

Device for thermal imaging diagnostics of a hydrogenerator rotor comprising a lens, a frequency divider, n separate infrared sensors of an infrared receiver, a buffer register, a video control unit, two controlled amplifiers, a voltage generator, a memory unit, a first counter, a data preparation unit, a switch, a position setting unit, a first indicator, a speed setting unit, a digital adder, three digital comparators, two registers, a position sensor, five AND elements, a clock distributor, five triggers, and two pulse generators. An output of the frequency divider is connected to an input of the buffer register and to a first input of the video control unit, the second and third inputs of which are connected to outputs of the first and second controlled amplifiers, the first inputs of which are connected to an output of the voltage generator. Second inputs are connected, respectively, to the first and second outputs of the memory unit, an input digital bus of which is connected to an output digital bus of the first counter. A fourth input of the video control unit together with a first input of the data preparation unit are connected to an output of the switch, an input digital bus of which is connected to an output digital bus of the buffer register, an input digital bus of which is connected to outputs of n separate infrared sensors of the infrared receiver. An output of the data preparation unit is connected to computer circuits. An output digital bus of the position setting unit is connected to a first input digital bus of the first digital comparator, the second input digital bus of which together with input digital buses of the first and second registers are connected to the output digital bus of the position sensor. An output of the first digital comparator is connected to a first input of the first AND element, the second input of which is connected to a first output of the second trigger, and an output is connected to a first input of the first trigger, the second input of which together with an input of the first indicator are connected to a second output of the second trigger, the first input of which is connected to an output of the second digital comparator, the second input digital bus of which is connected to the output digital bus of the speed setting unit. A first input digital bus is connected to an output digital bus of the digital adder, the first and second input digital buses of which are connected, respectively, to the output digital buses of the first and second registers, the inputs of which are connected, respectively, to the first and second outputs of the clock distributor, the third output of which is connected to a second input of the second trigger. An output of the second AND element is connected to a second input of the data preparation unit, an output of the first trigger is connected to a first input of the second AND element, the second input of which is connected to an output of the first pulse generator. An output is connected to inputs of the frequency divider, the voltage generator, and the switch. Output digital buses of the first and second registers are connected, respectively, to the first and second input digital buses of the third digital comparator, the first and second outputs of which are connected, respectively, to first inputs of the fourth and fifth triggers, the second inputs of which are connected to the third output of the clock distributor. Outputs are connected, respectively, to first inputs of the fourth and fifth AND elements, the second inputs of which are connected to the output of the frequency divider. The output of the first digital comparator is connected to a first input of the third trigger, the second input of which is connected to a fourth output of the clock distributor. An output is connected to a first input of the third AND element, the second input of which is connected to an output of the second pulse generator, and an output is connected to an input of the clock distributor. A comparator, a sixth AND element, two counters, a fourth digital comparator, a vibration setting unit, and a second indicator are introduced. The output of the switch is connected to an input of the comparator, an output of which is connected to a third input of the sixth AND element, the second input of which is connected to the output of the frequency divider, and a first input is connected to a third output of the second counter. First and second outputs of the second counter are connected, respectively, to first and second inputs of the first counter, and first and second inputs are connected, respectively, to outputs of the fourth and fifth AND elements. The output of the first counter is connected to a second input of the third counter, a first input of which is connected to the output of the sixth AND element, and an output digital bus is connected to a first input digital bus of the fourth digital comparator, the second input digital bus of which is connected to an output digital bus of the vibration setting unit, and an output is connected to an input of the second indicator.