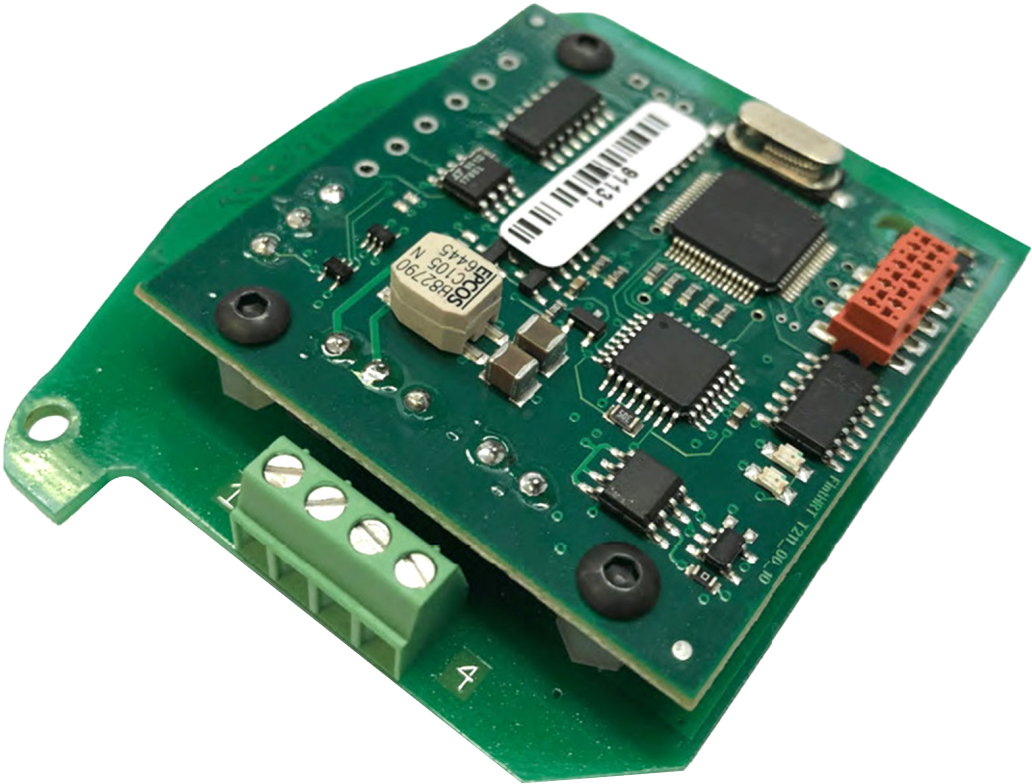


Bettis RTS

HART Upgrade Kit - Conversion Instructions



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Section 1: Parts Needed

Figure 1.

