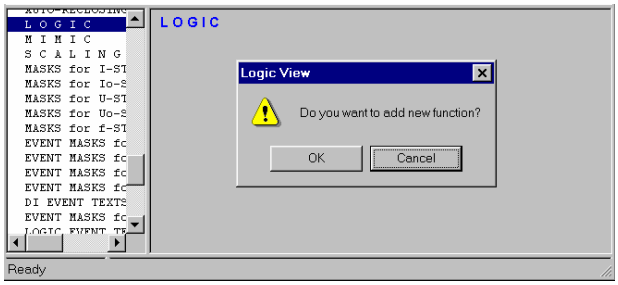
Reading protection signals from Profibus DP

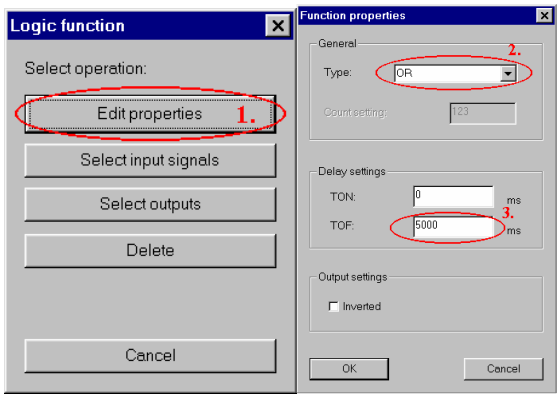
On Feeder Managers VAMP 230, 245, 255, alarm & trip information of independent protection stages is also available for Profibus DP in continuous mode. This is achieved by configurating a logic function block for each protection signal which should be included within Profibus data.

Configurating logic

Additional logic functions can be configurated to Feeder Manager by using Vampset. From the left menu of Vampset, select 'L O G I C' and left click anywhere on the screen to add the first function block. In case some logic functions already exist, you should left click below an existing function block.



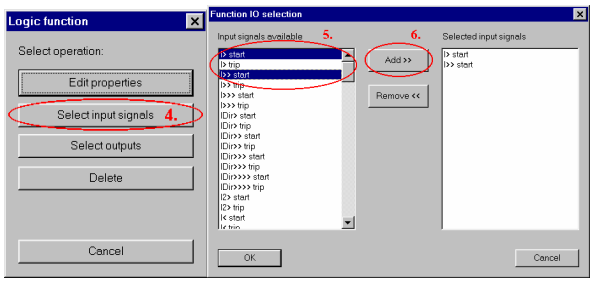
Now the logic screen should contain one AND function. Left click the function, and select 'Edit Properties'.



Change the function type to 'OR'. Protection signals operates very fast, thus a release delay is needed for keeping the signal active a sufficient time. Otherwise Profibus master can miss rapid signal changes. The delay should be set to a value of 500 ms or greater, depending on how often master polls the slave. Press 'OK' when finished.

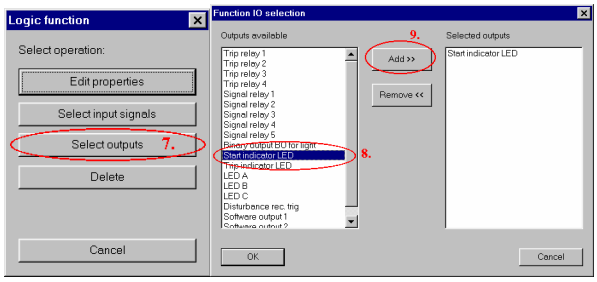
Selecting protection signals

Left click the function, and press 'Select Input signals'.



On this example we are making a function block which output is used as a common overcurrent alarm signal for Profibus. Select the required start signals from the left list and then press the 'Add' button. Press 'OK' when finished.

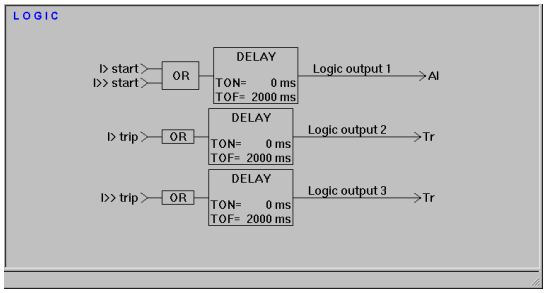
Left click the function again, and press 'Select Outputs'.



On this example the logic output is only used by Profibus, thus the function output is connected just to an alarm led. At least one output connection is required, even if there are no other purposes for the output than reading from the bus.

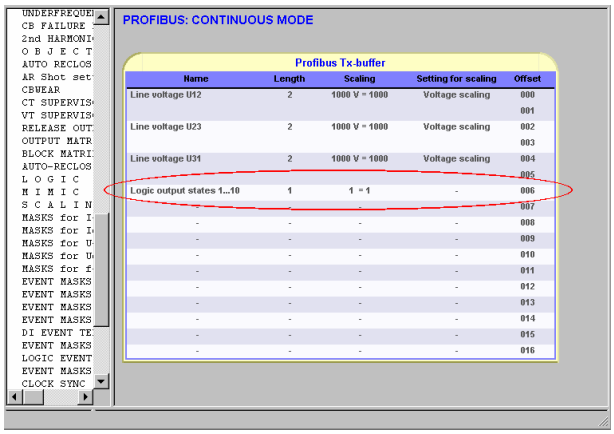
Adding more protection signals

To add more signals to the logic, for example tripping signals, first create new function blocks and configure the functions as described before. Here is an example configuration of one common alarm and two independent trip signals:



Configurating Profibus

Profibus continuous mode data can be configurated by using Vampset. From the left menu of Vampset, select 'PROFIBUS: CONTINUOUS MODE'.



Add the logic outputs to appropriate offset by left clicking a line, and selecting 'Logic Outputs' from the appearing 55list.

Reading from the Profibus

The logic output byte contains status of the first 8 logic outputs, one bit for each logic function. Bit 0 is the state of logic output 1 and bit 7 is the state of logic output 8. On this example the following bits are available:

Bit	Description	Prot. Stage
0	Logic output 1	Alarm
1	Logic output 2	I> Trip
2	Logic output 3	I>> Trip

Keywords : Profibus DP protection, Profibus DP alarm and trip information, Profibus DP logic function block, Profibus DP continuous mode

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