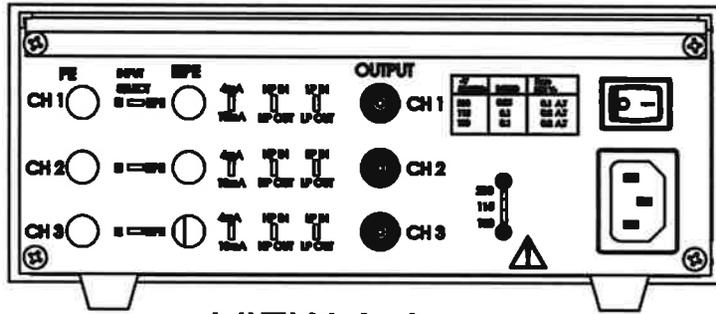


PROPRIETARY AND CONFIDENTIAL

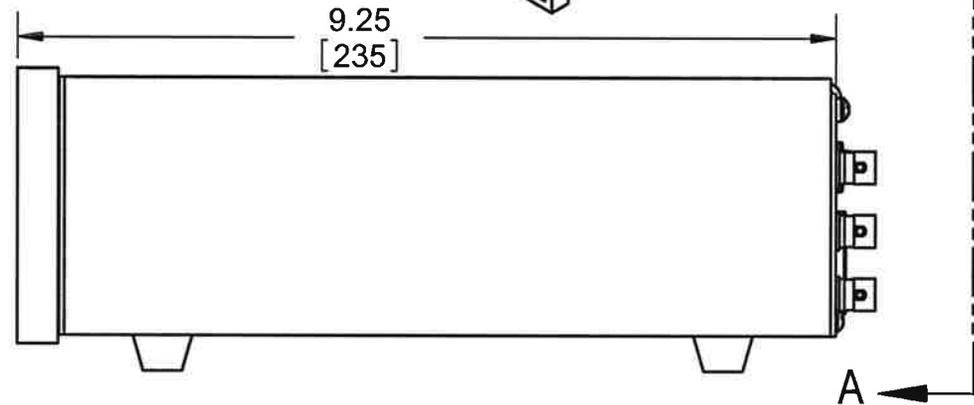
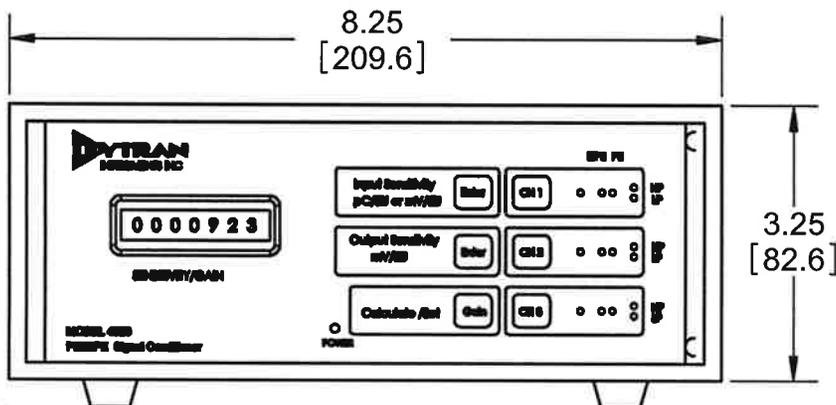
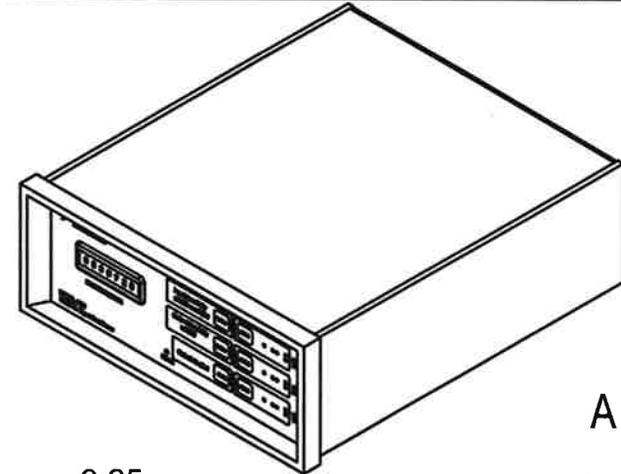
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REVISIONS

REV	ECN	DESCRIPTION	BY/DATE	CHK	APPR
B	8193	SEE ECN	LN 01/04/12	EP	DV
C	8606	ADDED NOTE 1	JS 05/04/12	RA	DV
D	10469	REVISED FRONT & REAR PANEL TO REFLECT ACTUAL UNIT	JS 10/17/13	RA	DV



VIEW A-A



1 AC POWER CORD (NOT SHOWN) SUPPLIED.
 NOTES: UNLESS OTHERWISE SPECIFIED

USED ON _____ NEXT ASSY _____

APPLICATION _____

THIRD ANGLE PROJECTION
 USA

UNLESS OTHERWISE SPECIFIED:
 INTERPRET DIM & TOL PER ASME Y14.5M - 1994.
 REMOVE BURRS.
 COUNTERSINK INTERNAL THDS 90° TO MAJOR DIA.
 CHAM EXT THDS 45° TO MINOR DIA.
 THD LENGTHS AND DEPTHS ARE FOR MIN FULL THDS.
 THDS PER MIL-S-7742.
 DIMENSIONS APPLY AFTER FINISHING.

