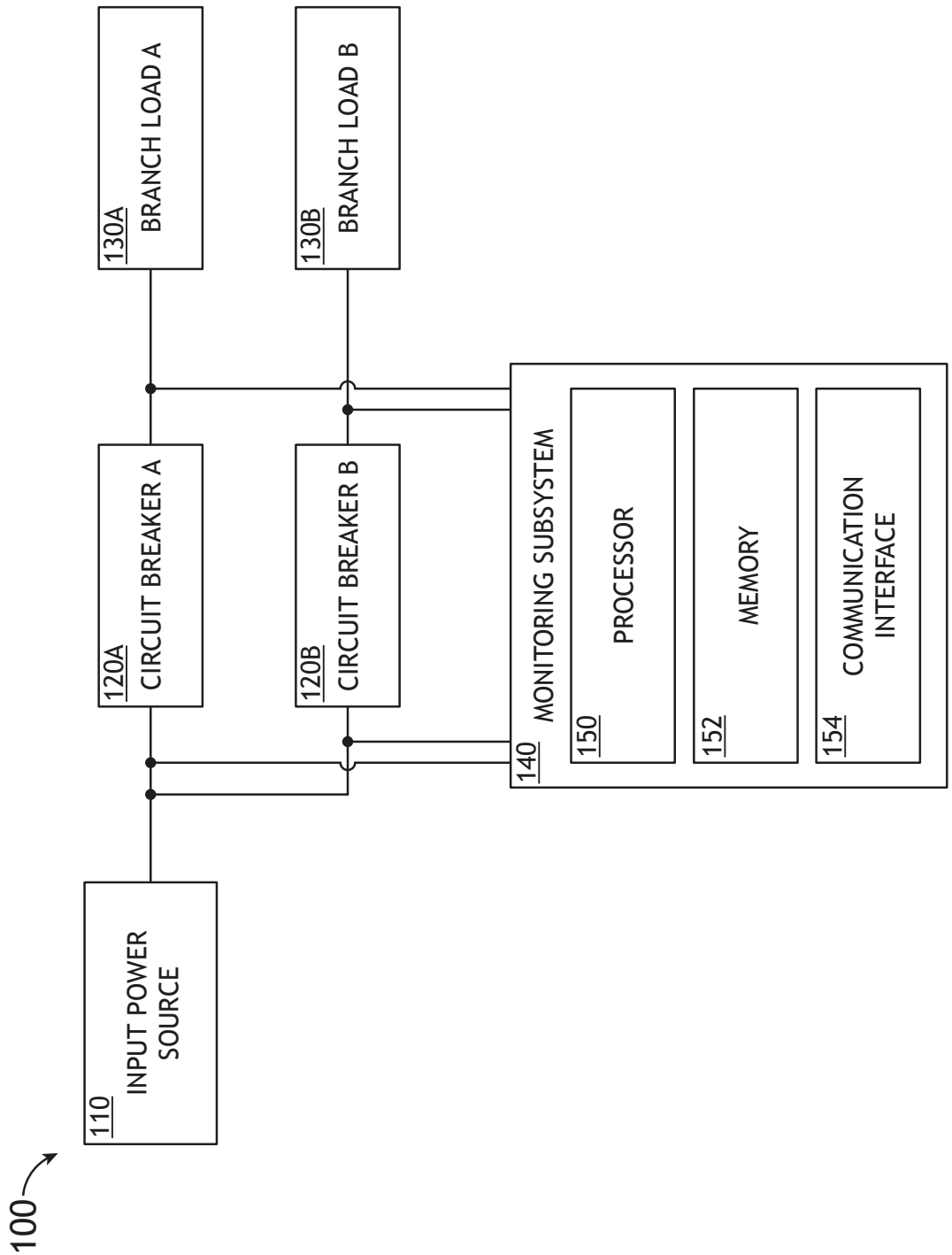

100
110
INPUT POWER SOURCE
120A
CIRCUIT BREAKER A
120B
CIRCUIT BREAKER B
130A
BRANCH LOAD A
130B
BRANCH LOAD B
140
MONITORING SUBSYSTEM
150
PROCESSOR
152
MEMORY
154
COMMUNICATION INTERFACE

