

Controls using Profibus continuous mode

This application note applies to Vamp 40, Vamp 50, Vamp 200 and Vamp 300 series

When controls are used in Profibus continuous mode it must be remembered that the first byte in the Rx-buffer is reserved for future diagnostics. This byte should not be written from the bus. Some masters will react with error indications if this byte is controlled. However when making the configuration for Profibus Rx-buffer the first byte cannot be left empty, an item that is never used for control must be selected at offset 000. See picture below.

The screenshot shows the Vampset software interface. On the left, a list of control items is visible, including 'DIRECTIONAL O/C STAGE...', 'REVERSE POWER STAGE...', 'UNDER CURRENT STAGE I<', 'UNBALANCE STAGE I2>', 'THERMAL OVERLOAD STAGE T>', 'EARTH-FAULT STAGE...', 'DIRECTIONAL E/F...', 'OVERVOLTAGE STAGE...', 'UNDERVOLTAGE STAGE...', 'RESIDUAL VOLTAGE STAGE...', 'FREQUENCY STAGE...', 'UNDERFREQUENCY STAGE...', 'FREQUENCY STAGE df/dt', 'PROGRAMMABLE STAGE...', 'CB FAILURE PROTECTION', 'O B J E C T S', 'AUTO RECLOSING', 'AR Shot settings', 'AR COUNTER TEXTS', 'CEWEAR', '+ SUPERVISOR...', 'RELEASE OUTPUT MATRIX LATCHES', '+ MATRIX...', 'L O G I C', 'M I M I C', '+ LOCAL...', 'S C A L I N G', 'STAGE EVENT ENABLING', '+ EVENT MASKS for...', 'DI EVENT TEXTS', '+ EVENT ENABLING...', 'CLOCK SYNC', 'P R O T O C O L CONFIGURATION', '+ SPABUS...', 'EXTERNAL I/O CONFIGURATION', '+ MODEBUS...', 'PROFIBUS MAIN CONFIGURATION', and 'PROFIBUS: CONTINUOUS MODE'. On the right, a table titled 'Profibus Rx buffer' is displayed. The table has columns for 'Name', 'Length', 'Scaling', 'Setting for scaling', and 'Offset'. The first row is '1st byte reserved' with a length of 1, scaling of 1 = 1, and offset of 000. This row is circled in red. Other rows include 'Open select Obj1' through 'Execute operation Obj5' with offsets ranging from 001 to 015.

Name	Length	Scaling	Setting for scaling	Offset
1st byte reserved	1	1 = 1	-	000
Open select Obj1	1	1 = 1	-	001
Close select Obj1	1	1 = 1	-	002
Execute operation Obj1	1	1 = 1	-	003
Open select Obj2	1	1 = 1	-	004
Close select Obj2	1	1 = 1	-	005
Execute operation Obj2	1	1 = 1	-	006
Open select Obj3	1	1 = 1	-	007
Close select Obj3	1	1 = 1	-	008
Execute operation Obj3	1	1 = 1	-	009
Open select Obj4	1	1 = 1	-	010
Close select Obj4	1	1 = 1	-	011
Execute operation Obj4	1	1 = 1	-	012
Open select Obj5	1	1 = 1	-	013
Close select Obj5	1	1 = 1	-	014
Execute operation Obj5	1	1 = 1	-	015

Also note that it is not recommended that the Profibus master is connected to the VAMP device when doing settings from Vampset software. Continuous controls of some items may prevent the VAMP device from applying new settings in a correct manner.

Keywords : Profibus DP, Profibus DP continuous mode, Profibus DP control commands

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