

Figure 1. MK25 Sensor physical layout

## Features

- Ex-Approved (intrinsically safe) meets EU directives 94/9/EC
- Hermetically sealed
- Designed for SPST (Form A) and SPDT (Form C) switching
- Dynamically tested contacts
- Reliable switching
- Operating temperature -40°C to 60°C
- Simple mounting format
- Customizable button plate (color/print)
- Designed to handle high shock environments
- Designed to operate in dirty environments
- Millions of reliable switching operations

## Applications

- Industrial appliances
- Selector or mode switch in machinery tank systems
- Environments with high dust or particle levels

## Introduction

Many facilities, particularly manufacturing environments where dust particles or explosive atmospheres may exist, represent real challenges when it comes to electronic circuitry and switching contacts. Any type of arc can set off an explosion dramatically damaging the facility. Reed switches represent a real switching solution with their hermetically sealed contacts.



Figure 2. MEDER's MK25 Ex-Approved Reed Sensor

## MEDER's MK25 Series Reed Sensors Represent A Serious Contribution Toward Switching Active Loads In Explosive Atmospheres

MEDER has developed a new Reed Sensor specifically designed to meet the difficult Ex (Intrinsically Safe) requirements that essentially specify components and systems that qualify to operate in potentially explosive environments. Most people think of explosive atmospheres as being factories that are manufacturing ordinance or actual explosive materials (gun powder, gas, etc.), however, many, many more explosive atmospheres exist, some of which have been discovered the hard way. Grain factories are a typical example. During normal processing, high concentrations of grain dust are produced. Grain dust is flammable and in high concentrations, can explode if ignited. To ignite such an atmosphere all one needs is a spark or arc. Switching a typical electromechanical relay, if in the sphere of influence of high concentrations of dust, could be enough to trigger an explosion.

With this potential malady as our design criteria MEDER has developed our MK25 Series Reed Switch Sensor. This sensor is specifically designed to co-exist in the above types of atmospheres, eliminating any potential for setting off an explosion under any circumstances. This design meets the EU Standard and directives 94/9/EU. The sensor contacts are hermetically sealed and packaged in a well sealed plastic package capable of operating from -40°C to 60°C.

The hermetically sealed contacts can be ordered in a single pole single throw, (Form A), switching configuration, or as a single pole double throw switch, (Form C). As can be seen from the packaging, a simple mounting approach has been integrated into the design, maintaining flexibility in how and where the sensor is mounted. Button plates are available in different colors to better conform to system designs.

# Ex-Approved (Intrinsically Safe) Push Button Reed Sensor



*Products for tomorrow...*

REED RELAYS ■ REED SENSORS ■ REED SWITCHES



## Specifications (@ 20°C) MK25 Series

Operate specs	Min	Max	Units
Must close distance	ref	ref	mm
Must open distance	ref	ref	mm
Hysteresis			

Load Characteristics	Min	Max	Units
Switching voltage		225	V
Switching current	0	0.5	Amps
Carry current	0	1.5	Amps
Contact rating	0	10	Watts
Static Contact resistance		150	mΩ
Dynamic contact resistance		250	mΩ
Breakdown voltage	225		V
Operate time		2.5	msec
Release time		1.5	msec
Operate Temp	-40	160	°C
Storage Temp	-40	100	°C

As typical of all MEDER Reed Switch Sensors, the MK25 Series is designed to give fault free operation for 10s of millions of operations.

Consult our engineering group with your specific applications.

Ex-Approved Series				
Series	Dimensions			Illustration
		mm	inches	
MK25	W	40	1.575	
	H	40	1.575	
	L	51	2.008	
MK08	W	18	0.709	
	H	18	0.709	
	L	96	3.780	

\*\*Consult the factory for more options not listed above.