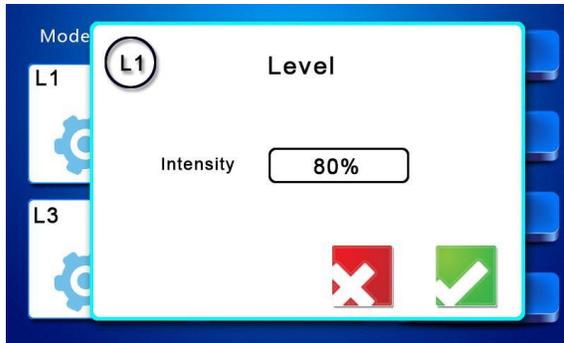
For example, if operator have defined as below, when start signal comes, LED head will run as blow flow and runs 2 cycles. See chart on next page.

Step	Intensity	Time
No.1	10%	2.0 s
No.2	20%	2.0 s
No.3	30%	2.0 s
No.4	40%	2.0 s
No.5	50%	2.0 s
No.6	60%	2.0 s
No.7	70%	3.0 s
Cycle No.	7	
Step No.	2	

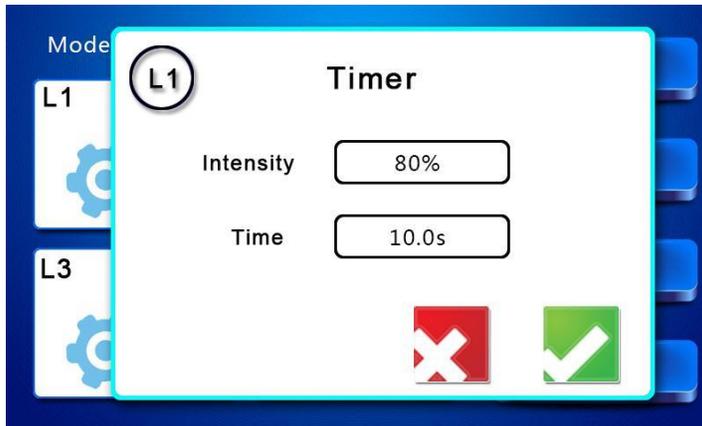


2. Restore factory setting.
3. To Language Selection page.
4. Save Setting: Save changes.
5. Exit Without Saving: Quit this page without saving.
6. Link Button: The linked LED head will turn on with start signal.
7. Intensity & Timer setting. When clicked, can enter below page to set intensity and timer:

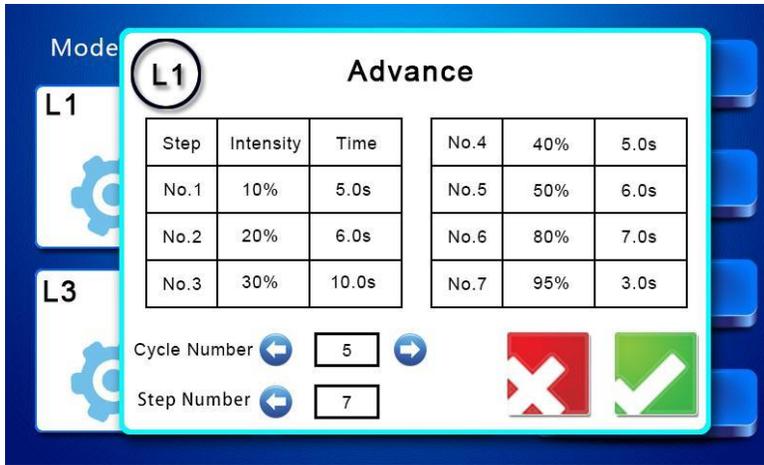
Level Mode:



Timer Mode:



Advance Mode:



### 5.5 Language Selection page

There are 4 languages available: Chinese, German, English and Japanese.



1. Select Chinese
2. Select English
3. Select German

## 5.6 Control Operation Page



1. Turn on single LED head
2. Turn on all LED head

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## 6 Application Hints

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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.

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## 7 Troubleshooting

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**⚠** Before proceeding with any repair or maintenance operation disconnect the tool from the main electricity supply.