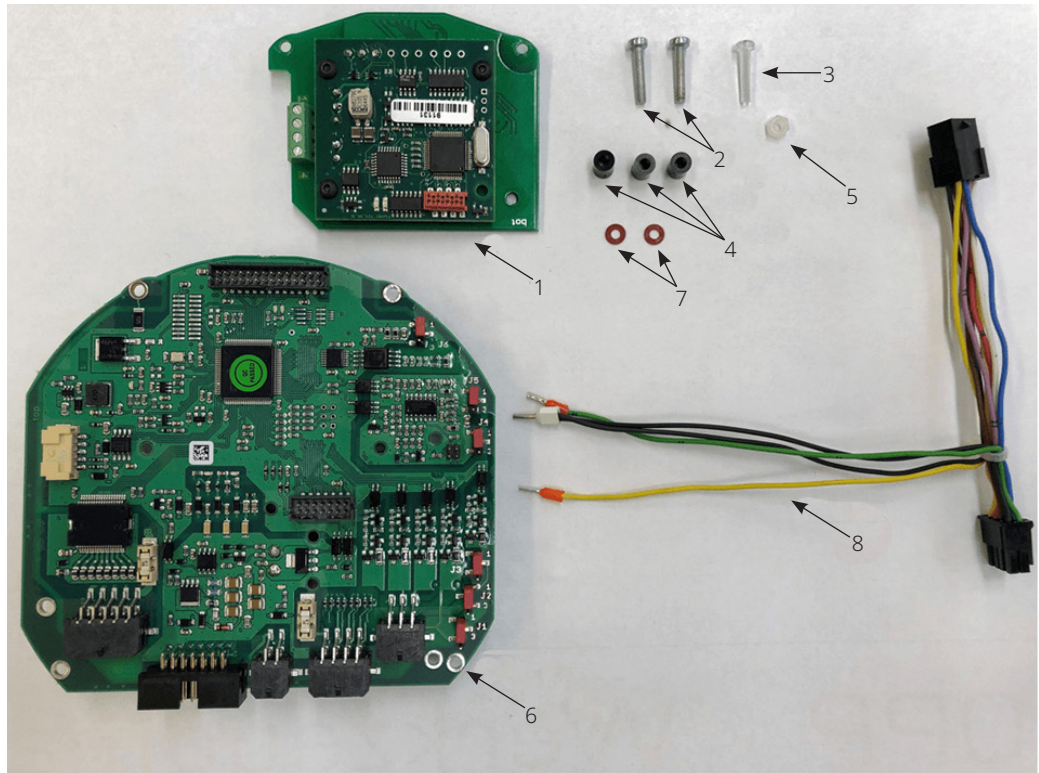
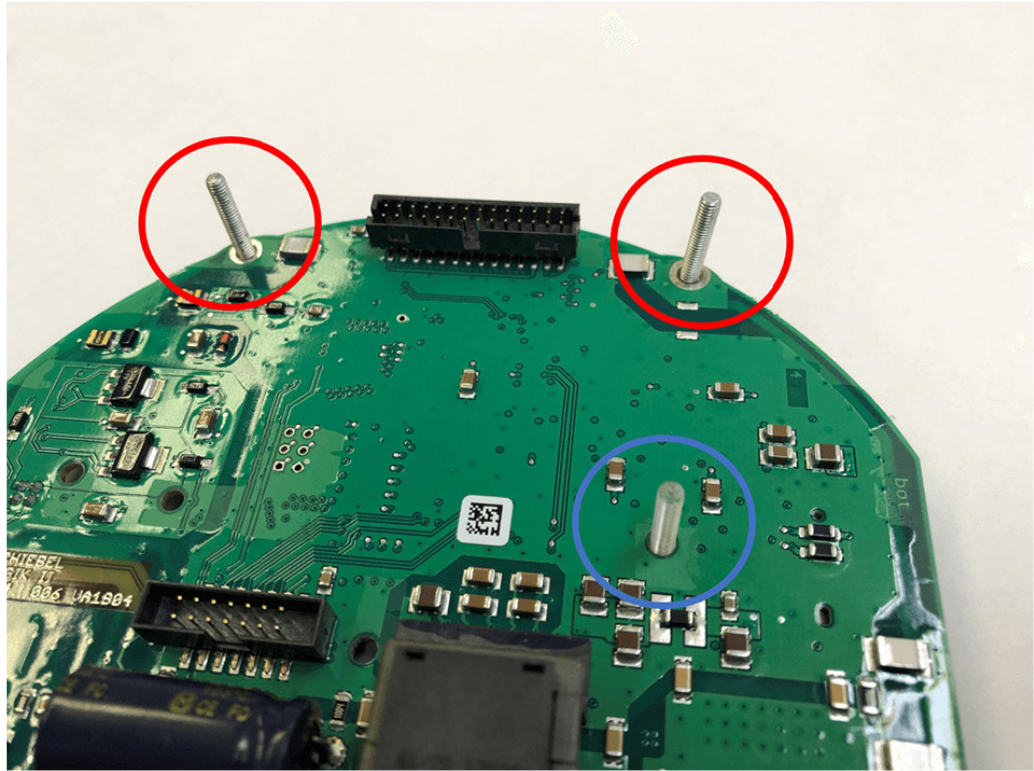


Table 1.

