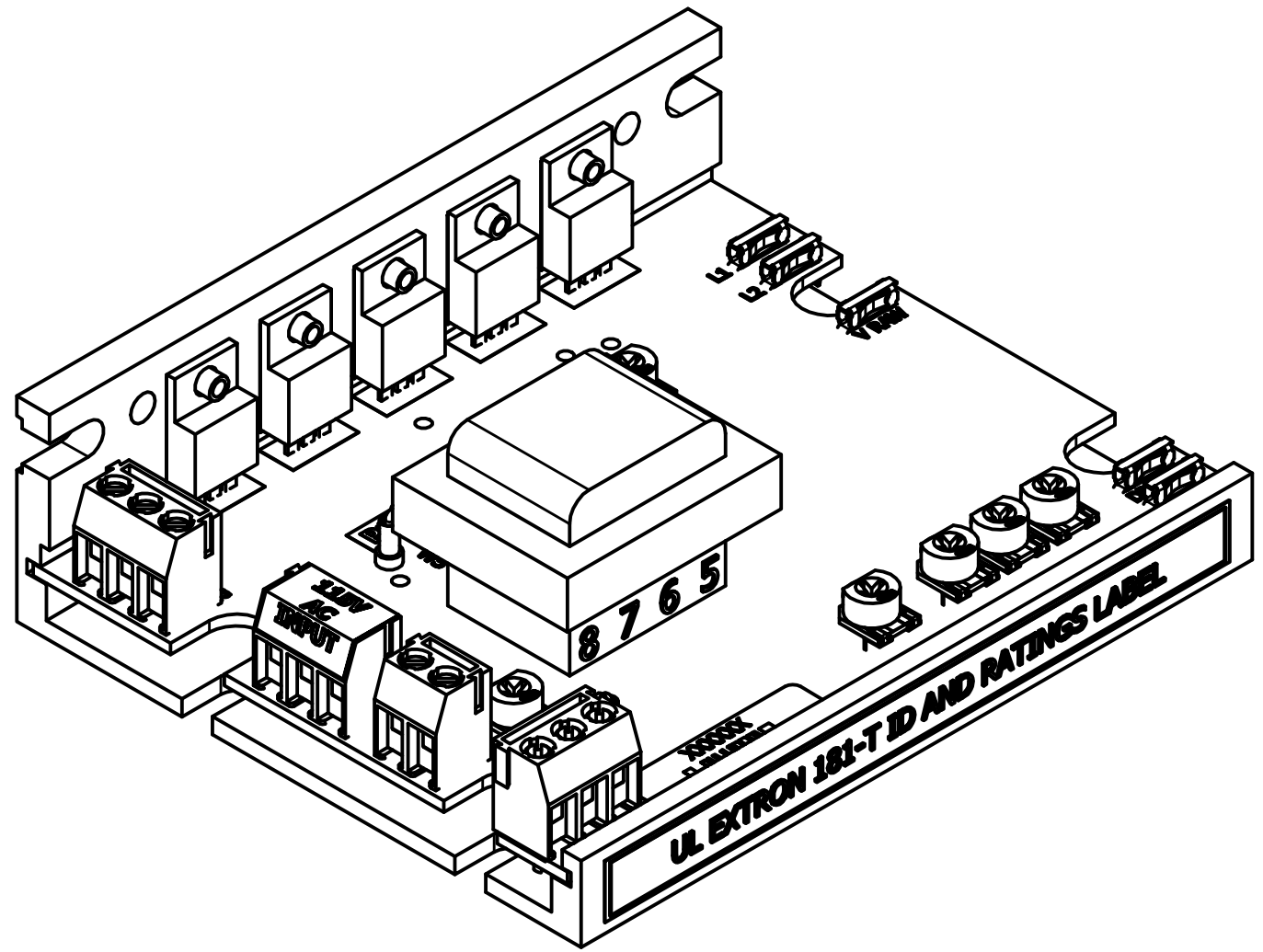