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## 8 Care and Maintenance

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The unit requires no special care and maintenance.

**!** Observe the operating manual of the LED head used.

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## 9 Accessories and Spare Parts

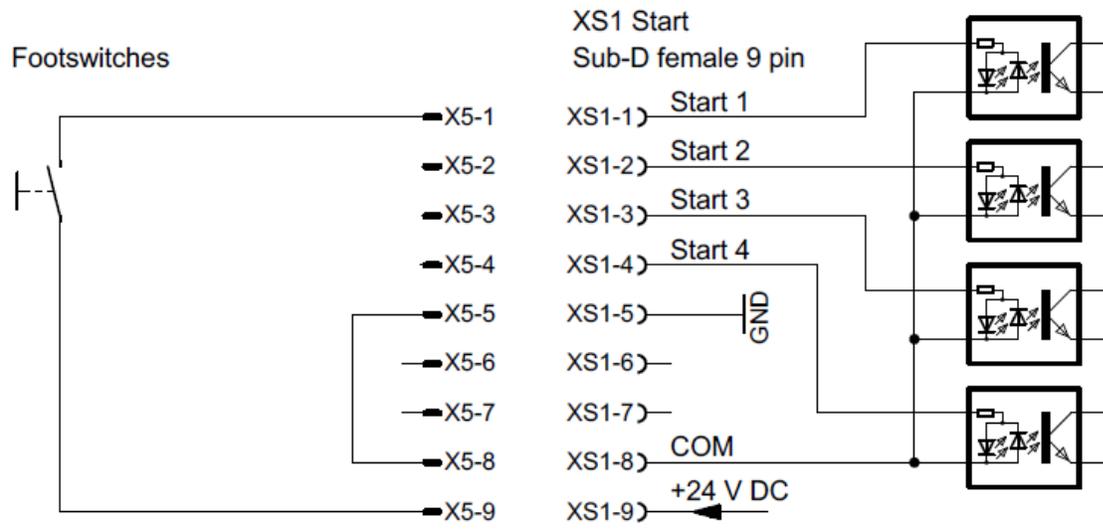
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<b>Item</b>	<b>Description</b>	<b>IDH#</b>
-	LED Head 375 nm Array	1167582
-	LED Head 405 nm Array	1167593
-	LED Head Indigo™ Array	1167589
-	CL30 365nm LED Flood Head	2139182
-	CL30 380nm LED Flood head	2139181
-	CL30 405nm LED Flood head	2139180
-	LED Power Cable	1333333
-	Footswitch	88653
-	UV V Light Radiometer Dosimeter	1265282
-	UV A/B Light Radiometer Dosimeter	1390323
-	Radiometer Adapter with Light Filter	1403403