Part	ID	Amount	Description
1	14488	1x	HART Circuit Board
2	952	2x	Phillips-Head Screw M3x16
3	9895	1x	Plastic Phillips-Head Screw M3x16
4	9896	3x	Distance Column 8 mm
5	7084	1x	Plastic Hexagonal Nut M3
6	13992	1x	Logic II Circuit Board
7	13674	2x	Fiber Disc
8	-	1x	Adapter

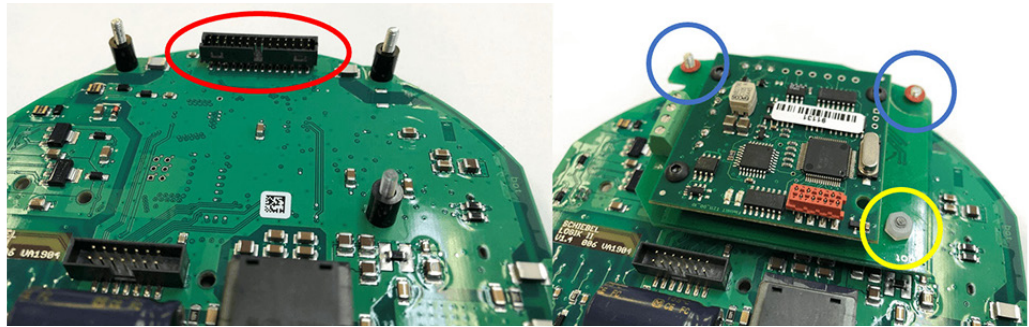
Section 2: Conversion Instructions

Figure 2.



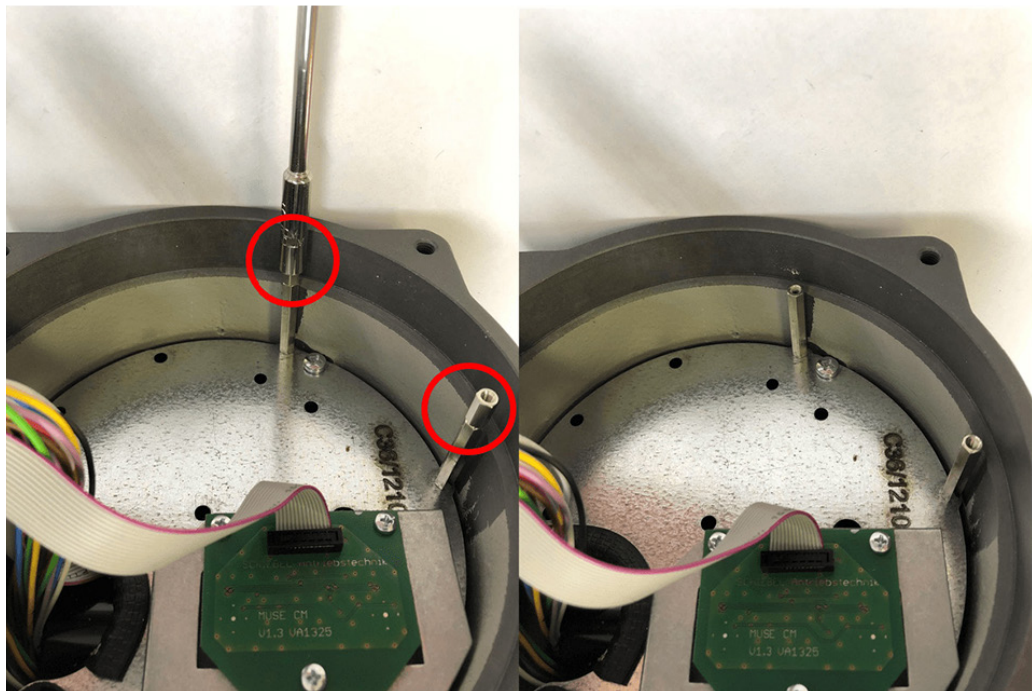
1. Insert both M3x16 Phillips-head screws (No. 2) and the 3x16 plastic Phillips-head screw (No. 3) into the bores of the Logic II board (No. 6) as shown in Figure 2. The parts No. 2 are to be fitted into the bores marked in red and the part No. 6 into the bore marked in blue.

