



Lika Electronic Srl
Via S. Lorenzo, 25
36010 Carrè (VI) • Italy

Smart encoders & actuators

Carrè, 31.08.2015

Declaration of Conformity

The manufacturer:
LIKA ELECTRONIC SRL
Via S. Lorenzo, 25
36010 Carrè (VI) - Italy

hereby declares that the following products:

Lika encoder series **IX58, IX58S, CX58, CX59**

with the marking:

Ex II 3G Ex nA IIB T5 Gc
EX II 3D Ex tc IIIC T100° Dc IP65

may be used in Zone 2 and Zone 22 hazardous areas.

Gas explosion protected equipment for Zone 2, according to EN60079-15

Zone 2 includes areas in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas or vapour is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

Dust explosion protected equipment for Zone 22, according to EN60079-31

Zone 22 includes areas in which an explosive atmosphere in the form of a cloud of dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

Protection requirements:

Zone 22, dust explosion protection (D)

Protection by means of the housing: the construction of the product protects against the penetration of dust in hazardous quantities (min. IP5x) and guarantees that the surface temperature is under the ignition temperature of dust/air mixtures as well as under the smouldering temperature of dust deposits.

Zone 2, gas explosion protection (G)

Protection by non sparking equipment: the construction minimizes the occurrence of sparks, arcs or hot surfaces, which in normal operation might give the risk of explosion.

The manufacturer's specification of the purchased product such as operating temperature, shaft rotational speed, shaft load, max. supply voltage, etc must under no circumstances be exceeded.


Protection requirements for rotary encoders of category 3GD:

- The product must be correctly assembled (encoder body and connection cap)
- The degree of protection in the installs condition must be at least IP6x.
- The maximum surface temperature (in °C) of the product must not exceed 2/3 of the ignition temperature of the dust/air mixture.
- During normal operation no sparks, arcs and non-permissible temperatures should occur.
- The upper continuous operating temperature of plastic parts must be 10°C higher the maximum temperature that can arise at the hottest point of the product, based on the highest environmental temperature possible in service.

Obligations of the user:

- The rated supply voltage must not exceed 30Vdc.
- The manufacturer's specification concerning the operating temperature range (see product data sheet) has to be fully observed.
- The product must be protected against overheating due to mechanical or electrical overloading.
- The user has to take suitable measures in order to prevent longer or continuous disturbances that cause the supply voltage to exceeded by 10% or more.
- The user has the obligation to protect in an appropriate way the area where electrical connections are carried out (make sure the product is not connected to power supply when connecting) and ensure that this area also complies with Zone 2/22 requirements.
- The listed products do not meet the "impact test" requirements of EN60079-0, section 26.4.2. but can however be used in Zone 2/22 areas where the user ensures that impacts are avoided by appropriate protection.

LIKA Electronic SRL


Marco CALABRESE
Managing Director

EU Declaration of Conformity encoders series IX58, IX58S, CX58, CX59

- 1) Certificate: Nr. 6
- 2) Manufacturer: LIKA ELECTRONIC SRL
Via S. Lorenzo, 25
36010 Carrè (VI) - Italy
VAT# IT00817760242
- 3) Scope of the certificate: encoder series **IX58, IX58S, CX58, CX59**
- 4) This certificate has been issued under the responsibility of the manufacturer indicated in point 2).
- 5) The scope of the certificate indicated in point 3) is in conformity with the essential Health and Safety regulations and legislative regulations of the directives:
2014/34/EU "ATEX"
2014/30/EU "Electromagnetic compatibility"
- 6) Compliance to harmonized regulations, technical specifications and other documents is assured by compliance to the following norms:
EN 60079-0
EN 60079-31
EN 61000-6-4, EN 61000-6-2
EN 60079-15
- 7) ATEX marking on the equipment:



II3 GD, Ex nA IIB T5 Gc, Ex tc IIIC T100° Dc, IP65

Carrè, 20.04.2016



Marco CALABRESE
Legal representative

SAFETY INSTRUCTIONS encoders series IX58, IX58S, CX58, CX59

1) Marking:



II3 GD, Ex nA IIB T5 Gc, Ex tc IIIC T100° Dc, IP65

Explosion-proof encoder manufactured according to the following regulations:

EN 60079-0
EN 60079-31
EN 61000-6-4, EN 61000-6-2
EN 60079-15

- **Ex:** Equipment for use in potentially explosive atmospheres
- **d:** Protection by explosion-proof housing
- **IIB:** Electrical apparatus for use in potentially explosive atmospheres other than mines susceptible to firedamp.
- **T5:** Maximum housing surface temperature 100°C
- **Gc:** Level of protection (EPL). The equipment can be used in Zone 2.
- **tc:** Electrical apparatus with protective housing for use in the presence of combustible dust.
- **IIIC:** Equipment or protective housing intended for use in potentially explosive atmospheres with presence of combustible dust.
- **T100°C:** Maximum surface temperature.
- **Dc:** Level of protection (EPL). The equipment can be used in Zone 22.
- **IP65:** Degree of IP protection for dust-proof housing.

Equipment intended for use in the following Zones:

Zone 2: Mixture of gas/air, vapour/air, mist/air,

Zone 22: Mixture of dust/air

ATTENTION: Equipment not to be used in Zone 0, 1 and 21

- 2) The equipment has to be installed only by qualified personnel and according to the applicable regulations.
- 3) Do not tool or drill the equipment
- 4) Do not open the equipment
- 5) Do not loosen or unscrew the cable-press
- 6) Use the encoder's fixing pin or plate (CX58, CX59) for installation and against rotation
- 7) Protect the device against shock and mechanical damages
- 8) Use the product according to the indicated degree of IP protection
- 9) Maximum permissible environmental temperature +70°C (at continuous rotational speed of max. 6000 rpm)
- 10) In classified areas the electrical connection of the device has to be carried out according to the methods of EN 60079-0.
- 11) Connect the device according to the electrical connections scheme on the user manual
- 12) Provide a ground connection (GND) using the ground screw on the housing

LIKA ELECTRONIC SRL
Carre', 31.08.2015