SPARK DETECTING AND EXTINGUISHING SYSTEM

SDS-BUS

IMMEDIATE SPARK DETECTION TO REDUCE FIRE RISKS

BEST IN CLASS FOR:

WOOD BASED PANELS:
PB/SPB
OSB/LSB/FOSB
MDF/HDF

The SDS series spark detection and extinguishing systems have been designed and constructed to achieve spark detection in real time in all those environments where there is risk of fire (conveyors, filters, silos, screens, etc.).
The system is integrated with an efficient extinguishing system which utilizes water sprayed at high pressure, or it can activate the customer's existing fire extinguishing system with foam, dust, etc. and is equipped with controls to operate efficiently in any operative situation.

MAIN FEATURES

The SDS spark detection system **conforms to the requirements of ATEX directive 2014/34/UE** for use as intended in potentially explosive atmospheres due to the presence of combustible dust (zones 20, 21 or 22) with **EU-type Examination Certificate.**

• Compliance with European Standards EN 60079-0; EN 60079-31 • Extremely rapid system response • Emergency back-up power unit • Modular and expandable system • Incorporated database to store alarms and record operations carried out on the system • Infrared detectors with special fibre optics to withstand temperatures of up to 290 °C • No calibration • Auto-testing function to test sensor efficiency • Possibility of linking up with any kind of PLC • Constant electric control carried out on the extinguishing unit • Global monitoring of all plant areas as well as instant individual monitoring of any one area via the graphic displays provided (PC/display panel) • System can run independently and efficiently without PC • Easy access to any area of the plant.

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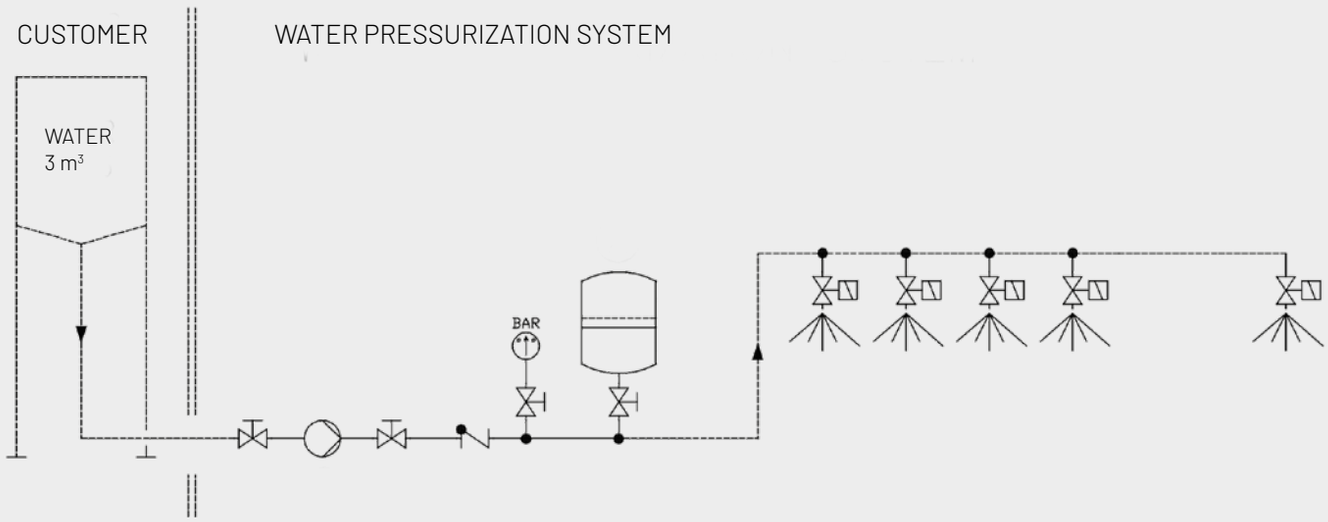
If the production plant does not have pressurized water (about 7 bar), IMAL may supply a pump and tank system in order to reach and maintain operating pressure during functioning.



Optional

To plant network

SWITCH

CPU & I/O MASTER

Display panel (optional)

up to 8 ZONES

ZONE 1

SENSOR MODULES

up to 90 AREAS

ZONE 3

SENSOR MODULES

ZONE 2

SENSOR MODULES

up to 90 AREAS

AREA 1

up to 4 spark detectors

up to 4 extinguishing nozzles with electrovalves

AREA 2

up to 4 spark detectors

up to 4 extinguishing nozzles with electrovalves

AREA 3

up to 4 spark detectors

up to 4 extinguishing nozzles with electrovalves

AREA 1

up to 4 spark detectors

up to 4 extinguishing nozzles with electrovalves

S80D

INFRARED DETECTORS

This detector is suitable for operation where temperatures do not exceed 80 °C. Standard applications for this detector include pneumatic conveyors, screw feeders, belt conveyors etc.

TECHNICAL DATA	
POWER SUPPLY	24 VDC
QUIESCENT SUPPLY CURRENT	20 mA
FULL LOAD SUPPLY CURRENT	100 mA
SENSOR TEMPERATURE OPERATING RANGE	-10 ÷ +80 °C
SENSITIVITY SPECTRUM	0.8 ÷ 3 µm
REVERSE POLARITY SUPPLY PROTECTION	yes
SHORT CIRCUIT OUTPUT PROTECTION	yes
CASE MATERIAL	AISI12 DIN1725
CASE PROTECTION	IP65 CEI EN 60529
DIMENSIONS	80 x 125 x 57 mm

S80F

OPTICAL FIBRE INFRARED DETECTORS

This detector is suitable for operation where temperatures can be as high as 290 °C. Standard applications for this type of detector include dryers and conveyors where extremely hot material is transported.

TECHNICAL DATA	
POWER SUPPLY	24 VDC
QUIESCENT SUPPLY CURRENT	20 mA
FULL LOAD SUPPLY CURRENT	100 mA
SENSOR TEMPERATURE OPERATING RANGE	-10 ÷ +80 °C
OPTICAL FIBRE MAX OPERATING RANGE	290 °C
SENSITIVITY SPECTRUM	0.7 ÷ 1.3 µm
REVERSE POLARITY SUPPLY PROTECTION	yes
SHORT CIRCUIT OUTPUT PROTECTION	yes
CASE MATERIAL	AISI12 DIN1725
CASE PROTECTION	IP65 CEI EN 60529
DIMENSIONS	80 x 125 x 57 mm

SSR1

EXTINGUISHING UNIT

Each extinguishing unit consists of: • No. 1 manual ball valve • No. 1 filter • Spraying nozzles with electrovalves.

The nozzles spray pressurized water directly into the conveyor and are mounted downstream of the spark detectors. This enables each spark to be extinguished with a timed spray, thus reducing the quantity of water required and, at the same time, minimizing any potential damage to production.