FIG. 1

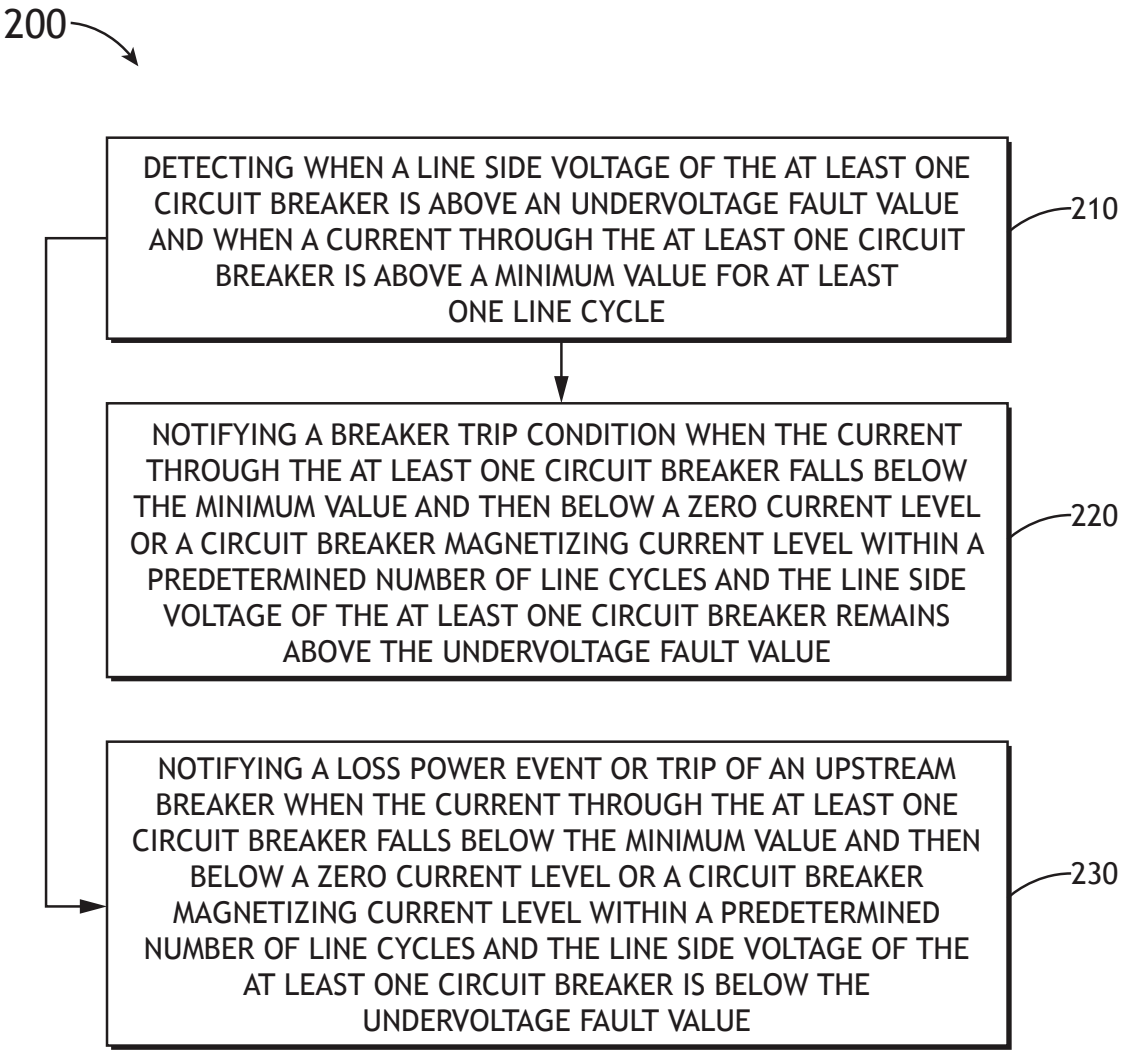

200
DETECTING WHEN A LINE SIDE VOLTAGE OF THE AT LEAST ONE CIRCUIT BREAKER IS ABOVE AN UNDERVOLTAGE FAULT VALUE AND WHEN A CURRENT THROUGH THE AT LEAST ONE CIRCUIT BREAKER IS ABOVE A MINIMUM VALUE FOR AT LEAST ONE LINE CYCLE
210
NOTIFYING A BREAKER TRIP CONDITION WHEN THE CURRENT THROUGH THE AT LEAST ONE CIRCUIT BREAKER FALLS BELOW THE MINIMUM VALUE AND THEN BELOW A ZERO CURRENT LEVEL OR A CIRCUIT BREAKER MAGNETIZING CURRENT LEVEL WITHIN A PREDETERMINED NUMBER OF LINE CYCLES AND THE LINE SIDE VOLTAGE OF THE AT LEAST ONE CIRCUIT BREAKER REMAINS ABOVE THE UNDERVOLTAGE FAULT VALUE
220
NOTIFYING A LOSS POWER EVENT OR TRIP OF AN UPSTREAM BREAKER WHEN THE CURRENT THROUGH THE AT LEAST ONE CIRCUIT BREAKER FALLS BELOW THE MINIMUM VALUE AND THEN BELOW A ZERO CURRENT LEVEL OR A CIRCUIT BREAKER MAGNETIZING CURRENT LEVEL WITHIN A PREDETERMINED NUMBER OF LINE CYCLES AND THE LINE SIDE VOLTAGE OF THE AT LEAST ONE CIRCUIT BREAKER IS BELOW THE UNDERVOLTAGE FAULT VALUE
230

