ABSTRACT:
This memo outlines the calculations for the resistors to be used to divide 24V going into the relay coil for the Safety Loop monitor.

TECHNICAL FINDINGS:
Resistance of relay coil = 127 ohm

Needed resistance R, supply 24 V and division of 4 V on the coil

\[(24-4)/R = 4/127\]

\[R = 635 \text{ ohm}\]

Power from R = \[\frac{V^2}{R} = \frac{42}{635} = 25.1 \text{ mW}\]

RECOMMENDATIONS AND DECISIONS:
Two resistors in parallel with equivalent resistance of around 635 ohm should be used to reduce heat dissipation from one resistor.

Using two 1.2K ohm resistors, Power = \[\frac{42}{1.2k} = 13 \text{ mW}\]

ATTACHED DOCUMENTS:
N/A