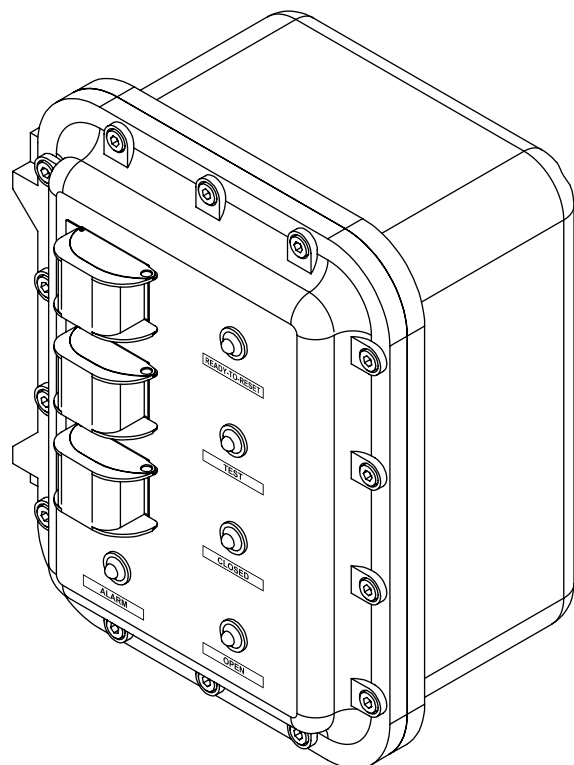
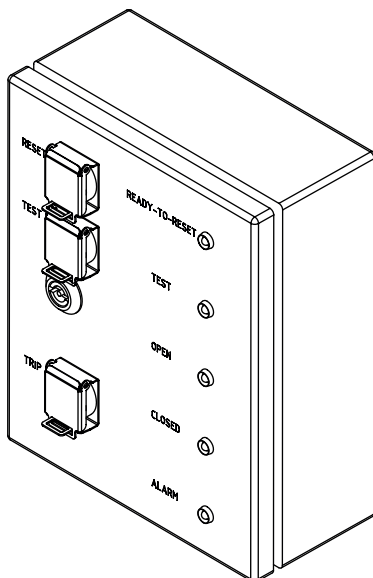


# Local Control Panels for VG9000H LCP9H Series

Installation, maintenance and  
operating instructions



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All trademarks are property of their respective owners.

#### **READ THESE INSTRUCTIONS FIRST!**

These instructions provide information about safe handling and operation of the valve.

If you require additional assistance, please contact the manufacturer or manufacturer's representative.

#### **SAVE THESE INSTRUCTIONS!**

Addresses and phone numbers are printed on the back cover.

# 1. LCP9H LOCAL CONTROL PANELS FOR VG9000H

## 1.1 General

The Local Control Panels LCP9H-series are designed to be used together with the VG9000H intelligent safety solenoid. Later on in this manual LCP9H name is used when all device versions are in question. LCP9HL name is used when loop powered versions are in question.

Different versions of LCP9H are following:

### LCP9H, LCP9HW

- Externally powered with ATEX and IECEx Ex i and Ex e approvals
- Use with VG9000H\_L2

### LCP9HL, LCP9HWL

- Loop powered with ATEX and IECEx Ex i and Ex e approvals
- Use with VG9000H\_L3

### LCP9HE, LCP9HEW

- Externally powered with ATEX and IECEx Ex d and tb approvals
- Use with VG9000H\_L2

### LCP9HEL, LCP9HEWL

- Loop powered with ATEX and IECEx Ex d and tb approvals
- Use with VG9000H\_L3

See the details of different types of LCP9H in the type coding at the end of this document.

This manual only describes the Local Control Panel wiring, configurations and functions. See the VG9000H manual (7VG92H70en) for detailed information, functionality and wiring connections and options for the VG9000H.

## 1.2 Technical description

LCP9H permits the emergency isolation valve to be closed (or opened) locally (close/open functionality, see 4.1.1 for details). LCP9H permits the valve to be returned to the normal operating position when the trip initiators are normal (manual reset functionality, see 4.1.2 for details). There is also the option for functional testing (PST) of the emergency isolation valve (test functionality, see 4.1.3 for details).

Trip-functionality is removed in the W versions of the LCP9H.

See the details of different types of LCP9H in the type coding at the end of this document.

LCP9H has also indicators (LEDs) for the valve position (open/close), ready to reset, testing and alarm status (see 4.1.4-7 for LED details).

All the buttons are lockable with e.g. padlock (max. shackle dia. 5 mm).

## 1.3 System architecture

The Local Control Panel LCP9H is connected to the VG9000H with a dual pair cable. Communication between the devices is handled by a current loop. The LCP9H needs also a supply power. For the loop powered LCP9H versions (LCP9H\_L) the supply power is taken from the input loop for the VG9000H, which needs to be 8 mA or more. For the other LCP9H versions the power supply is external 24 VDC. Refer to the general wiring of the LCP9H versions in Fig. 1 & 2. See detailed wiring information in Section 3.2.

If the LCP9H is used in intrinsically safe installations, an isolator barrier is needed for the 24 V DC power supply. See Section 1.5 for electrical interface values and compatible isolators. LCP9H can also be used without an isolator barrier as it has Ex eb mb [ib] approval. See Section 1.5 for electrical interface values.

