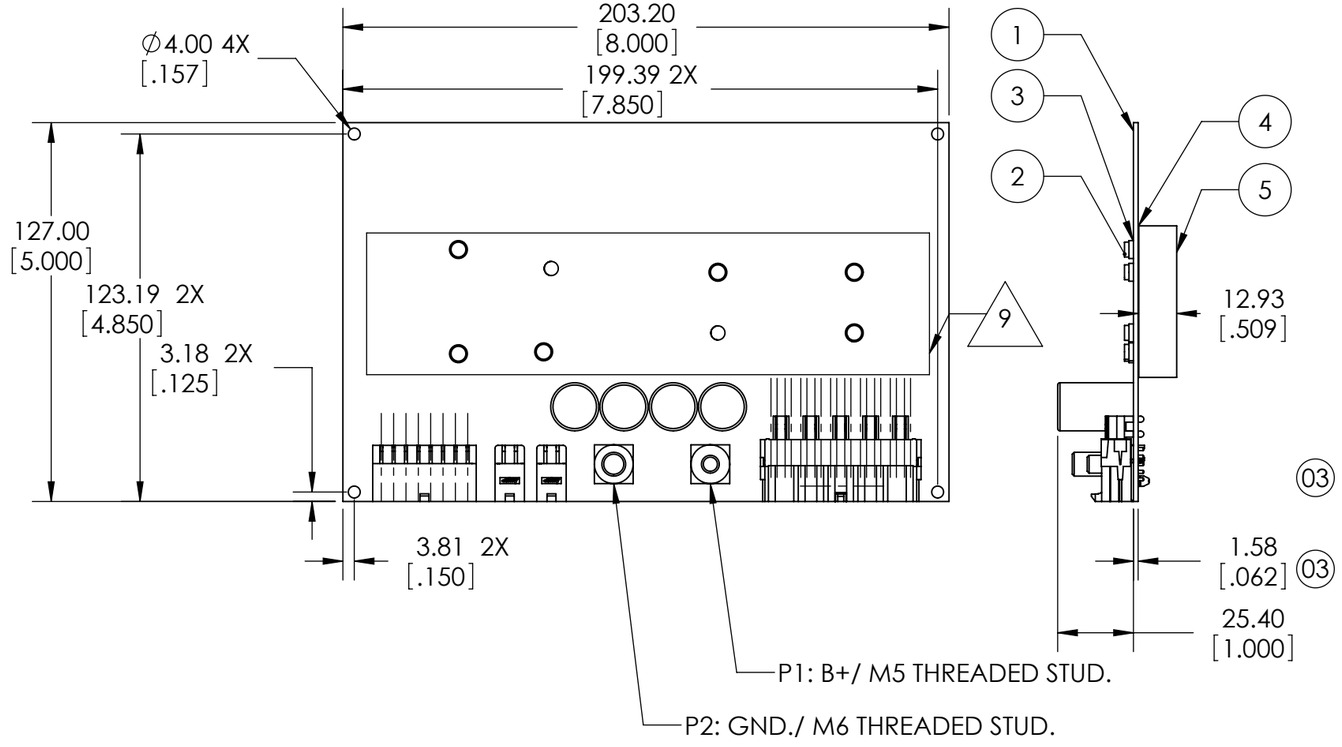
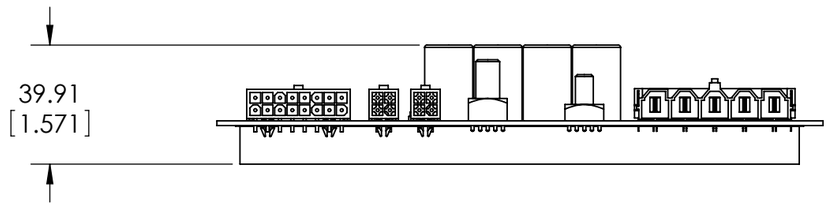


