DC MONITOR

AUXILIARY DC SERVICES MONITORING UNIT (USSA)

Including:

- ✓**A digital display ground leakage DC detector**
- ✓**A digital display DC low voltage detector voltmeter**
- ✓**A DC ammeter**

Note: Detectors may be sold separately.

INTRODUCTION

The USSA unit was designed to monitor the VDC panels of auxiliary services. It includes a digital display **ground leakage DC detector**, a digital display **DC low voltage detector voltmeter**, and a digital display **DC ammeter**. All 3 units are assembled into a 19-inch enclosure (model 19) for standard racks, or into an enclosure that can be mounted on the front face of a panel (model PAN), or in a compact enclosure (model P225).

See Outline Drawings 140-15386 and 140-16343 (pages 3 and 4).

MAIN FEATURES

All connections are done on the TB1 terminal block. The calibration is done on the front panel. Just open the windows (item 4 on drawing 140-15386 and 140-16343) to gain access to the calibration potentiometers.

USSA

OPERATION OF GROUND LEAKAGE DETECTOR

The display panel shows the value of the positive or negative leakage to ground as follows: i.e., 0.25 mA, –0.12 mA, 0.00 mA, etc. When the leakage is greater than one of the 2 detection thresholds (positive or negative threshold), the corresponding alarm contact at TB1-5,6 or TB1-7,8 closes.

OPERATION OF LOW VOLTAGE DETECTOR

The display works as a voltmeter and shows the DC voltage as follows: i.e., 129.4 V. When the DC voltage is lower than the detection threshold, the TB1-9,10 alarm contact closes.

(Note: The TB1-9,10 contact also closes upon total loss of the VDC power supply.)

OPERATION OF AMMETER

The display always shows the positive or negative current flowing into the “x” amperes shunt, 100 mV, to which it is connected at TB1-3,4 as follows: example: 352.4 A, –235.6 A, etc.

HOW TO ORDER

Simply specify the following parameters:

Operating DC voltage:	24, 48, 125, 250 VDC or X (for special VDC)
Ammeter full scale current:	50, 100, 200, 400, 600, 800 A, etc.
Outline:	– 19-inch enclosure (19) for standard racks; – Panel enclosure (PAN); – Compact enclosure (P225).

Example for a model of Auxiliary DC Services Monitoring Unit (USSA): USSA-125-400-PAN

USSA:	Auxiliary DC Services Monitoring Unit
125:	125 VDC
400:	ammeter –400 ~ 0 ~ +400 A
PAN:	panel enclosure

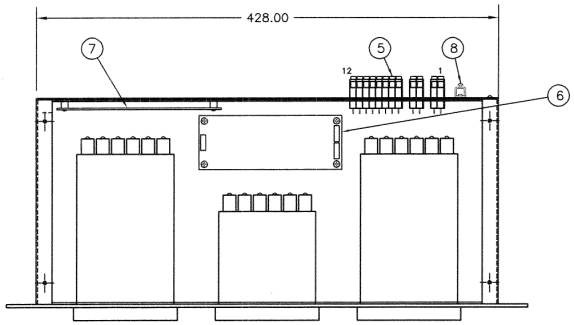
ELECTRICAL FEATURES

Power:	24 VDC system:	20 to 30 VDC, 1.5 A
	48 VDC system:	40 to 60 VDC, 0.8 A
	125 VDC system:	100 to 140 VDC, 0.3A
	250 VDC system:	200 to 280 VDC, 0.2A
Accuracy:	0.5% of full scale (note 1) (Note 1: VDC supply voltage variations affect the ground leakage detector precision)	
Display:	– Ground leakage detector:	3 digits (0.56 inch red LED)
	– Low voltage detector:	4 digits (0.56 inch red LED)
	– Ammeter:	4 digits (0.56 inch red LED)
Alarm contacts:	load rating: 140 VDC, 0.5 A / 24 VDC, 3 A / 125 VAC, 3 A, type: "A" (N.O.)	

TESTS

Electric strength test: EIC 60255-5
Surge withstand capability test (SWC): satisfies IEC 60255-22-1/-4 (IEEE C37.90.1)
Environmental tests: Dry-heat test: satisfies IEC 68-2-2

Quality assurance program: ISO9001:2008

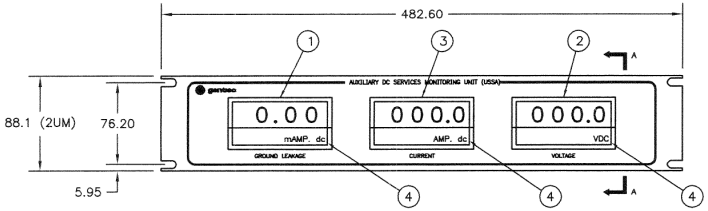


TOP VIEW WITHOUT COVER

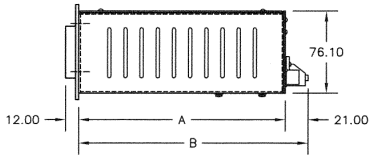
TERMINAL BLOCK TB1 (NOTE 1)

		TB1
Vdc	+	1
	-	2
SHUNT 100mV	+	3
	-	4
GROUND LEAKAGE(+)		5
		6
GROUND LEAKAGE(-)		7
		8
LOW VOLTAGE		9
		10
GND INPUT		11
GND OUTPUT		12

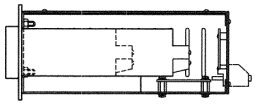
GND



FRONT VIEW 19-INCH ENCLOSURE (USSA-19)