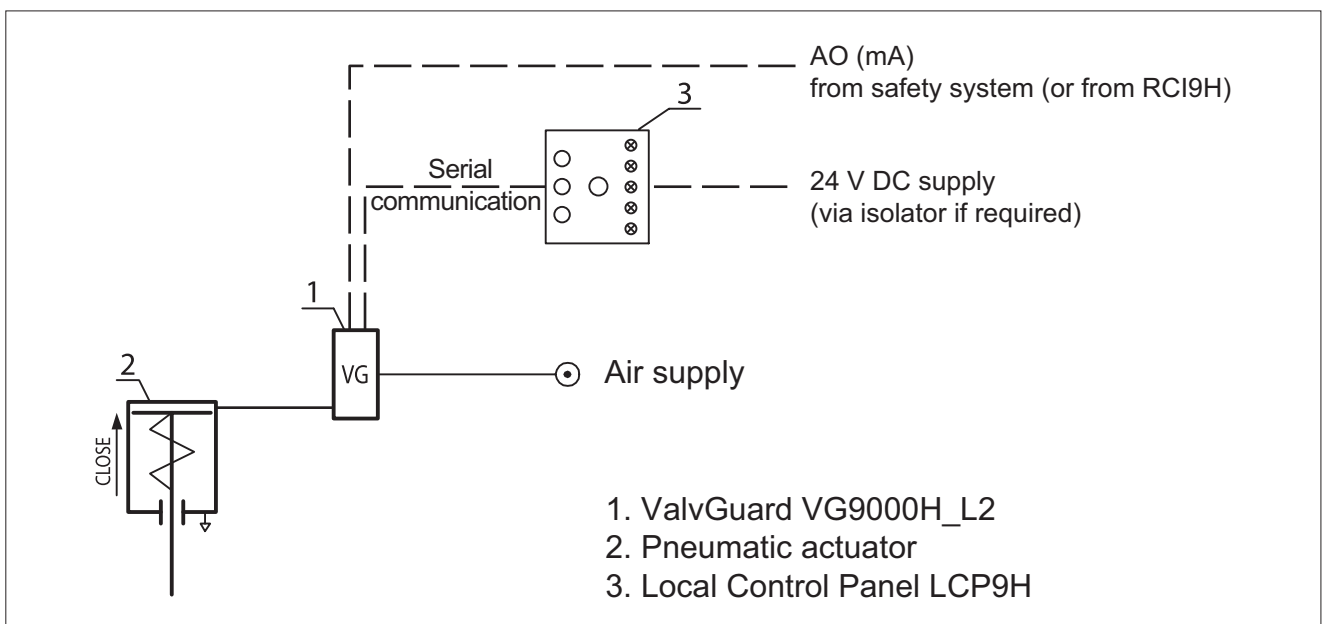


Fig. 1 General wiring of LCP9H / VG9000H\_L2

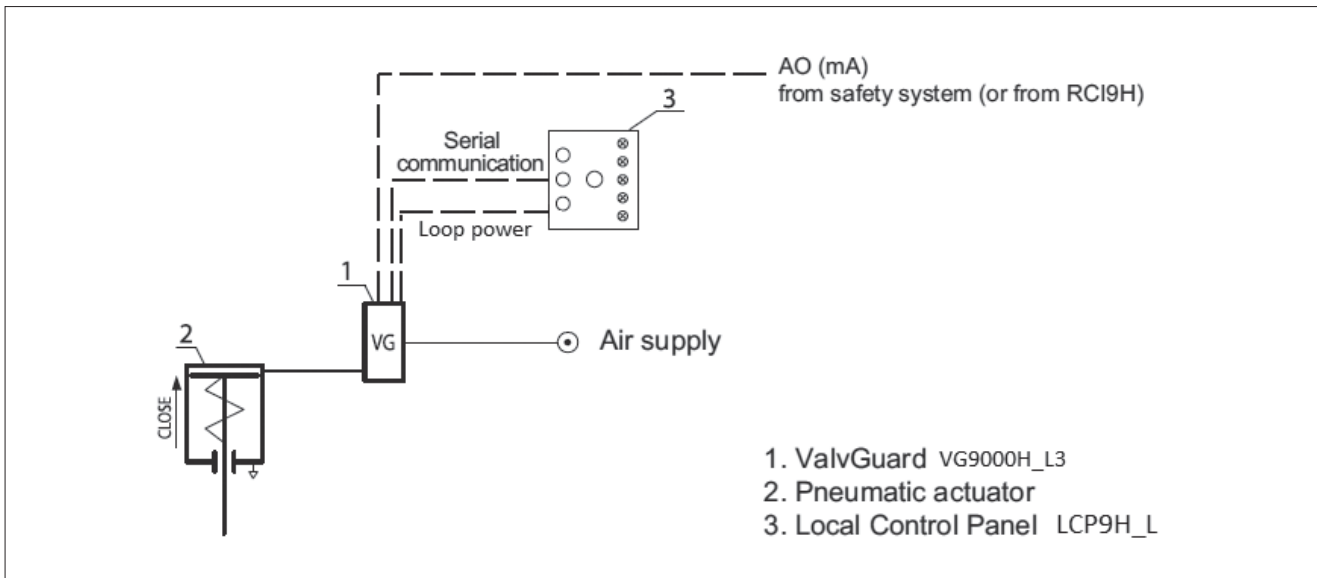


Fig. 2 General wiring of LCP9H\_L / VG9000H\_L3

## 1.4 Markings

The Local Control Panel is equipped with an identification plate (Fig. 2 or 3).

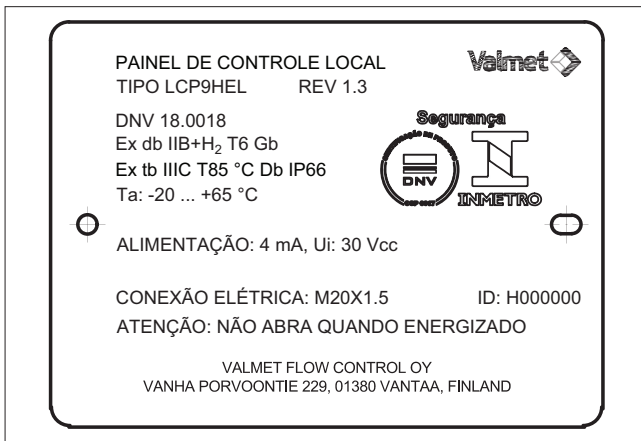


Fig. 3 Example of identification plate, LCP9HE



Fig. 4 Example of identification plate, LCP9H

## 1.5 Technical specifications

### VG9000H compatibility

LCP9H 24 VDC powered versions are compatible with VG9\_H\_L2\_ versions. LCP9H loop powered versions (LCP9H\_L) are compatible with VG9\_H\_L3\_ versions.

See the LCP9H type coding for further details of different LCP9H versions.

See the VG9000H type coding for further details of different VG9000H versions.

### Temperature range

-20° to 85 °C (Ex ia, ic)

-20° to 65 °C (Ex d, e)

### Electronics

Electrical connection: max. 2.5 mm<sup>2</sup>

#### LCP9H

2 pcs. conduit entry, dia. 21 mm, cable glands for cable with with ext. dia. 8-12 mm included. They can be changed if IP class is maintained and they are approved for use in the intended application.

#### LCP9HE

2 pcs. conduit entry, M20x1.5

Power consumption: 400 mW

Power supply: Externally powered versions: 11–24 V DC, 50 mA.

Short circuit protected. Maximum distance 1200 m

Loop powered versions: power taken from VG9000H input signal, minimum 8 mA.

