

Backup controller (Special specifications)

If the "control board" which is the core of pump control fails, water supply will be cut off even if the pump or inverter is in a normal condition. Although it is common to avoid water cutoff by using a duplex circuit board, our water supply system is equipped with a backup controller that monitors water cutoff.

■ System configuration (in case of 3 pumps)

By adding a backup board and a pressure transmitter, water supply can be continued without deteriorating the water supply performance in the event of a failure of the water supply unit control board or a failure of the pressure transmitter.

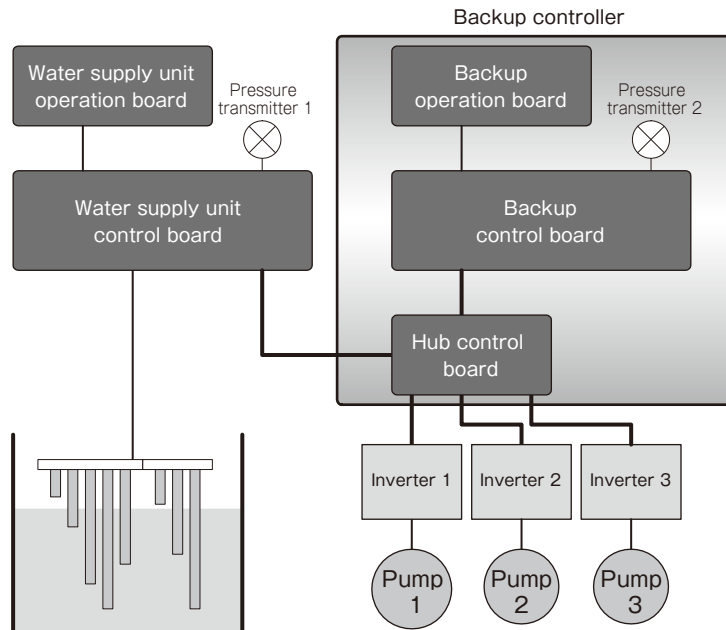


Fig. 1 System configuration

● Covering 70% of failures leading to water outage

Water supply is continued without deteriorating the water supply performance when the water supply unit control board fails and when the pressure transmitter fails. This makes it possible to supplement more than 70% of the failures that lead to water outage (our study).

● Avoid water outages as much as possible

Even if the backup dedicated pressure transmitter should fail during backup operation, constant speed operation is performed at the preset number of operating units to avoid water cutoff as much as possible.

■ Backup condition

If any of the following conditions is met, operation will switch to that by the backup controller.

- (1) No communication between the control board for the control panel and the inverter continues for a set time (initial value: 30 seconds).
- (2) The pressure measured by pressure transmitter 2 dedicated to the backup controller remains lower than the set value for a certain period of time (initial value: 30 seconds).

Once the operation is switched to backup operation, the communication with the control board for the control panel is completely cut off. As a result, even if the power is temporarily turned off due to an instantaneous power failure, the unit will automatically start up in backup operation when the power is restored. When the failure of the control board for the control panel or the pressure transmitter for the control panel is recovered, the backup operation is canceled by manual operation.

■ List of applicable models

Table 1

Unit model	Control panel model	Remarks
MC5S	BQMC5CM	
MC5S-P	BQMC5CM	
MC5S-B	BQMC5CM	
MC5S-W3	BQMC5CM-232	
NX-VFC-e	BQNXC	
NX-VFC-e multiple control	BQNXC	Available from automatic alternate operation to 5-pump rotation.
SVMV-e	BQEC	