
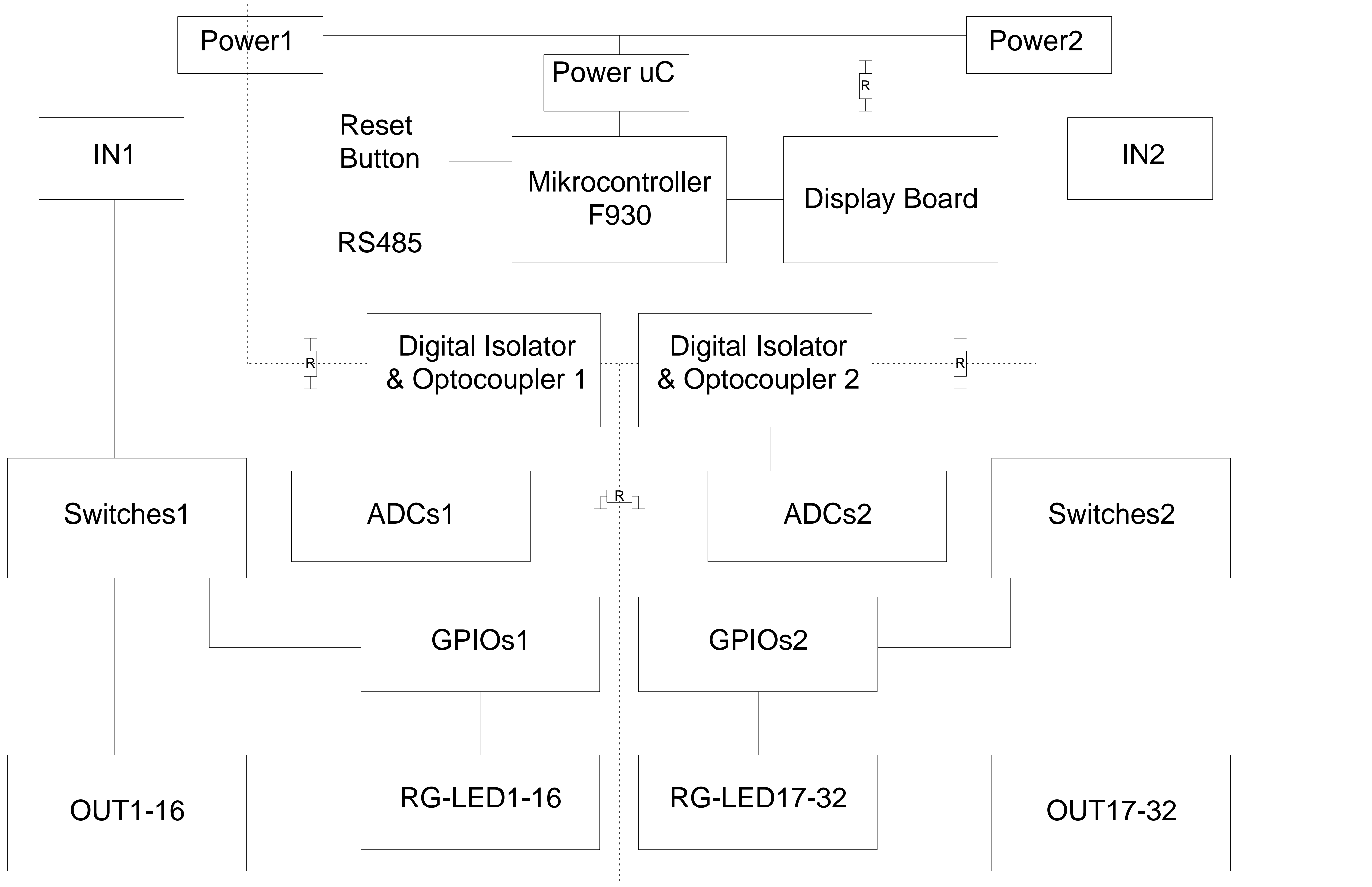
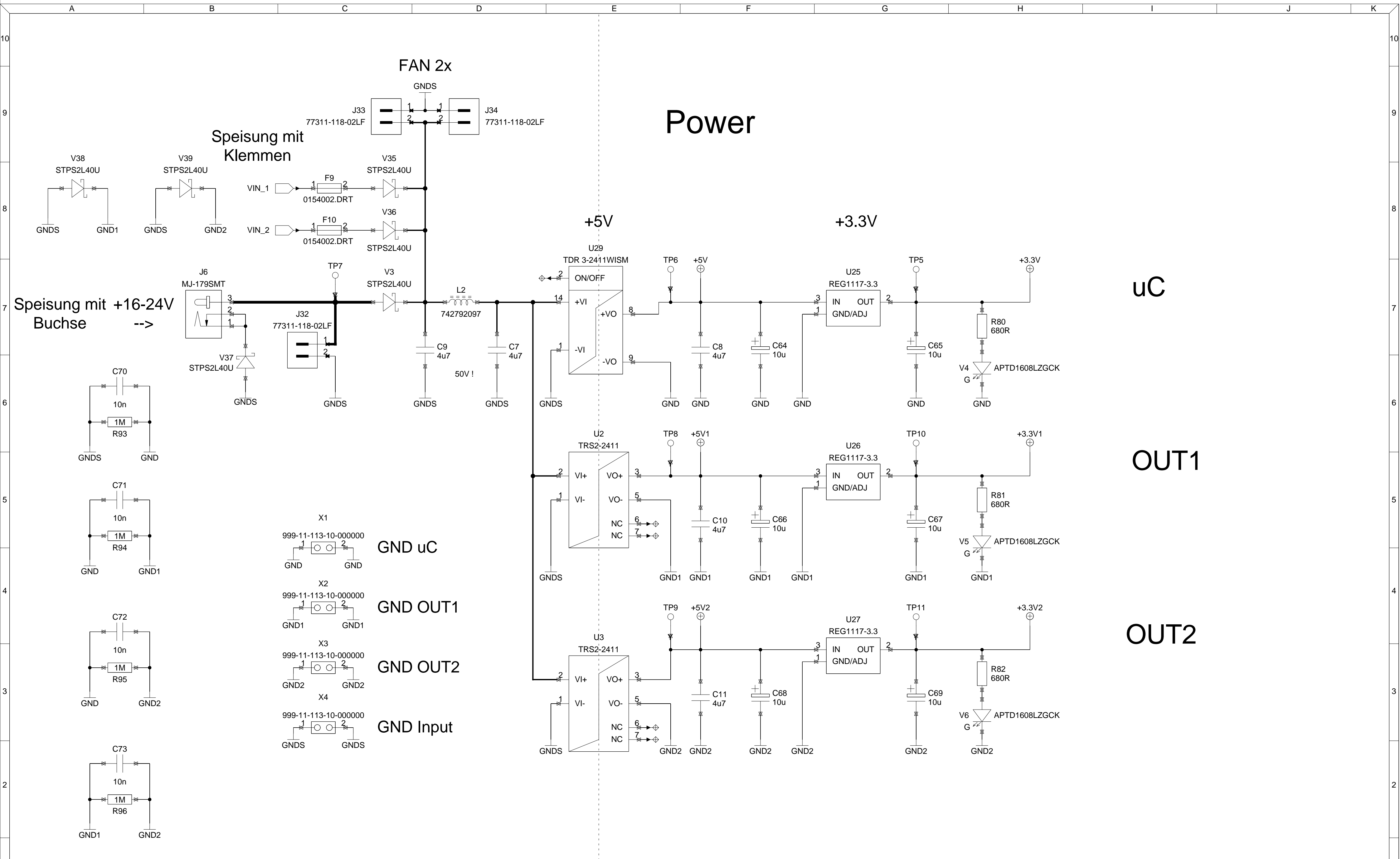