Interface values for externally powered versions:

Ex ia IIC T4/T5/T6 Gb

Input values for the power supply:

$U_i \leq 25.2 \text{ V}$

$I_i \leq 150 \text{ mA}$

$P_i \leq 650 \text{ mW}$

$C_i \leq 30 \text{ nF}$

$L_i \leq 252 \text{ }\mu\text{H}$

Output values for the communication interface:

$U_o \leq 9.8 \text{ V}$   
 $I_o \leq 47 \text{ mA}$   
 $P_o \leq 120 \text{ mW}$   
 $C_o \leq 3.3 \text{ }\mu\text{F}$   
 $L_o \leq 15 \text{ mH}$

Ex ic IIC T4/T5/T6

Input values for the power supply:

$U_i \leq 25.2 \text{ V}$   
 $I_i \leq 150 \text{ mA}$   
 $P_i \leq 650 \text{ mW}$   
 $C_i \leq 25 \text{ nF}$   
 $L_i \leq 201 \text{ }\mu\text{H}$

Output values for the communication interface:

$U_o \leq 8.8 \text{ V}$   
 $I_o \leq 42 \text{ mA}$   
 $P_o \leq 93 \text{ mW}$   
 $C_o \leq 45 \text{ }\mu\text{F}$   
 $L_o \leq 45 \text{ mH}$

Interface values for externally and loop powered versions:

Ex eb mb [ib] IIC T6...T4

Maximum input value for the power supply:

$U = 24 \text{ V}$

Note: Isolator barrier not needed.

The Intrinsically Safe parameters of the current loop communication interface are:

$U_o = 9.8 \text{ V}$   
 $I_o = 47 \text{ mA}$   
 $P_o = 120 \text{ mW}$   
 $C_o = 3.3 \text{ }\mu\text{F}$   
 $L_o = 15 \text{ mH}$

Ex d IIB+H2 T6 Gb

Ex tb IIIC T85 °C Db

Input values for the power supply:

$U_i \leq 25.2 \text{ V DC}$   
 $I_i \leq 50 \text{ mA}$   
 $P_i \leq 1.26 \text{ W}$

Output values for the communication interface:

$U_o \leq 8.8 \text{ V DC}$   
 $I_o \leq 42 \text{ mA}$   
 $P_o \leq 0.37 \text{ W}$

Interface values for loop powered versions:

Ex ia IIC T6...T4 Gb

Input values for the power supply:

$U_i \leq 28 \text{ V}$   
 $I_i \leq 120 \text{ mA}$   
 $P_i \leq 1 \text{ W}$   
 $L_i \leq 313 \text{ }\mu\text{H}$   
 $C_i \leq 33 \text{ nF}$

Output values for the communication interface:

Tx:  $U_o \leq 8.3 \text{ V}$   
 $I_o \leq 5.8 \text{ mA}$   
 $P_o \leq 12 \text{ mW}$   
 $L_o \leq 50 \text{ mH}$   
 $C_o \leq 3.6 \text{ }\mu\text{F}$

Rx:  $U_o \leq 8.3 \text{ V}$   
 $I_o \leq 12.7 \text{ mA}$   
 $P_o \leq 26 \text{ mW}$   
 $L_o \leq 50 \text{ mH}$   
 $C_o \leq 3.6 \text{ }\mu\text{F}$

Ex ic IIC T6...T4 Gc

Input values for the power supply:

$U_i \leq 28 \text{ V}$   
 $I_i \leq 120 \text{ mA}$   
 $P_i \leq 1 \text{ W}$   
 $L_i \leq 313 \text{ }\mu\text{H}$   
 $C_i \leq 27.5 \text{ nF}$

Output values for the communication interface:

Tx:  $U_o \leq 8.3 \text{ V}$   
 $I_o \leq 5.8 \text{ mA}$   
 $P_o \leq 12 \text{ mW}$   
 $L_o \leq 50 \text{ mH}$   
 $C_o \leq 3.6 \text{ }\mu\text{F}$

Rx:  $U_o \leq 6.5 \text{ V}$   
 $I_o \leq 1.8 \text{ mA}$   
 $P_o \leq 3 \text{ mW}$   
 $L_o \leq 50 \text{ mH}$   
 $C_o \leq 152 \text{ }\mu\text{F}$

ATEX and IECEx approvals are valid under these conditions.  
Compatible isolators for the power supply for the externally powered

LCP

KFD0-SD2-Ex1.1045

P&F

9176/0-14-0

STAHL

V17132-520

ABB

Class I, Division 2, Groupes A, B, C, D

Input values for the power supply for externally powered versions:

$U_i = 11-24 \text{ V}$   
 $I_i = 50 \text{ mA}$

Output values for the communication interface for externally powered versions:

$U_o = 9.8 \text{ V}$   
 $I_o = 47 \text{ mA}$

Input values for the power supply for loop powered versions:

$U_i = 28 \text{ V}$   
 $I_i = 4 \text{ mA}$

Output values for the communication interface for loop powered versions:

$U_o = 8.3 \text{ V}$   
 $I_o = 18.9 \text{ mA}$

### Cable

The cable between LCP9H\_ and VG9000H must be a shielded, twisted pair, 4- or 6-wire cable depending on the LCP type (externally or loop powered, respectively). The communication and functionality can be guaranteed with the distance up to 300 m, if the cable requirements stated below are met.

### Cable requirements:

Signals and corresponding ground wires twisted  
Wire thickness min. 0.8 mm  
Shield coverage > 85 %  
Test voltage > 1500 V  
(Ex requirement)  
Resistance < 50  $\Omega$ /km  
Capacitance < 50 pF/m

### Material and weight

LCP9H 316L stainless steel, 2.8 kg  
LCP9HE Copper-free aluminium alloy with epoxy coating, 14.6 kg

## Dimensions

### LCP9H

With buttons and cable glands (approx.):  
270 mm x 200 mm x 137 mm (h x w x d)

### LCP9HE

With buttons:  
364 mm x 317 mm x 252 mm (h x w x d)

## APPROVALS

### Intrinsically safe

IECEX Ex ia IIC T6...T4 Gb  
Ex ic IIC T6...T4 Gc  
Ex eb mb [ib] IIC T6...T4 Gb

ATEX II 2G Ex ia IIC T6...T4 Gb  
II 3G Ex ic IIC T6...T4 Gc  
II 2G Ex eb mb [ib] IIC T6...T4 Gb

INMETRO Ex ia IIC T6...T4 Gb  
Ex ic IIC T6...T4 Gc

### Flameproof and explosion proof

IECEX Ex d IIB+H<sub>2</sub> T6 Gb  
Ex tb IIIC T85 °C Db IP66

ATEX II 2GD  
Ex d IIB + H<sub>2</sub> T6 Gb  
Ex tb IIIC T85 °C Db IP66

INMETRO Ex d IIB+H<sub>2</sub> T6 Gb  
Ex tb IIIC T85 °C Db IP65

### Electromagnetic protection

Electromagnetic compatibility  
Emission acc. to EN 61000-6-4: 2007  
Immunity acc. to EN 61000-6-2: 2005

## 1.6 Recycling and disposal

Most local control panel parts can be recycled if sorted according to material. Most parts have material marking. In addition, separate recycling and disposal instructions are available from the manufacturer.

