



**NOTES:**

1. THE 'B' END OF A FUSE OR LINK THUS (B) INDICATES THE BOTTOM CONNECTION.
2. THIS DRAWING SHOWS THE DC PROTECTION SCHEMATIC WHICH IS TO BE USED AT A CITY DISTRIBUTION SUBSTATION WITH OPTICAL ARC FLASH DETECTION AND DISTRIBUTION LOCAL AUTOMATION CONTROL PANEL INSTALLED. IT SHOULD BE READ IN CONJUNCTION WITH NETWORK STANDARDS AND THE SUBSTATION DESIGN INFORMATION PACKAGE.  
THIS DRAWING SHOWS 2 CUSTOMER SUPPLY ARRANGEMENTS.
- 2.1. CUSTOMER No.1 PROTECTION MUST ALWAYS BE INSTALLED. IT IS REQUIRED FOR SCADA (CTS & ACB MAY NOT BE PRESENT, SO WIRING MAY BE OMITTED).
- 2.2. CUSTOMER No.2 PROTECTION & WIRING IS TO BE INSTALLED ONLY WHERE REQUIRED.
3. CUSTOMER SUPPLY IS TO BE BY ACB. OVERCURRENT CT'S ARE INSTALLED AS SHOWN ON THE AC SCHEMATIC.
4. FOR CLARITY, TRANSFORMERS ARE REFERENCED AS 1st TRANSFORMER, 2nd TRANSFORMER & 3rd TRANSFORMER. ACTUAL DESIGNATION WILL DEPEND ON WHICH CITY TRIPLEX FEEDERS ARE SUPPLYING THE DISTRIBUTION SUBSTATION. TYPICAL DESIGNATION FOR 1st, 2nd, & 3rd TRANSFORMERS ARE - 'A', 'B', & 'C' 'D', 'E', & 'F' 'G', 'H', & 'J' 'K', 'L', & 'M' SEE DESIGN PACKAGE FOR PROJECT DETAIL.

TAGNAME	MFG	CATNO	DESC	REF DWG
BL LK	EUGAUQP	Moulded Type MS	BATTERY/TEST LINK	507111
CA	IEEC	RIB2B-ULD 48V DC	AUXILIARY RELAY WITH BASE SH2B-05C	169175
C-DC1, C-DC2	SCHNEIDER ELECT.	MCOM P1x2	OVERCURRENT & EARTH FAULT RELAY	224809
EB	-	EARTH BAR	EARTH BAR	-
FSB	ALSTOM	RS20P Blank	FUSE - 2 STUD BACK CONNECTED	-
AP	-	-	ANTI-PUMP RELAY (ACB PANEL)	244234-1 & 244235-1
ALM	-	-	AC MOTOR FOR SPRING CHARGING (ACB INTERNAL)	244234-1 & 244235-1
CS	-	-	CONTROL SWITCH (ACB PANEL)	244234-1 & 244235-1
SRC	-	-	SPRING RELEASE COIL (ACB INTERNAL)	244234-1 & 244235-1
TIC	-	-	TRIP COIL (ACB INTERNAL)	244234-1 & 244235-1
'a'	-	-	AUXILIARY SWITCH (Open when CB Open)	244234-1 & 244235-1
'b'	-	-	AUXILIARY SWITCH (Closed when CB Open)	244234-1 & 244235-1
'c'	-	-	AUXILIARY SWITCH (Spring Charge)	244234-1 & 244235-1
PPFB	-	-	READY TO CLOSE CONTACT (ACB INTERNAL)	244234-1 & 244235-1
T	UTILUX	3820	RAIL MOUNTED TERMINAL (ACB PANEL)	244234-1 & 244235-1
X3	UTILUX	3820	RAIL MOUNTED TERMINAL	118547
X4	WEDMULLER	SAK 25	RAIL MOUNTED TERMINAL CAT No. 27966	-
X5	WEDMULLER	ASKT	RAIL MOUNTED FUSE CAT No. 37636	-
X5	WEDMULLER	SAKR	RAIL MOUNTED ISOLATING TERM CAT No. 41926	-

LINK No.	LINK FUNCTION
LK-3B	CUSTOMER ACB SCADA CONTROL CLOSE - LINK
LK-2B	CUSTOMER ACB SCADA CONTROL OPEN - LINK
FSB	48V '10B' PROTECTION FUSE
BL-10B	48V 'B' -VE BATTERY LINK
BL-1B	'B' -VE BATTERY LINK

**LEGEND**

1. ALL DRAWINGS MUST BE APPROVED BY THE DESIGNER AND CHECKED BY THE ENGINEER.

2. BORROW & TITLE BLOCK UPDATED TO REFLECT THE LATEST REVISIONS. NUMBER & ARRANGED AS INTERNAL NUMBERING SYSTEM. CONTACT US FOR DETAILS.

