GENSYS COMPACT PRIME IN REDUNDANCY APPLICATION

APPLICATION NOTE

OPERATING SPECIFICATIONS

- The redundancy is a cold redundancy with an automatic switch **Master** to **Slave** and a manual switch **Slave** to **Master**:
  - The switch from failing controllers to **Slave** controllers is automatic without a manual intervention,
  - After a possible few seconds' power failure, the power plant will be automatically back to automatic power as it was before failure,
  - The switch from **Slave** controller (becoming **Master**) to the previously **Master** controller is done manually with an operator.
- The manual switch order from **Slave** controller (becoming **Master**) to the previously **Master** controller is done with a push button (mandatory push, no signal maintained) wiring in the input 6, terminal J1-15 from **Slave** controller.
- The **Master** controller cannot be the **Slave** and vice versa (watchdog signal is only sent from **Master** to **Slave**).
- The **Slave** controller is automatically forced in manual mode as long as it is the **Slave**. It cannot be changed to an auto mode or test mode.
- The **Slave** controller generates a lot of alarms/faults because it receives the same information as the one received from the **Master** controller (wired in parallel) but without control from the **Slave**. All alarms/faults on the **Slave** controller are usual and should not be taken into account. When the **Slave** controller takes the lead (loses watchdog), then its first action is to automatically reset all alarms/faults.

PROCEDURE TO RETURN ON THE MASTER AFTER FAULT

To switch the **Slave** controller (becoming **Master**) to the previous **Master** controller, please follow the procedure below:

- This operation is 100% manual,
- Correct the fault which caused the loss of the Watchdog from the **Master** controller and therefore the switching to the **Slave** controller,
- Check the output of the Watchdog on the previous **Master** controller output N°3, terminal J1-6 is working. The signal is visible on the input N°5, terminal J1-14 of the **Slave** controller,
- Reset manually all alarms/faults of the previous **Master** controller,
- Push the button return **Slave** -> **Master.**

For configuration files on «Master» and «Slave» products: please contact CRE TECHNOLOGY to receive it.

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APPLICATION NOTE

WIRING SPECIFICATIONS

- All voltage measurements bus and genset are doubled.
- Necessity to use 2 transformer sets for current measurements (genset, mains, bus). One set for the **Master** controller and one set for the **Slave** controller.
- The digital outputs and analog outputs are switched between the **Master** controller and the **Slave** controller.

ASSIGNMENT OF I/O

GENSYS COMPACT PRIME Master & Slave		Terminals	GENSYS COMPACT PRIME Master	GENSYS COMPACT PRIME Slave
DIGITAL OUTPUTS	DO 1 -> Crank	J1-4	X	X
	DO 2 -> Fuel oil	J1-5	X	X
	DO 3 -> Watchdog OUT	J1-6	X	Unused
	DO 4 -> Genset control by the Slave	J1-7	Unused	X
RELAY OUTPUTS	R1 - > Genset breaker control (open)	J3-1	X	X
	R1 -> Common relay 1	J3-2	X	X
	R2 -> Genset breaker control (close)	J3-3	X	X
	R2 -> Common relay 2	J3-4	X	X
DIGITAL INPUTS	DI 1 -> Genset breaker feedback	J1-10	X	X
	DI 2 -> Remote start	J1-11	X	X
	DI 3 -> Emergency stop	J1-12	X	X
	DI 4 -> Unused	J1-13	Unused	Unused
	DI 5 -> Watchdog IN	J1-14	Unused	X
	DI 6 -> Manual return from Slave to Master	J1-15	Unused	X
	DI 7 -> Genset control by the Slave	J1-16	X	Unused
CURRENT INPUTS	I1 -> Current input	J5-5	X	X
	I2 -> Current input	J5-4	X	X
	I3 -> Current input	J5-3	X	X
	Common -> Common current input	J5-6	X	X
VOLTAGE INPUTS	Bus N -> see attached single line diagram	J4-1	X	X
	Bus L1 -> see attached single line diagram	J4-4	X	X
	Bus L2 -> see attached single line diagram	J4-3	X	X
	Bus L3 -> see attached single line diagram	J4-2	X	X
	Gen N -> see attached single line diagram	J4-5	X	X
	Gen L1 -> see attached single line diagram	J4-8	X	X
	Gen L2 -> see attached single line diagram	J4-7	X	X
	Gen L3 -> see attached single line diagram	J4-6	X	X
CANBUS	CANL	J2-9	X	X
	CANH	J2-10	X	X