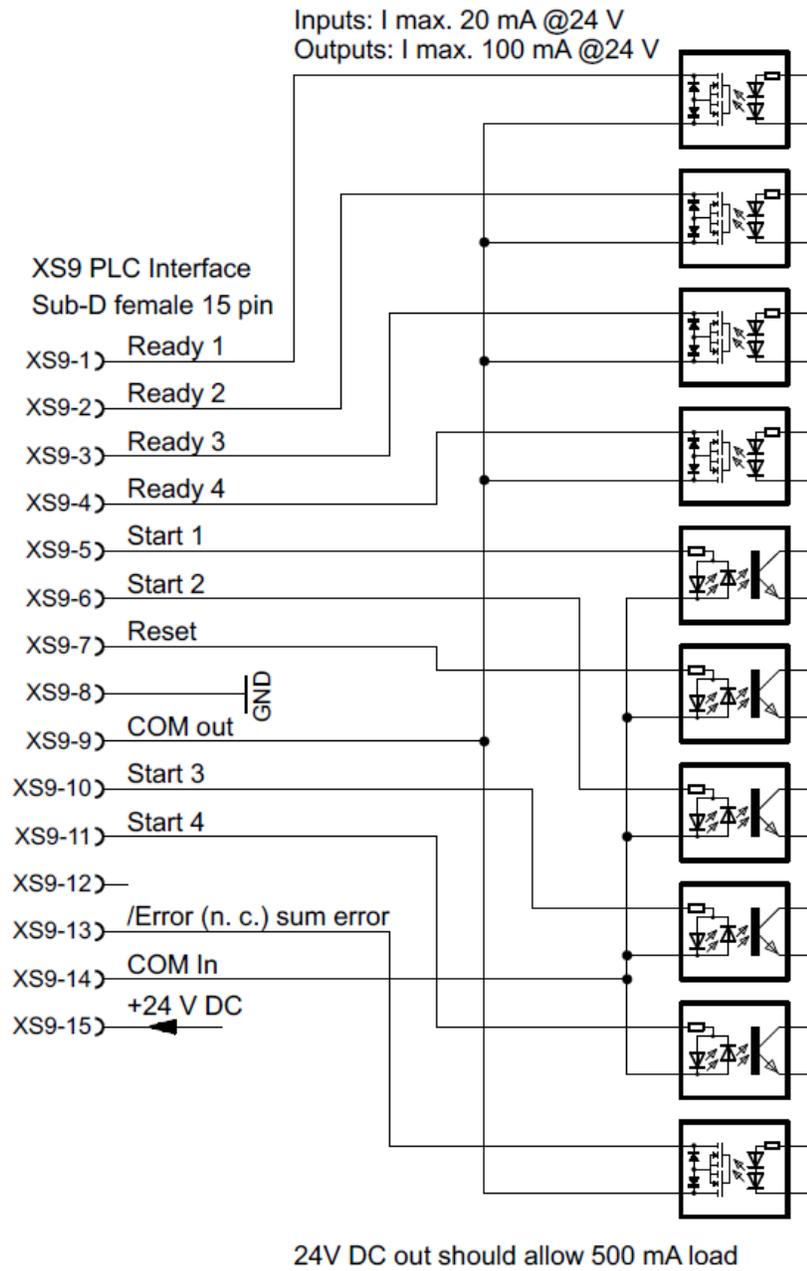
## 10 Diagrams

XS1: Start

### CL30 LED Quad Controller



XS9: PLC Interface



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## 11 Warranty

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Henkel expressly warrants that all products referred to in this Instruction Manual for 2257357 Loctite® EQ CL30 LED Quad Controller (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.

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## 12 Declaration of Conformity

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Konformitätserklärung	
Der Hersteller gemäß der EU-Richtlinien	Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München
erklärt, dass das nachfolgend bezeichnete Gerät auf Grund seiner Konzipierung und Bauart den unten aufgeführten europäischen Richtlinien, harmonisierten Normen und nationalen Normen entspricht.	
Bezeichnung des Gerätes	EQ CL30 LED Quad Controller
Gerätenummer	2257357
Einschlägige EU-Richtlinien	EU-Richtlinie Niederspannung 2014/35/EU EU-Richtlinie Elektromagnetische Verträglichkeit 2014/30/EU EU-Richtlinie RoHS 2011/65/EU
Angewandte harmonisierte Normen	EN 61326-1: 2013; EN 6100-3-2: 2014; EN 61000-3-3: 2013
Bevollmächtigter für die technischen Unterlagen	Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München
Garching, 11.08.2017	 (D. Majid) Business Director AG Deutschland/Schweiz Standortleiter München

Declaration of Conformity	
The Manufacturer according to the EC regulations	Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München
declares that the unit designated in the following is, as a result of its design and construction, in accordance with the European regulations, harmonized standards and national standards listed below.	
Designation of the unit	EQ CL30 LED Quad Controller
Unit number	2257357
Applicable EC Regulations	EC Directive of Low Voltage 2014/35/EC EC Directive for Electro-Magnetic Compatibility 2014/30/EC EC Directive of RoHS 2011/65/EC
Applicable harmonized standards	EN 61326-1: 2013; EN 6100-3-2: 2014; EN 61000-3-3: 2013
Authorized person for technical files	Henkel AG & Co. KGaA Site Munich Gutenbergstr. 3 85748 Garching bei München Germany
Garching, 08/11/2017	 (D. Majid) Business Director AG Germany/Switzerland Site Manager Munich

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