



Product manual Illuminated pushbutton Z0212



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Purpose of these instructions

Working in hazardous areas, the safety of personnel and plant depends on complying with all relevant safety regulations. Assembly and maintenance staff working on installations therefore have a particular responsibility. They require precise knowledge of the applicable standards and regulations.

These instructions give a brief summary of the most important safety measures. It supplements the corresponding regulations which the staff must study.



SAFETY INSTRUCTIONS

- Use the explosion-proof signal lamp with button module only for its intended purpose
- Incorrect or impermissible use or non-compliance with these instructions invalidates our warranty provision.
- No changes to the device impairing its explosion protection are permitted.
- Use the explosion-proof signal lamp only if they are clean and undamaged.
- Any damage can invalidate the Ex-protection.
- Observe the following during installation and operation:
 - * National safety regulations
 - * National accident prevention regulations;
 - * National installation regulations(e.g. IEC 60079-14);
 - * Generally recognized technical regulations;
 - * Safety guidelines in these operating instructions;
 - * Characteristic values given on the explosion-proof signal lamp with button module.

Conformity to standards

The explosion-proof switch module is designed and manufactured according to standard of ISO 9001.

The explosion-proof switch module is conformity to the directive 94/9/EC, ATEX and the following standards:

IEC60079-0 : 2011	EN60079-0 : 2012
IEC60079-1 : 2014	EN60079-1 : 2014
IEC60079-7 : 2015	EN60079-7 : 2015
IEC60079-11 : 2011	EN60079-11 : 2012
IEC60079-26 : 2014	EN60079-26 : 2015

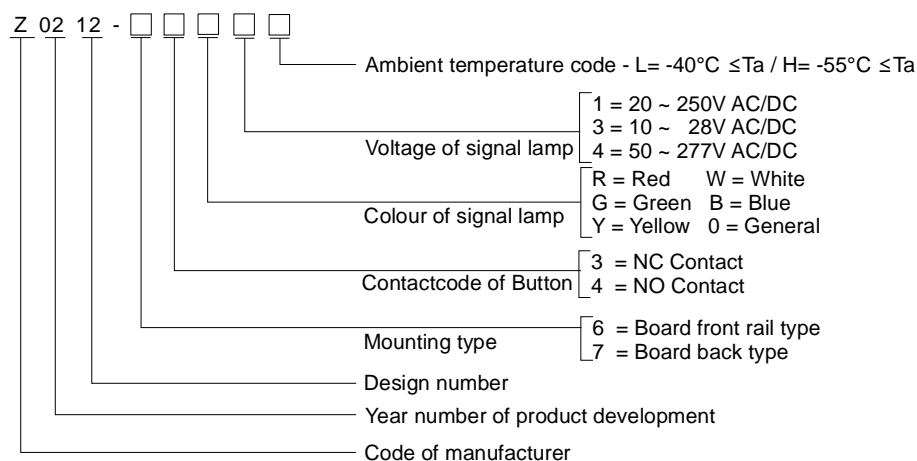
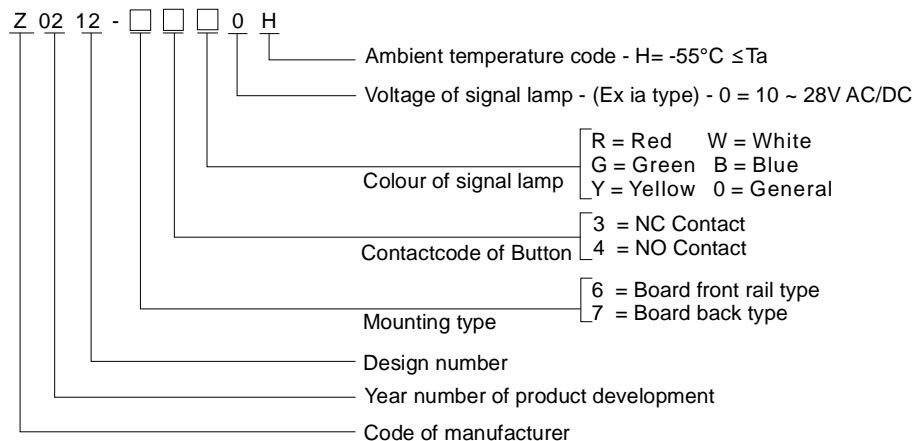
Applicable scope

The series products is suitable for the industrial control circuit that the rated service voltage is AC277V or below. Witch can be used to control electromagnetic starter, contactor, relay and other electric circuit.

It also can be used to indicate signal, forenotice signal, accident signal and other indicate signal in the electric circuit of telecommunication, electrical apparatus that the rated service voltage is AC227 or below.