Figure 3.



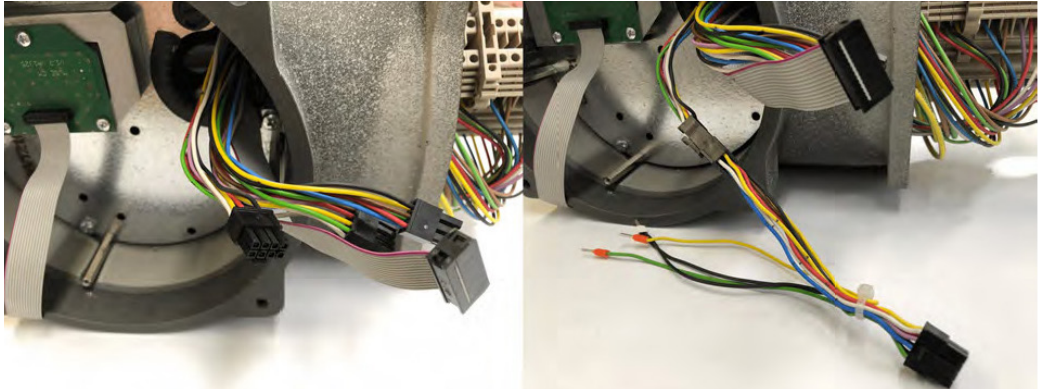
2. Now, insert the distance columns (No. 4) onto the three screws and put the HART circuit board (No. 1) on the distance columns. Please make sure that the HART circuit board is properly connected to the Logic II board via the plug connector marked in red on Figure 3. The screws are to be inserted into the bores of the HART circuit board as shown on the right figure.
3. Secure the HART circuit board with the two fiber disks (No. 7) on the M3x16 Phillips-head screws marked in blue on the right figure and the M3 plastic hexagonal nut (No. 3) on the plastic phillips-head screw marked in yellow.

Figure 4.



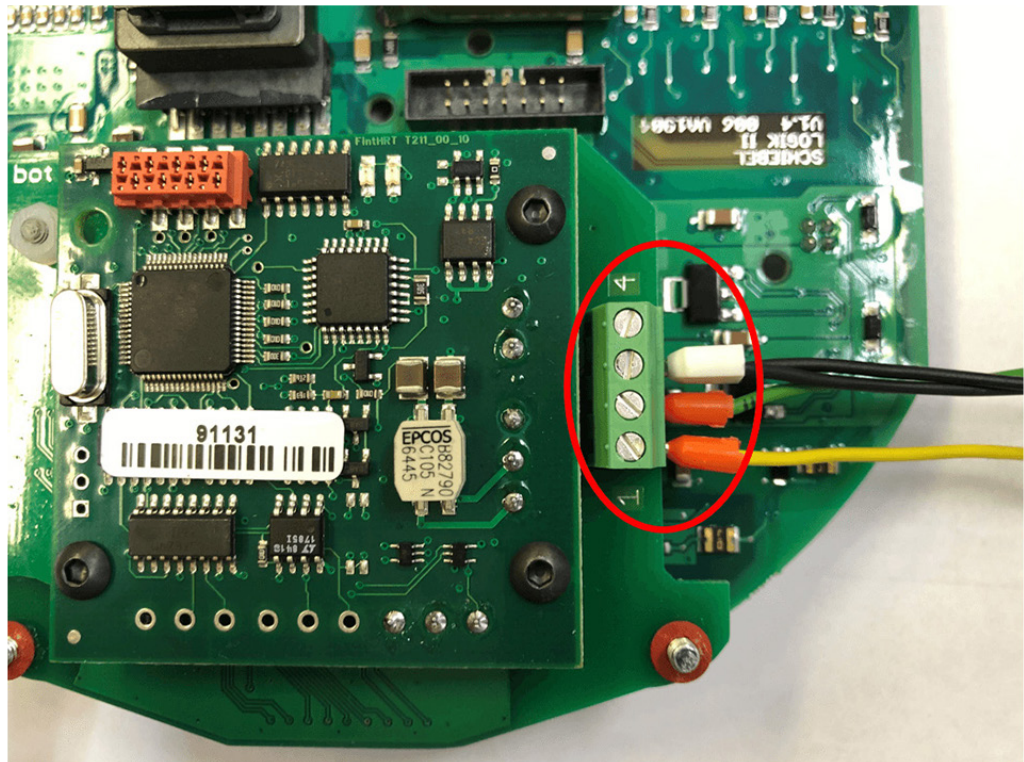
4. Before installing the Logic II board, the two 10 mm pillars have to be removed as shown in Figure 4.

