Engineered to order. Built to last.

Test No: 18-11-05A
Test Index: 35-R-M-41

REPORT
of
RECLOSER CONTROLLER SIMULATED SURGE ARRESTER OPERATION TEST

SPECIMEN DESCRIPTION

Recloser Control:	Beckwith Control		
Control Part #	A-7679#29234		
Control Serial #	101 471-1314		
Three-phase Recloser:	G&W Viper-ST Type VIP388ER-12-1 ST		
Impulse level (BIL):	125 kV_{peak}		
Rated Voltage:	27 kV_{rms}		
Rated Current:	800 A_{rms} continuous		
Viper ST Serial No.:	2017 0130 0001		
Reference drawing: D870A PT2I A00		Photographs attached:	Yes: X No:

Dates of Test: 13-November-2018 through 14-November-2018

REQUIREMENTS

Standard:	C37.60-2012 Section 6.111.3, "Simulated Surge Arrester Operation Test"

Test Voltage and Current: 120 kV_{peak} (150 kV_{peak} x 0.8), 6 kA_{peak} (Note: tested at 38KV level)

Configurations:

Condition	Description of Applied Impulses	Point of Application	Switch Position
A	15 surges of (+) polarity and 15 surges of (-) polarity	source bushings	open
B	15 surges of (+) polarity and 15 surges of (-) polarity	source bushings	closed
C	15 surges of (+) polarity and 15 surges of (-) polarity	load bushings	closed
D	15 surges of (+) polarity and 15 surges of (-) polarity	properly rated transformer	open
E	15 surges of (+) polarity and 15 surges of (-) polarity	properly rated transformer	closed

Note: control unit was tested with
(42-Pin Cabinet tested with new AC transfer switch, DIP board, original AC/DC converter)

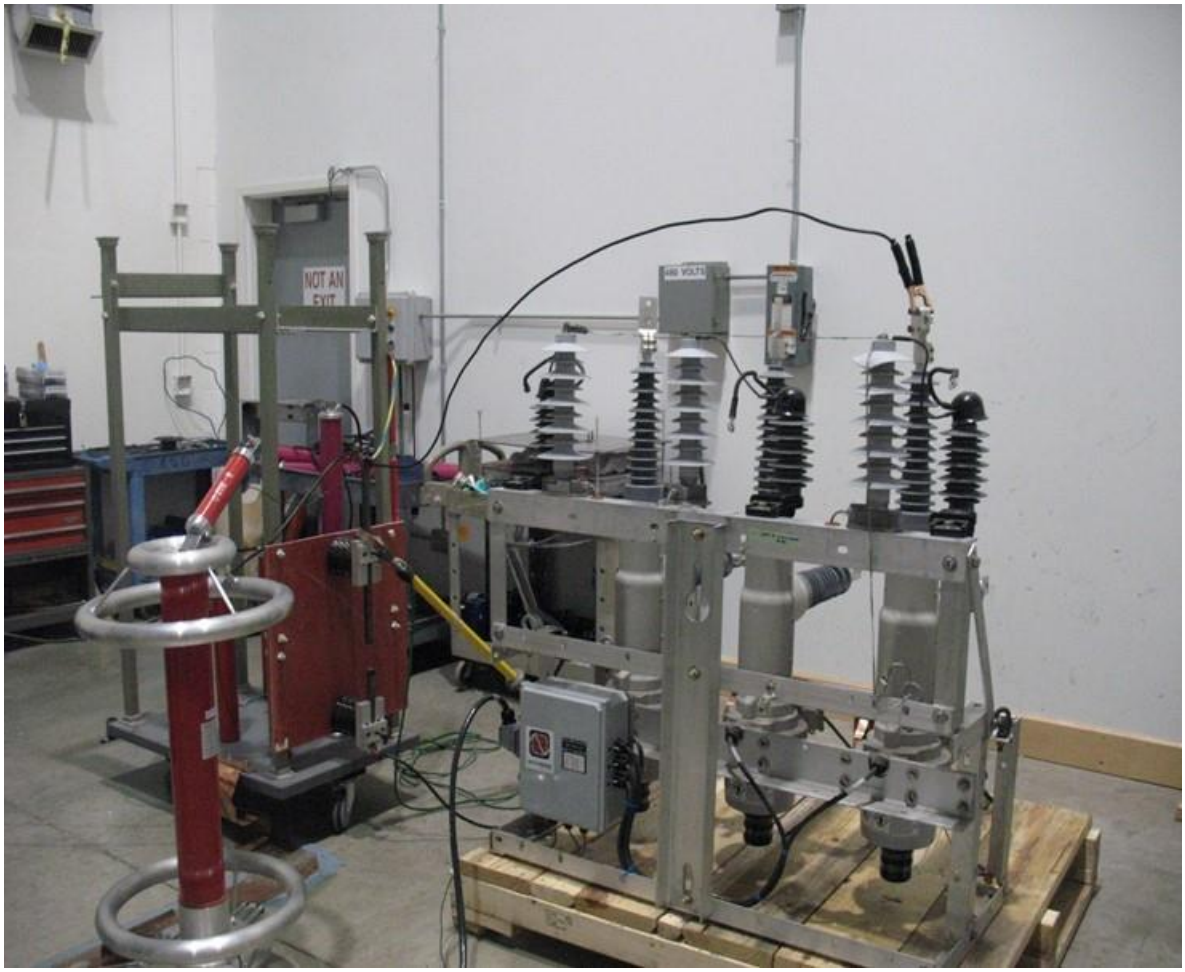
TEST RESULTS:

The recloser and controls continued to function after all surges had been applied.

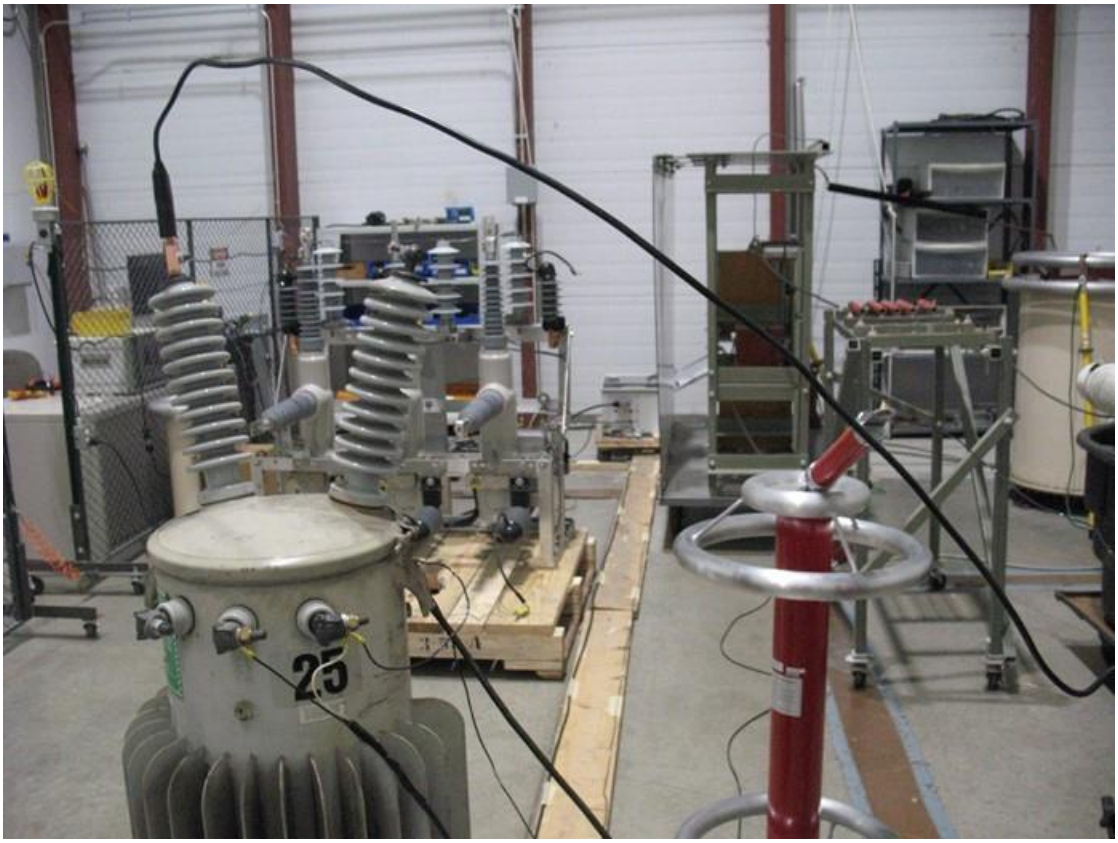
CONCLUSION:

The recloser and controls complied with the requirements of IEEE Standard C37.60-2012, Section 6.11.3.

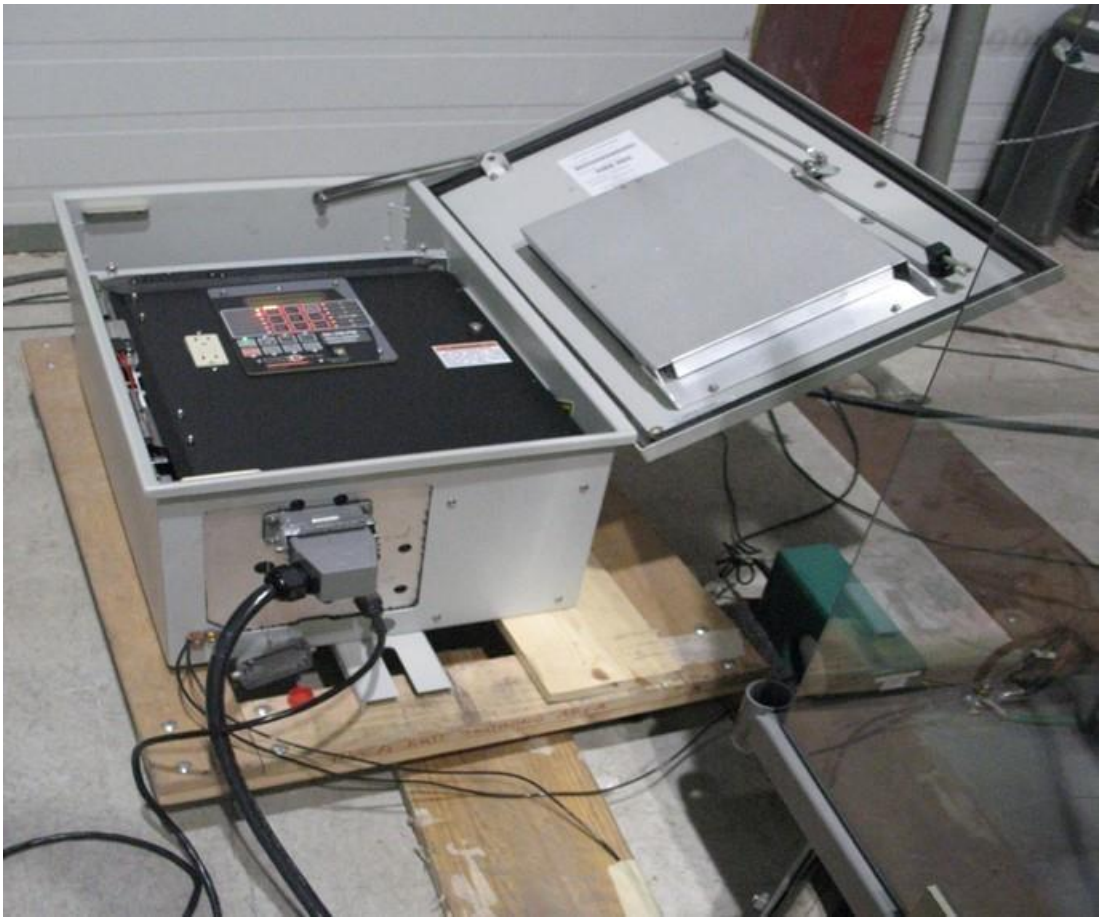
Report Prepared By:	Nader Samara	Date:	16-November-2018
Signed by:	Nick Nakamura	Date:	29-November-2018