Model and implication

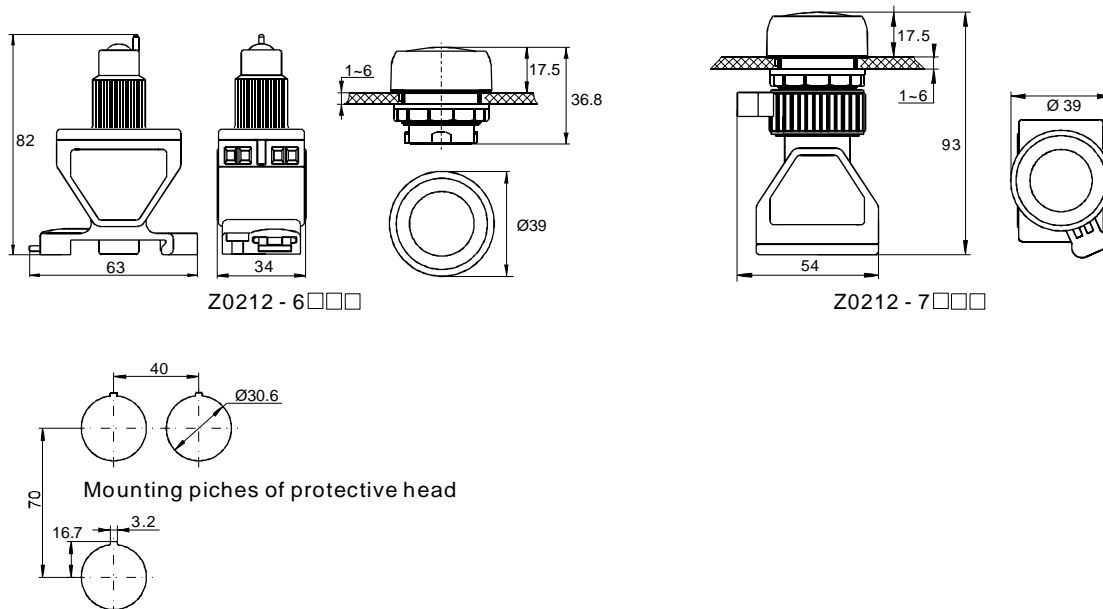




Technical data

- Ex mark: Ex II 2 G Ex db eb IIC Gb - 10 ~ 28 V AC/DC
20 ~ 250 V AC/DC
50 ~ 277 V AC/DC
- Ex mark: Ex II 1 G Ex ia IIC Ga - 10 ~ 28 V AC/DC
- Test certificate: Presafe 17 ATEX 11329U
- Degree of protection: IP20
- Rated voltage: 10 ~ 28V AC/DC, 20 ~ 250 V AC/DC, 50 ~ 277 V AC/DC
- Ambient temperature range: Types L - -40°C ~ +60°C, Type 0H (Ex ia) = -55°C ~ +55°C, other types H = -55°C ~ +60°C.
- Service temperature: -55°C ~ +90°C for type Z0212 - xxx 0H
- Service temperature: -55°C / -40°C ~ +90°C for other type.
- Signallight:
 - * Safety-specific maximum values type ia: U_i - 28V AC/DC, I_i - 93 mA, P_i - 0.651 W, C_i - 0.01 μ F, L_i - 2.2mH
 - * Rated power (type db e) $P < 1$ W (Power depends on the rated voltage)
 - * Signallamp electric life: One hundred thousand hours
- Button:
 - * Rated voltage / rated current of button - AC 250 V/10A - DC 24V/1A (type de) - DC 30V/100 mA (Type ia)
 - * Safety-specific maximum values (type ia): U_i - 30V AC/DC, I_i - 100 mA, P_i - 1W, C_i - 0, L_i - 0
 - * Mechanical life 10 switching cyclus - The flameproof gap will not exceed the designed gap and its explosion protection performance will not be changed when it is to be used in its mechanical life.
 - * Connect type: Terminal 2,5 mm², wire insulation stripping 8 mm.
 - * Tightening torque: 0.6 ~ 0.8 Nm