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	SEE NOTE #1	PCB ASSY [T12, SCRUB MODULE]	1
2	SEE NOTE #4	SCREW, M3x0.5x6	6
3	SEE NOTE #4	WASHER, M3, NYLON	6
4	1201435	SIL PAD, CIRCUITBOARD [CASSODAY, SCRUB]	1
5	1201433	HEATSINK, CIRCUITBOARD [CASSODAY, SCRUB]	1

NOTES:
1) PCB ASSEMBLY TO BE BUILT USING QPL BILL OF MATERIAL: **BOM1219352revJ**.
2) WORKMANSHIP STANDARD PER: IPC-J-STD-001E, IPC-A-610E.
   SOLDERING AND ELECTRICAL CONNECTIONS : IPC-S-815B.
   OR MORE CURRENT VERSIONS OF THESE STANDARDS.
3) APPLY LABEL OR LABELS WITH THE FOLLOWING INFORMATION:
   - TENNANT PART NUMBER AND REVISION. EXAMPLE: **1219352-04**.
     NOTE: THIS NUMBER AND REVISION SHOULD MATCH THE RELEASED TENNANT DRAWING.
   - MANUFACTURER'S LABEL WITH SERIAL NUMBER.
     NOTE: PLACE LABEL(S) SO THEY DO NOT GET COVERED UP BY THE HEATSINK.
4) SCREWS AND WASHERS HOLDING THE HEATSINK (ITEM #5) AND SIL-PAD (ITEM #4):
   - (6) SCREW, PAN HEAD, PHILLIPS, M3 X O.5, 8.0MM LONG, DIN 7985. McMASTER CARR #92005A118 OR EQUIVALENT. (ITEM #2)
   - (6) WASHER, NYLON, FLAT, #6, 0.14B 0.31D .03. KEYSTONE #3349 OR EQUIVALENT, (ITEM #3).
   - TO BE APPLIED IN (6) LOCATIONS AS SHOWN.
   - SCREW HEAD TO BE ON THE TOP SIDE OF THE PCB AS SHOWN.
   - NYLON WASHERS (ITEM #3) TO BE LOCATED BETWEEN THE SCREW HEAD AND THE PCB(ITEM #1).
   - SCREWS TO BE TORQUED TO 4-5 IN-LBS.
5) EACH ASSEMBLY TO HAVE CONTINUITY TEST BETWEEN THE "P1" STUD(= B+) AND THE METAL HEATSINK. NO CONTINUITY = PASS. CONTINUITY = IMPROPERLY INSTALLED SIL-PAD.
6) CONFORMAL COATING APPLIED AS PER NOTES ON SHEET 2 OF 2.
7) EACH ASSEMBLY TO BE ICT TESTED AND FUNCTIONALLY TESTED. FUNCTIONAL TEST TBD.
8) ASSEMBLY TO BE MANUFACTURED PER RoHS/LEAD FREE STANDARDS.
△ 9) AREA BENEATH THE HEATSINK (BACK SIDE) TO BE FREE OF SOLDER BUMPS. MASK OFF OR PROGRAM WAVE SOLDER SYSTEM TO PREVENT SOLDER BUILD UP IN THIS AREA.
10) DIMENSIONS FOR REFERENCE ONLY. REFER TO GERBER FILE.
03 11) SOFTWARE: **Q30038-003 = T12_MAIN_PRODUCTION_IMAGE_1_50.BIN.**



REV-03 CHANGES:
1) NEW QPL BILL OF MATERIAL RevH. NO PHYSCIAL CHANGES ARE BEING MADE FOR REV-03, JUST CORRECTING THE CONNECTOR REFERENCES IN THE QPL BOM TO MATCH THE SILKSCREEN CONNECTOR REFERENCES THAT CHANGED ON REV-02.
2) MOVE THE SOFTWARE FILE CALL OUT FROM THE QPL BILL OF MATERIAL TO THE DRAWING. SEE NOTE #11.
   NOTE: QPL BILL OF MATERIAL REV-G WAS NOT USED.