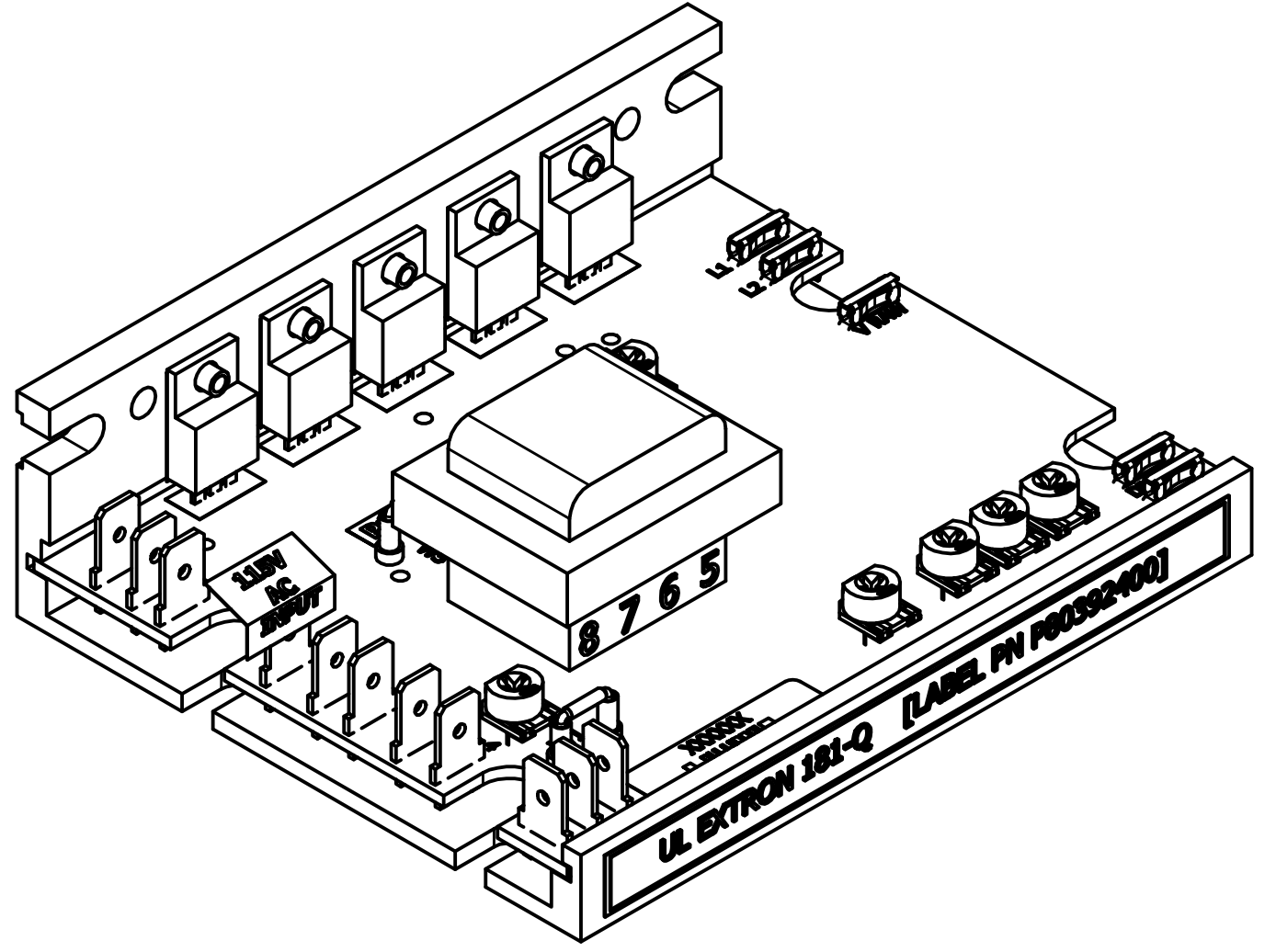


REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	NEW DRAWING RELEASE	3/17/2023	PSG



181-T  
TERMINAL CONNECTIONS

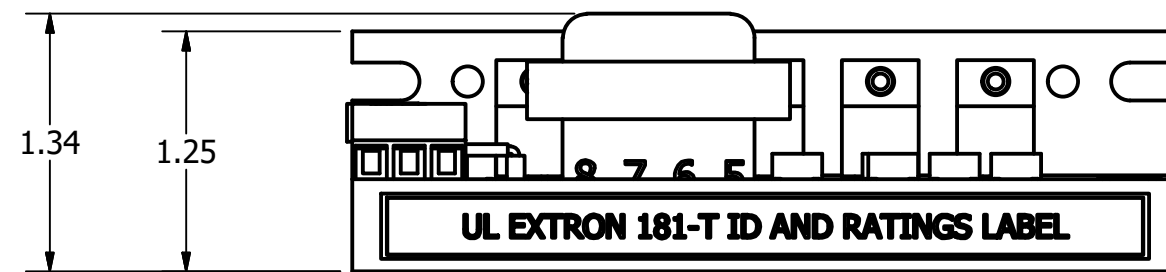
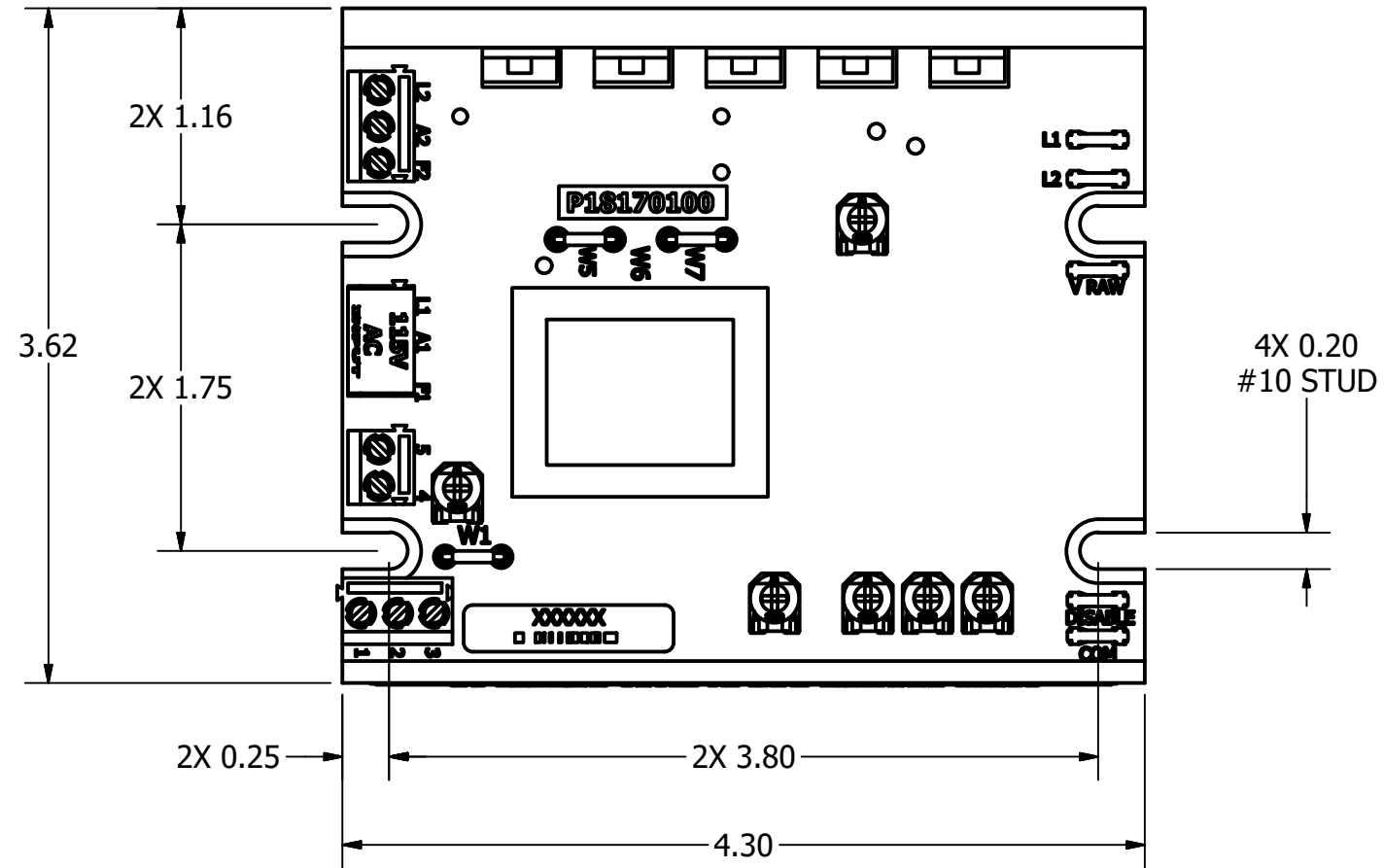