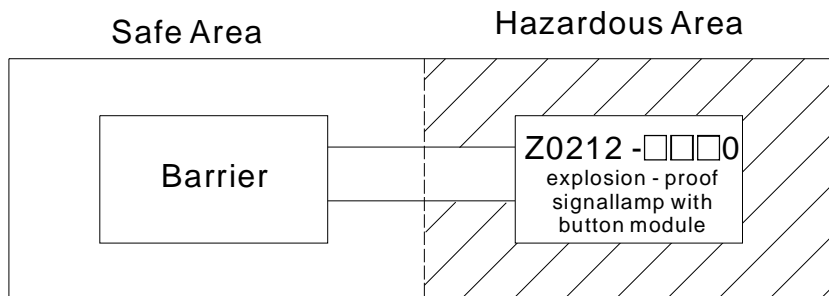
Dimensions





Operation / installation

- Transport and storage in original packaging only. National safety and installations regulations and the generally accepted rules of engineering practice must be observed when mounting and operating this equipment.
- The series of operation head shade is provided by the company to be used with the series module together.
- For the sake of ensuring normal operation and safety of explosionproof signal lamp, user must abide by the following provisions:
 - * Explosion-proof signal lamp with button module is designed to be used under the following atmospheric conditions:
The pressure is 80kPa(0.8bar)~110kPa(1.1bar)
The volume ratio of standard oxygen content is 21% air.
 - * When using de protection explosion-proof signal lamp with button module rated input voltage of signal lamp:
10 ~ 28 V AC/DC - 20 ~ 250 V AC/DC - 50 ~ 270 V AC/DC - Rated voltage / Current of button AC 250 V/10A, DC 24V/1A.
should be installed in the appropriate case for Zone 1 and 2.
 - * When using "ia" protection explosion-proof signal lamp with button module:
- Rated input voltage of signal lamp: 10 ~ 28 V AC/DC. Rated voltage / current of button 30 V AC/DC - 30mA, should be installed in the appropriate housing and the corresponding barrier ($U_o \leq 28V$, $I_o \leq 93mA$) with the use for zone 0 and zone 1.



- * This product should be enclosed in explosion-proof enclosure which is fitted to the environment.
- * This series of products only can be used together with the operating head.
- * Proposed tightening screw torque: 0.6 ~0.8 Nm.
- * The module mounting should be firm and reliable.
- * When using "de" protection explosion-proof signal lamp with button module. During wiring the creepage distance of bare current-carrying part should be ≤ 10 mm. Electric clearance should be ≤ 6 mm.
- * When using "ia" protection explosion-proof signal lamp with button module. During wiring the creepage of bare current-carrying part should be ≤ 3 mm. Electric clearance should be ≤ 3 mm.
- * The flameproof shaft and flameproof enclosure are not intended to be repaired.
- * The supply terminals are designed for the connection of ≤ 2.5 mm² max two brass conductors (IEC60947-7-1). if multi- or fine - wire connecting cables are used, the wiring ends will have to be handled in accordance with the applicable national and international rules.
- * The conductor itself shall not be damaged.
- * The wiring should be clamped by the standard compression ferrule (See figure 1). If two wires have to be connected the cross-section area of the wires should be the same.(see figure 2)

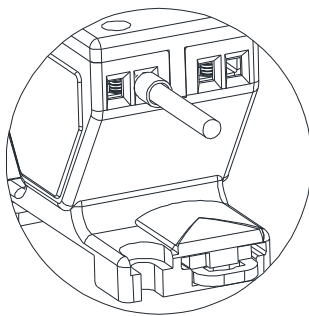


Figure 1

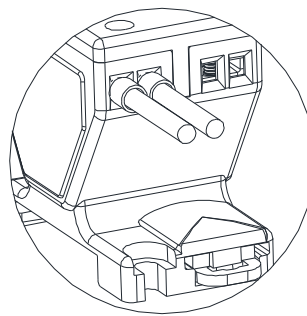
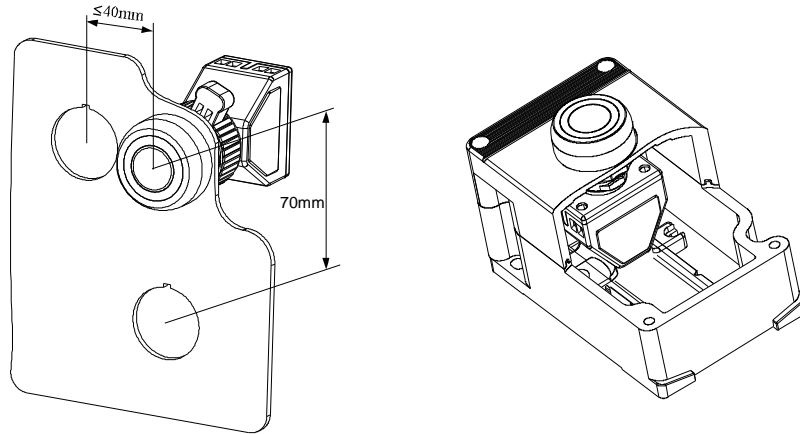


Figure 2



Spare parts

- Use only original spare parts as well as original accessories made by INDEX ELEKTRO BV.

Repairs / Maintenance

- Observe the relevant national regulations for your country!
- Only parts from our company that can be used to replace or maintain, and the operation should be carried out by professional electrician!
- The following points must be checked during maintenance:
 - * Compliance with permitted temperatures;
 - * Check if there is any crack in the explosion-proof load isolation switch module;
 - * Check if the product has been fixed reliably.
 - * Check if the wiring is loose.
 - * Check if the flame-proof joints is damaged.

Recycling / Disposal

- The respective valid national regulations for waste disposal shall be observed when disposing of apparatus!
- We are pleased to answer any questions. In this case you can contact INDEX ELEKTRO BV.