Figure 5.



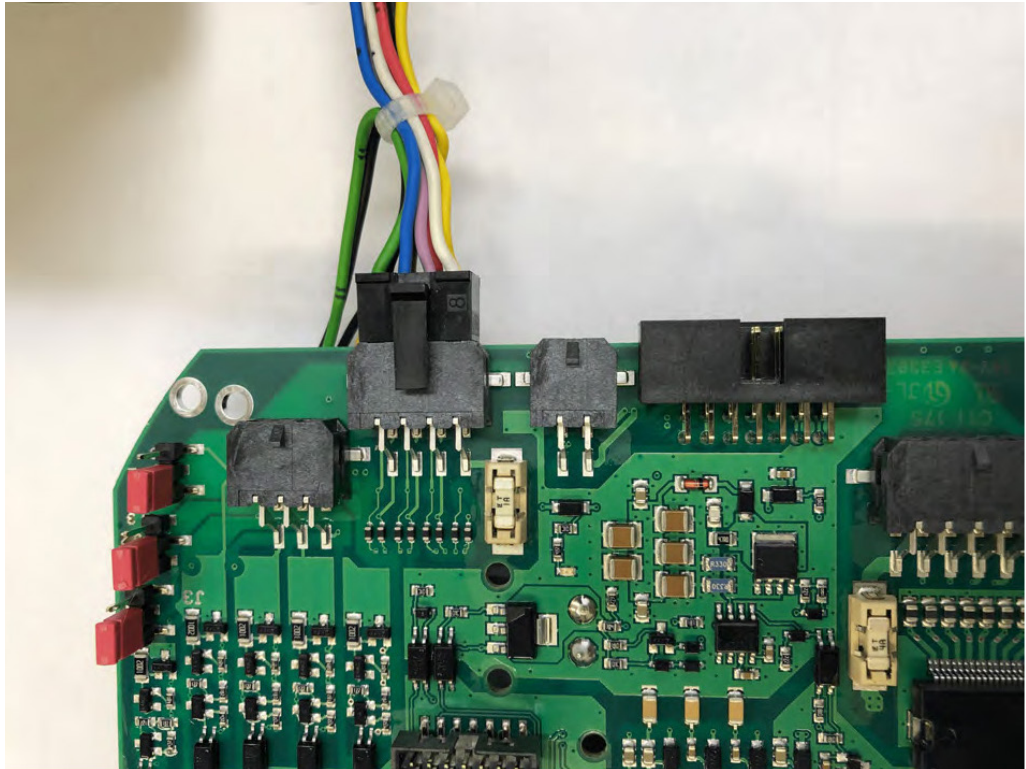
5. Connect the Adapter (No. 8) to the 8-pole Micro-Fit plug of the actuator.

Figure 6.