The Local Control Panel may also be returned to the manufacturer for recycling and disposal. There will be a charge for this.

## 1.7 Safety precautions

### CAUTION:

**Do not exceed the permitted values!**  
**Exceeding the permitted values may cause damage to the local control panel and to equipment attached to the panel.**  
**Damage to the equipment and personal injury may result.**

### CAUTION:

**During maintenance or commissioning when the device cover is open, ensure that water does not go inside the enclosure.**

### CAUTION:

**Do not operate the device with the cover open or removed!**  
**Electromagnetic immunity is reduced.**

### Ex d WARNING:

**Do not open the cover when an explosive atmosphere may be present!**

### Ex d and Ex tb WARNING:

**Use a cable gland with suitable Ex d IIC and Ex tb IIIC certification. Use cable gland suitable for at least -20 °C to 70 °C.**

### Ex d NOTE:

Only persons familiar with Ex d explosion protection are allowed to work with the device. Special attention has to be paid to careful handling and closing of the cover.

### NOTE:

Avoid earthing a welding machine in close proximity to the LCP9H.

Damage to the equipment may result.

### WARNINGS for cETLus Class I Division 2 Groups A, B, C, D:

**Use supply wires rated at least 70 °C.**

**Explosion hazard. Do not connect or disconnect when energized.**

**Explosion hazard. Do not remove or replace while circuit is live unless the area is free of ignitable concentrations.**

**All push button switches are equipped with lockable button covers in order to prevent accidental use and shall be locked when not in use.**

## 2. TRANSPORTATION, RECEPTION AND STORAGE

The Local Control Panel is a sophisticated instrument, handle it with care.

- Check the Local Control Panel for any damage that may have occurred during transportation.
- Store the Local Control Panel preferably indoors and keep it away from rain and dust.

### 3. MOUNTING

**NOTE:**

The tightening torque for the cover screws of LCP9HE\_ versions is 16 Nm.

**NOTE:**

The enclosure of the LCP9H meets the IP66 protection class according to EN 60529 in any position when the cable entries are plugged according to IP66.

Based on good mounting practice, the recommended mounting position is with electrical connections placed downwards. If these requirements are not met, and the cable glands are leaking and the leakage is damaging the LCP9H electronics, our warranty is not valid.

#### 3.1 Electrical connections

There are two terminal blocks located in the circuit board inside the LCP9H (see Fig. 4). LOOP terminals are for connection to the VG9000H and PWR terminals are for the 24 V DC power supply or for the loop power.

**NOTE:** The VG9000H version to be used with LCP9H products needs to have type code option L2. The VG9000H version to be used with LCP9H\_L products needs to have type code option L3.

In VG9000H the LCP connection terminals are located in the upper housing.

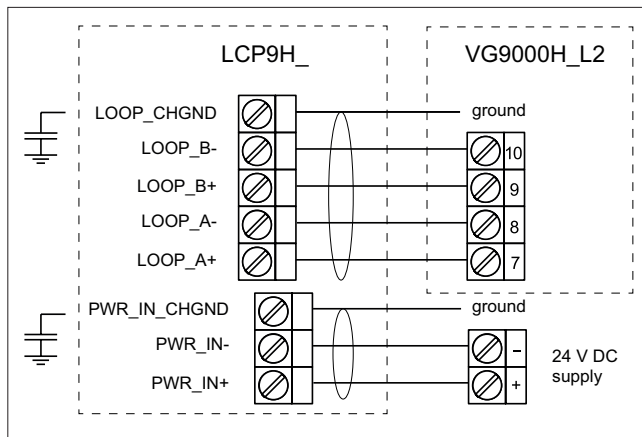


Fig. 5 LCP9H\_ electrical connections

See the VG9000H manual 7VG9H70EN for detailed electrical connections in the VG9000H.

**NOTE:**

When installing the LCP9H, standard IEC 60079-14/12.2.4 should be considered. The circuits of the apparatus are assumed to be earthed.

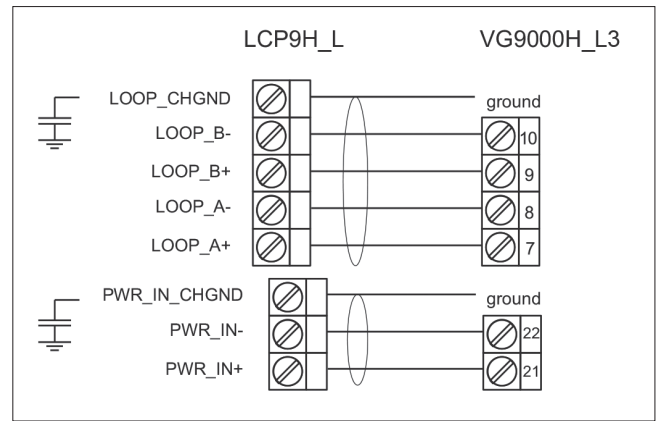


Fig. 6 LCP9H\_L electrical connections

**NOTE:**

Tightening torque for the wiring terminal screws shall be 0.5-0.6 Nm

### 4. LCP9H LAYOUT AND FUNCTIONALITY

The LCP9H front panel layouts with push buttons and LEDs can be seen in Fig. 5–8.