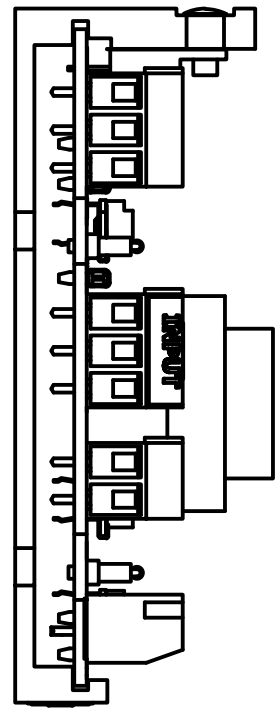
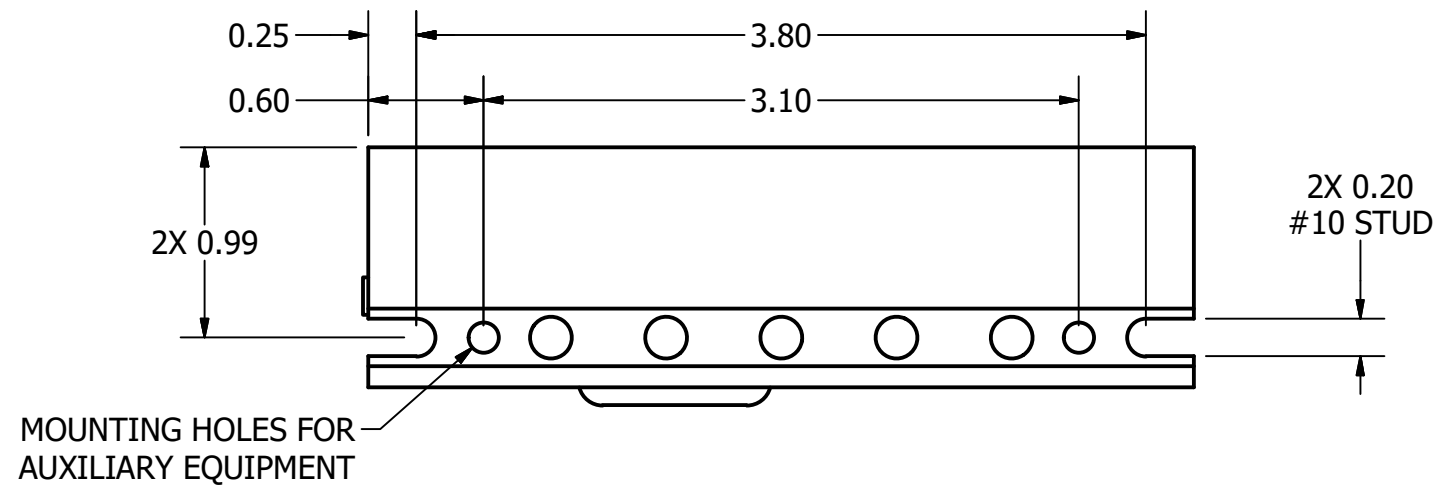
WIRE CONNECTORS ON LEFT EDGE  
PCB CONNECTOR W/ SCREW CONNECTION  
WIRE ENTRANCE IS PARALLEL TO PCB  
18-12AWG WIRE  
ACCEPTS FERRULE-ENDED WIRES