# Mu3e Power Distributor and Controller MPDC

24.08.2021

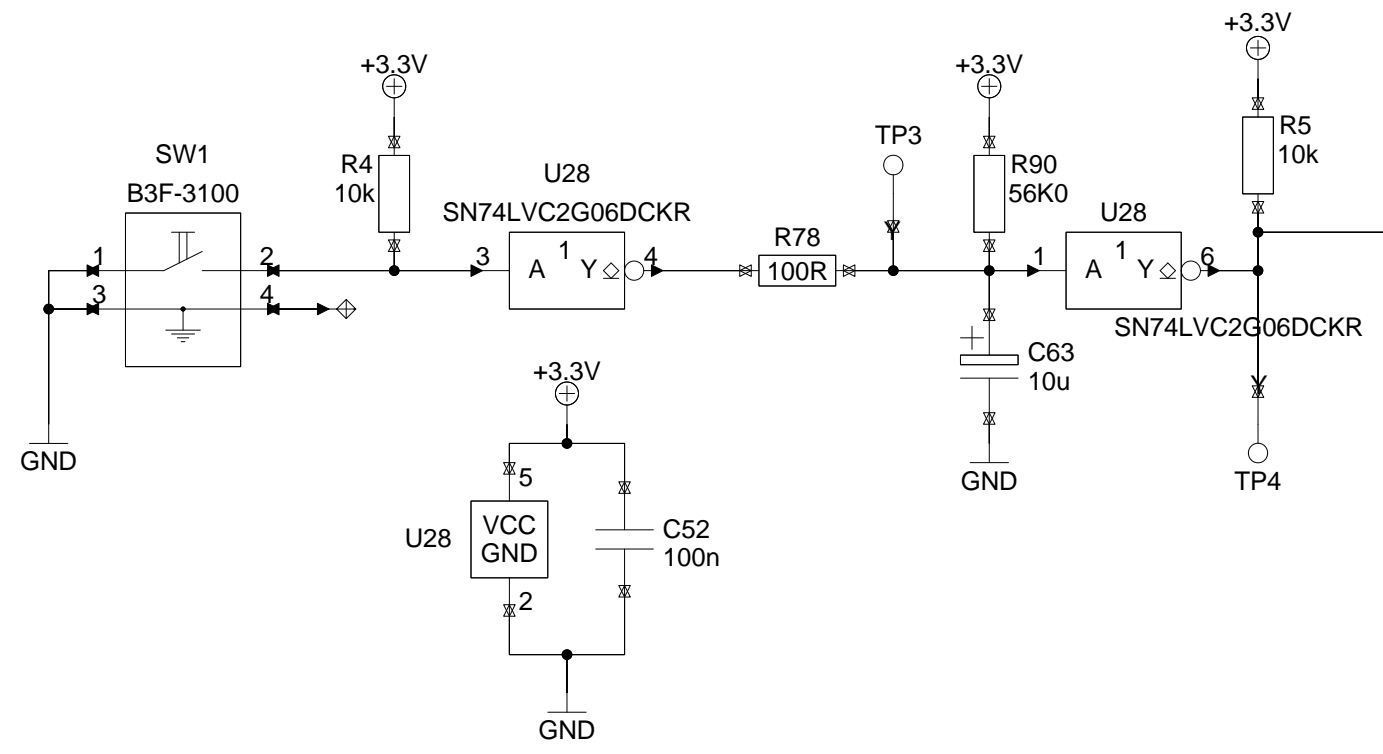
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department PSI PER 1381	Project: Mu3e Schematic: Top	Sheet: Title	Developer: Ernst Tobias Drawn by: Ernst Tobias Checked by: Variant Name:	PCB Nr: 220201 PCB Name: Mu3e_Power_Distributor_Controller_(MPDC) Date Changed: 24/06/2022:12:12 Date of prod. data:	Rev: A Located at: TOP-TopTop Block page: 1 of 14 Sheet Nr.: 1 Total: 47	Size: A4
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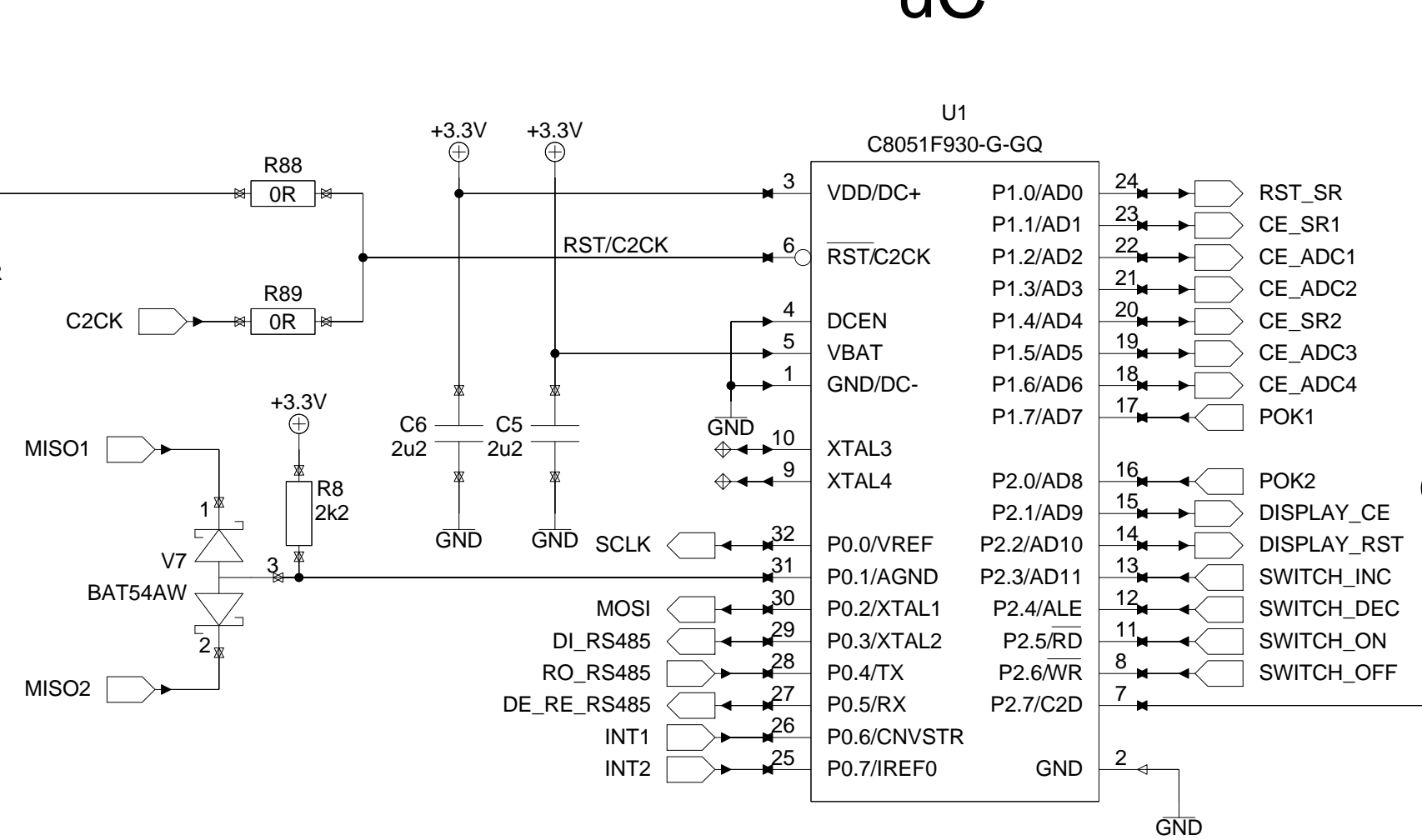