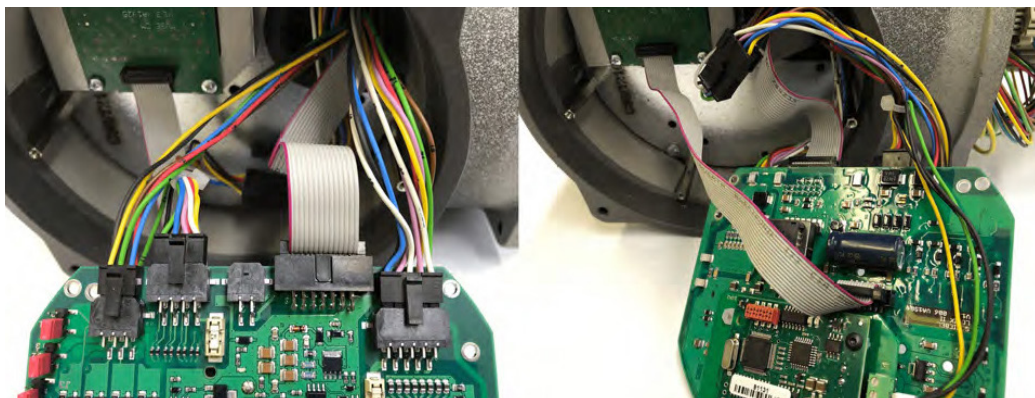
6. Connect the cables of the adapter to the HART circuit board as shown in Figure 6.

Figure 7.



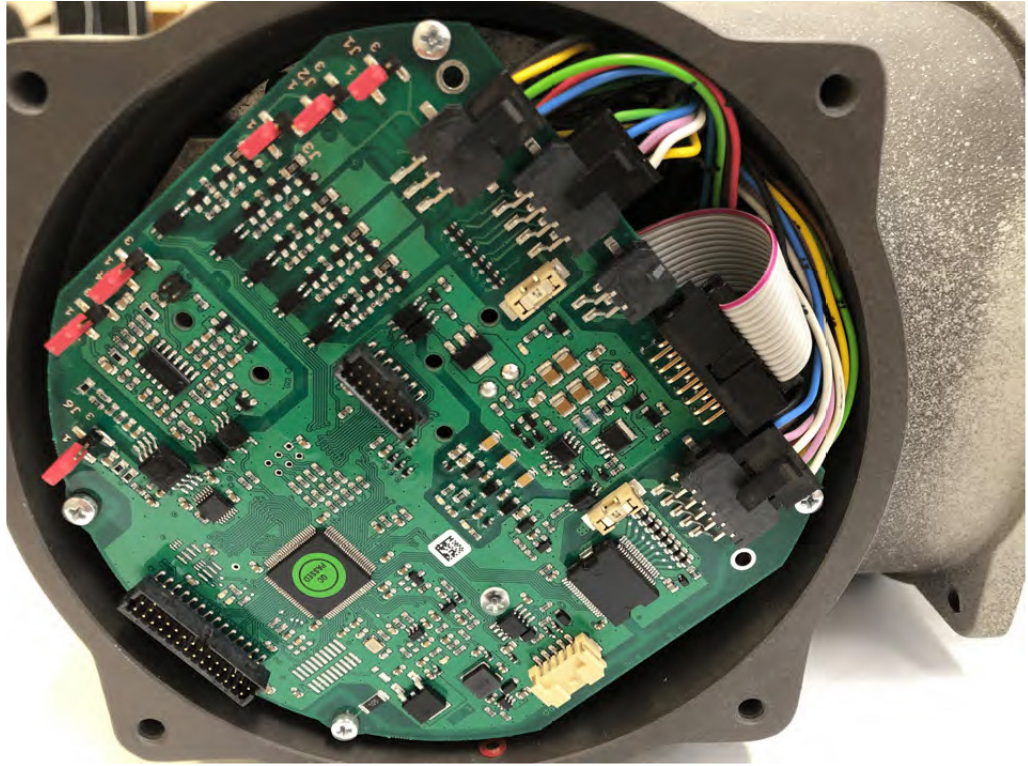
7. Plug in the Micro-Fit connector to the 8-pole connector of the Logic II circuit board.

Figure 8.



8. Plug in the remaining cables as before the conversion to the logic circuit board as shown in Figure 8.

Figure 9.



