

DEVICE NO. DEFINITION AND FUNCTION (CONT'D)

DEVICE THAT FUNCTIONS UPON THE OCCURRENCE OF AN ABNORMAL ATMOSPHERIC CONDITION, SUCH AS DAMAGING FUMES, EXPLOSIVE MIXTURES, SMOKE, OR FIRE.

SPECIFIC APPLICATIONS OF THIS MONITOR MAY BE DESIGNATED BY USE OF A SUITABLE SUFFIX, SUCH AS 45-SM, MEANING SMOKE MONITOR; 45-HA, MEANING EXPLOSIVE ATMOSPHERE MONITOR, ETC.

46. REVERSE-PHASE OR PHASE-BALANCE CURRENT RELAY IS A RELAY THAT FUNCTIONS WHEN THE POLYPHASE CURRENTS ARE OF REVERSE-PHASE SEQUENCE, OR WHEN THE POLYPHASE CURRENTS ARE UNBALANCED OR CONTAIN NEGATIVE PHASE-SEQUENCE COMPONENTS ABOVE A GIVEN AMOUNT.

47. PHASE-SEQUENCE VOLTAGE RELAY IS A RELAY THAT FUNCTIONS UPON A PREDETERMINED VALUE OF POLYPHASE VOLTAGE IN THE DESIRED PHASE SEQUENCE.

48. INCOMPLETE SEQUENCE RELAY IS A RELAY THAT GENERALLY RETURNS THE EQUIPMENT TO THE NORMAL, OR OFF, POSITION AND LOCKS IT OUT IF THE NORMAL STARTING, OPERATING, OR STOPPING SEQUENCE IS NOT PROPERLY COMPLETED WITHIN A PREDETERMINED TIME. IF THE DEVICE IS USED FOR ALARM PURPOSES ONLY, IT SHOULD PREFERABLY BE DESIGNATED AS 48A (ALARM).

49. MACHINE OR TRANSFORMER THERMAL RELAY IS A RELAY THAT FUNCTIONS WHEN THE TEMPERATURE OF A MACHINE ARMATURE OR OTHER LOAD-CARRYING WINDING OR ELEMENT OF A MACHINE OR THE TEMPERATURE OF A POWER RECTIFIER OR POWER TRANSFORMER (INCLUDING A POWER RECTIFIER TRANSFORMER) EXCEEDS A PREDETERMINED VALUE. (THIS INCLUDES SUCH DEVICES AS INDIRECTLY HEATED TRANSFORMERS, RESISTANCE TEMPERATURE DETECTORS AND

NOTE: BOXED SENTENCES ARE EBASCO ADDENDA TO AN STDS. RESERVED FOR FUTURE APPLICATION IN AN STDS.

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a-c & d-c MOTOR-CONTACTOR THERMAL-OVER LOAD DEVICES WHICH SIMULATE OR ANTICIPATE THE ACTUAL TEMPERATURE.)

50. INSTANTANEOUS OVERCURRENT OR RATE-OF-RISE RELAY IS A RELAY THAT FUNCTIONS INSTANTANEOUSLY ON AN EXCESSIVE VALUE OF CURRENT OR ON AN EXCESSIVE RATE OF CURRENT RISE, THUS INDICATING A FAULT IN THE APPARATUS OR CIRCUIT BEING PROTECTED.

51. A-C TIME OVERCURRENT RELAY IS A RELAY WITH EITHER A DEFINITE OR INVERSE TIME CHARACTERISTIC THAT FUNCTIONS WHEN THE CURRENT IN AN a-c CIRCUIT EXCEEDS A PREDETERMINED VALUE.

52. A-C CIRCUIT BREAKER IS A DEVICE THAT IS USED TO CLOSE AND INTERRUPT AN a-c POWER CIRCUIT UNDER NORMAL CONDITIONS OR TO INTERRUPT THIS CIRCUIT UNDER FAULT OR EMERGENCY CONDITIONS. (BKR SHOWN DE-ENERGIZED IN OPERATE POSITION.)

AUXILIARY CONTACTS FOR CIRCUIT BREAKERS SHALL BE DESIGNATED BY THE FOLLOWING LETTERS OR LETTER COMBINATIONS:

a - AUXILIARY SWITCH, OPEN WHEN MAIN DEVICE IS IN NONOPERATED OR DE-ENERGIZED POSITION.

b - AUXILIARY SWITCH, CLOSE WHEN MAIN DEVICE IS IN NONOPERATED OR DE-ENERGIZED POSITION.

aa - AUXILIARY SWITCH, OPEN WHEN THE OPERATING MECHANISM OF THE MAIN DEVICE IS IN THE DE-ENERGIZED OR NONOPERATED POSITION.

bb - AUXILIARY SWITCH, CLOSED WHEN THE OPERATING MECHANISM OF THE MAIN DEVICE IS IN THE DE-ENERGIZED OR NONOPERATED POSITION.

e, f, h, etc.; ab, ac, etc.; or ba, bc, bd, etc., AND SPECIAL AUXILIARY SWITCHES OTHER THAN a, b, aa and bb. LOWER-CASE LETTERS SHALL BE USED FOR ALL OF ABOVE AUXILIARY SWITCHES.

