EV521 Spark Detection Control Unit

FEATURES

- **suitable to control two EV395 spark detectors**
- **temporized command for 4 output relays for the following functions:**
  - **command 1 or 2 electrovalves feeding water spraying nozzles for spark extinguishing**
  - **command acoustic and visual alarms**
  - **automatic activation of shutters to block the accumulation of materials in a silo**
  - **verification of electrovalves opening using pressure meters in the hydraulic circuit**

ADVANTAGES

- **simple and easy installation**
- **provided with all the elements necessary for a spark detection system**
- **the box transparent plastic door, allows the visualization of the leds and the control elements, and protects the unit from tampering**
- **provided with an internal stabilized power supplier**

In spark detection systems, devices other than the specific detector are normally required.
Usually these additional devices allow the detected sparks extinguishing, the acoustic signalling of alarms, the control of extinguishing systems and the eventual block of the silo material feeding system.
The operations described above are carried on by the EV521 Control Unit in very short times, with precision, in the right sequence and so definitely in the best way.
The EV521 Control Unit has been designed to be used together with our EV395 Spark Detectors. It can control up to two EV395 detectors.
This unit automatizes all the operations and so allows to use the EV395 Spark Detectors in a simple and reliable way.
Moreover the EV521 Control Unit avoids the necessity to buy a lot of devices coming from different manifacturers and so the problem of coupling this eterogenous devices.
The EV521 installation is very simple and can be carried out in a short time.

FUNCTIONING

The typical installation of a spark detection system in a silo feeding pipe consists at least of:

- 1 spark detector
- 1 electrovalve to open/close the water feeding
- 1 water spraying nozzle (sprinkler head) for spark extinguishing
- 1 visual/acoustic signalling unit

For the maximum safety it is good to double all the elements above described to obtain the following result:

- the first section performs the detecting and the extinguishing
- the second allows the final control and if the spark is not extinguished yet, executes the extinguishing and the system block

The example of page 2 is about a complete installation with two EV395 and an EV521 Control Unit.

The EV521 functioning mode is the following: it is connected with the two EV395 detectors by means of the supplied terminal board, so that it can supply the detectors with power and receive the signals from them.

- if an alarm signal is sent from the **first spark detector** the EV521 powers the internal relays R1 and R2.
- R1 activates the VL1 electrovalve. The VL1 opening causes, by means of the SS1 nozzle (sprinkler head), an extinguishing water spray in the pipe. The spraying time lenght is regulated by an internal timer (time adjustable between 0-30 sec.).
- the second relay R2 commands the acoustic(warning siren) and visual(warning flasher)
- if the **second spark detector** gives out an alarm, the EV 521 powers R3 and R4 relays.
- R3 activates the VL2 electrovalve that commands the SS2 extuinguishing sprinkler head. The R4 relay will be eventually useful to command the pipe shutter closing.
- The SS1 and SS2 pressure meters are mounted on both the feeding pipes for the SS1 and SS2 nozzles. The meter's outputs are used to command the onboard memory system with signalling led of the EV521 Control Unit. In this way a confirmation of the sprinkler heads intervention is provided .

TECHNICAL DATA

- power supply: 220 Vac
- power consumption: 5 VA
- general switch
- timers: 2 adjustable between 0-30 sec. with a trimmer
- power light
- electrovalve 1 activation light
- electrovalve 2 activation light
- pressure meter 1 control light with memory
- pressure meter 2 control light with memory
- extractable power fuse
- memory reset button
- spark detector remote testing button
- output relays: 4 (2 programmable)
- container: antishock plastic box with transparent plastic door supplied with insulating gasket
- protection index: IP 54