FIG.2

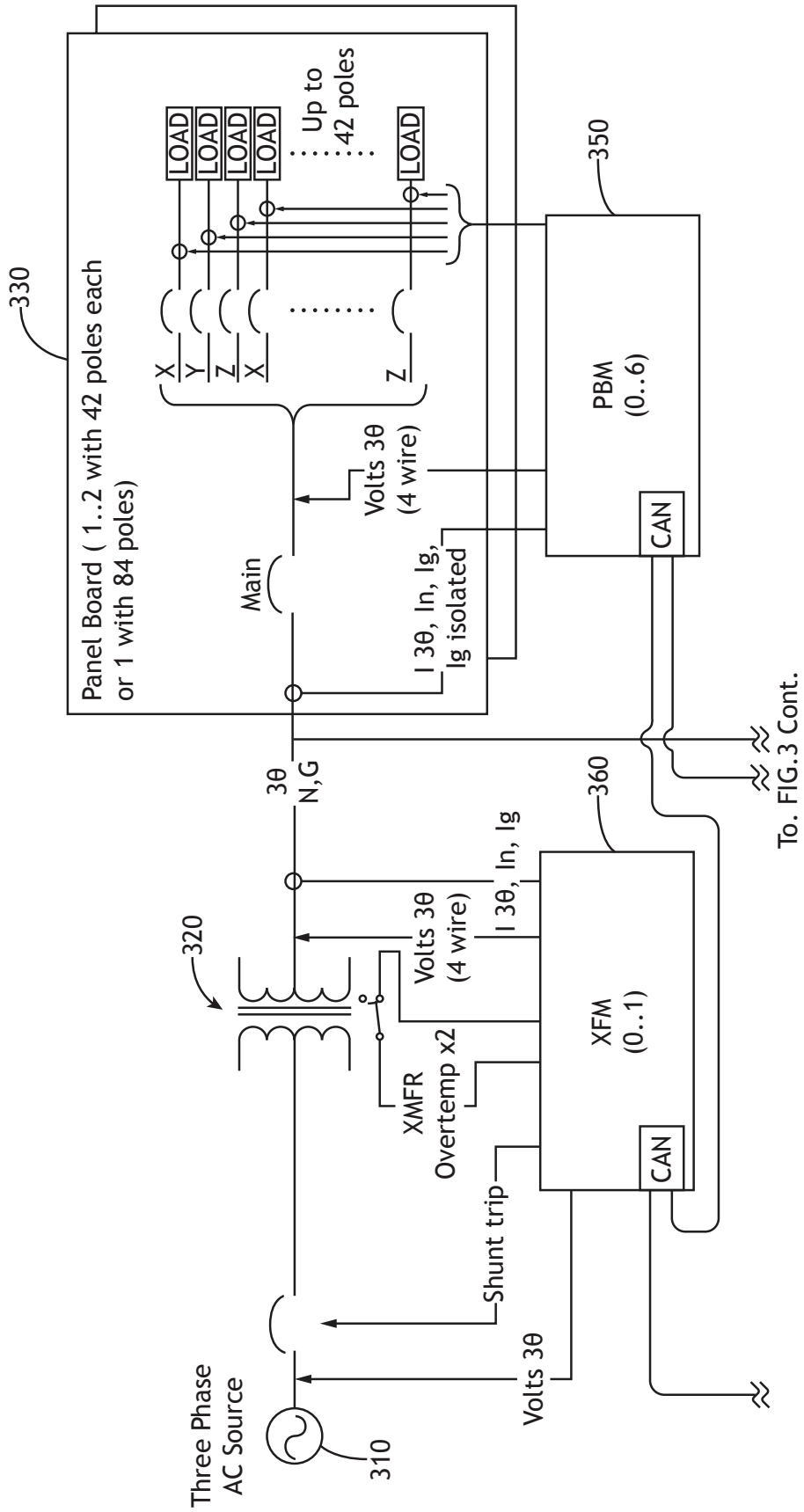

330
Panel Board (1..2 with 42 poles each
or 1 with 84 poles)
LOAD
LOAD
LOAD
LOAD
Up to
42 poles
LOAD
X
Y
Z
X
Z
Main
Volts 3θ
(4 wire)
I 3θ, In, Ig,
Ig isolated
350
PBM
(0..6)
CAN
To. FIG.3 Cont.
3θ
N,G
360
320
Volts 3θ
(4 wire)
I 3θ, In, Ig
XMFR
Overtemp x2
XFM
(0..1)
CAN
Shunt trip
Volts 3θ
Three Phase
AC Source
310