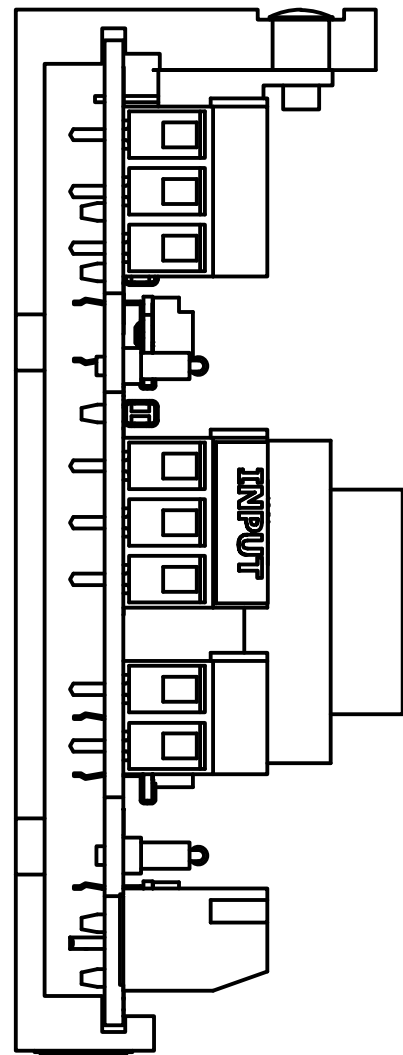
181-Q  
QUICK CONNECT

WIRE CONNECTORS ON LEFT EDGE  
QUICK-FIT TERMINAL  
QUICK DISCONNECT (Q/D) MALE  
0.250 W X 0.032 THK

MATL:	Extron Company, Minneapolis, MN (c) 2023 <a href="http://extroncompany.com">http://extroncompany.com</a>		
FINISH:	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES		
SHEET METAL (14-20 GA) LASER OR PUNCH AND PRESS BRAKE FORMING TOLERANCES:	TITLE: <b>F/A SNAP-TROL 181-T/181-Q MOTOR CONTROL [CUST]</b>		
HOLE DIAMETER: ±0.003 SAME PLANE HOLE-TO-HOLE: ±0.010 SAME PLANE SHEAR EDGE -TO-HOLE: ±0.015 FORMED EDGE-TO-HOLE: ±0.015 ANGULAR: ±1°	DWG NO: <b>P181701X0</b>		REV: <b>A</b>
3rd ANGLE PROJECTION 	UNLESS SUPERSEDED BY THE ABOVE X ± 0.1 XX ± 0.03 XXX ± 0.015		SCALE: 1.25:1 DWG SIZE: B SHEET 1 OF 4
DO NOT SCALE DRAWING			

