

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 thrid 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:	2	c				ć			5	Ċ.				2		
Logic:	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
TRIP	>															
CLOSE		 Image: A start of the start of														
TAGOPN																 Image: A start of the start of
JLO1			~													
Receive Data from Database Heceive Data from Unit						Edit										
Re <u>c</u> eive D	ata from Da	atabase		eceive Da	ata from l	Jnit	Edit]	

Figure 3: Original Programmable Output Mapping for Hot Line Tagging

8	Programmable Outputs - Source: Local (Changed)																	
		Out1b	Out2b	Out1c	Out2c	Out3c	Out4c	N/A	N/A	FB8	FB7	FB6	FB5	FB4	FB3	FB2	FB1	1
	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	1
	TRIP	 Image: A state Image: A state<td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td>																
	CLOSE		 Image: A start of the start of															
	TAGBTN																	
	TAGOPN															Image: A state of the state		
																		-
	Re <u>c</u> eive Data I	from Datal	base	<u>R</u> eceiv	ve Data fro	om Unit	Edit	<u>T</u> imer										
	Send Dat	a to Unit		Send D) ata to <u>D</u> a	tabase	E	rint								<u>B</u> a	ck	

Figure 4: Programmable Output Mapping for the Enhanced Front Panel

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2. 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.

Names: AN 52A AN 52B AN AN	ND C ND										1.00	1100	1104	1.00	1.00	
52A AN 52B AN AN	ND C ND		6	-	2									-		
52B AN AN	ND						1	28		1		8				
AN		10	-		- 49			÷	-			·	- 0			·
TACHICC	ND			2	- C	3		8-	- C			3	0			2
TAGMOG JAN	ND			-	- C	3		8-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	- C			3	0			C
CLSBLK OR	R		С	2	0	3		8	- C			3	0			C
ALT2 OR	R		С	2	- C			8	- C-			8	÷.			C
ULI1 OR	R		С	8	-	3		87	- C-			8	0			C
AN	ND			8	- C	3		8	- C			3	0			8
AN	ND			0	20				- C			0	- C			0
AN	ND			0	20				- C			0				0
C = Receive Data fro	Enable = Clo: from <u>D</u> atabase	sed, Disabl	e = Oper eceive D	ed C ata from l) = Unit	⊥ ┯─	nable = ()pened, l	Disable =	Closed						

Figure 5: Original Programmable Input Mapping for Hot Line Tagging

🖻 Programmable Inputs - Source: Local (Changed)															×			
	Logic	In1b	In2b	In1c	In2c	In3c	In4c	In5c	In6c	FB8	FB7	FB6	FB5	FB4	FB3	FB2	FB1	1
Names:																Rem T ₍	Tg Btn	1
52A	AND	С																•
52B	AND		С															_
	AND																	_
CLSBLK	OR															С	С	
ALT2	OR															С	С	
TAGMSG	AND															С		
	AND																	-
•																		
	$C = \frac{1}{1}$ Enable = Closed, Disable = Opened $O = \frac{1}{1}$ Enable = Opened, Disable = Closed																	
Receive Da	ta from <u>D</u> a	itabase	<u>R</u> e	ceive Da	ata from U	nit												
Send D	ise	E	rint								<u>B</u> ack							

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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