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MainsPro

Protection Relay for Parallel Applications

SW version 1.8.0

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New Features List

1 General information

1.1 Version information

Version 1.8.0, brings new feature, 3rd level of over voltage protection **V>>>** and appropriate delay**V>>> Del**

1.2 Clarification of notation

Note: *This type of paragraph calls readers attention to a notice or related theme.*

IMPORTANT: This type of paragraph highlights a procedure, adjustment etc., which can cause a damage or improper function of the equipment if not performed correctly and may not be clear at first sight.

Example: This type of paragraph contains information that is used to illustrate how a specific function works.

2 Changes in the version 1.8.0

2.1 New features

- New parameter *V>>>*

V>>>

Setpoint group	Group: V <>, A.V <>	**Related FW**	1.8.0
Range [units]	0 OFF,1...999[V]		
Default value	0= OFF	**Alternative config**	NO
Step	[1]		
Setpoint visibility	Always		
Description			
Threshold of 3rd stage overvoltage protection. This setpoint defines overvoltage protection level at which the protection will be activated.			

- New parameter *V>>> Del*

V>>> Del

Setpoint group	Group: V <>, A.V <>	**Related FW**	1.8.0
Range [units]	0,00...600,00[s]		
Default value	0,00	**Alternative config**	NO
Step	[0,01]		
Setpoint visibility	Always		
Description			
This setpoint determines the time delay for the third voltage protection V>>>			

3 Changes in the version 1.7.1

3.1 Repairs

- RoCoF precision degraded for higher signal values
  - The problem where RoCoF evaluation degrades for higher signal values (higher Hz/s), has been resolved, now the signal evaluation will have better precision over the declared measuring range.

4 Changes in the version 1.7.0

4.1 New features

- New parameter *Grid Codes*

Grid Codes

Setpoint group	Basic	**Related FW**	1.7.0
Range [units]	STANDARD/FRENCH		
Default value	STANDARD	**Alternative config**	NO
Step	[]		
Setpoint visibility	Always		
Description			

STANDARD

If the voltage or frequency failure occurs, the protection relay is activated immediately.

FRENCH

If the voltage or frequency failure occurs, the guaranteed non-operating time of MainsPro is 60 ms is given to allow the protection relay to do the calculations over 3 periods.

In this case, MainsPro ignores errors (f >,f>>,f<,f<<,V>,V>>,V<,V<<) shorter than 60ms.

In case, when the fail occurs and it will bee > 60ms, trip will occur after 100ms from the begin of the event. Max time to TRIP is 200ms from the begin of the event.

Note: *The setpoints of the protection delays f > Del, f>> Del, f< Del, f<< Del,V > Del, V>> Del, V< Del, V<< Del, are ignored at this time.*

5 Changes in the version 1.6.0

5.1 New features

- New parameter *ROCOF Del*

ROCOF Del / A.ROCOF Del

Setpoint group	LOM, A.LOM	**Related FW**	1.8.0
Range [units]	0,00 .. 10,00 [s]		
Default value	0,00 s	**Alternative config**	YES
Step	0,01 s		
Setpoint visibility	Always		
Description			
When *ROCOF* value is above the *ROCOF* threshold, trip is delayed based on *ROCOF Del* setting. ROCOF protection trips only in case that *ROCOF* value is above the *ROCOF* threshold for the *ROCOF Del* time. Use the default ROCOF Del setting to 0,00s in case that ROCOF protection should trip immediately as soon as ROCOF value above the ROCOF threshold is detected.			

6 Related information

6.1 Available files

Firmware (*.mhx)
For MainsPro
MainsPro-1.8.0.mhx

Table 6.1 Available firmware

6.2 Overview of all available hardware

	MainsPro
Binary Inputs	4
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Table 6.2 Available hardware

6.3 Available related documentation

Documents	Description
MainsPro 1.5 Comprehensive guide.pdf	Manual of the MainsPro protection relay unit
MainsPro 1.6.1 Global Guide	Global guide

Table 6.3 Available documentation

7 Notes

7.1 Document history

Revision number	Related sw. version	Date	Author
4	1.8.0	8.4.2021	Jiří Louda
3	1.7.1	1.2.2021	Jiří Louda
2	1.7.0	17.2.2020	Jiří Louda
1	1.6.0	15.6.2017	Jiří Louda