



Application Note – Power Control Device (PCD) Tagging Function through the Enhanced Front Panel

The tagging function in the PCD is a customizable feature that can be tailored to meet specific needs of each utility.

All PCDs include the ability to be tagged remotely through:

- SCADA using one of the available protocols (DNP3.0 or Modbus)
- WinPCD (which has dial-up capability)
- Hardwired SCADA (via programmable input)

Now, PCDs contain an enhanced faceplate (identified by Serial Numbers starting with “8R3”) that have a front panel Hot Line Tag button standard (see Figure 1).

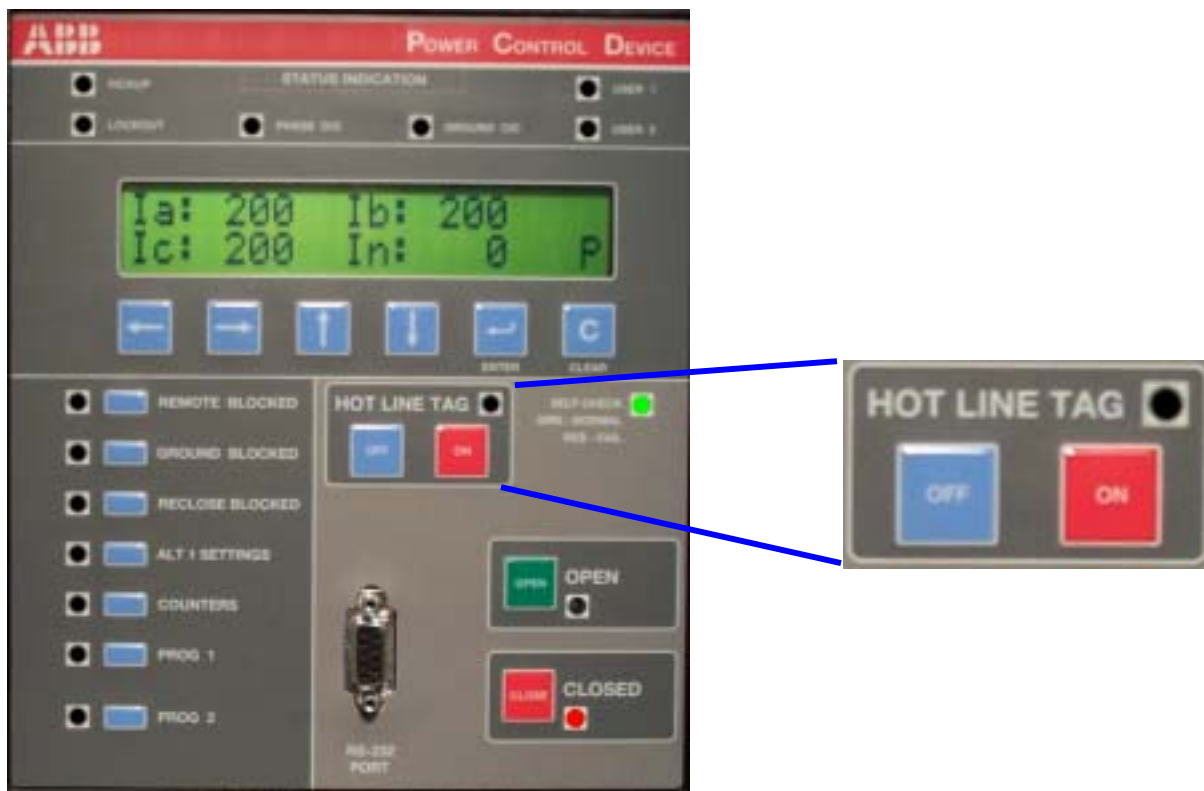


Figure 1. Hot Line Tag button

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Activating the hot line tag function in the PCD

- Sets the recloser to one shot mode
- Prevents closing from all sources; including the front panel close pushbutton
- Requires the tagging source to “un-tag” the control

Additionally, the hot line tagging function can be programmed to select an alternate protection profile such as a fast curve. Note: if the user is using single phase tripping, it is especially important to switch to an alternate protection profile in order to switch to three phase tripping.

When tagged, the unit will stay closed until there is a fault or until someone opens the unit. Once opened, the tag must be removed by the activating source.

The following is an example using the scheme described above. This example is based on a PCD with the enhanced front panel, which includes the Hot Line Tag button. The programmable logic shown for the Trip/Close 52a/52b is based on a three phase tripping unit, but the tagging logic would be applied similarly for a single phase tripping unit.

Programming the Hot Line Tag Settings:

The programmable input and output logic in the PCD is programmed with the WinPCD software, included with the PCD control. The control will normally be programmed before shipment for Hot Line Tag logic utilizing the front panel pushbutton. In the event this is not programmed or if modifications are desired, follow and modify the following steps as necessary:

1. For the programmable outputs, map the logical output TAGBTN (which activates when the Hot Line Tag button is pressed) to the **FB1** (feedback 1) contact. This causes the selected feedback contact to close when the Hot Line Tagging button is pressed on the PCD Human Machine Interface (HMI). (See Figure 2)
2. Map the logical output TAGOPN (which is a SCADA point that activates when the unit is remotely tagged) to the **FB2** contact. This causes the selected feedback contact to close when a remote signal to tag is sent to the unit from WinPCD or SCADA.

