

MODULAR CURRENT SENSOR AND POWER SOURCE

ABSTRACT OF THE DISCLOSURE

A modular current sensor and power source unit (10) for duplicating the function of a current transformer is disposed on a conductor (11) of an electrical circuit. Modular current sensor and power source unit (10) includes a current transformer (12), a power supply circuit (14), a current sensor (16), and current source circuit (18). Current transformer (12) provides operating power to power supply circuit (14). Power supply circuit (14) regulates the operating power and provides the regulated operating power to sensor (16) and current source (18). Sensor (16) senses current in phase (11) and provides a signal indicative of the current in phase (11) to current source (18). Current source (18) receives the signal from sensor (16) and drives an output current proportional to this signal to the load circuit via lines (34) and (36). The current output by current source (18) has the attributes of the low power sensor (16) with the ability to provide power to the load circuit.

Figure. 1