The push buttons (described in the Section 4.1) are as follows:

- Reset
- Test
- Trip (not available in W version)

The LEDs (described in the Section 4.1) are as follows:

- Ready-To-Reset (amber)
- Test (amber)
- Open (green)
- Closed (red)
- Alarm (white)

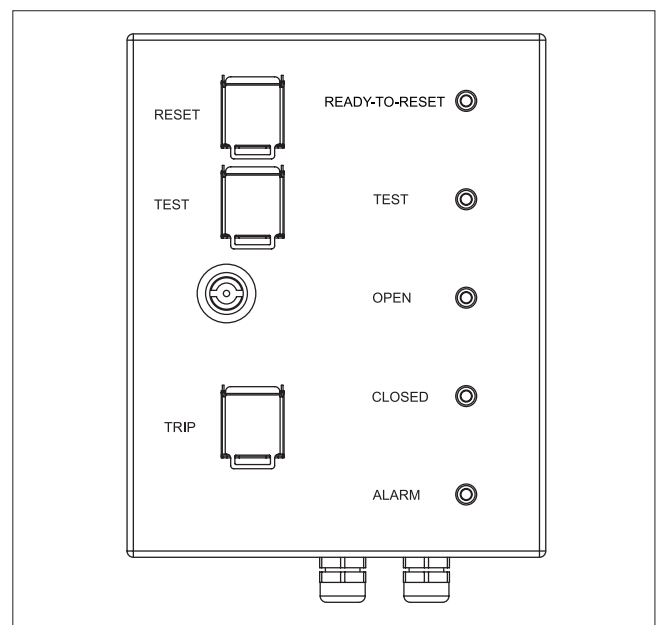


Fig. 7 LCP9H and LCP9HL front panel

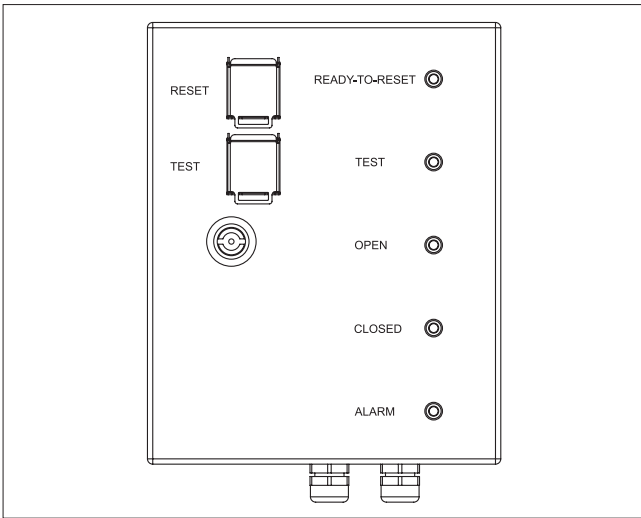


Fig. 8 LCP9HW and LCP9HWL front panel

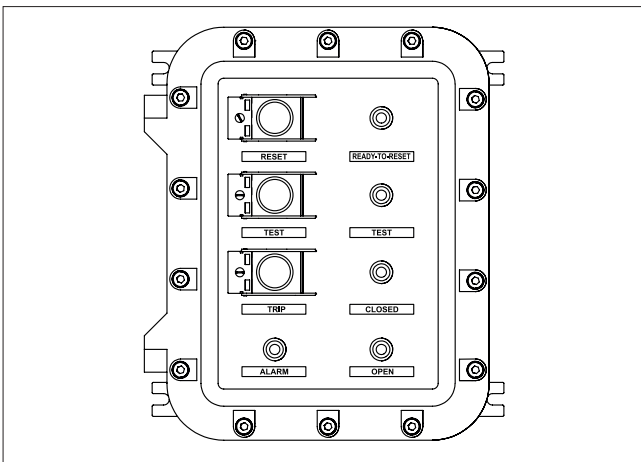


Fig. 9 LCP9HE and LCP9HEL front panel

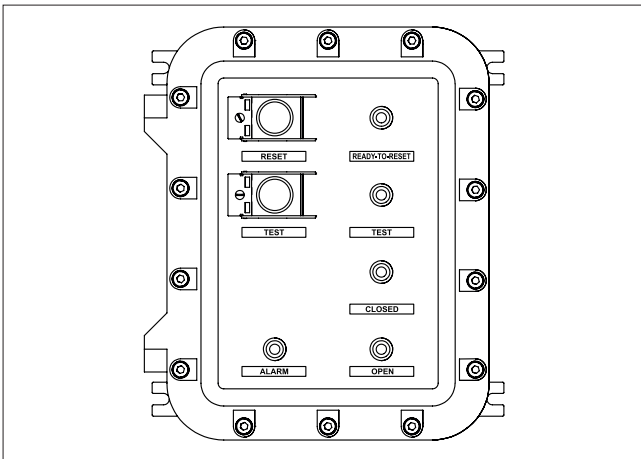


Fig. 10 LCP9HEW and LCP9HEWL front panel

## 4.1 Functionality

The functionality of the LCP9H push buttons and purpose of the LEDs are described below in 4.1.1-7.

Functionality of the LCP9H is lost in the following cases:

- If the supply power (external 24 VDC or loop powered from VG) is disconnected.
- If there is no communication between the LCP9H and the VG9000H, e.g. the cable is broken or disconnected.

- If the polarity of wires is incorrect.
- If the Loop A (7, 8) and Loop B (9, 10) wires are mixed in the VG9000H.

These above-mentioned cases do not affect the valve position. Alarm LED is blinking in those cases.

The buttons need to be pushed (0.2–10 seconds) and released to perform the desired function.

### Trip button

- This functionality is only available in LCP9H and LCP9HE. LCP9HW and LCP9HEW do not have the valve trip functionality.
- The purpose of the Trip button is to manually close or open the valve depending on the assembly and configuration of the valve. It means that this will drive the valve to safety position.

#### NOTE:

When the button is pushed and released, the valve will be driven to the safety position; i.e. it will close the valve if it is the emergency shutdown valve and it will open the valve when it is the emergency blowdown (venting) valve.

#### NOTE:

When LCP is used with VG9PST version the trip-functionality needs to be enabled in VG. It is disabled as default.

### Reset button

- The purpose of the Reset push button is to return the valve to the normal operating position after the emergency trip.
- The Reset button is operational only when the mA signal from the safety system (or RC19H2) to VG9000H is in the normal state, i.e. above 16.0 mA.
- The Ready-to-Reset LED is lit when mA signal from the safety system (or RC19H2) to VG9000H is above 16.0 mA, i.e. in the normal state. 20 mA is required with VG9\_P. The Reset button is then operational.
- Push and release the Reset button to return the valve to the normal operating position.

#### NOTE:

When the button is pushed and released, the valve will be driven to the normal operating position; i.e. it will open the valve if it is the emergency shutdown valve and it will close the valve when it is the emergency blowdown (venting) valve.

#### NOTE:

Make sure to push the Reset button only when it is safe to return the valve to the normal operating position.

