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 configuring a logic function block for each protection signal which should be included within Profibus data.

1 Configuring logic

Additional logic functions can be configured 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.

2 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'.

Logic function	Function IO selection	×
Select operation: Edit properties Select input signals Select outputs 7. Delete	Opportunity 9 Selected output Trip relay 2 Add 34 Selected output Signal eday 1 Parrows K Selected output Signal eday 2 Selected output Selected output	
Cancel	OK	

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.

3 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:



4 Configurating Profibus

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

[Application note]

AUTO RECLOS	C T Profibus Tx buffer					
AB Shot set	Length	Scaling	Setting for ecoling	Offeet		
CBUEAR	Lenger	4000 V = 4000	Voltage easing	000		
CT SUPERVIS	2	1000 0 - 1000	voltage scaling	000		
VT SUPERVIS				001		
RELEASE OUT. Line voltage U23	2	1000 V = 1000	Voltage scaling	002		
OUTPUT MATR				003		
BLOCK MATRI	2	1000 V - 1000	Voltage scaling	004		
AUTO-RECLOS				200		
LOGIC				005		
HIHIC Logic output states 110	1	1 = 1	-	006		
SCALIN				007		
MASKS IOF 1	-		-	800		
MASKS IOT 1				009		
WARVE for IL				010		
WASKS for f.				044		
EVENT MASKS			-	011		
EVENT MASKS	-		-	012		
EVENT BASKS				013		
EVENT HASES				814		
DI EVENT TE				815		
EVENT MASKS				016		
LOGIC EVENT		· ·		010		
EVENT MASKS						
CLOCK SYNC 💌						

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

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

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