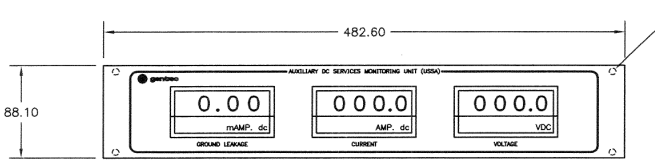


SIDE VIEW

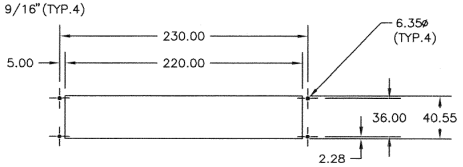


SECTION A-A

	125Vdc	250Vdc
A	191.50	226.50
B	212.50	247.50



FRONT VIEW PANELMOUNT ENCLOSURE (USSA-PAN)



PANEL CUT OUT
SCALE 1=4

NOTES 1-THE CONTACTS ARE N.O., THEY CLOSE TO REPORT THE PROBLEM.
2-CABINET: COLD LAMINATED STEEL.

REF.	REVISION	DATE	VER	APP

TOLERANCE
DEC. ±
FRAC. ±
ANGLE ±
√

gentec

APP. M.DONATI
VER.
D.POULIOT

DC MONITOR
USSA-PAN AND USSA-19
MECHANICAL LAYOUT

PROJECTION

DATE 2010-02-11
1=3

SK-3648 A2

USSA-_____-_____-PAN and USSA-_____-_____-19

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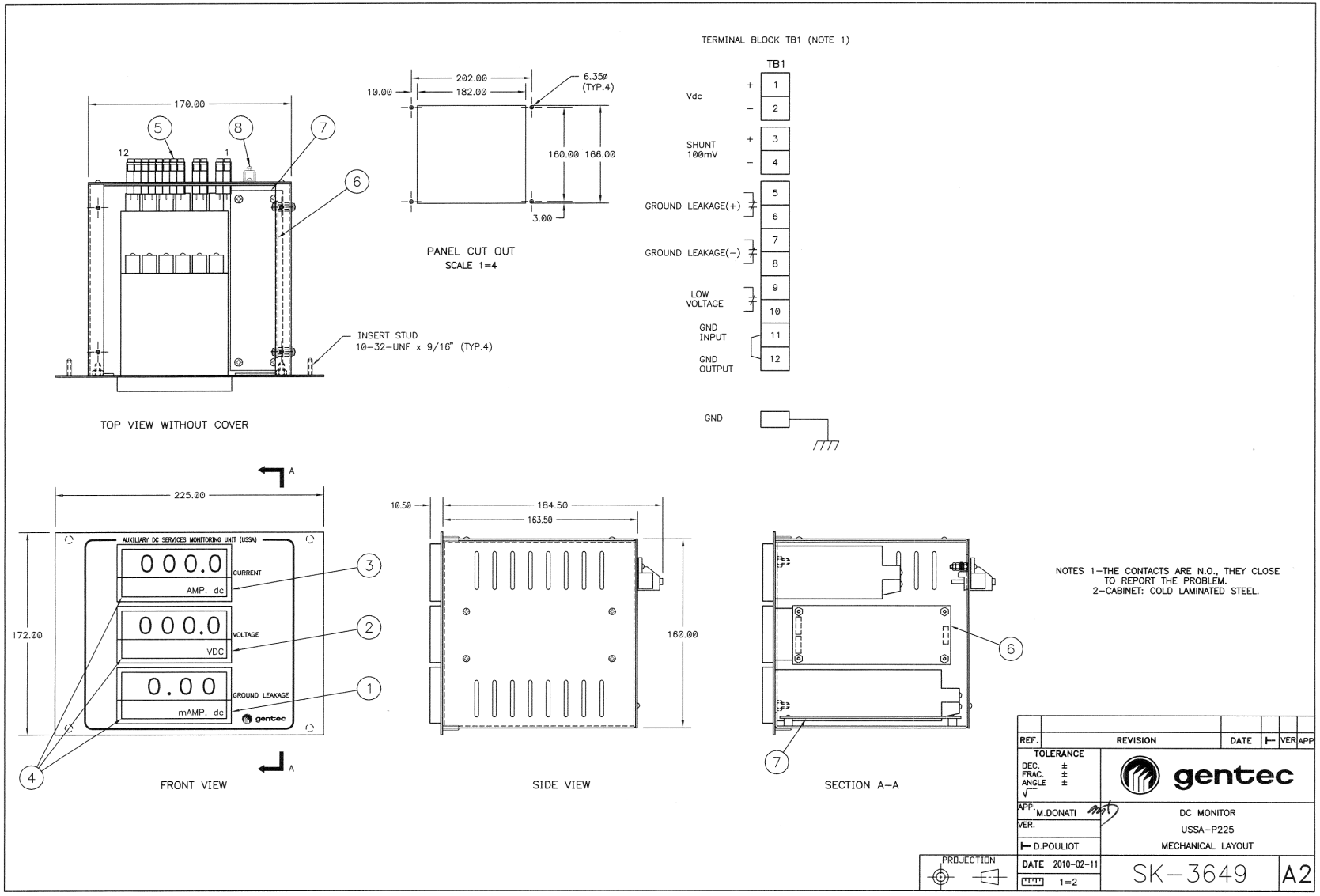

USSA-_____-_____-P225

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