Device for thermal imaging diagnostics of hydrogenerator rotor windings comprises an objective, n mirrors fixed on an optical bar such that their planes form an angle of 45° with a main optical axis, n lenses installed on the same optical axis as the mirrors. A line of n infrared sensors, a frequency divider, a buffer register, a commutator, an analog-to-digital converter, an interface unit, two pulse generators, two controlled amplifiers, a video control unit, two counters, and a step-variable voltage generator. A memory unit, a position sensor, a position setting unit, a speed setting unit, a clock distributor, two registers, two digital comparators, a digital adder, two flip-flops, two AND elements, a start unit, a data buffer, and a digital-to-analog converter. An output of the frequency divider is connected to inputs of the buffer register, the first counter, 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 step-variable voltage generator. Second inputs are connected, respectively, to 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 first input of the analog-to-digital converter is connected to an output of the commutator, an input digital bus of which is connected to an output digital bus of the buffer register. An input digital bus of the buffer register is connected to outputs of the line of n individual infrared sensors, an output digital bus of the position setting unit is connected to a first input digital bus of the first digital comparator, a second input digital bus of which together with input digital buses of the first and second registers are connected to an 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. A second input of the first AND element is connected to a first output of the second flip-flop, and an output is connected to a first input of the first flip-flop, a second input of which is connected to a second output of the second flip-flop, a first input of which is connected to an output of the second digital comparator. A second input digital bus of the second digital comparator is connected to an output digital bus of the speed setting unit, and a first input digital bus is connected to an output digital bus of the digital adder, first and second input digital buses of which are connected, respectively, to output digital buses of the first and second registers. Inputs of the registers are connected, respectively, to first and second outputs of the clock distributor, a third output of which is connected to a second input of the second flip-flop, an output of the second pulse generator is connected to an input of the clock distributor, an output of the first flip-flop is connected to a first input of the second AND element, a second input of which is connected to an output of the first pulse generator, and an output is connected to inputs of the frequency divider, the step-variable voltage generator, the commutator, and to a second input of the analog-to-digital converter. An output digital bus of the analog-to-digital converter is connected to a first input digital bus of the data buffer, an output digital bus of which is connected to an input digital bus of the digital-to-analog converter, an output of which is connected to a fourth input of the video control unit, an output of the start unit is connected to an input of the data buffer, a second input digital bus of which is connected to an output digital bus of the second counter, an input of which together with a second input of the interface unit are connected to the output of the second AND element, the output of the commutator is connected to a first input of the interface unit, an output of which is connected to computer circuits. There are introduced therein three counters, three registers, three AND elements, an OR element, a third flip-flop, a comparator, a third digital comparator, a pulse shaper, and a digital indicator. The output of the frequency divider is connected to an input of the third flip-flop, first and second outputs of which are connected, respectively, to first inputs of the third and fourth AND elements, outputs of which are connected to first inputs of the third and fourth registers, and second inputs together with a second input of the fifth AND element are connected to an output of the comparator, an input of which is connected to the output of the digital-to-analog converter. A first input of the fifth AND element is connected to an output of the third digital comparator, first and second input digital buses of which are connected, respectively, to output digital buses of the third and fourth registers, input digital buses of which are connected to an output digital bus of the third counter, and second inputs of which together with an input of the pulse shaper and an input of the fifth register are connected to

an output of the OR element, a first input of which is connected to an output of the fourth counter. A first input of the fourth counter is connected to the output of the third counter, and a second input together with second inputs of the third counter and the OR element are connected to the output of the first digital comparator, the output of the pulse shaper is connected to a second input of the fifth counter, a first input of which is connected to the output of the fifth AND element. An output digital bus is connected to an input digital bus of the fifth register, an output digital bus of which is connected to an input digital bus of the digital indicator, and a first input of the third counter is connected to the output of the second AND element.