PAUL SCHERRER INSTITUT  1001H 5232 Villigen - PSI	Department PSI PER 1381	<b>Project: Mu3e</b> Schematic: Top	Sheet: Power	Developer: Ernst Tobias Drawn by: Ernst Tobias Checked by: Variant Name:	PCB Nr: 220201 PCB Name: Mu3e_Power_Distributor_Controller_(MPDC) Date Changed: 24/06/2022:12:12 Date of prod. data:	Rev: A Located at: TOP-TopTop Block page: 3 of 14 Sheet Nr.: 3 Total: 47	Size: A4 Total: 47
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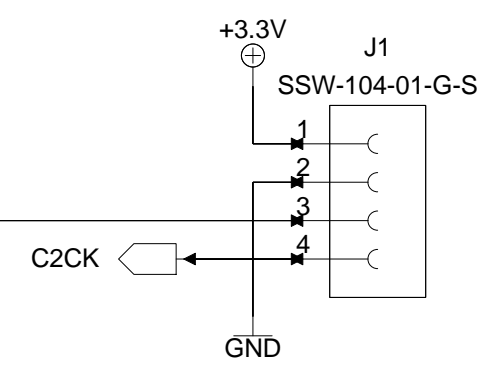
# Reset Button



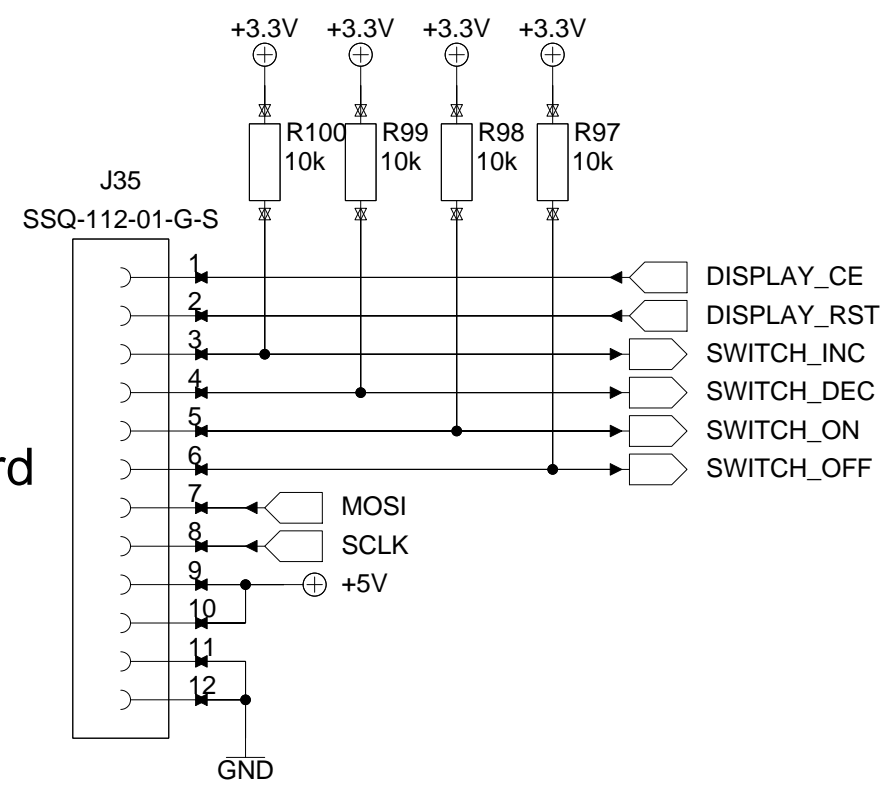