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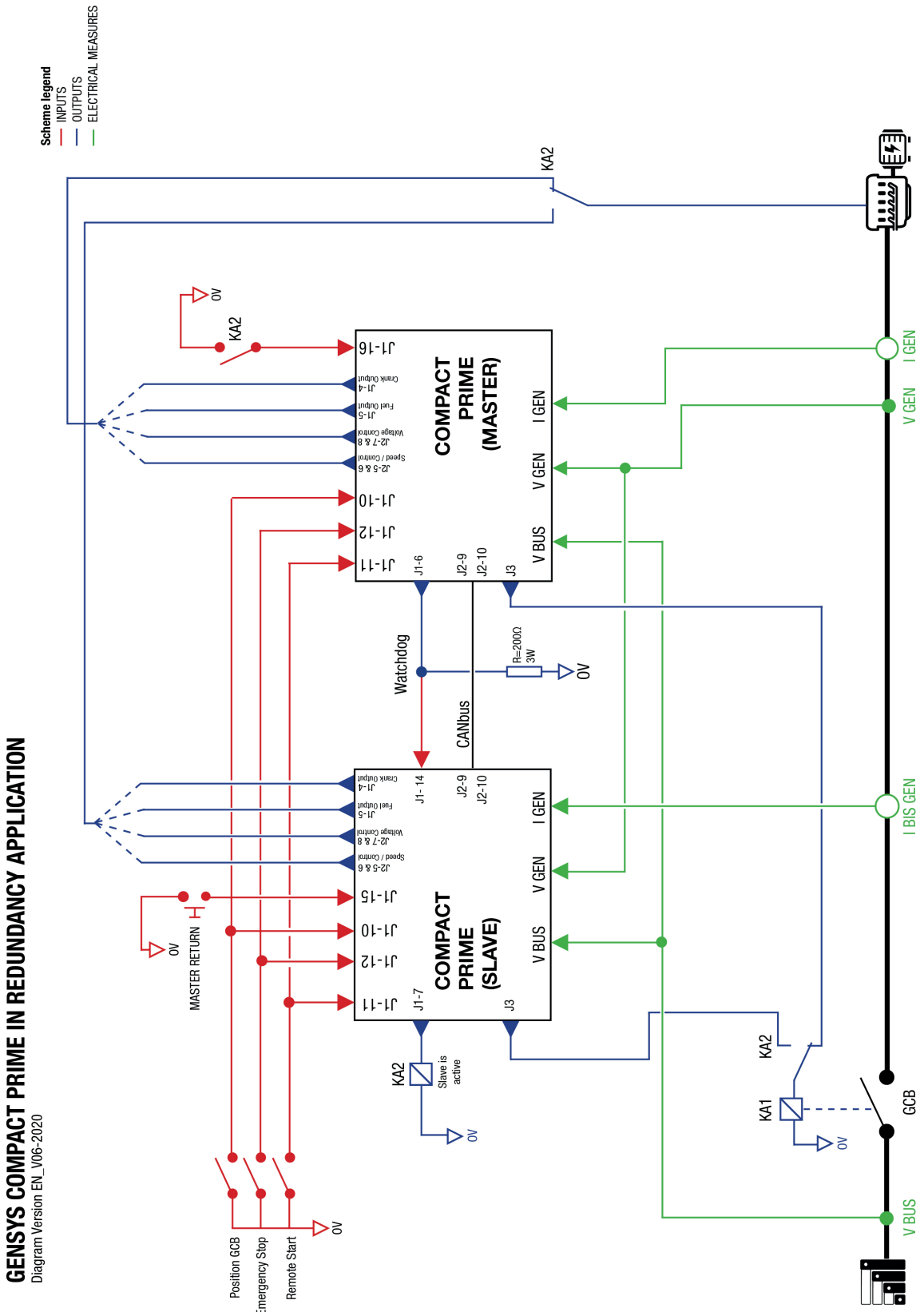
WIRING



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