### Test button

- The purpose of the Test button is to start the partial stroke test (PST) manually or to cancel the manual partial stroke test of the emergency isolation valve.
- The stroke size of the test can be set via HART (DTM, EDD) or from the LUI (Local User Interface) of the VG9000H. See VG9000H manual 7VG970en for details.
- The manual test via LCP9H uses the same stroke size than manual PST programmed into VG9000H itself.
- To start the PST test, press and release the Test button and the Test LED will be illuminated.



- To stop the ongoing manual PST test, press and release the Test button and the manual PST test will be cancelled. The valve will return to its normal operating position.
- It is also possible to cancel the manual PST test with this Test button even if the test is started via HART or LUI.

## Ready-To-Reset LED

- The Ready-To-Reset LED is turned on when mA signal from the safety system (or RCI9H2) to the VG9000H is in the normal state (above 16.0 mA) and the Reset button has not yet been pushed. It indicates that the Reset button can be used.

### NOTE:

Make sure to push the Ready-To-Reset button only when it is safe to return the valve to the normal operating position.

## Open and Closed LEDs

- Open and Closed LEDs indicate the valve position and whether the emergency isolation valve is open or closed.
- If the valve is in the intermediate state both LEDs are turned off.
- The position information is taken from the position information of the VG9000H safety valve controller and the triggering limits are user selectable. The limits can only be seen and changed via HART (DTM, EDD).

## Test LED

- The function of the Test LED is to indicate when the Test button is pushed and the PST test with VG9000H has started. See Section 4.1.3. for the Test button functionality.
- The Test LED will be turned on when the Test button is pushed and released. It will be on also during the Test Warning Time. The Test Warning Time is the VG9000H parameter and can only be seen and changed via HART (DTM, EDD).
- The Test LED will also be turned on during other tests: pneumatics test, automatic or manual PST and ETT. See the VG9000H manual for other test details.
- The LED will blink few times if the test starting fails.

## Alarm LED

- The Alarm LED indicates the alarm state in the VG9000H.
- If the Alarm LED is turned on, it means that the Alarm status is activated in the VG9000H.
- The Alarm LED will blink, if the communication between the LCP9H and the VG9000H is disconnected or not functional, or if the External Devices -parameter "LCP" in the VG9000H DTM (Neles Valve Manager™) is not selected or it is disabled (diS) in the VG9000H LUI. That parameter can only be changed via HART or LUI.

# 5. MAINTENANCE

Under normal service conditions there is no requirement for regular maintenance.

## 5.1 LED test

Push the Test button for more than 10 seconds. All the LEDs will then be turned on and off after one another in the following sequence: open, closed, reset, test, alarm. After the LED test, the LEDs which were turned on prior to this testing will be turned on.

# 6. TROUBLE SHOOTING

If the LCP9H does not work, check the following:

- Check the LCP parameter in the VG9000H:
  - The LCP parameter in the VG9000H needs to be enabled. Go to the parameters menu in the VG9000H LUI and check that LCP is enabled. For details see the VG9000H IMO.
  - This can also be checked in Assembly Related view in the VG9000H DTM. Check that LCP is selected in the External Devices parameter. For details see the VG9000H DTM help file.
- Wiring:
  - Check that the wiring between the LCP9H and the VG9000H is done according to the instructions in this manual and/or in the VG9000H IMO.
- Power supply:
  - Check that the power supply or the loop power for the LCP9H is connected according to the instructions in this manual and it is turned on.
- VG9000H:
  - Check that the VG9000H installation and setup is done according to the instructions in the VG9000H IMO.

If starting the test fails:

- Check that there are no alarms/warnings in the VG9000H. See the VG9000H IMO (7VG9H70en) and/or DTM help file for details.
- The push of the test button may be too short or too long. You need to push the test button for 0.2–10 seconds and then release.

If the reset function does not work:

- Check that the mA signal to VG9000H is above 16 mA. See the VG9000H IMO (7VG9H70en) for details.
- Check that supply pressure to the VG9000H is turned on and in the correct range.
- The push of the test button may be too short or too long. You need to push the test button for 0.2–10 seconds and then release.

If the trip function does not work:

- Check that the mA signal to VG9\_P is 20 mA and the functionality is enabled in VG. See the VG9000H IMO (7VG9H70en) for details.

# 7. TOOLS

Use the provided key for opening and locking the cover in LCP9H\_ versions. No other special tools are required.

Use 8 mm hex key for the cover screws in the LCP9HE\_ versions.

