Flare Stack Burn Out

Problem: We use 3 K-type T/Cs to monitor the burn-off flame of our emissions flare stack. However, when the wind blows, the flame leaning away from the stack gives a false out.

Solution: Change your strategy to rely on low readings from two T/Cs to indicate no flame in a 2-out-of-3 voting scheme. This ladder rung approach creates a "flame out circuit" ONLY in the event that two of the three alarms are tripped. The SPA^2 Programmable Alarm Trip's time delay capability also helps prevent false trips.

SPA^2 Programmable Alarm Trips provide 2-out-of-3 voting

Trip 1A
Trip 1B
Trip 3A
Trip 3B
Trip 2A
Trip 2B

Voting Logic Circuit
(in power-off condition)

120° Hot   120° Neutral

1A   2A

1B   3A

2B   3B

Flame Out
Circuit

Model Number Example
SPA2 / TPRG / 2PRG / U / -DPDT [DIN]

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