

# Technical Data

## VSI – indicator LED

### Ex zone 1



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## 1 General

These operating instructions apply to the products listed under 3.1.  
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### 1.1 Manufacturer

Barel AS  
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www.barel.no  
E-Mail: [sales@barel.no](mailto:sales@barel.no)

### 1.2 Applications

To be used with Barel HFXE or similar product. The VSI may be used to indicate battery-status.  
State of the art technology is utilized to increase efficiency and long life-time.

These components are suitable for use in explosive gas atmospheres like:

- Oil Industry                      On- & Off-shore Installations, Gas Stations, Fuel Reservoirs, Oil Tankers
- Chemical Industry              Production Plants

## 2 Approvals

Approvals:

- QAN/QAR    0470 Nemko 01ATEX452Q/NO/NEM/QAR08.0001/04
- Ex protection Code    Ex II 2 G Ex mb IIC
- IECEx Certificate:    IECEx EXV 19.0027U
- ATEX no.    ExVeritas 19 ATEX 0478U

According to directives and standards listed:

*ATEX Directive 2014/34/EU*

EN 60079-0 Explosive atmospheres -- Part 0: Equipment - General requirements  
EN 60079-18 Explosive atmospheres - Part 18: Equipment protection by encapsulation "m"

*IECEx Scheme*

IEC 60079-0 Explosive atmospheres - Part 0: Equipment - General requirements  
IEC 60079-18 Explosive atmospheres - Part 18: Equipment protection by encapsulation "m"

*RoHS Directive 2011/65/EU*

EN 50581 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

### 3 Technical data

#### 3.1 Product range

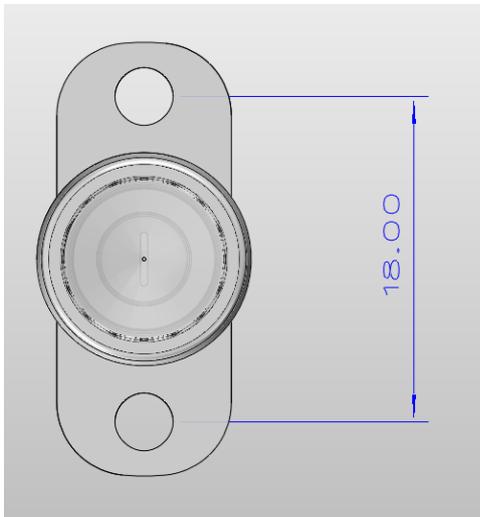
VSI is available with two choices of housing and LED.

Clear- or diffused housing, and Green or Red/green Bi-color LED. Choose “VSI White Green” for best visibility.

Barel art	Name
92040	VSI Clear Green
92041	VSI White Green
92042	VSI Clear Red/Green
92043	VSI White Red/Green

#### 3.2 Mechanical data:

- Suitable for permanent installation on suitable part of luminaire.
- 2pcs ø3,2mm hole C-C 18mm



#### 3.3 Lifetime-Warranty:

Warranty: TBD

Lifetime: >75.000hours at Ts 60°C (>90%)

### 4 Installation

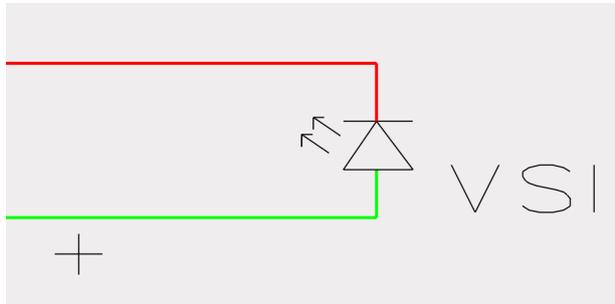
This equipment does not cause harm or injury when used as specified in these instructions. If this equipment is not utilised in a manner specified by the manufacturer, the protection by the equipment may be impaired. Do not energize circuit before connected properly.

In case of no function or malfunction: first de-energize the circuit.

Do not attempt to open or disassemble the equipment.

## 4.1 Electrical connection

Connect green wire to normal +.  
Nominal current 10mADC.  
Nominal voltage 2-3,2VDC.



## 4.2 Marking

92041 VSI WHITE GREEN 0470 II 2G SSS.WW.YY  
 Ex mb IIC Gb Ts -40°C to +95°C Max 10mA   
 19ATEX0478U, IECExEXV19.0027U  
 BAREL AS, Havneveien 8, Kirkenes, Norway, [www.barel.no](http://www.barel.no)

## 4.3 Cable

Suitable ferrule should be used to secure the connection of stranded wires.  
Wire length: 700mm.

## **5 Special conditions for safe use**

- When the VSI LED Status Indicator is installed in an enclosure it must comply with the requirements of EN/IEC 60079-0 for a minimum rating of IP54.
- The VSI indicators must not be subject to fault currents in excess of 30 mA when incorporated into the end use product.
- The ARC BG5 and VSI indicators have a Service Temperature (Ts) range of -40°C to +95°C. When incorporated into the end use product the temperature measured at the 'tc' point must not exceed 86°C for the 370mA rated model types and 79°C for the 550mA rated versions, taking into account the upper ambient rating of the end use equipment.

## **6 What to do if...**

- No light when first connected to the mains:
  - Make sure all connections and supply are correct.
  - Do not attempt to open or repair. Contact distributor for assistance.