ALL MACHINED SURFACES. TOTAL RUNOUT WITHIN .005.
 BREAK SHARP EDGES .005 TO .010.
 MACHINED FILLET RADII .005 TO .015.
 WELDING SYMBOLS PER AWS A2.4.
 ABBREVIATIONS PER MIL-STD-12

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES. DIMENSIONS IN BRACKETS [] ARE IN MILLIMETERS
 TOLERANCES ARE:
 INCHES METRIC ANGLES
 .XX ± .03 .X ± 0.8 ± 1°
 .XXX ± 0.10 .XX ± 0.25

MATERIAL _____

FINISH _____

DO NOT SCALE DRAWING

CONTRACT NO. _____

APPROVALS		DATE
ORIG	JS	06/08/10
CHK	EP	11/23/11
APP	DV	11/23/11
APP	DV	11/19/13

DYTRAN INSTRUMENTS, INC. Chatsworth, CA

MASTER ONLY IF IN RED

TITLE: **OUTLINE/INSTALLATION DWG, 3-CHANNEL CHARGE AMPLIFIER / IEPE SIGNAL CONDITIONER**

SIZE	CAGE CODE	DWG. NO.	REV
A	2W033	127-4020	D

SCALE: NONE SOLIDWORKS SHEET 1 OF 1

Model Number
4020

PERFORMANCE SPECIFICATIONS

DOC NO
PS4020

3-CHANNEL CHARGE AMPLIFIER / IEPE SIGNAL CONDITIONER

REV D, ECN 9669, 03/05/13



- DESIGNED TO BE USED WITH IEPE SENSORS
- INTEGRAL USER SELECTABLE CURRENT SOURCE

PHYSICAL

Weight, Max (with out power cord) 3.4 lbs
Case Material Iridited Aluminum

Input Specifications

Piezoelectric
Maximum Charge Input ≤ 30000 pC
Source Resistance > 10 megohms
Source Capacitance < 30000 pF
IEPE
Constant Current Source None, 4mA or 10mA selectable per channel
Accuracy $\pm 15\%$
Compliance Voltage < 22 Vdc
Maximum Input Voltage < 220 Volts (AC+DC)
Input Impedance 100 megohms and 33000 pF

Output Specifications

AC Voltage Single ended and referenced to signal ground. Signal proportional to input.
Linear Output 10 V peak, minimum
Output Current 10 mA, maximum
DC Offset 15 mV, maximum
Protection Short circuit protected

Transfer Characteristics

Gain Range 0.00 to 999.9
Resolution 0.0025, $0 \leq \text{gain} < 10$
0.025, $10 \leq \text{gain} < 100$
0.25, $100 \leq \text{gain} < 1000$
Accuracy $\pm 0.5\%$ at 1kHz with filters disabled and gain > 1
Sensitivity (pC/EU or mV/EU) 0.00 to 9999
Resolution Determined by gain resolution
Linearity 0.1% of Full Scale, best fit straight line at 1kHz reference
Noise with standard 10kHz 4-pole Butterworth low pass filter installed
Piezoelectric 0.02 pC rms + 0.006 pC rms per 100 pF of source capacitance RTI + 1mV rms RTO
IEPE 20 uV rms RTI + 400 uv rms RTO. Input shunted with a 249 Ohm (4mA exc) or 100 Ohm (10mA exc) load
Broadband Frequency Response $\pm 5\%$, 0.1Hz to 50kHz, reference to 1kHz. -3db at 100KHz, typical
Filter Characteristics
High Pass Type Single pole RC
Low Pass Type 4-POLE Butterworth
Corner Frequency (-3db) 10Hz $\pm 5\%$ and 10kHz $\pm 12\%$
Crosstalk between channels 80db RTI, minimum

Environment Specification

Operating Temperature 0 to +50 °C
Humidity 95% RH, Non-Condensing

Rare Panel Selectable Functions (per channel)

Input Type Charge or IEPE
Excitation Current (Isotron Only) 4mA or 10mA
Filter HP (High Pass) and LP (Low Pass)

Front Panel Programmable Functions (per channel)

Sensitivity (pC/EU or mV/EU) 0.01 to 99.99
100.0 to 999.9
1000 to 9999
Output Scaling (mV/EU) 0.01 to 99.99
100.0 to 999.9
1000 to 9999
Gain (Calculated) 0.00 to 999.9
Gain (front panel adjustable) 0.00 to 999.9
Memory Serial EEPROM (1K bits)

Power Requirements

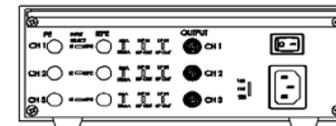
Voltage 100/115/230 Vac rear panel switch selectable, 50-60Hz
Isolation No isolation channel to channel or signal ground to case ground
Isolation No isolation channel to channel or signal ground to case ground

Supplied Accessories:

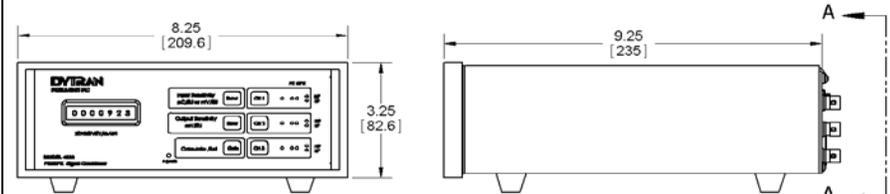
- 1) Accredited calibration certificate (ISO 17025)
- 2) Power Cord, 6 FT.

Notes:

[1] In the interest of constant product improvement, we reserve the right to change specifications without notice.



VIEW A-A



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-4020 for more information.



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