



Application Note

How to change the external tagging switch to the integrated hot line tag button on the PCD enhanced front panel

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Introduction

The enhanced front panel on the PCD incorporates a hot line tag button. Upgrading the PCD with this panel requires a couple wiring modifications and a modification of the PCD's programmable inputs and outputs. This programming assumes the customer uses remote tagging and utilizes Alternate 2 settings for hot line tagging.

Hardware Modification

With AC and DC power removed from the control, remove the hot line tag switch, nameplate and lamp from the front panel (See Figure 1). The switch is connected to the In1c contact (first input contact on the third module from the right) and is wetted through the switched DC output contact on the terminal block. The lamp is connected to the Out1c contact (first output contact on the third module from the right). This wiring should be removed. Refer to the wiring diagram included with the unit for wiring codes.



Figure 1: Original Tag Switch

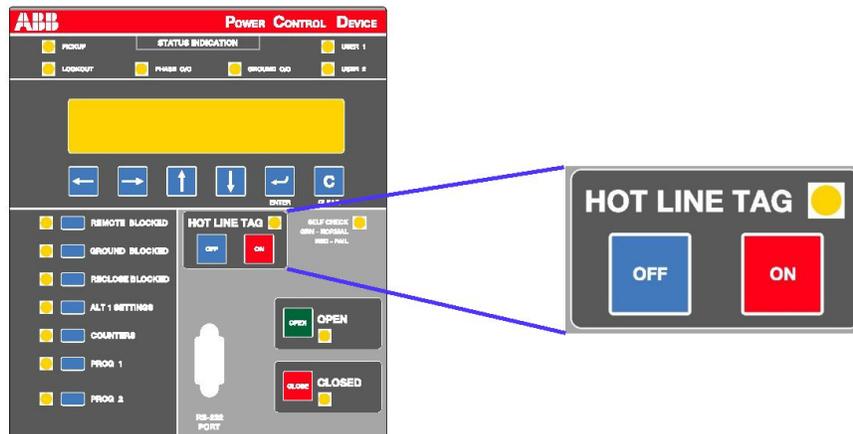


Figure 2: Hot Line Tag Button For Enhanced Panel

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Setting Modification

The programmable input and output logic in the PCD is programmed with the WinPCD software, included with the PCD control. The control with the enhanced front panel will normally be programmed before shipment with hot line tag logic utilizing the front panel pushbutton. In the event of a retrofit, modify the programmable inputs and programmable outputs as follows:

1. Change the programmable Output mapping from what is shown in Figure 3 to Figure 4. Note that the programming for the Trip and Close may vary depending on the style number, but is irrelevant for hot line tag programming. The hot line tag programming begins with the Out1c contact. The TAGBTN is the input activated when the tagging button is pressed.

	Out1b	Out2b	Out1c	Out2c	Out3c	Out4c	N/A	N/A	FB8	FB7	FB6	FB5	FB4	FB3	FB2	FB1
Timers:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Names:																
Logic:	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
TRIP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CLOSE	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TAGOPN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
UL01	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 3: Original Programmable Output Mapping for Hot Line Tagging

	Out1b	Out2b	Out1c	Out2c	Out3c	Out4c	N/A	N/A	FB8	FB7	FB6	FB5	FB4	FB3	FB2	FB1
Timers:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Names:															Rem Tg	Tg Btn
Logic:	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
TRIP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CLOSE	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TAGBTN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TAGOPN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 4: Programmable Output Mapping for the Enhanced Front Panel

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- Change the programmable Input mapping from what is shown in Figure 5 to Figure 6. Note that the programming for the 52a and 52b contact configuration may vary depending on the style number, but is irrelevant for hot line tag programming. The hot line tag programming begins with the In1c contact. The TAGBTN is the input activated when the tagging button is pressed.

Programmable Inputs - Source: Local (Unchanged) (Not Connected)

Names:	Logic	In1b	In2b	In1c	In2c	In3c	In4c	In5c	In6c	FB8	FB7	FB6	FB5	FB4	FB3	FB2	FB1
52A	AND	C															
52B	AND		C														
....	AND																
TAGMSG	AND																C
CLSBLK	OR			C													C
ALT2	OR			C													C
ULI1	OR			C													C
....	AND																
....	AND																
....	AND																

C = Enable = Closed, Disable = Opened
 O = Enable = Opened, Disable = Closed

Receive Data from Database Receive Data from Unit
 Send Data to Database Send Data to Unit Print... Back

Figure 5: Original Programmable Input Mapping for Hot Line Tagging

Programmable Inputs - Source: Local (Changed)

Names:	Logic	In1b	In2b	In1c	In2c	In3c	In4c	In5c	In6c	FB8	FB7	FB6	FB5	FB4	FB3	FB2	FB1
52A	AND	C														Rem Tg	Tg Btn
52B	AND		C														
....	AND																
CLSBLK	OR														C	C	
ALT2	OR														C	C	
TAGMSG	AND														C		
....	AND																

C = Enable = Closed, Disable = Opened
 O = Enable = Opened, Disable = Closed

Receive Data from Database Receive Data from Unit
 Send Data to Unit Send Data to Database Print... Back

Figure 6: Programmable Input Mapping for Enhanced Front Panel

Once programmed, test the programming by activating the tagging locally and remotely. The LED next to the Hot Line Tag, as well as Alternate 2 settings must activate for either local or remote tagging. If tagged remotely, a “Warning – Remote Tag Applied” message must appear on the HMI.

Contact ABB PCD technical support at 1-800-929-7947 ext. 2510 or +1-407-732-2000 x 2510 for further information.

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