3. ALL REVISIONS MUST BE APPROVED BY THE DESIGNER AND CHECKED BY THE ENGINEER.

4. ALL REVISIONS MUST BE APPROVED BY THE DESIGNER AND CHECKED BY THE ENGINEER.

5. ALL REVISIONS MUST BE APPROVED BY THE DESIGNER AND CHECKED BY THE ENGINEER.

TITLE	DWG No.
EPOXY RESIN ENCASED PROTECTION CURRENT TRANSFORMER OUTLINE AND DETAILS	125190
RMCB SUBSTATIONS WITH E TYPE LV BOARD WITH OPTICAL ARC FLASH DETECTION FIBRE LOOPING AND GENERAL MOUNTING DETAILS	227350 Sh5
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND DAFO CUSTOMER ACB INTERNAL WIRING AND ACB PANEL CONTROL WIRING SCHEMATIC	227390 Sh2
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND DAFO TRANSFORMER ACB INTERNAL WIRING AND ACB PANEL CONTROL WIRING SCHEMATIC	227390 Sh1
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD, DAFO, & CUSTOMER No.1 PROTECTION, DISTRIBUTION AUTOMATION CONTROL PANEL WIRING & CABLING DIAGRAM	227389 Sh2
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND DAFO DISTRIBUTION LOCAL AUTOMATION CONTROL PANEL WIRING & CABLING	227389 Sh1
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND DAFO 1500VVA TX'S AND VENTILATION FAN AC SERVICE BOARD LAYOUT, WIRING, & CONNECTIONS	227387 Sh1
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION CABLE SCHEDULE	227386 Sh2
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION CABLE CONNECTIONS	227386 Sh1
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND DAFO CUSTOMER No.1 (A No.2) PROTECTION PANEL WIRING AND CABLE CONNECTIONS	227385 Sh2
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD, OIL TYPE TX, & DAFO, TRANSFORMER PROTECTION PANEL CABLE CONNECTION DIAGRAM	227384 Sh2
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD, DRY TYPE TX, & DAFO, TRANSFORMER PROTECTION PANEL WIRING AND CABLE CONNECTIONS	227384 Sh1
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD, OIL TYPE TX, & DAFO, TRANSFORMER PROTECTION PANEL WIRING DIAGRAM	227383 Sh2
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD, DRY TYPE TX, & DAFO, TRANSFORMER PROTECTION PANEL WIRING DIAGRAM	227383 Sh1
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD & DAFO, TRANSFORMERS AND CUSTOMER OVERCURRENT PROTECTION FREE STANDING PANELS LABEL DETAILS	227382 Sh1
CITY DISTRIBUTION SUBSTATIONS WITH OPTICAL ARC FLASH DETECTION (E TYPE LV) TRANSFORMERS AND CUSTOMER OVERCURRENT FREE STANDING PANELS LAYOUT DETAILS	227381 Sh1
CITY DISTRIBUTION SUB WITH E TYPE LV BOARD AND DAFO, DLAC PANEL SCHEMATIC, GENERAL DC SUPPLIES INTER-PANEL WIRING, FIBRE COMMS & CABLING DIAGRAM	227380 Sh4
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION CUSTOMER OVERCURRENT DC SCHEMATIC	227380 Sh3
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD & OPTICAL ARC FLASH DETECTION TRANSFORMER DC SCHEMATIC	227380 Sh2
CITY DISTRIBUTION SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION AC SCHEMATIC	227380 Sh1

**REFERENCE DRAWINGS**

SCALE	NTS
DESIGNED	-
DRAWN	E.KAIROUZ
CHECKED	C.MURPHY
APPROVED	C.MURPHY
DATE	17/06/2015
TRIM REF	-

ISSUED FOR CONSTRUCTION

PROJECT NUMBER: OPEX-6923-1

DRAWING No: 227380

SHEET 3

AMD 3

SIZE A0

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