



DC ECH20 MODULE

1254501

Changelog:

Rev A:

- Initial Release.
- Design is a melding of T300 EC water boards and DC driver circuit.
- PCB Q25079-001
- Mule board.

Rev B:

- HARDWARE REV BITS SET TO 5.
- ADD RTC BACK IN.
- PCB Q25079-002.
- ELIMINATE SECOND WCM PUMP
- CONNECTOR PINOUTS CHANGED TO BE 100% COMPATIBLE WITH CHIMNEY SWIFT.
- CHANGE CONNECTORS BACK TO AMP. MOLEX COMPATIBLE BUT NO MOUNTING TAB.
- ADD LEGACY MODE BACK IN FOR T5: ENABLE AND MODE INPUTS AND EXTERNAL LED DRIVERS ON CAN LINES.
- CONNECT PH1 TO PWM INPUT.
- REVISED COMPONENT VALUES ON CELL DRIVER.
- DUAL CURRENT AMPLIFIERS TO CAPTURE CURRENT WHEN RECIRCULATING.
- P1 BOARD.

Rev C:

- Production Release.
- Change FET drive C113,C97,C128,C79 values.
- Change snubber R123,R61,C132,C65 values.
- Change R2 value, was 121 Ohm.
- PCB Q25079-002

Rev D:

- PCB rev C
- Made schematic pages fit template C
- Renamed "RTC_INTERRUPT" to "RTC_INTERRUPT"
- Delete R78, R80
- Replace R74 with Q10015-573
- Replace Y1 with Q12000-009
- Replace CR1 with B1 (Q11021-006)

ASSUMPTIONS:

- DROP-IN REPLACEMENT FOR CHIMNEY SWIFT BOARD.
- BOARD OUTLINE SAME AS OLD CHIMNEY SWIFT BOARD.
- CONNECTORS COMPATIBLE WITH OLD BOARD.
- UP TO 5A AVERAGE CURRENT CAPABILITY, PROGRAMMABLE.
- NO VALVES TO DRIVE.

