Minutes of WG PC37.11 Electrical Control of Circuit Breakers Monday, May 16th, 2011 10:15 – 12:00 Orlando, FL

- I Welcome
- II Review of Patent Slides
- III Introductions

John Webb is serving as new chairman due to Paul Barnett taking on new position with his employer.

Meeting opened with 10 members and 17 guests present. A quorum was present.

IV Minutes from previous meeting of the TF were reviewed and approved with the note that the attendance must be updated: Currently reads xx members and xx guests, actual count was 15 members and 22 guests.

V Old Business

- a. Added note (informational) under 5 g) "NOTE: For guidance on grounding of control cable shields users should refer to IEEE Std. 525.
- b. Revised 5 g) with respect to circuit breakers equipped with dual trip releases to allow for multiple trip circuits and expand condition "Loss of control power" to "Malfunction of one of the trip circuits" to allow for conditions other than a loss of control power to require operation of the second (or third) trip device, but limit the malfunction to electrical failures (hence the word 'circuits') to not prevent the use of multiple coils on a single moving iron core (plunger) as a second trip release where certain failures of one trip coil may result in mechanical binding of the trip coil plunger.

VI New Business

a. The feeling of the WG was that the control circuits of a magnetically operated circuit breaker are sufficiently similar when viewed as a block diagram to those of a conventional circuit breaker that new schematic diagrams are necessary. However, electronically controlled circuit breakers (many of which are magnetically operated) often have contacts which reflect the condition of the controller or the circuit breaker (e.g., "Ready" or "Not Ready"), similar to pneumatic or hydraulically operated circuit breakers. These wiring diagrams should be modified to make the alarm circuit labels generic enough for this purpose.

- b. On the question of preferred ratings for switching voltages and currents for auxiliary contacts it was decided that this would be more appropriated for C37.06. In subsequent meeting of C37.04/.06 WG it was agreed by that WG that the C37.04/.06 WG would attempt to incorporate preferred values of aux. switch ratings in the document.
- c. Gilbert Carmona (User) and Eldridge Byron (Manufacturer) were added to the WG as voting members, this brings the total to 22 members, 14 Manufacturer, 7 User & 1 Other.

VII Meeting adjourned at 12:00 PM. Next meeting will be in Nashville in Oct. 2011.

Attachments: (1) Membership list.

| Role | Туре | First Name | Last Name | Email | Company | 5/6/2009 | 9/30/2009 | 4/27/2010 | 9/28/2010 | 5/17/2011 |
|------------|----------------------------|---------------|-------------|----------------------------------|----------------------------------|----------|-----------|-----------|-----------|-----------|
| Member | Manufacturer | Mauricio | Aristizabal | m.aristizabal@ieee.org | Pennsylvania Breaker | | X | X | Χ | X |
| Guest | Member | Mietek | Glinkowski | mietek.glinkowski@us.abb.com | ABB Inc. | | | | Χ | |
| Member | Manufacturer | Xi | Zhu | xi.zhu@ieee.org | HICO America | | | Χ | X | |
| Guest | Member | Devki | Sharma | devkisharma@ieee.org | Consultant | | Х | X | Х | X |
| Guest | Member | Roy | Alexander | r.alexander@ieee.org | RWA Engineering | Х | | Х | X | |
| Member | Manufacturer | Stan | Billings | s.billings@ieee.org | Mitsubishi Electric PP | | Х | Х | Χ | X |
| Guest | Interested Indivi | d Steven | Brown | stevendbrown@ieee.org | Allen & Hoshall | Х | | | | |
| Member | Manufacturer | Doug | Edwards | doug.edwards@ieee.org | Siemens Energy, Inc. | | | | | |
| Guest | Interested Individ Charles | | Hand | charles.hand@sce.com | Southern California Edison | | Χ | | | |
| Guest | Honorary Membe Pete | | Dwyer | pete.dwyer@ieee.org | Dwyer Enterprises | Х | | | | |
| Member | Other | W.J. (Bill) | Bergman | bergman@ieee.org | PowerNex Associates Inc. | | Χ | Χ | Χ | Χ |
| Member | User | Robert | Barnett | rpbarnett@ieee.org | Tennessee Valley Authority | Х | Х | Х | | |
| Member | Manufacturer | R. | Long | bill.long@ieee.org | Eaton Corporation | | Χ | | Χ | |
| Guest | Member | Richard | York | richyork3560@gmail.com | TE Connectivity | Х | Х | | | |
| Guest | Member | Chih | Chow | ccchow@pepco.com | PEPCO | | Χ | Χ | Χ | Χ |
| Member | User | Hua Ying | Liu | liuhy@ieee.org | Southern California Edison | | | Х | Х | Х |
| Vice-Chair | Manufacturer | Michael | Crawford | michaelfcrawford@ieee.org | Mitsubishi Electric | Х | Χ | Χ | Χ | |
| Guest | Interested Indivi | d Jingxuan (J | o Hu | j.hu@rbjengineering.com | RBJ Engineering Corporation | | Х | | Х | |
| Member | Manufacturer | Arben | Bufi | benb@hvbi.com | HVB AE Power Systems, Inc. | Х | Χ | Χ | Χ | Χ |
| Guest | Member | Alan | Storms | a.d.storms@ieee.org | Storms Advisory Services | | | Х | Х | |
| Guest | Member | Jeffrey | Nelson | jeffnelson@ieee.org | Tennessee Valley Authority | | | Х | Х | Χ |
| Guest | Member | Yasin | Musa | yimusa@aep.com | AEP | | | | | |
| Member | Manufacturer | Anthony | Ricciuti | tricciuti@ieee.org | Eaton Corporation | Х | | Χ | Χ | Χ |
| Guest | Interested Indivi | d Mirko | Palazzo | mirko.palazzo@ieee.org | ABB | Х | | | | |
| Chair | Manufacturer | John | Webb | jcwebb@ieee.org | ABB | Х | Χ | Χ | Χ | Χ |
| Member | User | Michael | Anderson | mikeeanderson@ieee.org | American Transmission Company | | Х | | Х | |
| Member | Manufacturer | John | Toney | john.toney@ge.com | GE | Х | Х | Х | Х | |
| Member | Manufacturer | Eldridge | Byron | eldridge.byron@us.schneider-ele | e Schneider Electric | | | | | Х |
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| Guest | Interested Indivi | d Peter | Meyer | pmeyer@sandc.com | S&C Electric Company | | | Х | Х | |
| Guest | Interested Indivi | d Rick | Gavazza | r.gavazza@ieee.org | Pacific Gas & Electric | | | Х | Х | |
| Guest | Member | John | Brunke | jhbrunke@whidbey.com | Dr. John H. Brunke, P.E. | | | | Х | |
| Guest | Active Participar | nt Thomas | Pellerito | pelleritot@dteenergy.com | Detroit Edison | Х | | Х | Х | Χ |
| Guest | Honorary Membe Georges | | Montillet | montillet@comcast.net | GFM Consulting LLC | | | Х | | |
| Guest | Member | Cory | Johnson | cwjohnson@ieee.org | BPA | | | | | X |
| Member | User | David | Galicia | dgalicia@ameren.com | Ameren | Х | | Х | | |
| Member | User | Patrick | Di Lillo | dilillop@coned.com | Consolidated Edison Company of N | Х | Х | Х | | X |
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| Guest | Member | Roderick | Sauls | rodsauls@ieee.org | Southern Company Services | Χ | Х | | | |
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| Member | Manufacturer | Wes | Wadsworth | wesw@hvbi.com | HVB AE Power Systems, Inc. | Х | Х | | Х | |
| Guest | Interested Indivi | | Giraud | doug.giraud@powellind.com | Powell Electrical Systems | ., | X | | X | |
| Guest | • | | Ricard | frank.ricard@firstpowergroupllc. | | | , | Х | X | |
| Sucst | terestea maivi | | cara | | at the order of our LLC | | | ^ | ^ | |