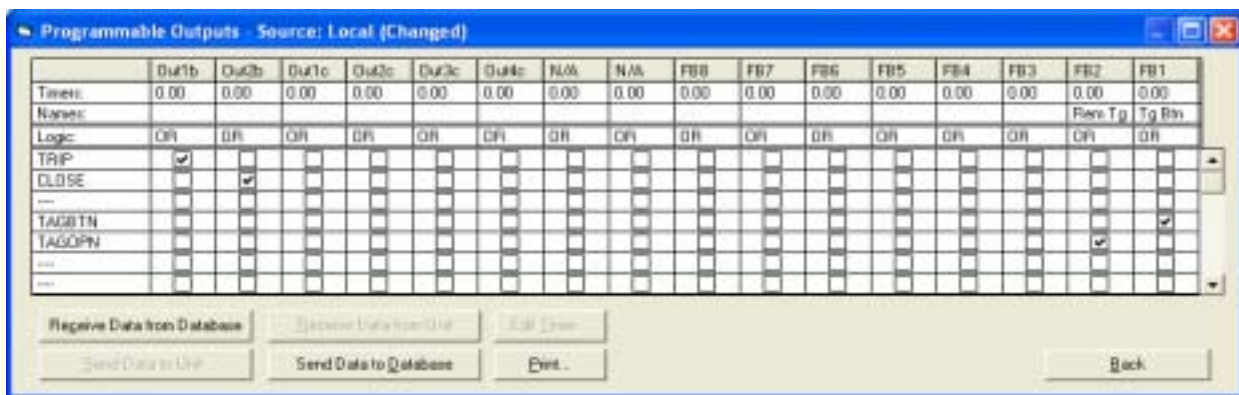


Figure 2. Programmable Outputs

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3. Program the programmable inputs. The **FB1 input** contact directly follows the programmable **FB1 output** contact, so when the output contact for **FB1** closes, the programmable input contact for **FB1** closes. (See Figure 3)
4. In this example, map the CLSBLK function (block ALL close operations) to **FB1** and **FB2** input. Select "OR" for the logic, which will permit the enabling of hot line tagging from either the front panel hot line tag button OR remote SCADA.
5. If the utility desires to initiate alternate protection settings when Hot Line Tag is active in order to utilize a special protection curve, map ALT2 to the same feedbacks as shown. Alternate 2 settings are recommended for this application, since this is the highest priority protection group and cannot be overridden.
6. Finally, map the TAGMSG to FB2 only. This provides a Liquid Crystal Display (LCD) message indicating "Warning - Remote Tag Applied". Note that for either Local or Remote Tagging, the LED located next to the Hot Line Tag button will illuminate when tagged.

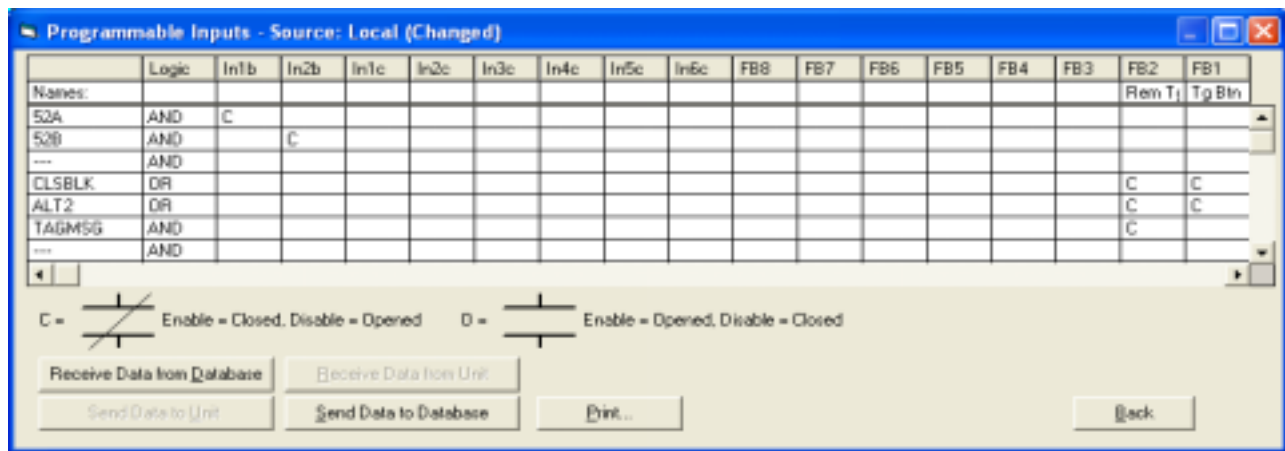


Figure 3. Programmable Inputs

The above example assumes the utilization of the enhanced front panel with a Hot Line Tag button. If the user desires a different scheme than indicated above, or if the user has the older front panel a slightly different setup can be used to perform hot line tagging.

The latest information on the PCD control can be found at our website at www.abb.com/mediumvoltage. (Select PCD from the dropdown Shortcuts menu.)

For additional support or information please call ABB Inc. at 1-800-929-7947 Ext. 5 or +1-407-732-2000 Ext. 5.

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