

# Improve Interface Reliability

## Mitigating the Effects of Leakage Current

### Application Issue

Leakage current from solid-state PLC outputs can cause indicator lights to glow dimly when they are not intended to be on. This can result in unreliable status indication, potentially causing the machine operator to take inappropriate action.



The "stopped" pilot light remains dimly illuminated even though the machine is currently running.



The red stack light LED, indicating the process is stopped, remains dimly illuminated even though the machine is currently running.

Discovery of this issue after equipment has been purchased and installed can result in challenges with keeping a project on schedule and within budget. To address this, an electrical contractor has three options, all requiring additional hardware and labor:

- Wiring a resistor across the indicator light terminals to shunt the leakage current
- Installing an interposing relay between the solid-state outputs and the LED indicator lights
- Swapping relay output modules for the solid-state output modules

## Component Solution

Allen-Bradley status indicator lights incorporate built-in 3mA shunting circuitry to provide true "on/off" status indication. This eliminates the need to install additional components to offset the effects of leakage current.

As an added benefit, Allen-Bradley also offers Universal LED solutions capable of operating under a 12...130V AC/ DC (Bulletin 800T/H) or 24...130V AC/DC (Bulletin 800F) voltage range - a universal solution sure to be compatible with your existing system architecture.



## Summary

Allen-Bradley status indicator solutions eliminate the reliability risks of leakage current, and provide a more reliable interface and flexible system architecture.

## Product Selection

Description	Cat. No.
<b>800H Type 7&amp;9 Hazardous Location Operators</b>	
Momentary Push Button, Illuminated, Universal LED, 12 - 130V AC / DC, Multi-Color Insert Packet, 1 NO - 1 NC Standard Contact Block	800H-QPBH2M
2-Position Push-Pull, Illuminated, Universal LED, 12 - 130V AC/DC, Multi-Color Insert Packet, 1 NO - 1 NCLB Contact Block	800H-FPXQH2MA1
Pilot Light, Illuminated, Universal LED, 12 - 130V AC/DC, Multi-Color Insert Packet	800H-QPH2M
Pilot Light, Illuminated, Push-To-Test, Universal LED, 12 - 130V AC/DC, Multi-Color Insert Packet	800H-QPTH2M
<b>854J/K Control Tower Stack Lights</b>	
Bulletin 854JC Configured Stack Lights, 10 cm Aluminum Pole Base, Black Housing Color, 120V AC Control Voltage, Level 1 - Steady LED Green Lens, Level 2 - Steady LED Amber Lens, Level 3 - Steady LED Red Lens	854JC-P10B10Y3Y5Y4
Bulletin 854JC Configured Stack Lights, Surface Mount Flange Base, Black Housing Color, 120V AC Control Voltage, Level 1 - Steady LED Green Lens, Level 2 - Steady LED Amber Lens, Level 3 - Steady LED Red Lens	854JC-SFB10Y3Y5Y4
Bulletin 854KC Configured Stack Lights, Vertical Mount Base, Black Housing Color, 120V AC, Level 1 - Steady LED Green Lens, Level 2 - Steady LED Amber Lens, Level 3 - Steady LED Red Lens	854KC-VMB10Y3Y5Y4

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