# uC



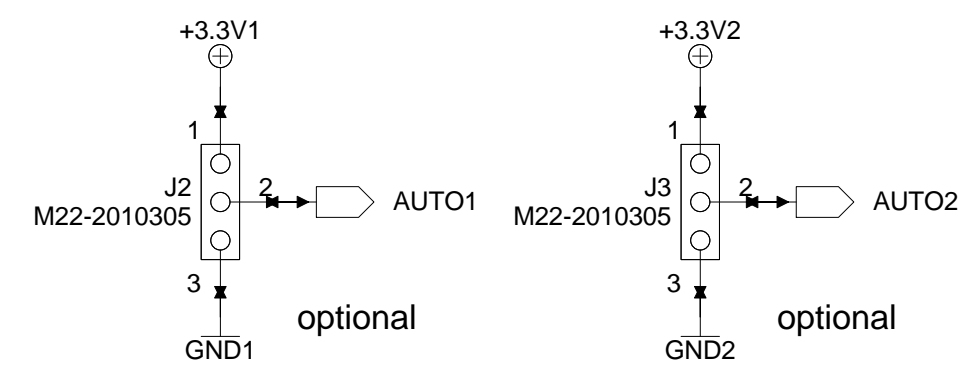
# C2 programming interface



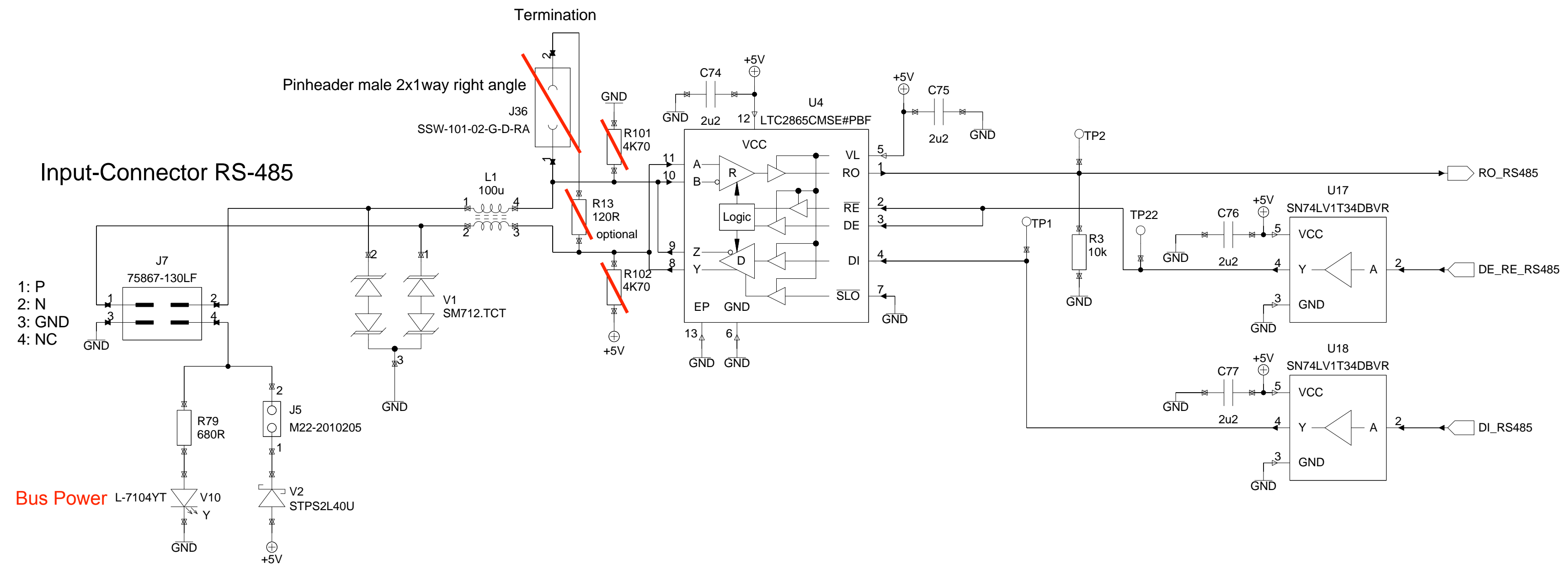
# Connector for Display Board



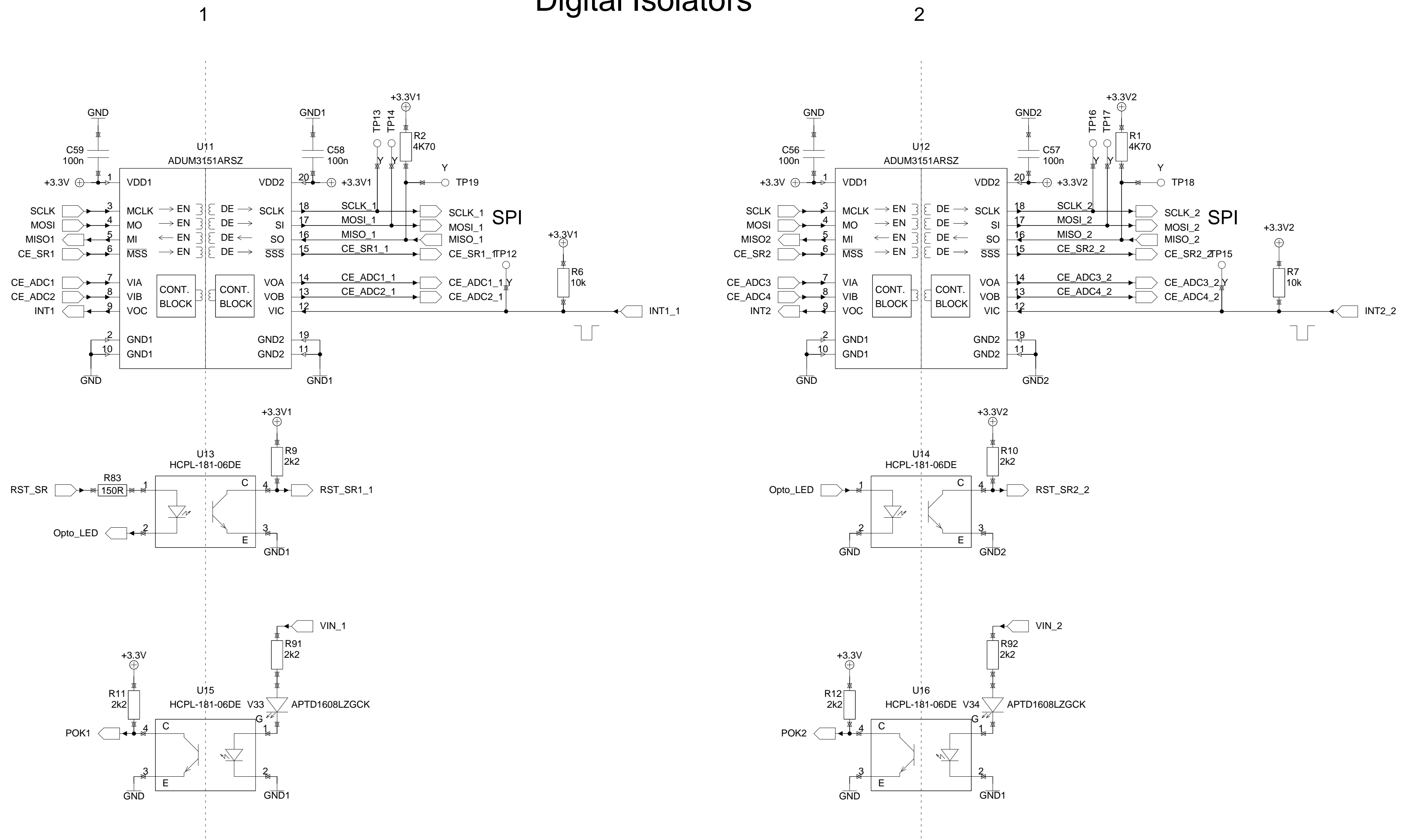
# Autoreset

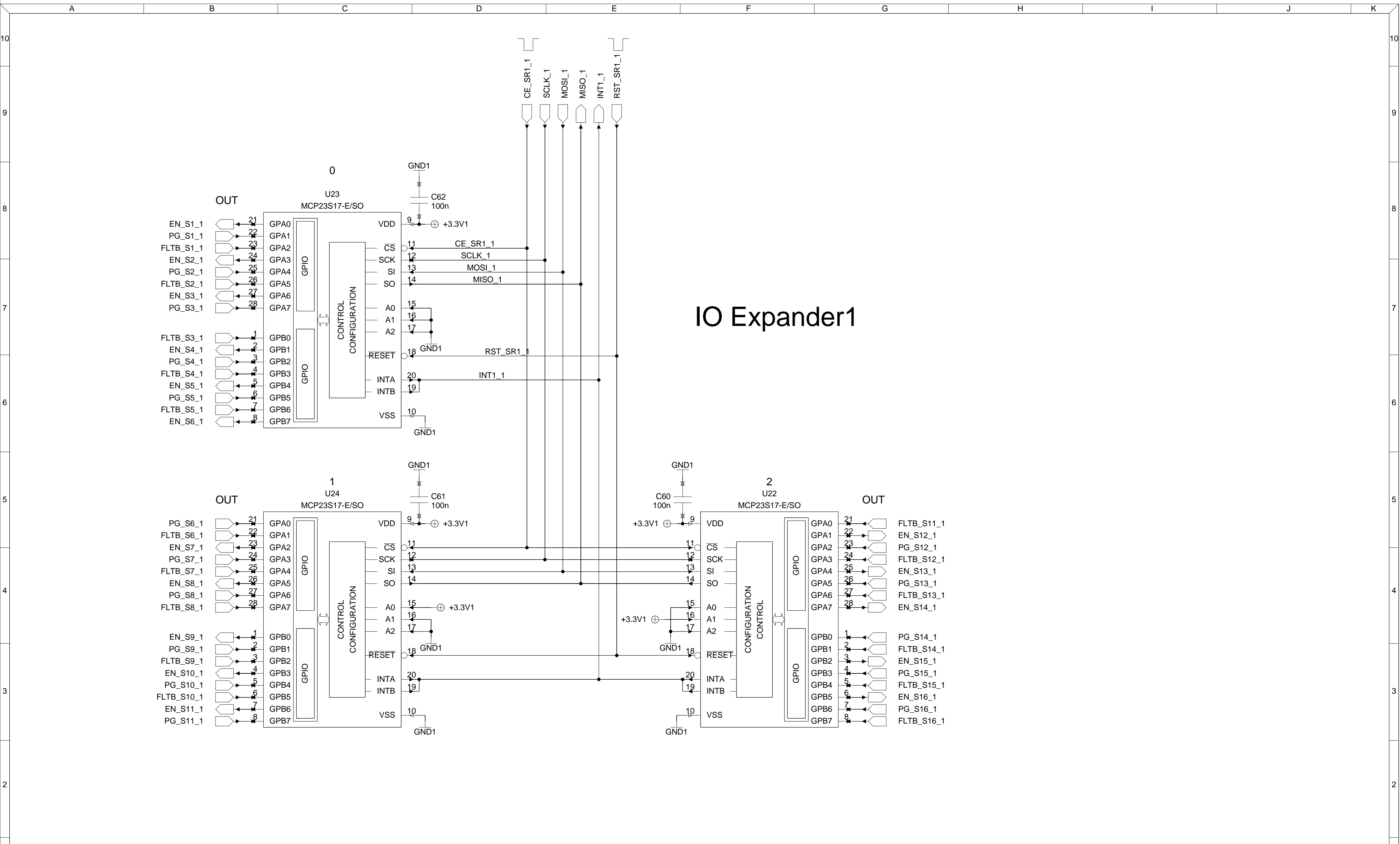


# RS-485 Transceiver

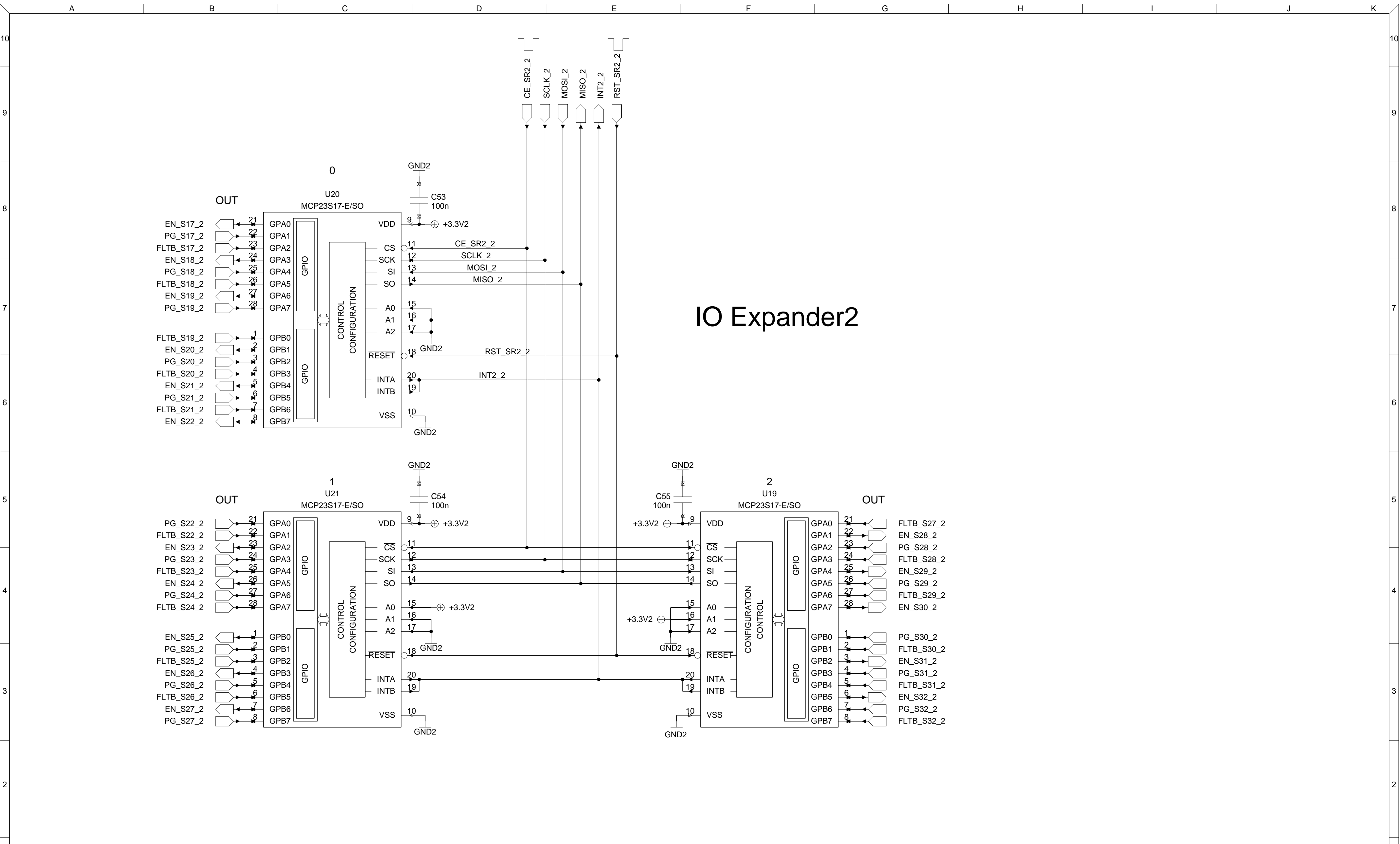