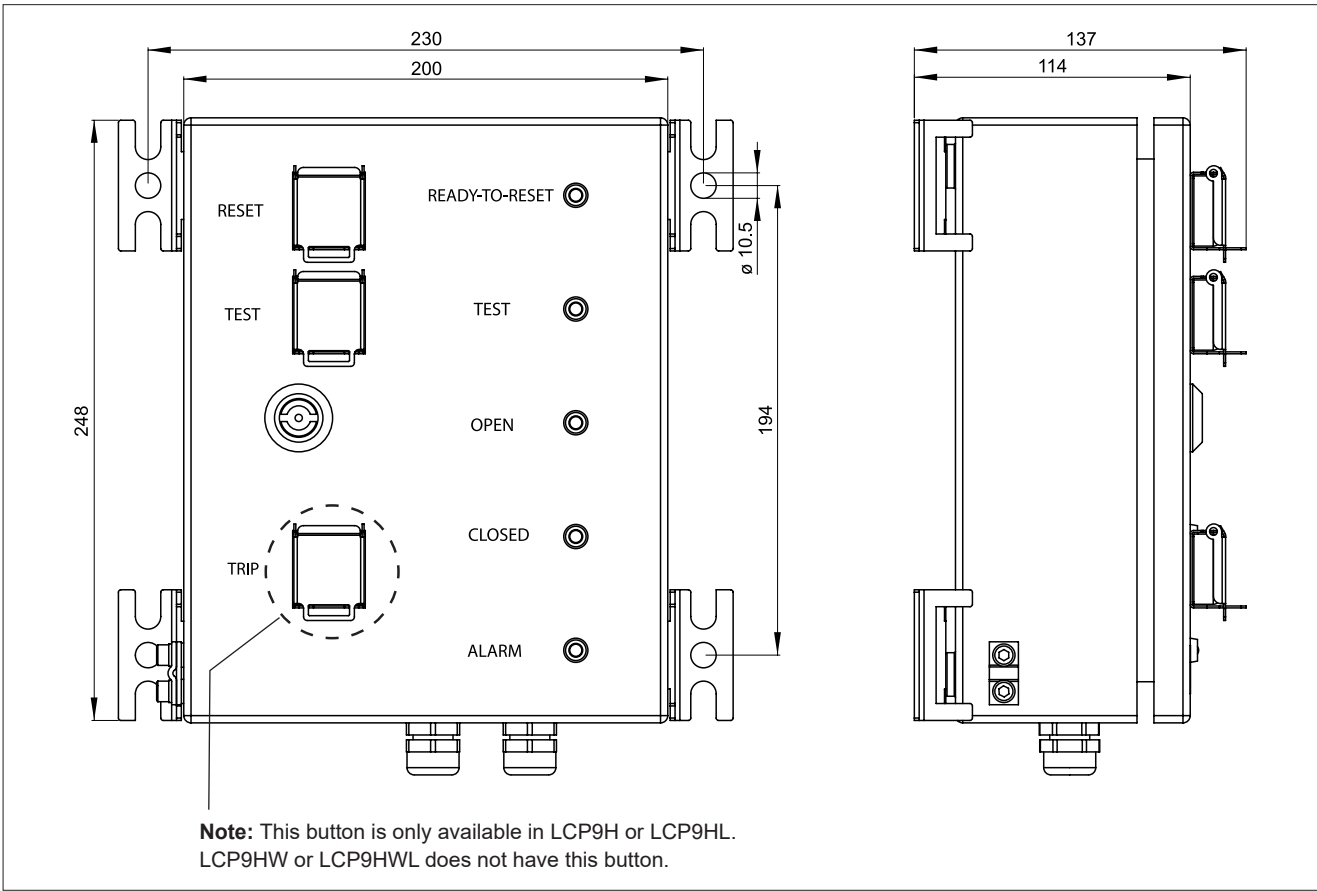
# 8. SPARE PARTS

The following spare parts are available:

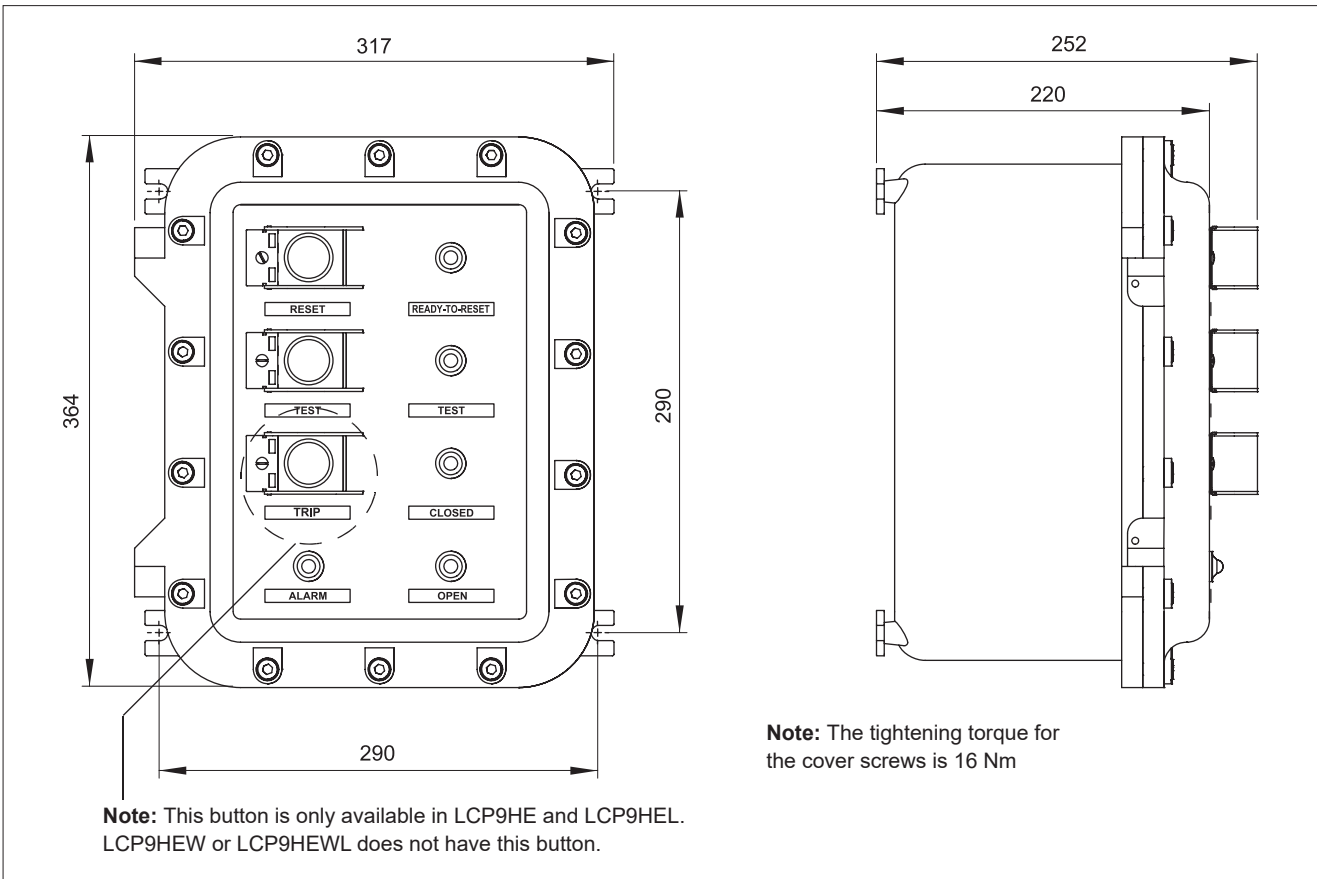
- printed circuit board
  - push buttons
  - button covers
- Contact the local Valmet office for ordering spare parts.

