61850-7-5 and 61850-7-500 - IEC61850-7-5 #6376

LN PDIF – setting for nominal current

06/14/2023 08:16 AM - Vladan Cvejic

Status:	New	**Start date:**	03/28/2023
Priority:	Normal	**Due date:**	
Assignee:		**% Done:**	0%
Category:			
Target version:			
Source:		**TF 7-5 Project document:**	IEC 61850-7-5
Category:	Not yet categorized	**Related TISSUE:**	

Description

LN PDIF contains DO LoSet and HiSet which represent Low (resp High) operate value setting [%] relative to the nominal current.
As the nominal current is not a setting in PDIF, how could a user set the value of the threshold for minimal (resp. maximal) differential current ?

In practice, the base current for PDIF is often the highest primary nominal current of the associated TC.

Related issues:

Copied from IEC 61850 User Feedback Task Force - Support #6303: LN PDIF – set...	**Resolved**	**03/28/2023**

History

#1 - 06/14/2023 08:16 AM - Vladan Cvejic

- Copied from Support #6303: LN PDIF – setting for nominal current added

#2 - 02/13/2024 05:50 AM - Michael Haecker

- TF 7-5 Project document IEC 61850-7-5 added

When working on this issue, then we should check whether also other settings are standardized in the same way, requesting the same solution. What about settings allowing either a primary value or a percentage value (e.g. 'ANCR.BndWid')?

Should a guideline for modelling settings be created?
Draft text for a guideline (by courtesy of Tom Berry):

"
Defining settings for functions

Most of the logical nodes in part 7-4 follow the principle that settings are defined using absolute values, such as amps or volts. This matches the expected data acquisition with sampled value streams that also use absolute units. It is a system integration activity to ensure that such settings are consistent with the ratings defined in the relevant TVTR, TCTR or Zxxx logical nodes, which may be in the same or a different IED.

For some functions, it may suit the algorithm or user HMIs, to express settings in percentage of a nominal value. This nominal value may be defined in the same logical node or may be defined by a reference to a related logical node. For example in part 7-420, for the voltage reduction use cases, it is convenient to define settings as a percentage of the nominal voltage at a connection point. In these cases, the relevant logical nodes have settings data objects that are references to the Logical Node that holds the reference value.
"

#3 - 02/13/2024 05:59 AM - Michael Haecker

Similar solutions:
- LN class MHAI / HarmonicsLN model 'HzSet' - "Basic frequency setting"
- 'TVTR.VRtg' and 'TCTR.ARtg' could be complemented with 'VNom' as in CSYN LN Class and 'ANom'. ['HarmonicsLN.NomA' already exists]

Files

differential protection tripping characteristic.png	30 KB	04/11/2023	Michael Haecker