# Digital Isolators





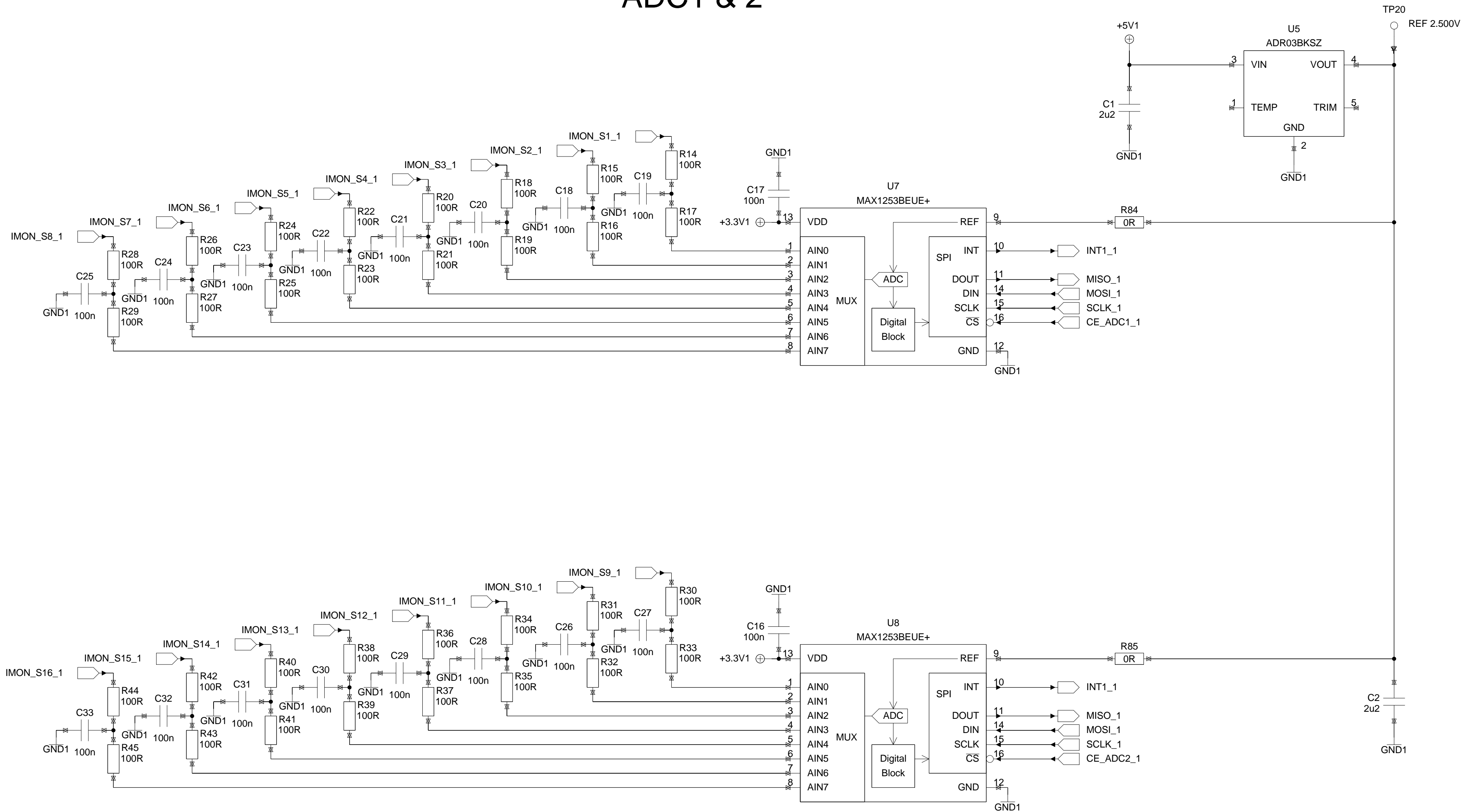
# IO Expander1



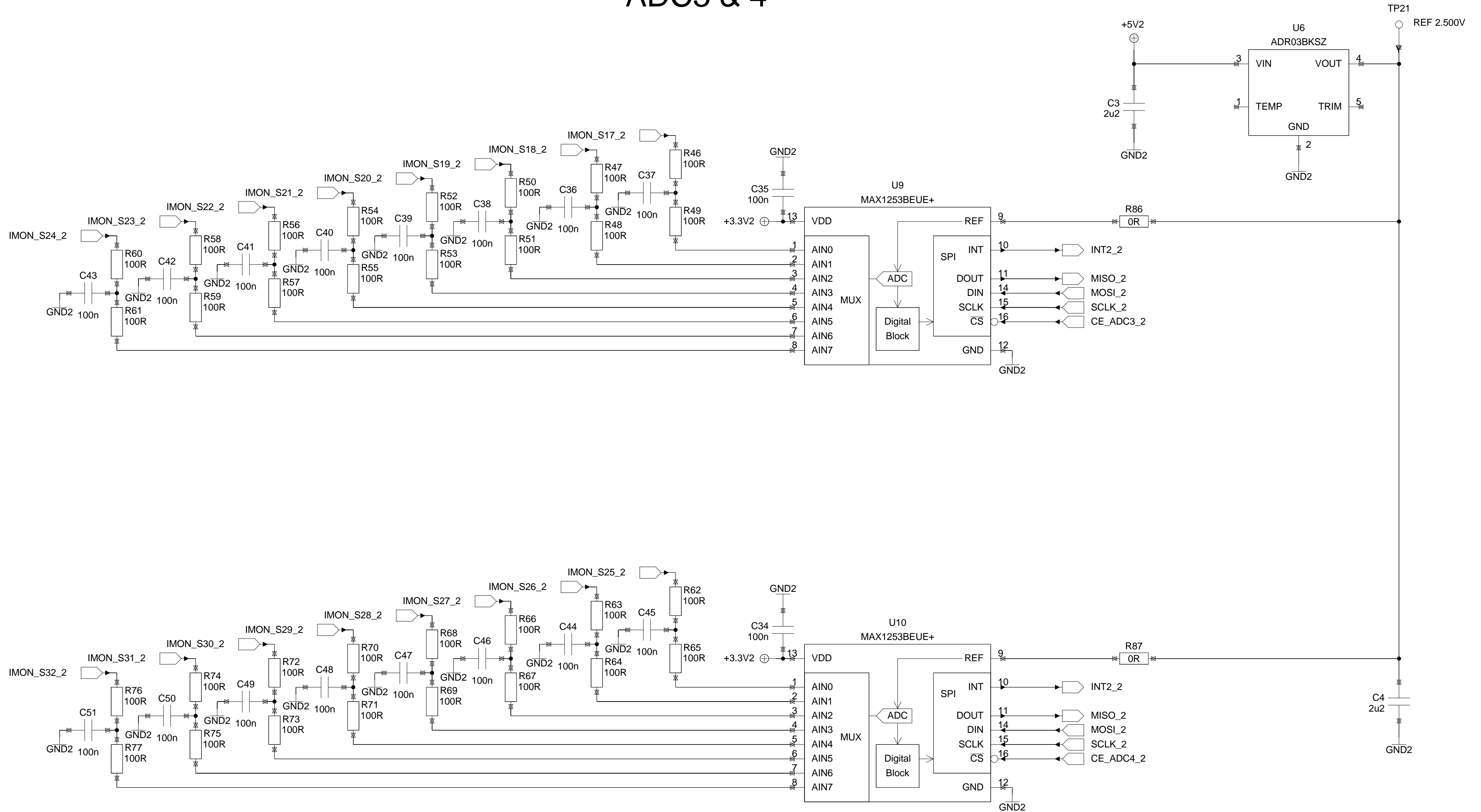
# IO Expander2



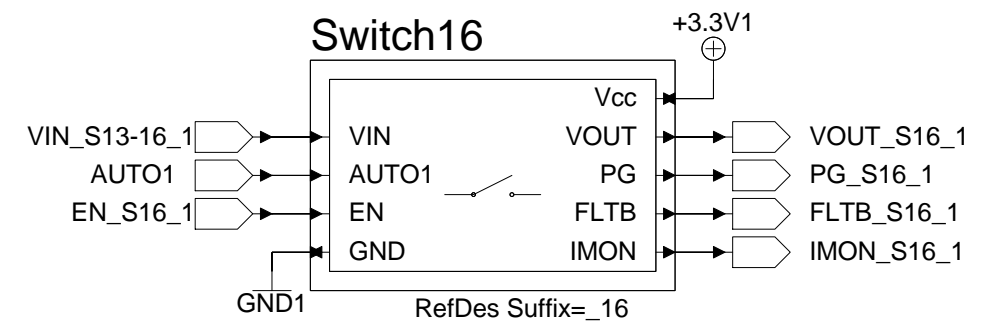
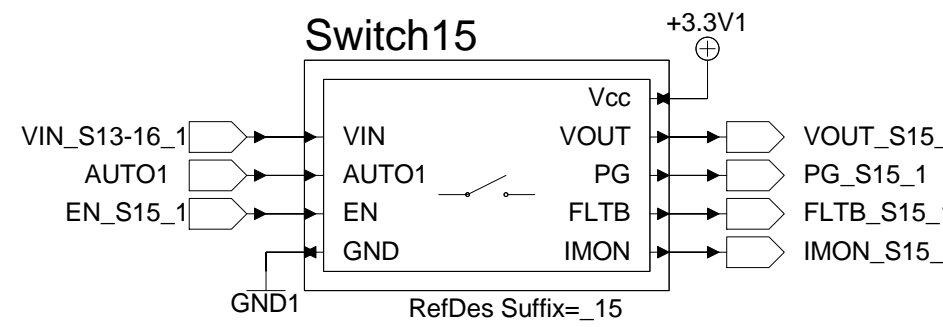
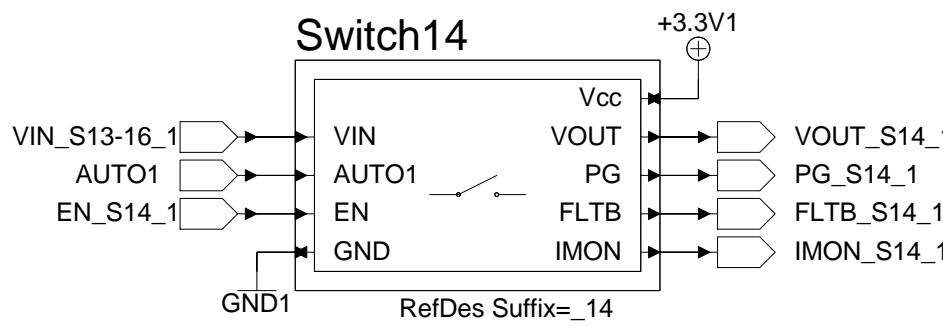