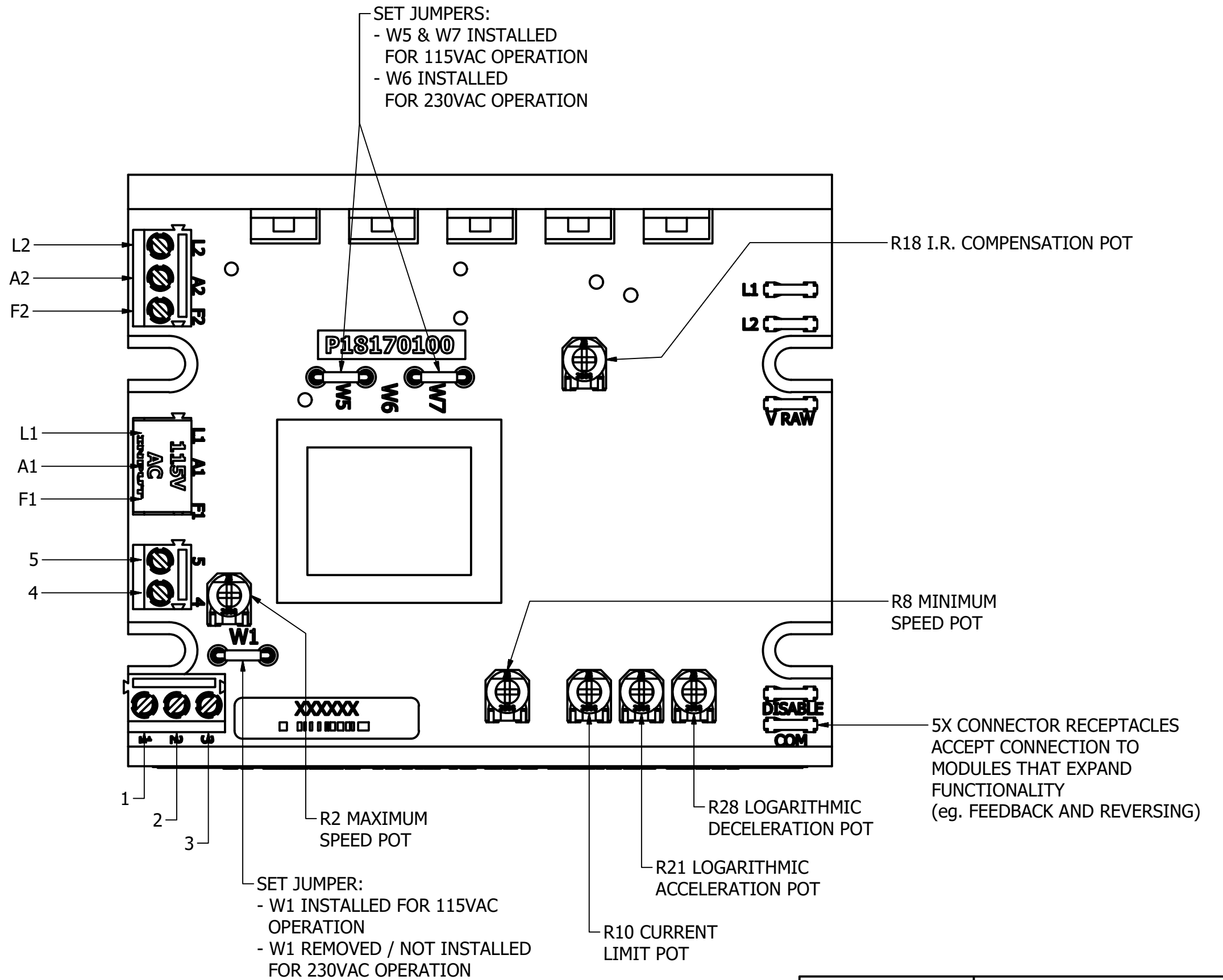


MATERIAL:		Extron Company, Minneapolis, MN (c) 2023 <a href="http://extroncompany.com">http://extroncompany.com</a>	
FINISH:		TITLE:	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES		F/A SNAP-TROL 181-T/181-Q MOTOR CONTROL [CUST]	
SHEET METAL (14-20 GA) LASER OR PUNCH AND PRESS BRAKE FORMING TOLERANCES:		DWG NO: P181701X0	
HOLE DIAMETER: ±0.003 SAME PLANE HOLE-TO-HOLE: ±0.010 SAME PLANE SHEAR EDGE-TO-HOLE: ±0.015 FORMED EDGE-TO-HOLE: ±0.015 ANGULAR: ±1°		REV: A	
3rd ANGLE PROJECTION	UNLESS SUPERSEDED BY THE ABOVE	SCALE: 1:1	
	X ± 0.1 XX ± 0.03 XXX ± 0.015	DWG SIZE: B	SHEET 2 OF 4
DO NOT SCALE DRAWING			