REFERENCE PART NUMBERS:
ASSEMBLY 1254501

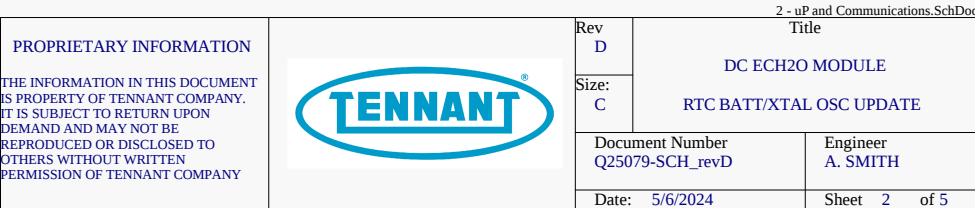
FID1
FIDUCIAL/A
FID2
FIDUCIAL/A
FID3
FIDUCIAL/A
FID4
FIDUCIAL/A
FID5
FIDUCIAL/A

FW1
DN1 FIRMWARE Q30091-002

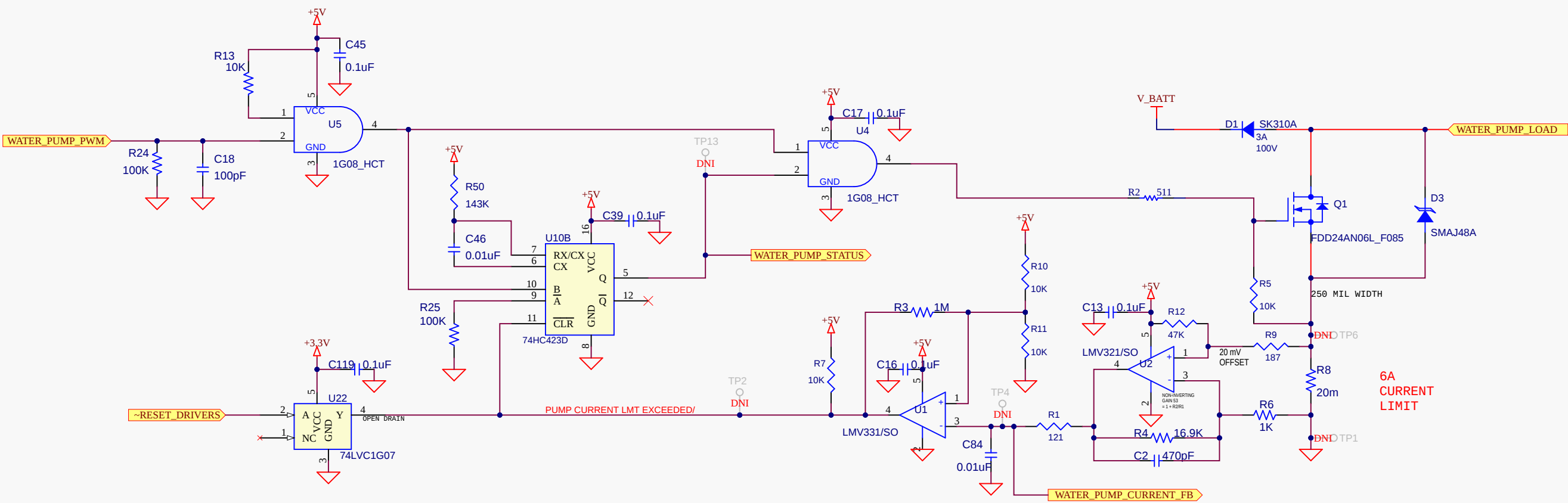
PCB1
PCB Q25079-PCB_revC

SCHEMATIC1
DN1 SCHEMATIC Q25079-SCH_revD

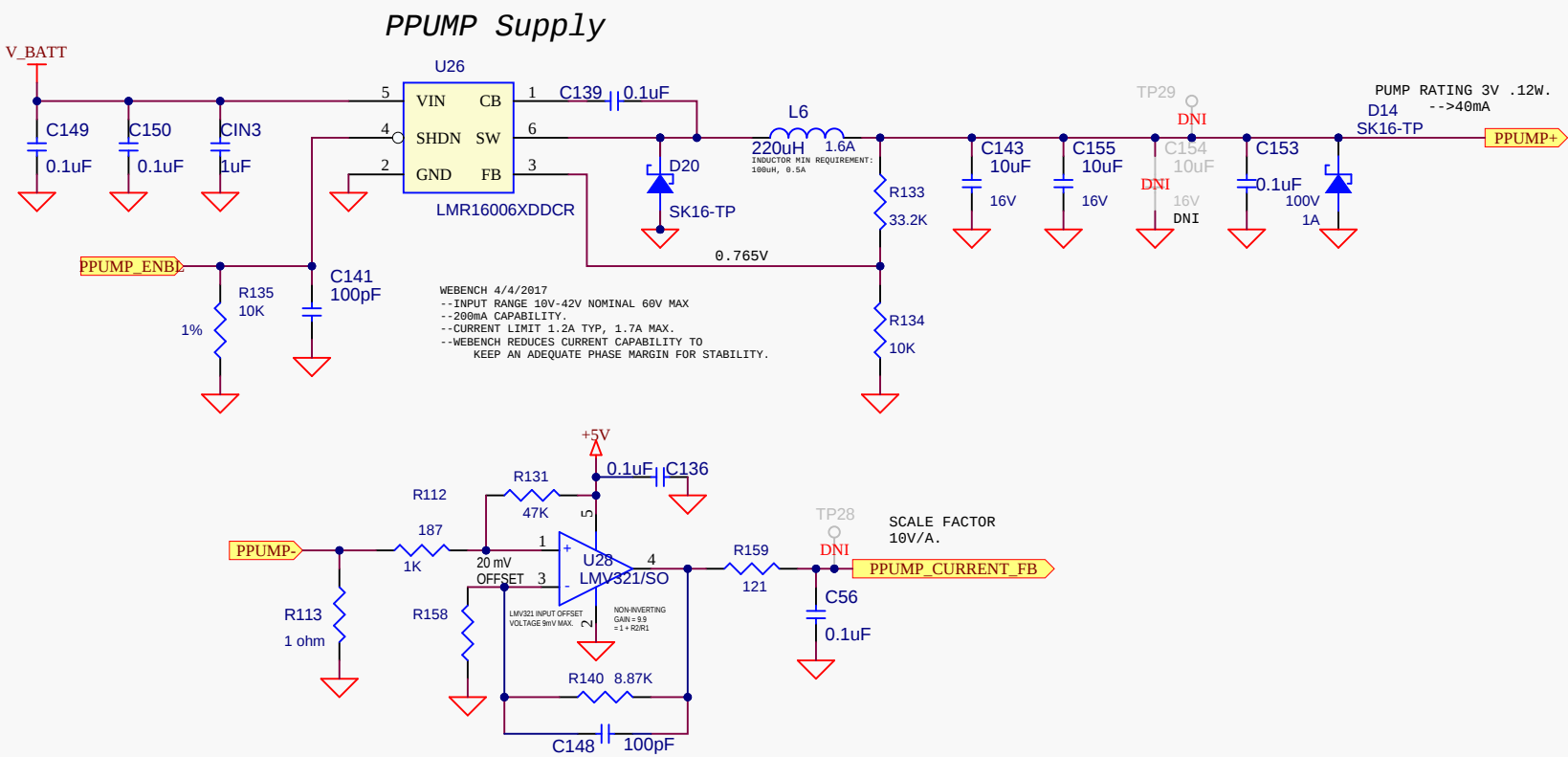
PROPRIETARY INFORMATION THE INFORMATION IN THIS DOCUMENT IS PROPERTY OF TENNANT COMPANY. IT IS SUBJECT TO RETURN UPON DEMAND AND MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION OF TENNANT COMPANY		Rev D	Title	