FIG.3

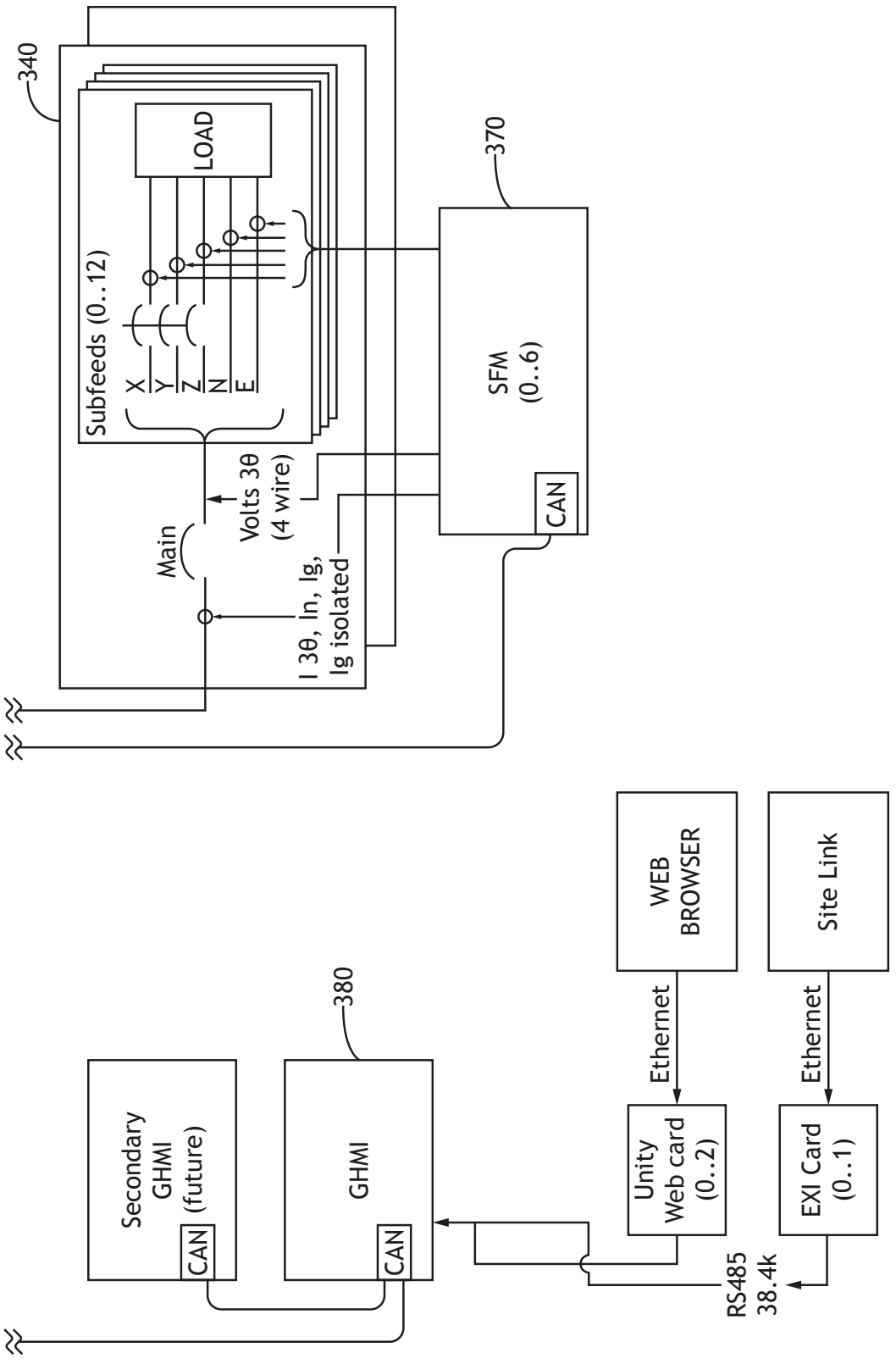

340
LOAD
Subfeeds (0..12)
X
Y
Z
N
E
370
SFM
(0..6)
CAN
Main
Volts 3θ
(4 wire)
I 3θ, In, Ig,
Ig isolated
380
Secondary
GHMI
(future)
CAN
GHMI
CAN
WEB
BROWSER
Site Link
Ethernet
Ethernet
Unity
Web card
(0..2)
EXI Card
(0..1)
RS485
38.4k

FIG.3 Cont.