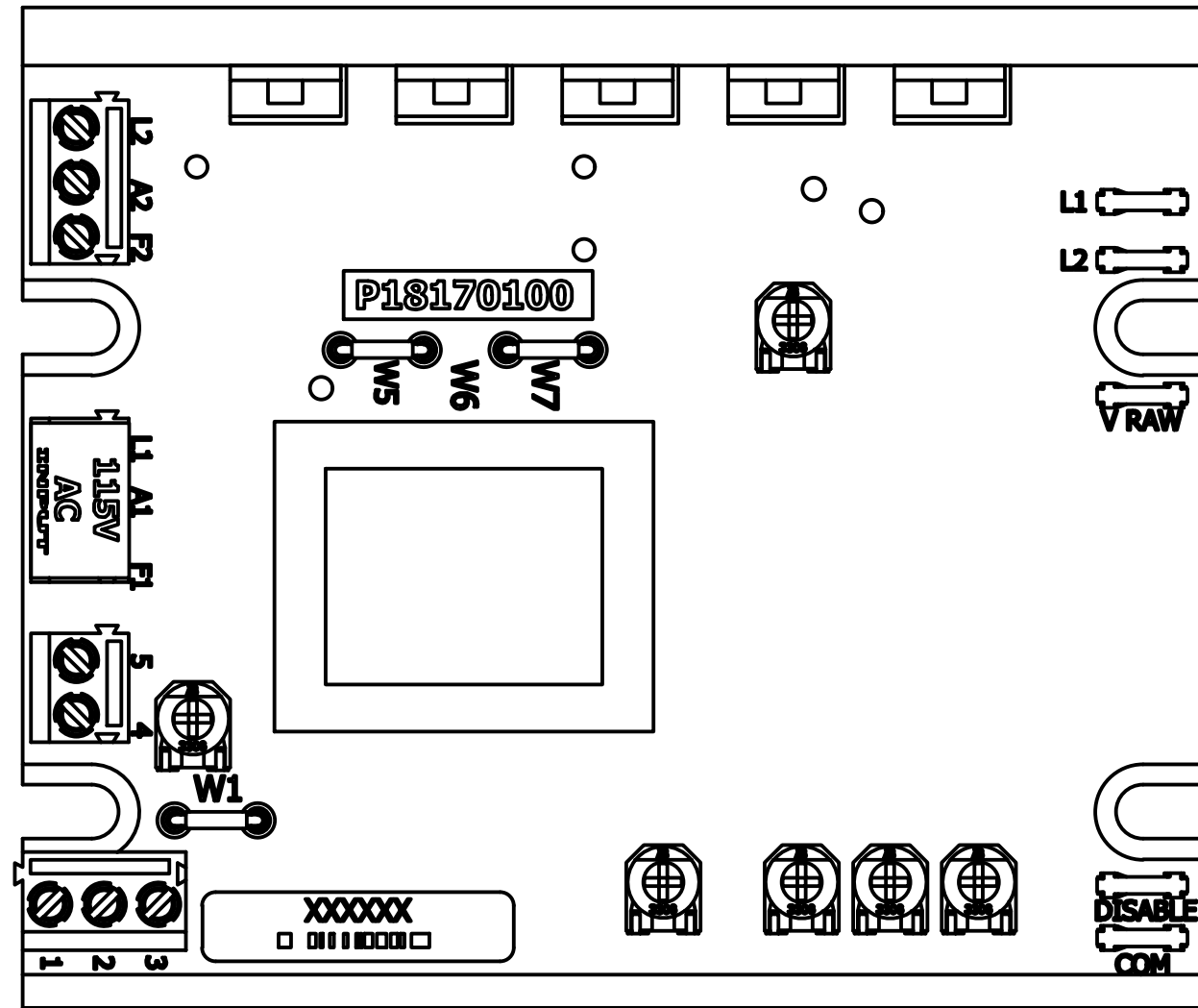


KEY:  
 L1/L2 SUPPLY VOLTAGE IN  
 A1/A2 ARMATURE VOLTAGE TO SHUNT  
 WOUND OR PERMANENT MAGNET MOTOR  
 F1/F2 FIELD FOR SHUNT WOUND MOTOR  
 1-5 TERMINALS FOR DC DRIVE CONTROL

REFER TO P18190100 181 BLOCK DIAGRAM



MATL:	Extron Company, Minneapolis, MN (c) 2023 <a href="http://extroncompany.com">http://extroncompany.com</a>	
FINISH:	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES	
SHEET METAL (14-20 GA) LASER OR PUNCH AND PRESS BRAKE FORMING	TOLERANCES:	
HOLE DIAMETER: ±0.003	SAME PLANE HOLE-TO-HOLE: ±0.010	
SAME PLANE SHEAR EDGE -TO-HOLE: ±0.015	FORMED EDGE-TO-HOLE: ±0.015	
ANGULAR: ±1°	3rd ANGLE PROJECTION	
UNLESS SUPERSEDED BY THE ABOVE	X ± 0.1	REV: A
	XX ± 0.03	DWG NO: P181701X0
	XXX ± 0.015	SCALE: 1.5:1 DWG SIZE: B SHEET 3 OF 4
DO NOT SCALE DRAWING		



THE EXTRON COMPANY MODEL 181 IS A SOLID STATE, VARIABLE VOLTAGE DC MOTOR CONTROL

181-T/181-Q DC MOTOR CONTROLLER	
PROPERTY	DESCRIPTION
SUPPLY VOLTAGE	115VAC OR 230VAC, 50-60 Hz JUMPER SELECTABLE
MAXIMUM DC LOAD CURRENT	12A