| Role | Туре | First Name | Last Name | Email | Company | 5/6/2009 | 9/30/2009 | 4/27/2010 | 9/28/2010 | 5/17/2011 |
|--------|--------------------|-------------|-----------|-------------------------------|-------------------------------------|----------|-----------|-----------|-----------|-----------|
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| Guest | Interested Individ | d Shane | Ford | sford@nespower.com | Nashville Electric Service | Х | | Χ | Χ | X |
| Guest | Interested Individ | d Raj | Nayar | raj.nayar@siemens.com | Siemens Energy Inc. | X | | | | |
| Guest | Interested Individ | d Sandeep | Zope | sandeep.zope@powellind.com | Powell Electrical Systems Inc. | Χ | | | | |
| Guest | Interested Individ | d Neil | McCord | neil.mccord@ieee.org | Southern States | | Х | X | X | |
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| Member | Manufacturer | Jiong | Zhang | jiong.zhang@meppi.com | MEPPI | | Х | Х | | Х |
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| Guest | Interested Individ | d Cody | Brehm | cbrehm@atcllc.com | American Transmission Company | | | | Χ | |
| Member | Manufacturer | Steven | Chen | stevenzchen@ieee.org | Eaton Corporation | | | X | X | |
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| Guest | Interested Individ | d Stephanie | Montoya | stephanie.montoya@sce.com | Southern California Edison | | | Χ | | |
| Guest | Interested Individ | d Ying | Liu | inna@zjtitan.com | Zhejiang Titan Composite | | | Х | | |
| Guest | Interested Individ | d Ed | Burt | ed.burt@bchydro.com | BC Hydro | | | | X | |
| Guest | Interested Individ | d Dave | Collette | dave.collette@meppi.com | Mitsubishi Electric | | | | Х | |
| Guest | Interested Individ | d Zachary | Smith | zach.smith@meppi.com | Mitsubishi Electric Power Products, | Inc. | | | | X |
| Guest | Interested Individ | Cornelius | Plath | cornelius.plath@omicron.at | Omicron electronics | | | | | Х |
| Guest | Interested Individ | d Stephen | Tyler | stephen.j.tyler@dom.com | Dominion | | | | | X |
| Guest | Interested Individ | d Robert | Foster | robert.foster@megger.com | Megger | | | | | Х |

22 Members

14 Manufacturers

8 Users & Other

 Members:
 9
 14
 17
 16
 12

 Guests:
 10
 16
 20
 21
 15