



F60 Breaker Status Monitoring

GE Publication No. GET-8399

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Breaker status monitoring is essential for correct operation of many features within feeder relay such as breaker control, breaker failure, autoreclosing, etc. Breaker status monitoring is generally done using inputs from type "a" or "b" breaker auxiliary contacts. If both "a" and "b" auxiliary contacts are available a more reliable scheme can be designed which will prevent an incorrect operation of control and protection features due to a failure of breaker auxiliary contacts. Following is a logic that can be used for enhanced reliability in breaker status monitoring. The virtual outputs of the logic represent breaker position and can be used in relay features where breaker position is required or in interlocking schemes in the substation.

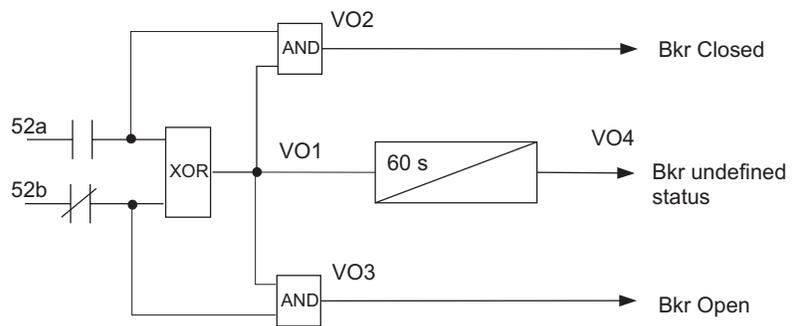
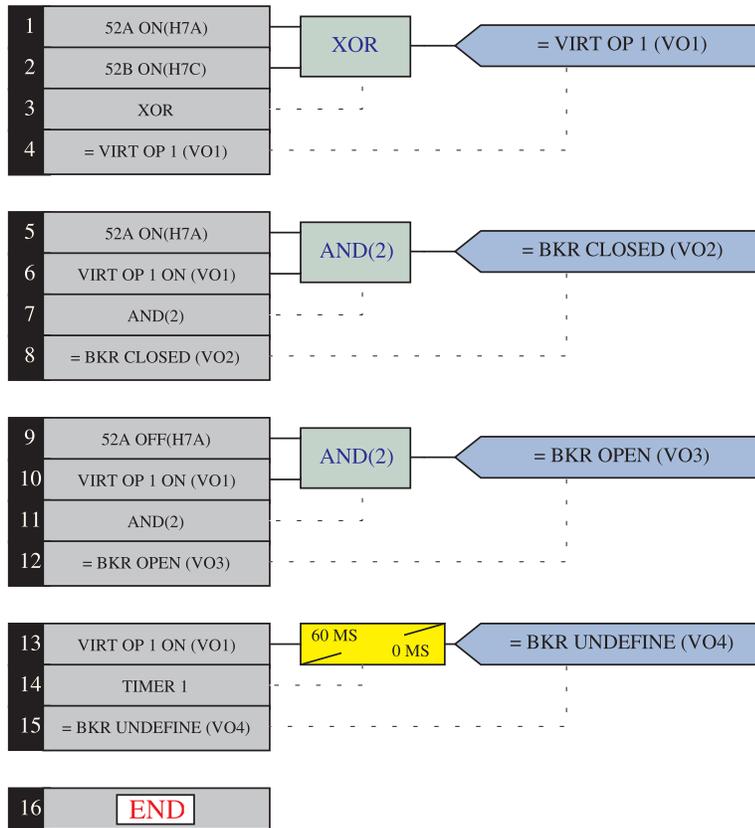


FIGURE 1. Breaker Status Monitoring Logic

The FlexLogic™ equations for this logic are shown below:



The FlexLogic™ above requires IDs be assigned to Contact Inputs H7a and H7c, as well as Virtual Outputs 1 to 4 as shown below:

Contact Inputs // UR: Test Rig: Settings: Inputs/Outputs		
PARAMETER	H7A	H7C
ID	52a	52b
Events	Disabled	Disabled

Virtual Outputs // UR: Test Rig: Settings: Inputs/Outputs				
PARAMETER	VIRTUAL OUTPUT 1	VIRTUAL OUTPUT 2	VIRTUAL OUTPUT 3	VIRTUAL OUTPUT 4
ID	Virt Op 1	Bkr Closed	Bkr Open	Bkr Undefine
Events	Disabled	Disabled	Disabled	Disabled