MAXIMUM DC FIELD CURRENT	1.5A
OPERATING TEMPERATURE RANGE	-20 DEG F (-29 DEG C) TO 120 DEG F (50 DEG C)

**DIAGNOSTICS:**

1. APPLY A DC VOLTMETER TO THE VRAW (+) AND COM (-) EXPANSION LUGS ON THE RIGHT HAND EDGE  
EXPECTED MEASUREMENT: APPROX 20VDC.
2. 115VAC SUPPLY VOLTAGE  
APPLY A DC VOLTMETER TO ARM A1 (+) AND ARM A2 (-)  
EXPECTED MEASUREMENT: 0VDC - 90VDC AS THE EXTERNAL VARIABLE SPEED CONTROL POTENTIOMETER IS ADJUSTED (MOTOR LOAD NOT REQUIRED)

MATL:	Extron Company, Minneapolis, MN (c) 2023 <a href="http://extroncompany.com">http://extroncompany.com</a>	
FINISH:	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES	
SHEET METAL (14-20 GA) LASER OR PUNCH AND PRESS BRAKE FORMING	TOLERANCES:	
	HOLE DIAMETER: ± 0.003	
	SAME PLANE HOLE-TO-HOLE: ± 0.010	
	SAME PLANE SHEAR EDGE -TO-HOLE: ± 0.015	
	FORMED EDGE-TO-HOLE: ± 0.015	
	ANGULAR: ± 1°	
3rd ANGLE PROJECTION	UNLESS SUPERSEDED BY THE ABOVE	REV: A
	X ± 0.1 XX ± 0.03 XXX ± 0.015	DWG NO: P181701X0
DO NOT SCALE DRAWING	SCALE: 1.5:1	DWG SIZE: B SHEET 4 OF 4