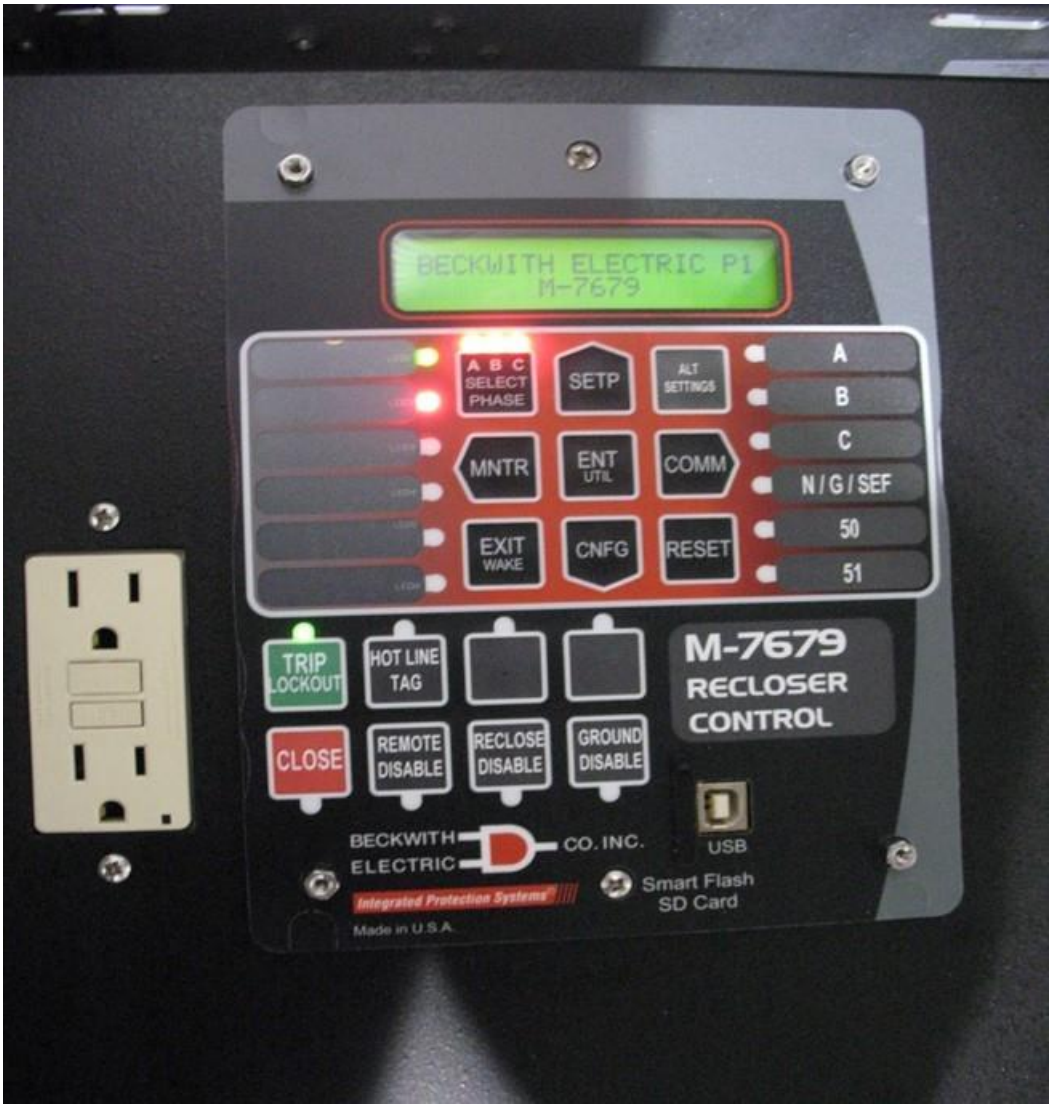
SSAO Recloser test setup



SSAO Transformer test setup



SSAO Control Setup



Beckwith control screen display

Engineered to order. Built to last.