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SPECIAL-PURPOSE CONTACTS FREQUENTLY FURNISHED ON CIRCUIT BREAKERS OR OTHER SWITCHGEAR, MAY BE DESIGNATED BY THE FOLLOWING LETTER COMBINATIONS:

LC - LATCH-CHECKING SWITCH. CLOSED WHEN THE CIRCUIT BREAKER MECHANISM LINKAGE IS RELATCHED AFTER AN OPENING OPERATION OF THE CIRCUIT BREAKER.

LS - LIMIT SWITCH.

MOC - MECHANISM-OPERATED CELL SWITCH IS A CIRCUIT BREAKER AUXILIARY SWITCH ASSEMBLY (WHICH MAY HAVE BOTH a AND b CONTACTS) ON A SWITCHGEAR, ARRANGED SO THAT IT FOLLOWS OPERATION OF ASSOCIATED CIRCUIT BREAKER ONLY WHEN THAT CIRCUIT BREAKER IS IN OPERATING POSITION AS DISTINGUISHED FROM TEST POSITION.

MOV - BREAKER AUX. SW MOUNTED IN THE TRUCK. (a AND/OR b)

L - MOV AUX. CONTACT LOCATED IN BKR TRUCK LEFT-SIDE. ITE

R - MOV AUX. CONTACT LOCATED IN BKR TRUCK RIGHT-SIDE. ITE

TOC - TRUCK-OPERATED CELL SWITCH IS A SPECIAL LIMIT SWITCH (WHICH MAY HAVE BOTH a AND b CONTACTS) IN A SWITCHGEAR, AND WHICH IS ACTUATED BY PLACING CIRCUIT BREAKER IN OPERATING OR IN TEST POSITION.

H - SINGLE TOC (W) ITE.

H-1 - FIRST OF TWO TOC's (W) ITE.

H-2 - SECOND OF TWO TOC's (W) ITE.

H/bp - TOC BYPASS CONTACT. ITE.

53. EXCITER OR D-C GENERATOR RELAY IS A RELAY THAT FORCES THE d-c MACHINE FIELD EXCITATION TO BUILD UP DURING STARTING OR WHICH FUNCTIONS WHEN THE MACHINE VOLTAGE HAS BUILT UP TO A GIVEN VALUE.

54. HIGH-SPEED D-C CIRCUIT BREAKER IS A DEVICE WHICH STARTS TO REDUCE THE CURRENT IN THE MAIN CIRCUIT WITHIN 0.01 SECOND, OR LESS, AFTER THE OC-

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CURRENCE OF A d-c OVERCURRENT OR AN EXCESSIVE RATE OF CURRENT RISE.

55. POWER FACTOR RELAY IS A RELAY THAT OPERATES WHEN THE POWER FACTOR IN AN a-c CIRCUIT RISES ABOVE OR FALLS BELOW A PREDETERMINED VALUE.

56. FIELD APPLICATION RELAY IS A RELAY THAT AUTOMATICALLY CONTROLS THE APPLICATION OF THE FIELD EXCITATION TO AN a-c MOTOR AT SOME PREDETERMINED POINT IN THE SLIP CYCLE.

57. SHORT-CIRCUITING OR GROUNDING DEVICE IS A PRIMARY CIRCUIT SWITCHING DEVICE THAT FUNCTIONS TO SHORT-CIRCUIT OR TO GROUND A CIRCUIT IN RESPONSE TO AUTOMATIC OR MANUAL MEANS.

FOR AUXILIARY CONTACT DESIGNATIONS SEE DEVICE NUMBER 52.

58. RECTIFICATION FAILURE RELAY IS A DEVICE THAT FUNCTIONS IF ONE OR MORE ANODES OF A POWER RECTIFIER FAIL TO FIRE, OR TO DETECT AN ARC-BACK, OR ON FAILURE OF A DIODE TO CONDUCT OR BLOCK PROPERLY.

59. OVERVOLTAGE RELAY IS A RELAY THAT FUNCTIONS ON A GIVEN VALUE OF OVERVOLTAGE.

60. VOLTAGE BALANCE RELAY IS A DEVICE THAT OPERATES ON A GIVEN DIFFERENCE IN VOLTAGE BETWEEN TWO CIRCUITS.

61. CURRENT-BALANCE RELAY IS A DEVICE WHICH OPERATES ON A GIVEN DIFFERENCE IN CURRENT INPUT OR OUTPUT OF TWO CIRCUITS.

62. TIME-DELAY STOPPING OR OPENING RELAY IS A TIME-DELAY RELAY THAT SERVES IN CONJUNCTION WITH THE DEVICE THAT INITIATES THE SHUTDOWN, STOPPING, OR

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| EBASCO SERVICES INCORPORATED NEW YORK | | FLORIDA POWER & LIGHT CO. HUTCHINSON ISLAND PLANT-UNIT NO. 1 | | 8770-B-327 |
| DIV. ELEC DR. RM | | CONTROL WIRING DIAGRAM | | SHEET 19 |
| SCALE 1 CH. RM | | DEVICE NUMBERS & DEFINITIONS | | |
| DATE MAY 5, 1972 | | APPROVED R. G. Hachler RL H. MJC | | |

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