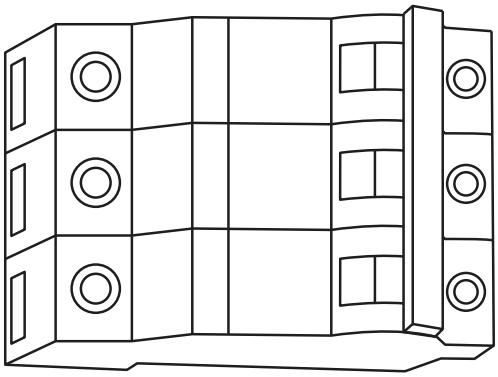


FIG.4C

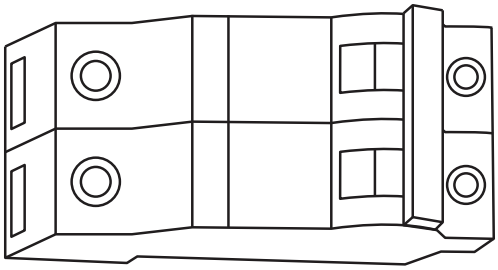


FIG.4B

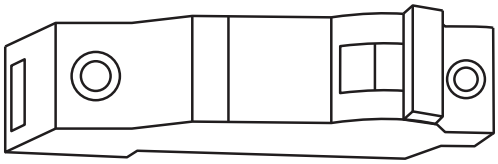


FIG.4A

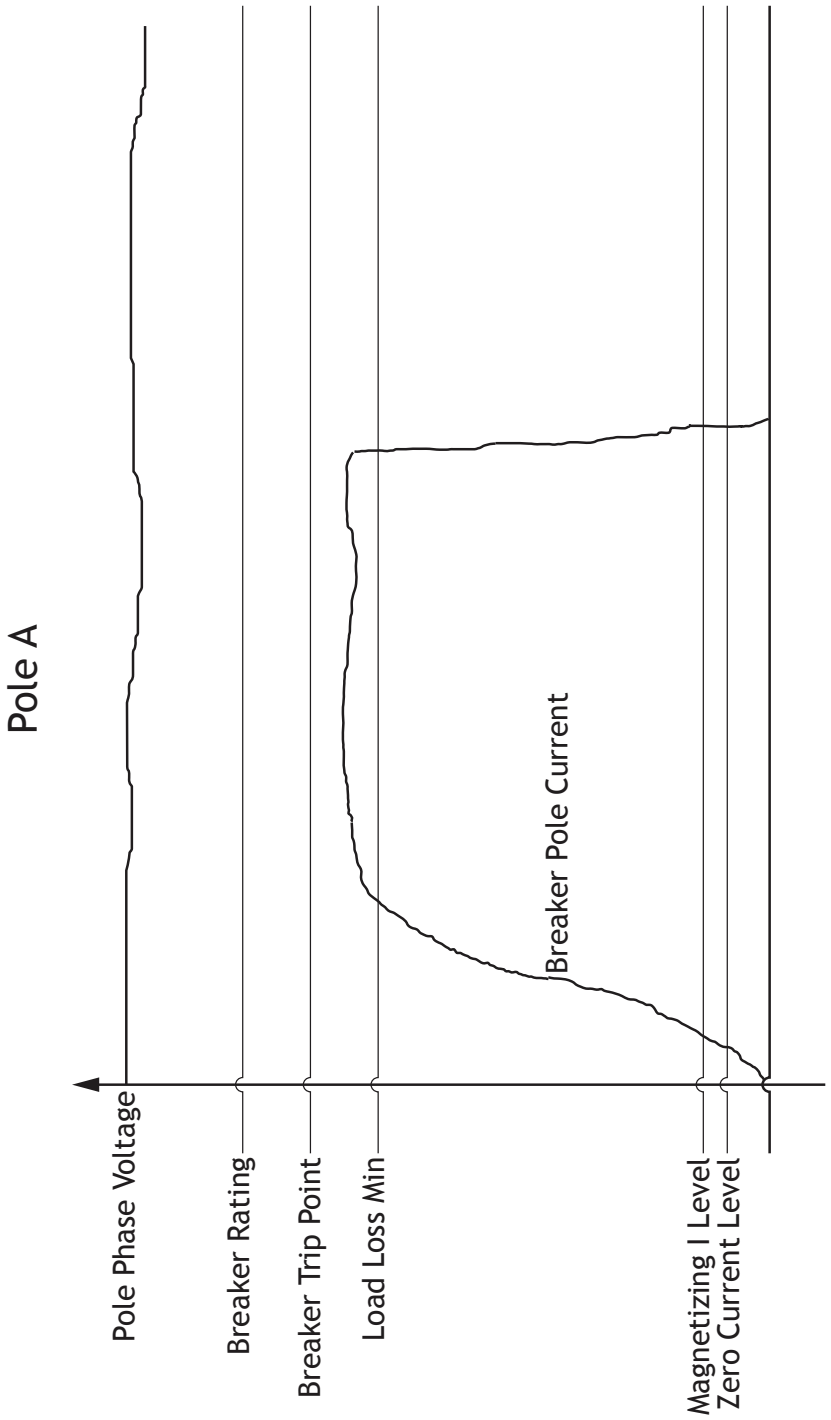

Pole A
Pole Phase Voltage
Breaker Rating
Breaker Trip Point
Load Loss Min
Breaker Pole Current
Magnetizing I Level
Zero Current Level