Test No: 18-11-05B
Test Index: 35-R-M-41

REPORT
of
RECLOSER CONTROLLER SIMULATED SURGE ARRESTER OPERATION TEST

SPECIMEN DESCRIPTION

Recloser Control:	Beckwith Control		
Control Part #	A-7679#29234		
Control Serial #	101 471-1314		
Three-phase Recloser:	G&W Viper-ST Type VIP388ER-12-1 ST		
Impulse level (BIL):	125 kV_{peak}		
Rated Voltage:	27 kV_{rms}		
Rated Current:	800 A_{rms} continuous		
Viper ST Serial No.:	2017 0130 0001		
Reference drawing: D870A PT2I A00		Photographs attached:	Yes: X No:

Dates of Test: 14-November-2018 through 15-November-2018

REQUIREMENTS

Standard:	C37.60-2012 Section 6.111.3, "Simulated Surge Arrester Operation Test"

Test Voltage and Current: 120 kV_{peak} (150 kV_{peak} x 0.8), 6 kA_{peak} (Note: tested at 38KV level)

Configurations:

Condition	Description of Applied Impulses	Point of Application	Switch Position
A	15 surges of (+) polarity and 15 surges of (-) polarity	source bushings	open
B	15 surges of (+) polarity and 15 surges of (-) polarity	source bushings	closed
C	15 surges of (+) polarity and 15 surges of (-) polarity	load bushings	closed
D	15 surges of (+) polarity and 15 surges of (-) polarity	properly rated transformer	open
E	15 surges of (+) polarity and 15 surges of (-) polarity	properly rated transformer	closed

Note: control unit was tested with
(42-Pin Cabinet tested with new AC transfer switch, DIP board replaced with DIP without TVSs (no protection), new AC/DC power supply used)

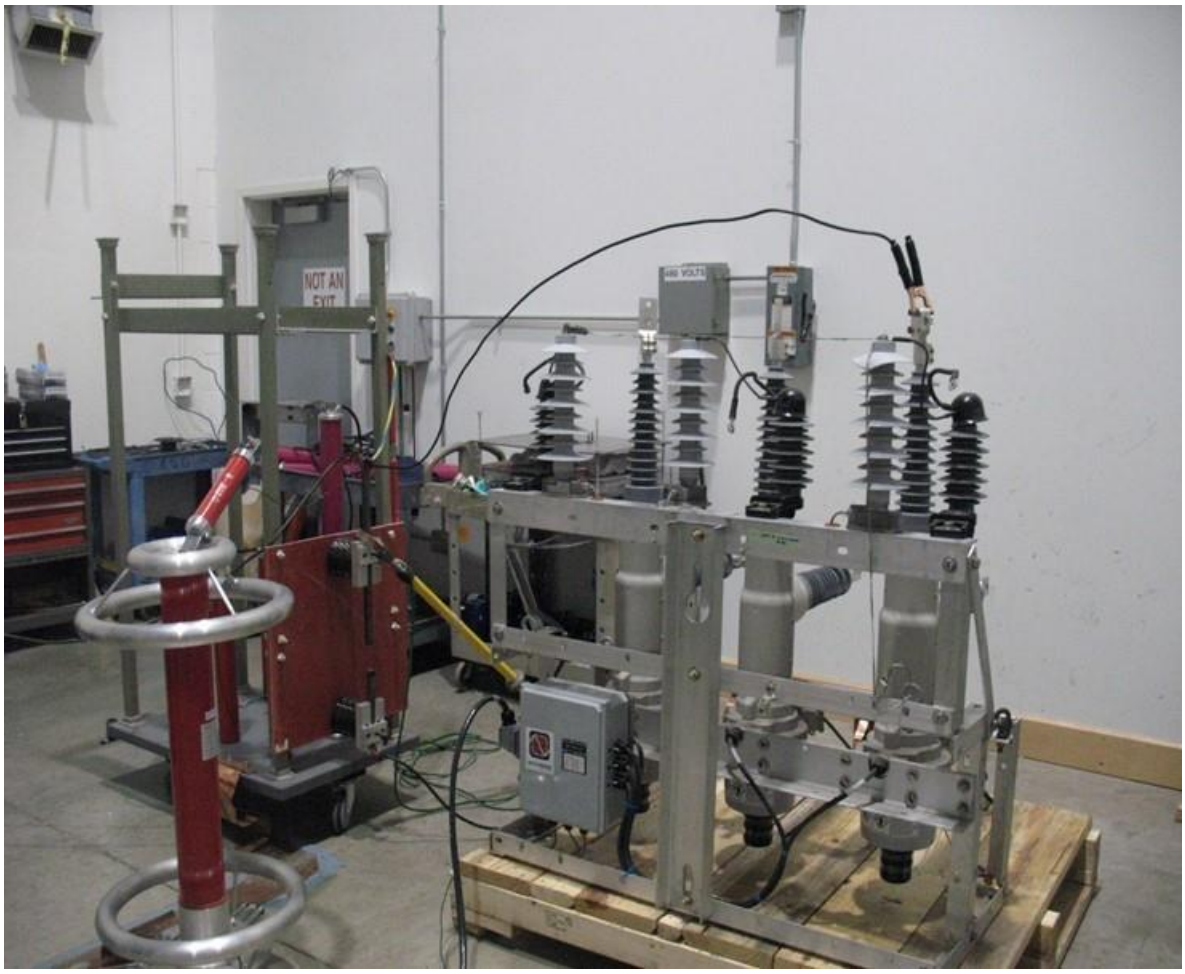
TEST RESULTS:

The recloser and controls continued to function after all surges had been applied.

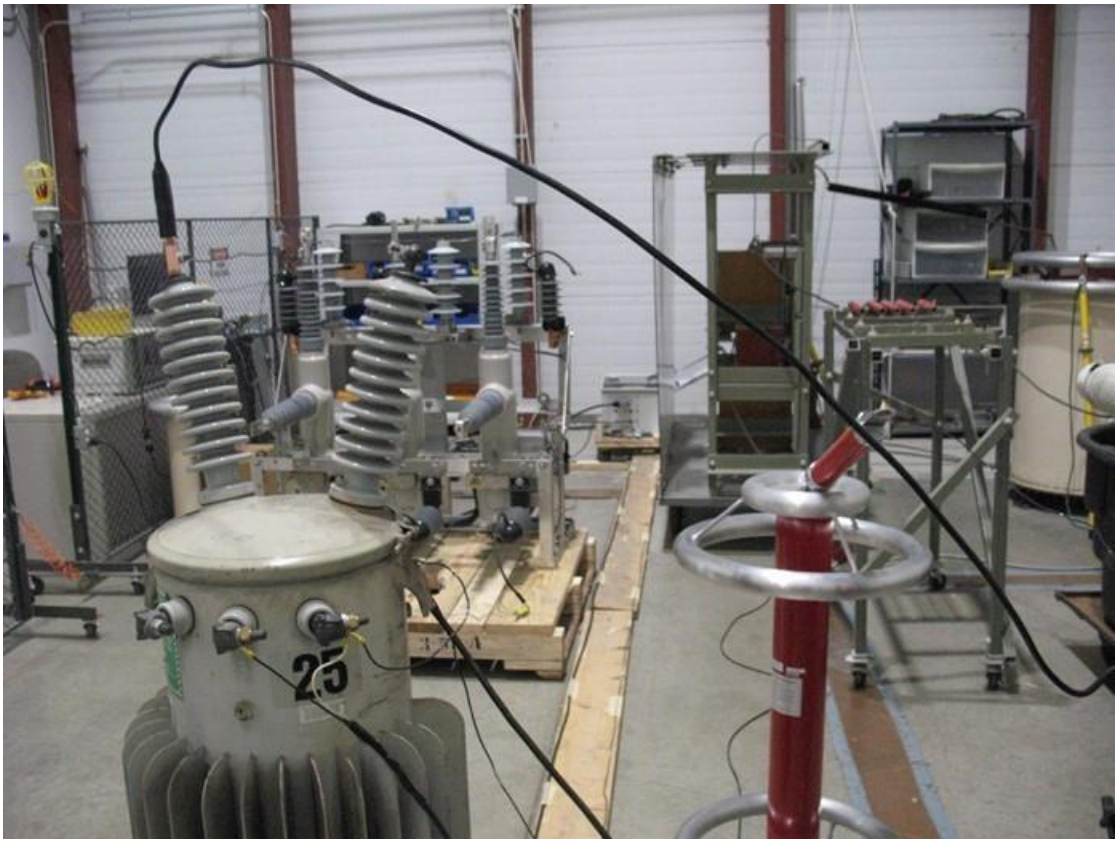
CONCLUSION:

The recloser and controls complied with the requirements of IEEE Standard C37.60-2012, Section 6.11.3.

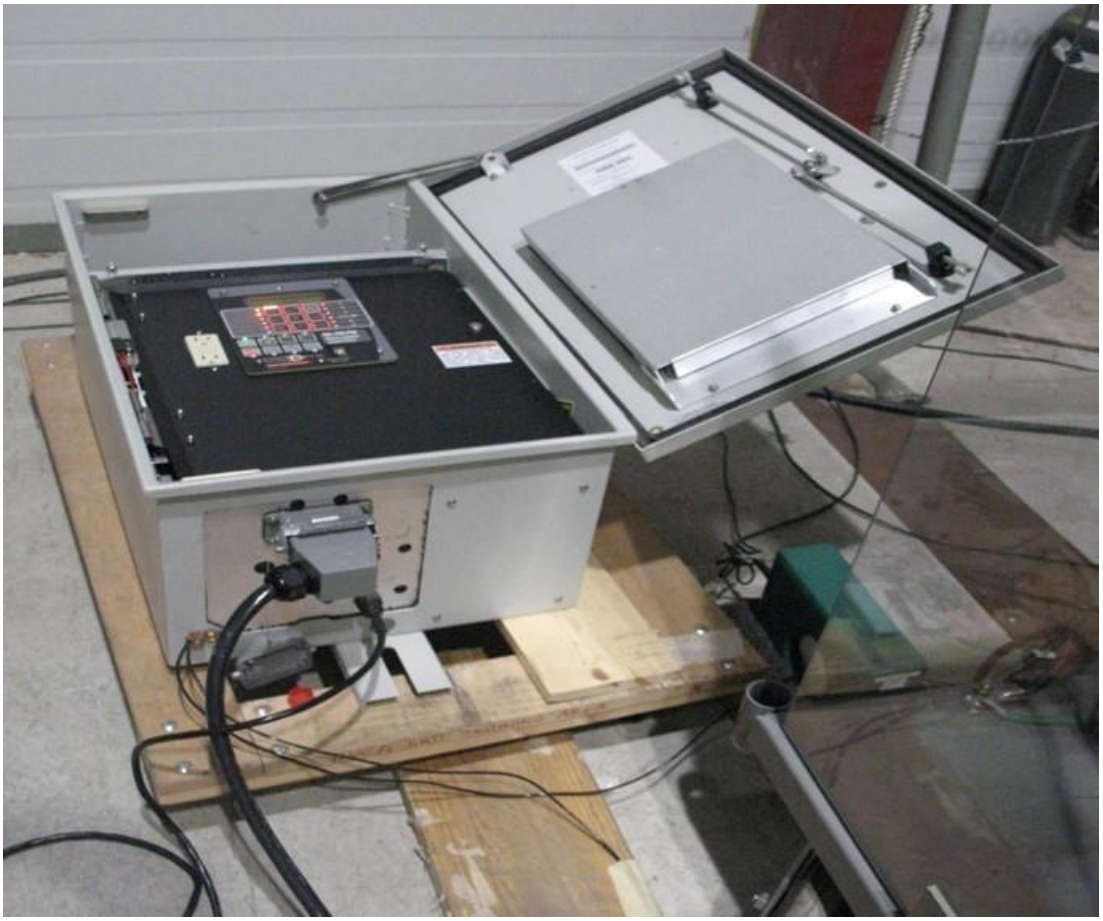
Report Prepared By:	Nader Samara	Date:	16-November-2018
Signed by:	Nick Nakamura	Date:	29-November-2018



