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The fault detection for the PAC

Click the link for more [ISaGRAF FAQ](#).

I-7188EG :	ver. 2.05 or later	I-7188XG :	ver. 2.04 or later
I-8xx7 :	ver. 3.07 or later	W-8x37 :	ver. 3.17 or later

There is two type of controller fault. One is “**Global**” fault. The other is “**Local**” fault. When Global fault happens, the ISaGRAF project will stop running. Waiting the new modified project to be download. When Local fault happens, the ISaGRAF project still runs.

HMI / PC can request the controller fault state by using Modbus protocol.

Word address of 9999 is the controller fault state. 0: Ok, 1: Controller fault.

Word address of 9998 is the controller fault type.

101: **Global fault**

(other value is Local fault)

102: S_R_R error, invalid REAL value

103: R_MB_REL error, invalid REAL value

104: INT_REAL error, invalid REAL value

105: RETAIN_F error, invalid REAL value

106: RETAIN_X error, invalid REAL value

107: Real value divided by 0

108: Integer value divided by 0

109: F_READ_F error, invalid REAL value (For Wincon-8x37/8x36 only)

110: I-87K IO board in slot 0 to 7 not found.

When Local fault happens, the project is still running, the ISaGRAF project can use R_MB_ADR(1, 9999) to get controller_state and R_MB_ADR(1, 9998) to get fault_type. To clear the value in Network address 9999 & 9998, please use W_MB_ADR(1, 9999, 0) and W_MB_ADR(1, 9998, 0)

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Example:

(* When controller "Local Fault" happens, the ISaGRAF program can detect it and then program can do the right action *)

(* is_fault & fault_type are declared as internal integer *)

(* tmp is declared as internal boolean *)

(* PC / HMI can request controller fault state & type by Modbus protocol at No.=9999 & 9998 *)

(* to get controller state *)

is_fault := R_MB_ADR(1,9999); (* 0: Ok , 1: controller fault happens *)

(* To get controller fault type

101: Global fault : project stop running, only HMI/PC can request it by Modbus No. 9999 & 9998
--- other value is Local fault ---

102: S_R_R error, invalid REAL value

103: R_MB_REL error, invalid REAL value

104: INT_REAL error, invalid REAL value

105: RETAIN_F error, invalid REAL value

106: RETAIN_X error, invalid REAL value

107: Real divided by 0

108: Integer divided by 0

109: F_READ_F error, invalid REAL value (For Wincon-8x37/8x36 only)

110: I-87K IO board in slot 0 to 7 not found.

*)

fault_type := R_MB_ADR(1,9998);

if is_fault=1 then

(* Do action here when "Local Fault" happens *)

(* ... *)

(* **Only for Wincon-8x37:** Stop program running & reset all output in slot 0 to 7 *)

(* tmp := Stop_APL(); *)

(* To clear the value in Network address 9999 & 9998 when Local fault happens *)

tmp := W_MB_ADR(1, 9999, 0);

tmp := W_MB_ADR(1, 9998, 0);

end_if;