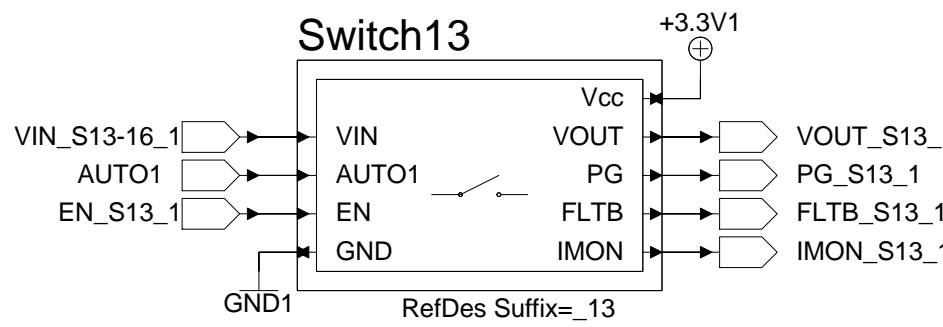
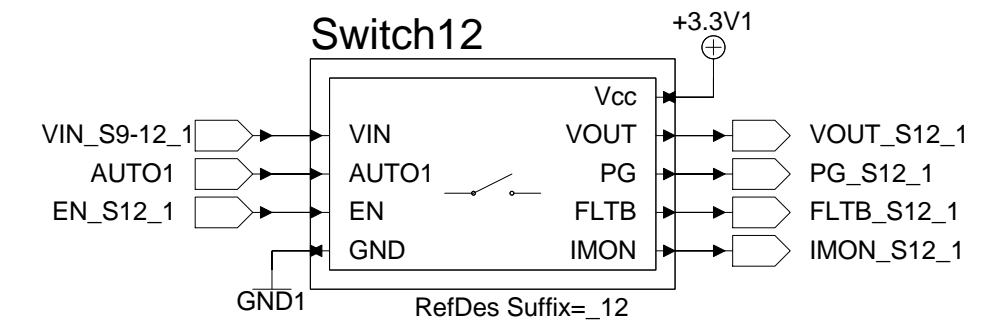
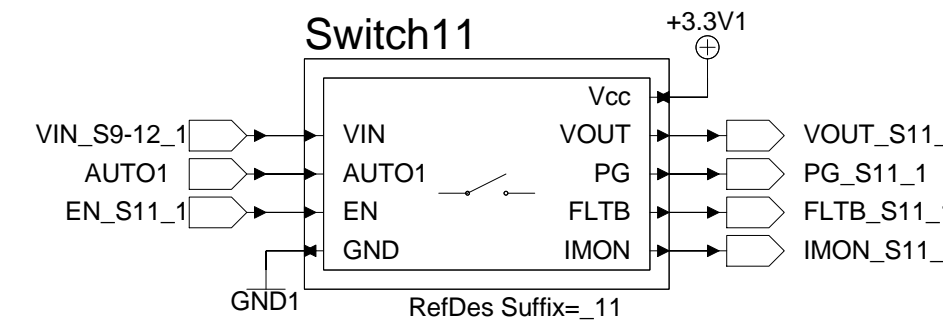
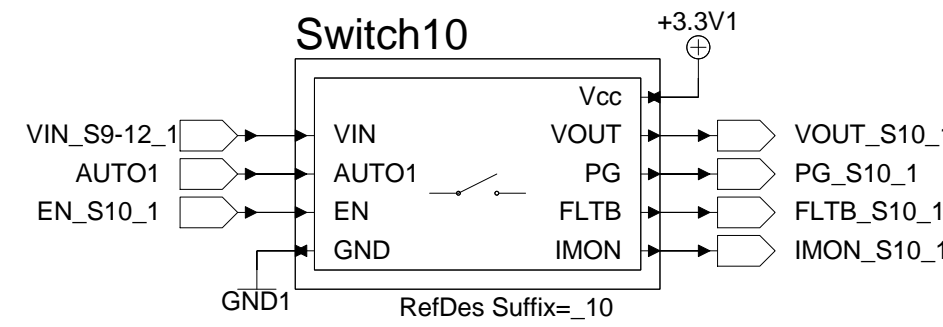
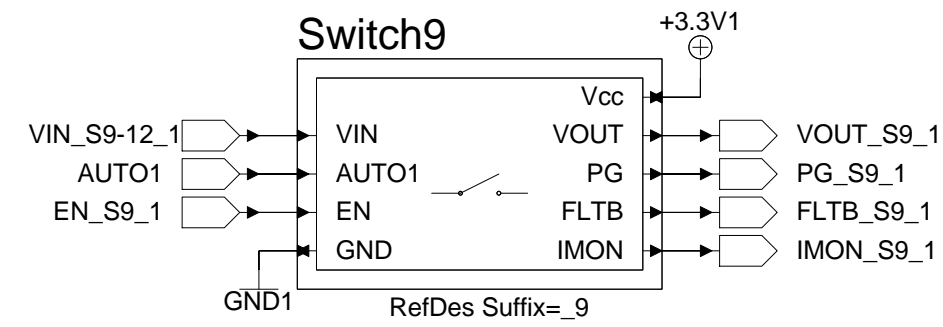
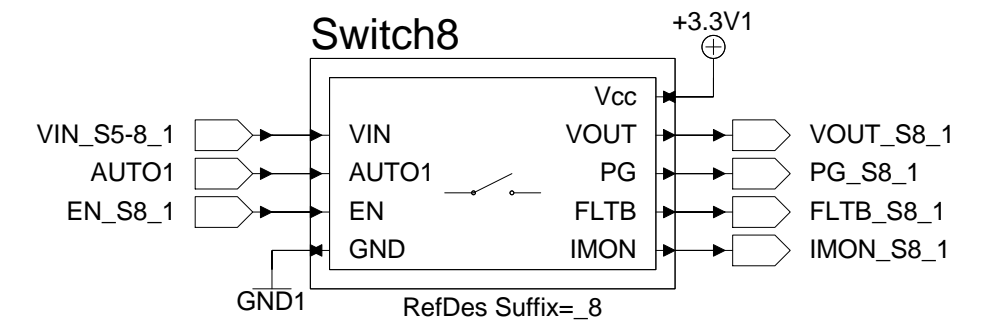
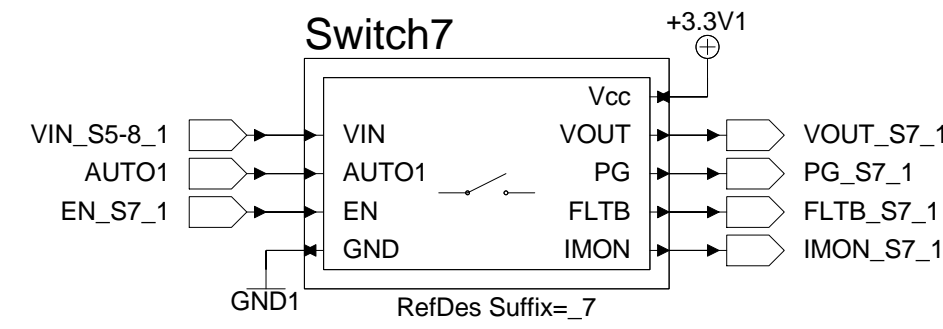