# 9. DIMENSIONS

LCP9H, LCP9HW, LCP9HL, LCP9HWL



LCP9HE, LCP9HEL, LCP9HEWL, LCP9HEWL



# 10. EU DECLARATION OF CONFORMITY



## EU DECLARATION OF CONFORMITY

Manufacturer:  
Neles Finland Oy  
01301 Vantaa  
Finland

Product: **Local Control Panel LCP9H\_-series**

Type	Product	Approval	EC Type examination Certificate
Ex i	LCP9H, LCP9HW	ATEX II 2G Ex ia IIC T6...T4 Gb	EESF 20 ATEX 020X EN IEC 60079-0:2018, EN 60079-11:2012
		ATEX II 3G Ex ic IIC T6...T4 Gc	EESF 20 ATEX 021X EN IEC 60079-0:2018, EN 60079-11:2012
	LCP9HL, LCP9HWL	ATEX II 2G Ex ia IIC T6...T4 Gb	EESF 20 ATEX 023X EN IEC 60079-0:2018, EN 60079-11:2012
		ATEX II 3G Ex ic IIC T6...T4 Gc	EESF 20 ATEX 024X EN IEC 60079-0:2018, EN 60079-11:2012
Ex m	LCP9H, LCP9HW, LCP9HL, LCP9HWL	ATEX II 2G Ex eb mb [ib] IIC T6...T4 Gb	EESF 20 ATEX 019X EN IEC 60079-0:2018, EN IEC 60079-7:2015/A1:2018, EN 60079-11:2012, EN 60079-18:2015/A1:2017
Ex d	LCP9HE, LCP9HEW, LCP9HEL, LCP9HEWL	ATEX 2 IIG Ex d IIB+H2 T6 Gb ATEX 2 IID Ex tb IIC T85°C Db IP66 Ta -20° to +65 °C	SIRA 11 ATEX 1170 , Issue 3 EN 60079-0: 2009, EN 60079-1: 2007, EN 60079-31: 2009
EMC	LCP9H, LCP9HW	(EMC 2004/108/EC) EN 61000-6-2 (2005), EN 61000-6-4 (2007)	NEMKO 135608
	LCP9H_L	(EMC 2004/108/EC) EN 61000-6-2 (2005), EN 61000-6-4 (2007)	SGS 285215-1

As the products within our sole responsibility of design and manufacture may be used as parts or components in machinery and are not alone performing functions as described in Article 6(2) in the Machinery Directive (2006/42/EC), we declare that our product(s) to which this Declaration of Conformity relates must NOT be put into service until the relevant machinery into which it is to be incorporated has been declared in conformity with the provisions of the Machinery Directive.

The product above is manufactured in compliance with the applicable European directives and technical specifications/standards. Protection from e.g. static electricity caused by the process or connected equipment must be considered by the user ( EN 60079-14 §6 ).

The product do not possess any residual risk according to hazard analyses made under the applicable directives providing that the procedures stated by the Installation, Operation and Maintenance manual are followed and the product is used under conditions mentioned in the technical specifications.

**The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:**

EMC 2014/30/EU Electrical  
ATEX 2014/34/EU Approved and Ex marked types

**ATEX Notified Bodies for EC Type Examination Certificate:**

**CSA** (Notified body number 2813)  
CSA Group Netherlands B.V.  
Utrechtseweg 310,  
6812 AR, Arnhem,  
Netherlands

**EESF** (Notified body number 0537)  
Eurofins Electric & Electronics Finland Oy  
Kivimiehentie 4  
FI-02150 Espoo  
Finland

Vantaa 11th November 2022

Janne Jussila, Quality Manager  
Authorized person of the manufacturer within the European Community

**ATEX Notified Body for Quality Assurance:**

ISO 9001:2015 DNV-GL 73538-2010-AQ-FIN-FINAS  
ATEX 2014/34/EU Annex IV Presafe 2460 Presafe 18 ATEX 91983Q

**Det Norske Veritas AS** (Presafe notified body number 2460)  
Veritasveien 1  
1322 Høvik, Oslo  
Norway

# 11. TYPE CODING

## Local Control Panel LCP9H

1.	2.	3.	4.	5.	6.
LCP	9	H	E	-	L

1. sign	PRODUCT GROUP
LCP	Local Control Panel For local control with Neles ValvGuard VG9000. All versions include LEDs, Manual Reset and PST buttons. Buttons are lockable in all versions.

2. sign	SERIES CODE
9	Suitable for Neles ValvGuard VG9000

3. sign	COMMUNICATION
H	Suitable for VG9000 HART communication version. Four wire serial communication between VG9000 and LCP.

4. sign	APPROVALS FOR HAZARDOUS AREAS
Enclosure IP66 and stainless steel 316L if not otherwise mentioned.	
-	<p><b>ATEX and IECEx certifications:</b>                      II 2 G Ex ia IIC T4/T5/T6 Gb                      Temperature range: T4; -20° to +65 °C, T5; &lt; +65 °C, T6; &lt; +50 °C.                      II 3 G Ex ic IIC T6...T4 Gc                      Temperature range: T4; -20° to +65 °C, T5; &lt; +65 °C, T6; &lt; +60 °C.                      II 2 G Ex eb mb [ib] IIC T6...T4 Gb                      Temperature range: T4; -20° to +65 °C, T5; &lt; +63 °C, T6; &lt; +48 °C</p> <p><b>CCC (Chinese) certifications:</b>                      Ex ia IIC T4~T6 Gb                      Ex ic IIC T4~T6 Gc</p> <p>NOTE: Ex ia and Ex ic are not applicable to 6. sign "L"                      Ex e mb [ib] IIC T4~T6 Gb</p> <p>NOTE: Additional Y-code at the end of the LCP9H_ type coding, e.g. LCP9HY, means following: Y = Special construction, to be specified. Does not affect the certification. For example, different button texts.</p>
E	<p>Enclosure material anodized aluminum.</p> <p><b>ATEX and IECEx certifications:</b>                      Ex d IIB + H2 T6 Gb                      Ex tb IIIC T85°C Db                      IP66                      Ta -20° to +65 °C</p> <p><b>INMETRO (DNV) certifications:</b>                      Ex d IIB + H2 T6 Gb                      Ex tb IIIC T85°C Db                      IP66                      Ta -20° to +65 °C</p> <p><b>ITRI (Taiwan) certifications:</b>                      Ex d IIB+H2T6 Gb                      Ex tb IIIC T85°C Db</p> <p><b>CCC (Chinese) certifications:</b>                      Ex d IIB + H2T6 Gb                      Ex tDA21 IP66 T85°C</p>

5. sign	OPTIONS
-	Standard version without 5. sign
W	LCP is provided without Close (trip) button

6. sign	SUPPLY POWER
-	<p><b>24 VDC externally powered</b>                      Power consumption 400 mW. Power supply 11-30 V DC, 50mA                      Note: 7. sign L2 needs to be selected for VG9000 type code option.</p>
L	<p><b>Loop powered</b>                      Power taken from VG9000H input signal, 4 mA.                      Note: Minimum 8 mA is required for VG9000 input signal.                      7. sign L3 needs to be selected for VG9000 type code option.</p>

Subject to change without prior notice.

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