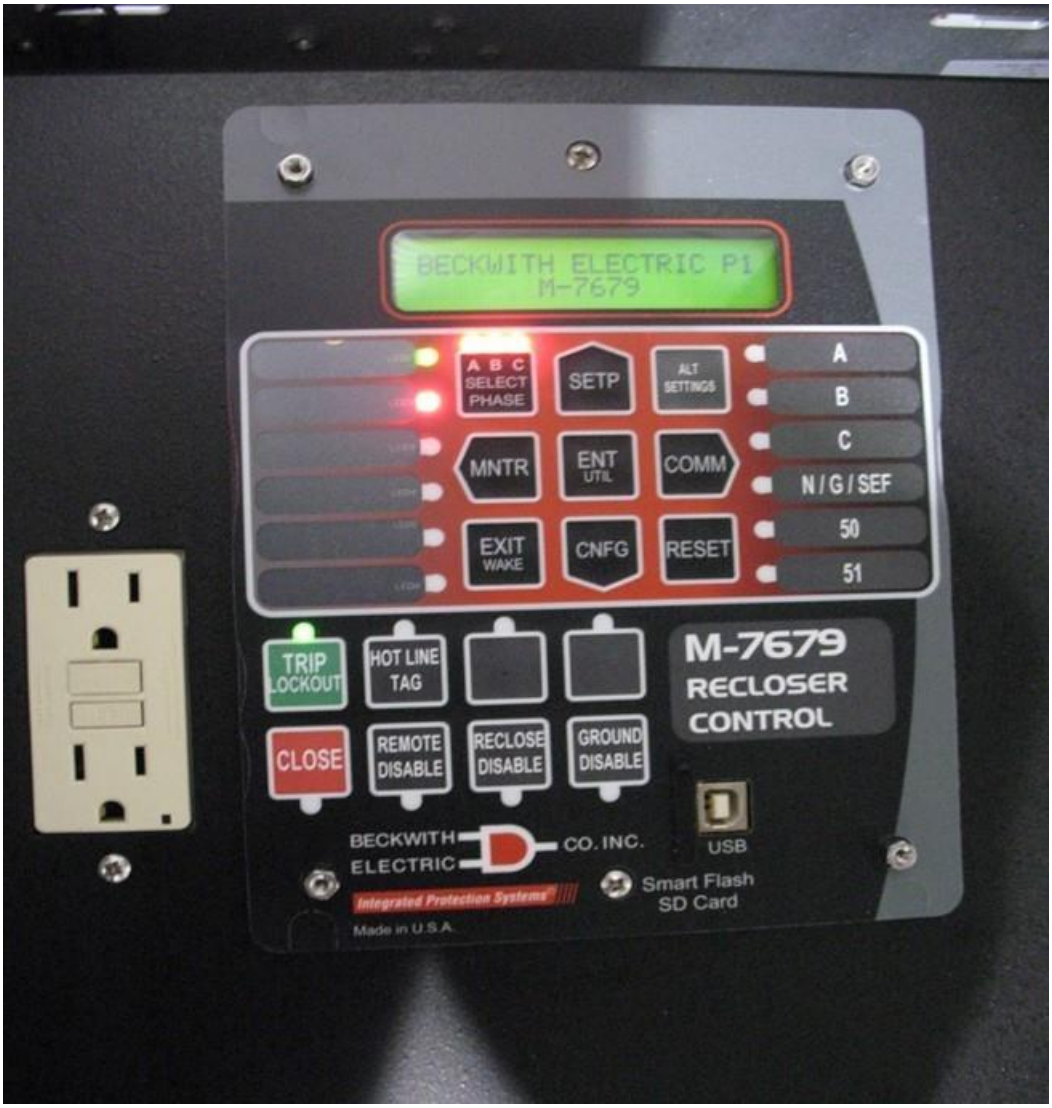
SSAO Recloser test setup



SSAO Transformer test setup



SSAO Control Setup



Beckwith control screen display