

# MTL SD55X SURGE PROTECTION DEVICE & THE HOCHIKI ESP<sup>®</sup> PROTOCOL APPLICATION NOTE

## INTRODUCTION

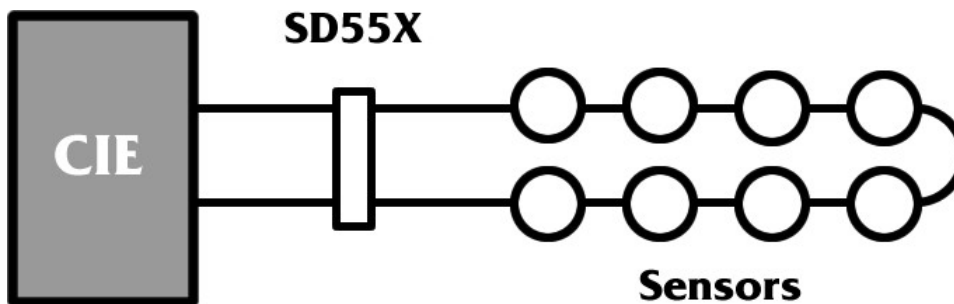
This Application Note explains how MTL's SD55X surge-Protection device can be used on a loop featuring Hochiki's ESP<sup>®</sup> protocol for installations that are at risk from lightning strikes or other high-energy environments. In these situations where energy could be induced onto the loop cable it is recommended that a surge protection device is fitted to limit damage to the system.

## COMPATIBILITY

Hochiki Europe (UK) Ltd tested the MTL SD55X in conjunction with its ESP<sup>®</sup> protocol across various test scenarios. The following conclusions were ascertained:

- ❑ The control panel can communicate with an ESP<sup>®</sup> device through the SD55X under varying polling currents.
- ❑ The control panel can communicate with an ESP<sup>®</sup> device through the SD55X and the surge protection device does NOT vary the loop voltage outside of the limits prescribed in Hochiki Europe's ESP<sup>®</sup> Specification, even on a fully loaded loop.
- ❑ The control panel can communicate with an ESP<sup>®</sup> device through the SD55X and the surge protection device does NOT alter or degrade the integrity of the protocol data. For example 'Device Type', 'Device Status' and 'LED Status' commands are communicated to the ESP<sup>®</sup> device correctly.
- ❑ The control panel can communicate with any ESP<sup>®</sup> device through the SD55X on a fully loaded loop with 127 devices plus 60 base sounders

## CONNECTION



## SPECIFICATION

Model	SD55X	
Working Voltage ( $U_n$ )	Vdc	55
	Vac	38
Rated Load Current (mA)	400	
Nominal Resistance ( $\Omega$ /line)	2.2	
Max Leakage Current ( $\mu$ A)	5	
Max Continuous Operating Voltage ( $U_c$ )	62	
Let-through Voltage ( $U_p$ )	100	
Bandwidth (Frequency)	25kHz	
Special Feature	Low Resistance	

Further technical information on the SD55X can be obtained direct from MTL:

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