FIG.5

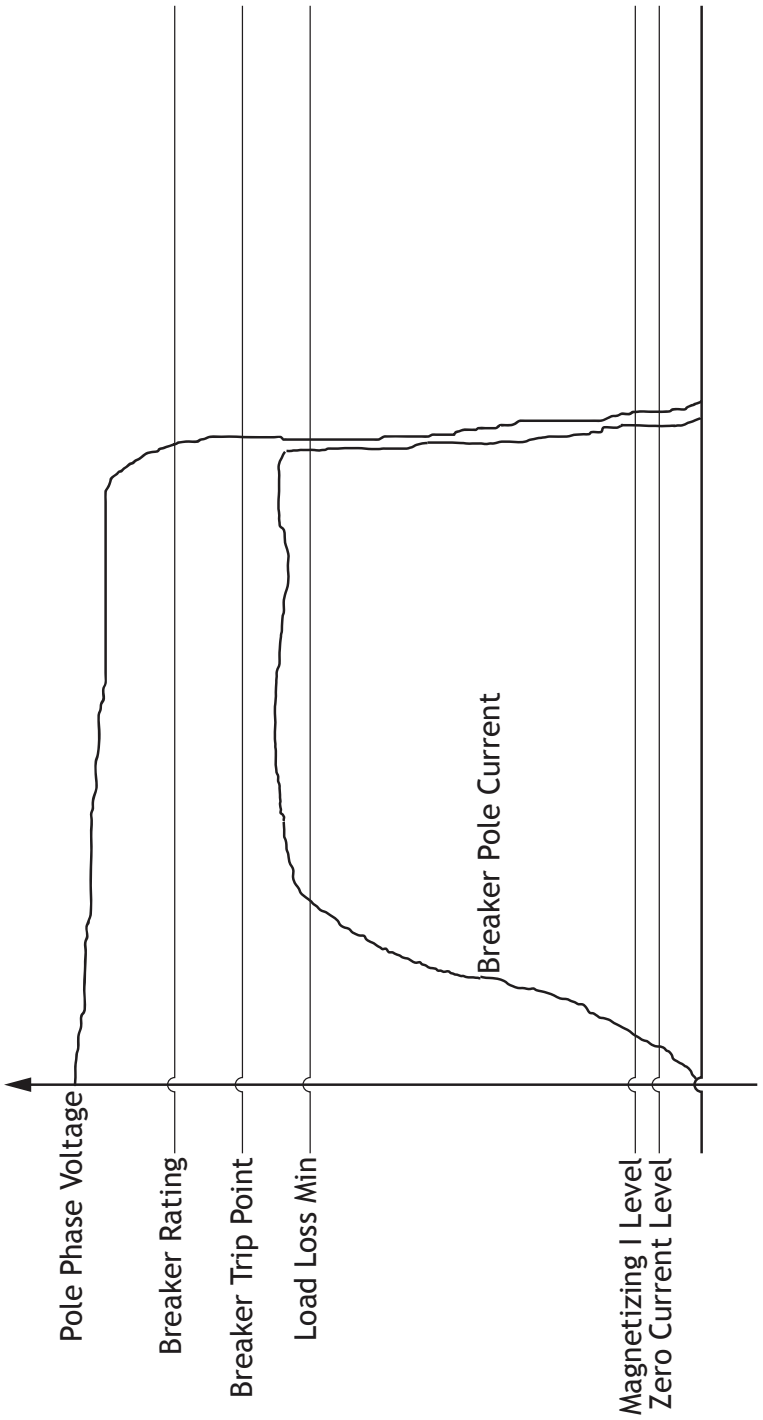

Pole A
Pole Phase Voltage
Breaker Rating
Breaker Trip Point
Load Loss Min
Breaker Pole Current
Magnetizing I Level
Zero Current Level

FIG.6