9. Mount the Logic II circuit board in the actuator and fasten it with corresponding screws.

Section 3: Programming and Activation

3.1 Programming

For programming, request download of SmartTool2 through your Sales Representative.

After the successful installation and registration, connect with the actuator. Use the Wizard and choose function "Extension Kit Install" and press "Apply" (see Figure 10). Then, select item 5 "HART interface" from "HW Bus Kits" and press "Apply" (see Figure 11).

Figure 10.

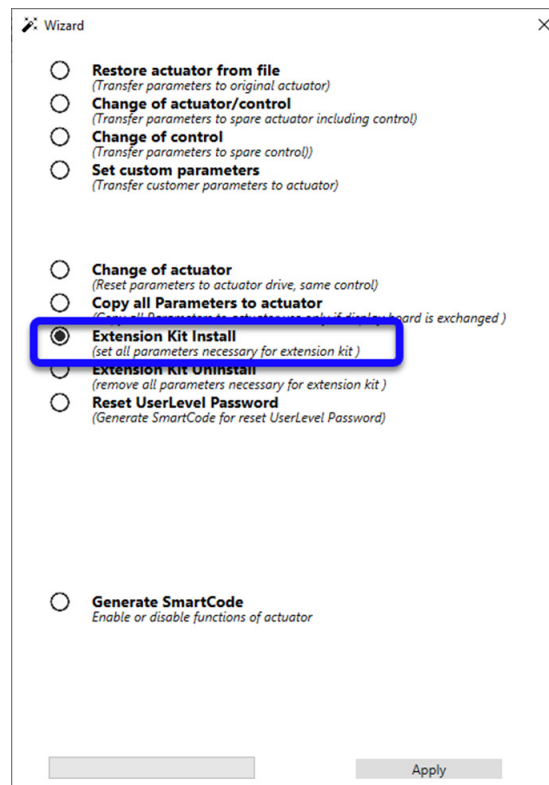


Figure 11.

INSTALL Extension Kit		
* Name		
0 HW Relay Kits		
0	RP3E6A : 6x Relay Outputs , 3x Inputs	Apply
1	RP4AF : 4x Relay Outputs	Apply
2	RP6A : 6x Relay Outputs	Apply
3	Standard Bin.Input : 5x Standard Binary Inputs	Apply
4	Standard Bin.Outputs : 8x Standard Binary Outputs	Apply
1 HW Bus Kits		
0	ModbusRTU : ModbusRTU Interface	Apply
1	ModbusTCP : ModbusTCP Interface	Apply
2	Profibus : Profibus Interface	Apply
3	Profinet : Profinet Interface	Apply
4	Fieldbus Foundation : FF Interface	Apply
5	Hart : Hart interface	Apply
6	Modbus2 : Modbus2 interface	Apply
7	Profibus DP V1 : Profibus DP V1 interface	Apply
8	Profibus DP RedCom : Profibus DP RedCom interface	Apply
9	Modbus2 Repeater : Modbus2 with Repeater interface	Apply
10	EtherNet IP : EtherNet IP interface	Apply
2 Other Kits		
0	Failsafe Handwheel unit : Hand Wheel operating kit for Failsafe	Apply

3.2 Activation

After programming the hardware, RTS will need to have Software Smartcodes/Keys to activate the firmware function for HART bus. To upgrade an On/Off unit, two software smartcodes are required — “RTS-ER-SR” and “RTS-BSC”. A unit with already enabled modulating function will require only one smartcode “RTS-BSC”.

Please contact Emerson order management team or sales representative to order software smartcodes.