REV-04 CHANGES:
1) CHANGE QPL BILL OF MATERIAL TO: BOM1219352revJ, CHANGED TO NON-USB MICRO.

REV	ECO
04	

ECO CONSULTATION

MATERIAL SPECIFICATIONS:	OTHER TREATMENTS AND FINISHES	PAINT - COLOR		
PART NAME: CIRCUITBOARD ASSY [T12, SCRUB MODULE]		GLOSS	PERFORMANCE	ACCEPTANCE

CHANGED BY: TIM LAROCQUE — DATE: 09/08/2022
MDR: — 09/27/2012
DES: JOHN HAEG — 11/01/2011

WELDING NOTATION IN ACCORDANCE WITH AWS A2.4-98

UNLESS OTHERWISE SPECIFIED DIMENSION TOLERANCING IN ACCORDANCE WITH ASME Y14.5M-2009 ALL UNTOLERANCED DIMENSIONS ARE BASIC AND CONTROLLED BY:

X.X	±0.8	±[.03]
X.XX	±0.25	±[.010]
X.XXX	±0.125	±[.0049]
ANGLES	±0.5°	

GENERAL NOTES
PRIMARY DIMENSIONS ARE METRIC, REFERENCE DIMENSIONS WITH BRACKETS ARE INCH. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE AFTER TREATMENTS AND FINISHES.

SHEET 1 OF 2

TENNANT

DWG B SIZE

PART NUMBER 1219352

CONFORMAL COATING AND RTV NOTES:
1) CONFORMAL COATING MATERIAL:
HUMISEAL 1B73 OR DYMAX 9481-E.
2) MASK OFF THE FOLLOWING AREAS ON THE TOP SIDE OF THE ASSEMBLY:
- CONNECTORS J1, J2, J3, J4, J5, J6,
-POWER AND GROUND STUDS P1 AND P2.
- THE 4 PCB ASSEMBLY MOUNTING HOLES IN THE CORNERS.
3) MASK OFF THE FOLLOWING AREAS ON THE BOTTOM SIDE OF THE ASSEMBLY:
- THE COMPLETE AREA BELOW THE HEATSINK.
- THE 4 PCB ASSEMBLY MOUNTING HOLES IN THE CORNERS.
4) APPLY NON-CORROSIVE PCB SAFE RTV (MOMENTIVE #RTV108 OR EQUIVALENT) AROUND THE FOLLOWING COMPONENTS FOR VIBRATION PROTECTION: C179, C180, C181, C182, C63, C142, X1, L1. ALSO APPLY RTV BEADS BETWEEN CAPACITORS C179, C180, C181 AND C182 TO SECURE THEM TOGETHER.
5) MINIMUM RTV BEAD DIAMETER TO BE 3MM.

ECO CONSULTATION

REV	ECO
04	

CHANGED BY: TIM LAROCQUE — DATE: 09/08/2022
MDR: — 09/27/2012
DES: JOHN HAEG — 11/01/2011

MATERIAL SPECIFICATIONS:	OTHER TREATMENTS AND FINISHES	PAINT - COLOR		
PART NAME: CIRCUITBOARD ASSY [T12, SCRUB MODULE]		GLOSS	PERFORMANCE	ACCEPTANCE

WELDING NOTATION IN ACCORDANCE WITH AWS A2.4-98

UNLESS OTHERWISE SPECIFIED DIMENSION TOLERANCING IN ACCORDANCE WITH ASME Y14.5M-2009 ALL UNTOLERANCED DIMENSIONS ARE BASIC AND CONTROLLED BY:

X.X	±0.8	±[.03]
X.XX	±0.25	±[.010]
X.XXX	±0.125	±[.0049]
ANGLES	±0.5°	

GENERAL NOTES

PRIMARY DIMENSIONS ARE METRIC, REFERENCE DIMENSIONS WITH BRACKETS ARE INCH. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE AFTER TREATMENTS AND FINISHES.

TENNANT

DWG B SIZE

PART NUMBER 1219352