		Size: C	DC ECH20 MODULE RTC BATT/XTAL OSC UPDATE	
		Document Number Q25079-SCH_revD		Engineer A. SMITH
		Date: 5/6/2024	Sheet 1	of 5



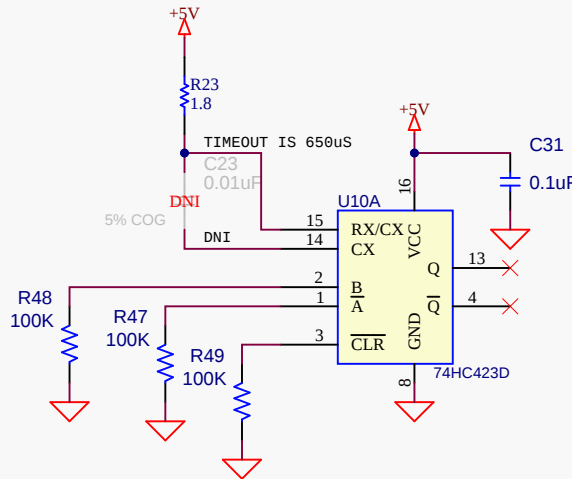
EC WATER PUMP DRIVER



P PUMP DRIVER



Spare Section



PROPRIETARY INFORMATION
THE INFORMATION IN THIS DOCUMENT
IS PROPERTY OF TENNANT COMPANY.
IT IS SUBJECT TO RETURN UPON
DEMAND AND MAY NOT BE
REPRODUCED OR DISCLOSED TO
OTHERS WITHOUT WRITTEN
PERMISSION OF TENNANT COMPANY



Rev	Title	
D	DC ECH20 MODULE	
C	RTC BATT/XTAL OSC UPDATE	
Document Number Q25079-SCH_revD		Engineer A. SMITH
Date: 5/6/2024		Sheet 3 of 5

POWER SUPPLIES