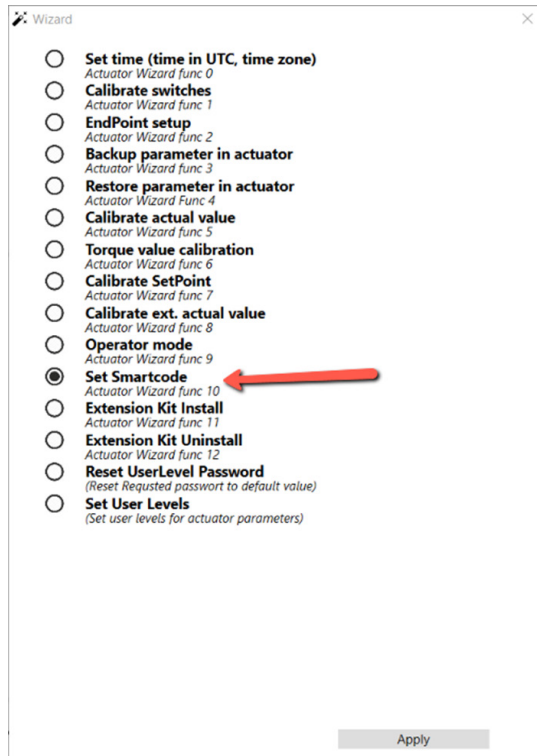
NOTE:

By ordering smartcodes, it is necessary to provide a correlated RTS SN/KEY and a setup file to Emerson team to generate correct smartcodes.

Once correct smartcodes are provided by Emerson, they can be entered in an RTS actuator by one of the following methods.

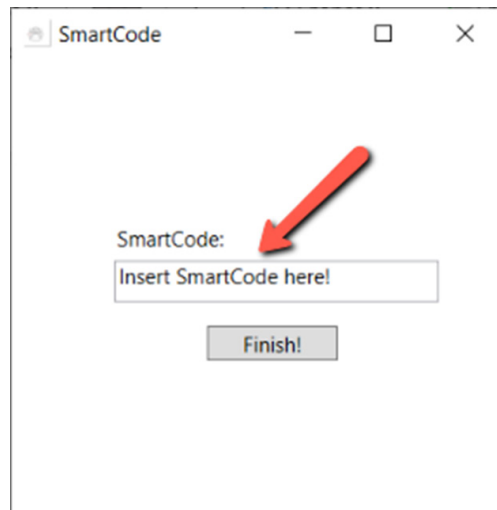
- **Method 1:** Using SmartTool Software
 - Connecting RTS unit with SmartTool and use “Wizard” function and apply “Set Smartcode” function.

Figure 12.



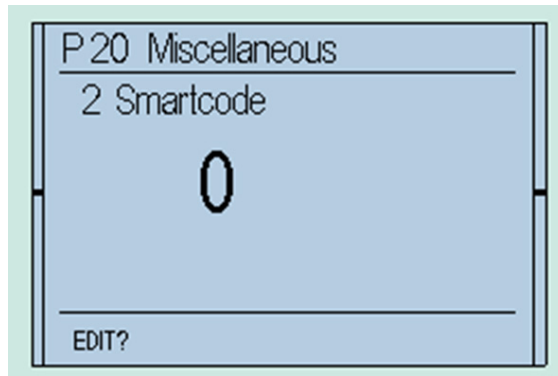
- Copy smartcode into blank column and click “Finish”.

Figure 13.



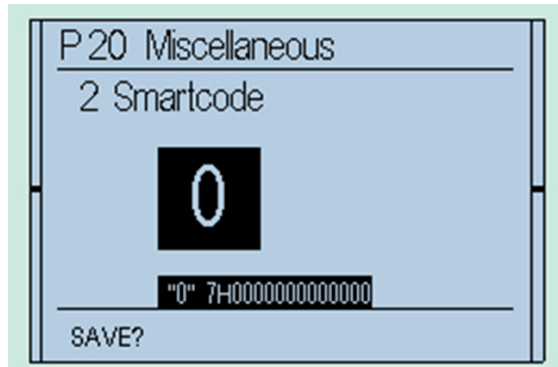
- **Method 2:** Using RTS Display
 - If user does not have SmartTool to connect to RTS actuator, a smartcode can be entered through the local display. Please navigate to the menu parameter P20.2 Smartcode by using the right side (black color) knob to enter the key.

Figure 14.



- Use right side (black color) knob to select correct character.
- Use left side (red color) knob level up to move to a next digit.

Figure 15.



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