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(54) Title: POWER SUPPLY FOR INDUSTRIAL PROCESS FIELD DEVICE

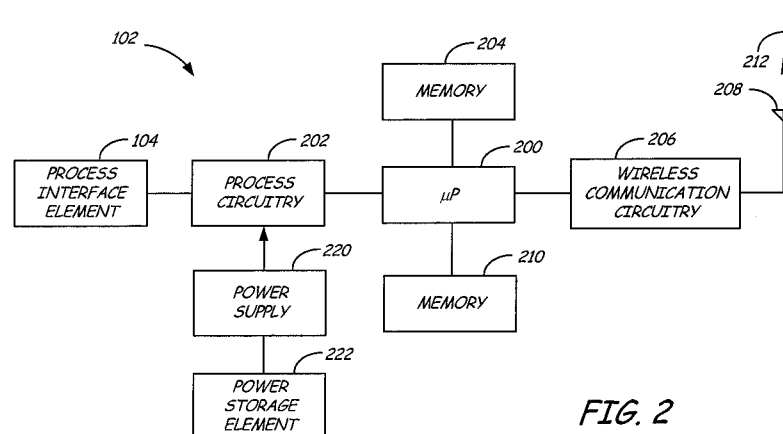


FIG. 2

(57) Abstract: A wireless industrial process field device (102) for use in controlling or monitoring a process variable of an industrial process (100) includes a process interface element (104) configured to sense or control the process variable of the industrial process, a wireless communication circuitry (206) and power supply circuitry (220) configured to provide power to process device circuitry from a power storage element (222) at an output voltage. The power supply circuitry (220) includes a boost converter (240) and a low drop out (LDO) voltage regulator (242). The boost converter (240) increases the output voltage when this output voltage is less than a threshold. The LDO voltage regulator (242) reduces the output voltage when this output voltage is greater than the threshold and, in this case, the operation of the boost converter (240) are disabled to thereby reduce power consumption.