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Penberthy et al.(10) **Pub. No.: US 2022/0368125 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **OUTPUT CONTACT FAILURE MONITOR
FOR PROTECTION RELAYS IN ELECTRIC
POWER SYSTEMS**(52) **U.S. Cl.**CPC *H02H 7/22* (2013.01); *H02H 1/0007*
(2013.01); *H02H 1/0092* (2013.01)(71) Applicant: **Schweitzer Engineering Laboratories,
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ABSTRACT(72) Inventors: **Evan J. Penberthy**, Moscow, ID (US);
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Output circuit devices for use in electric power systems may include a first output subsystem for transmitting a first signal output via an output port to a component of the electric power system, an input subsystem for receiving and monitoring the first signal output transmitted by the first output subsystem, and a second output subsystem for transmitting another signal output to the component of the electric power system. The second output subsystem is to transmit the signal output in response to an indication from the input subsystem. Intelligent electronic devices (IEDs) and associated methods may include one or more output circuit devices.