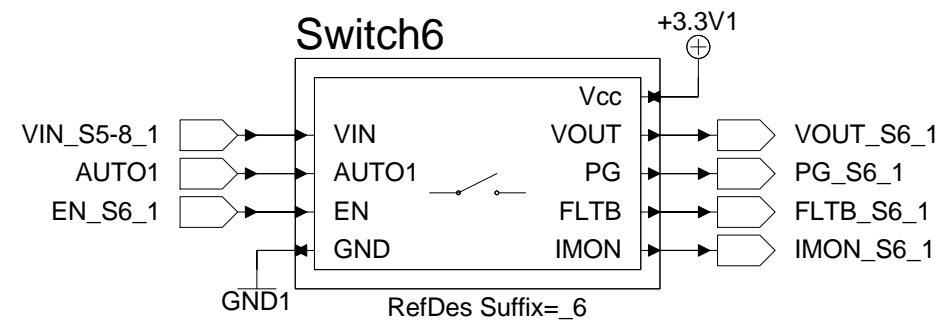
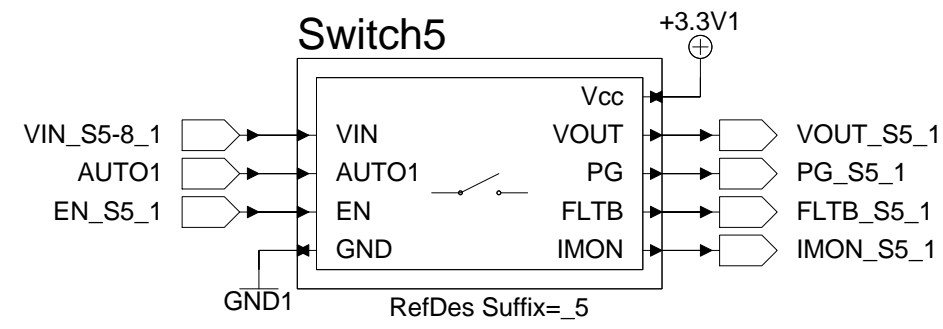
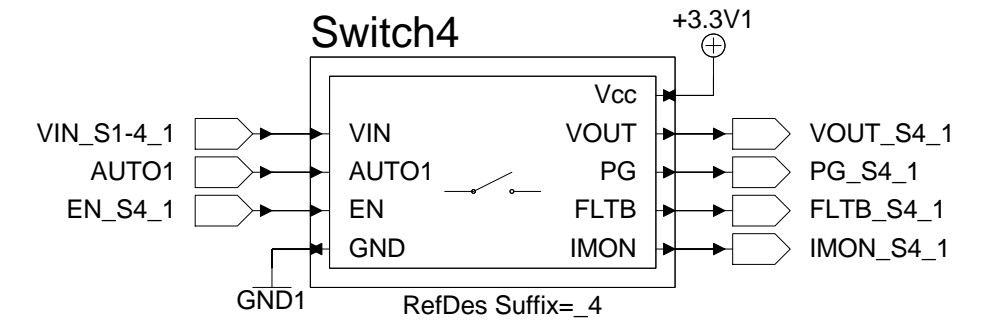
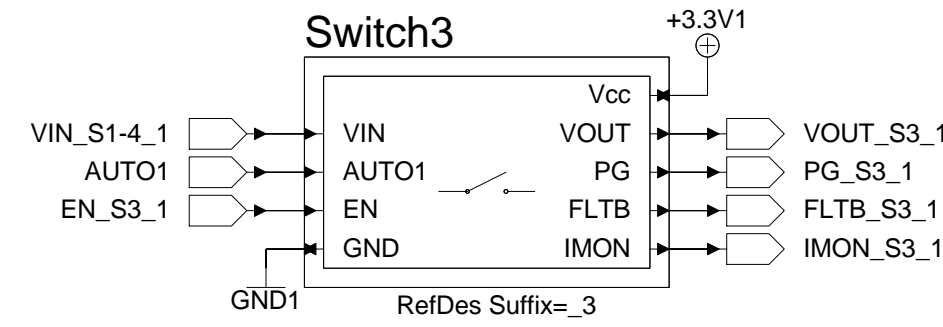
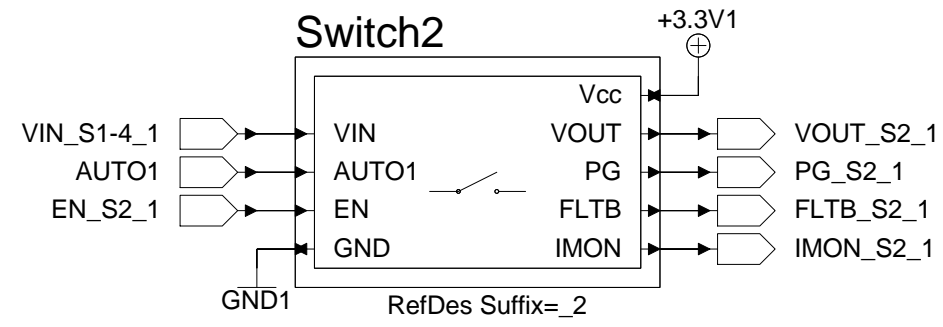
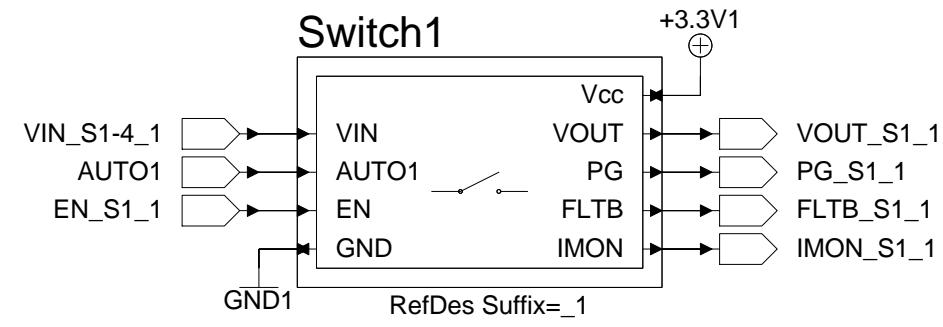
# ADC1 & 2



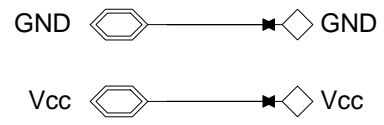
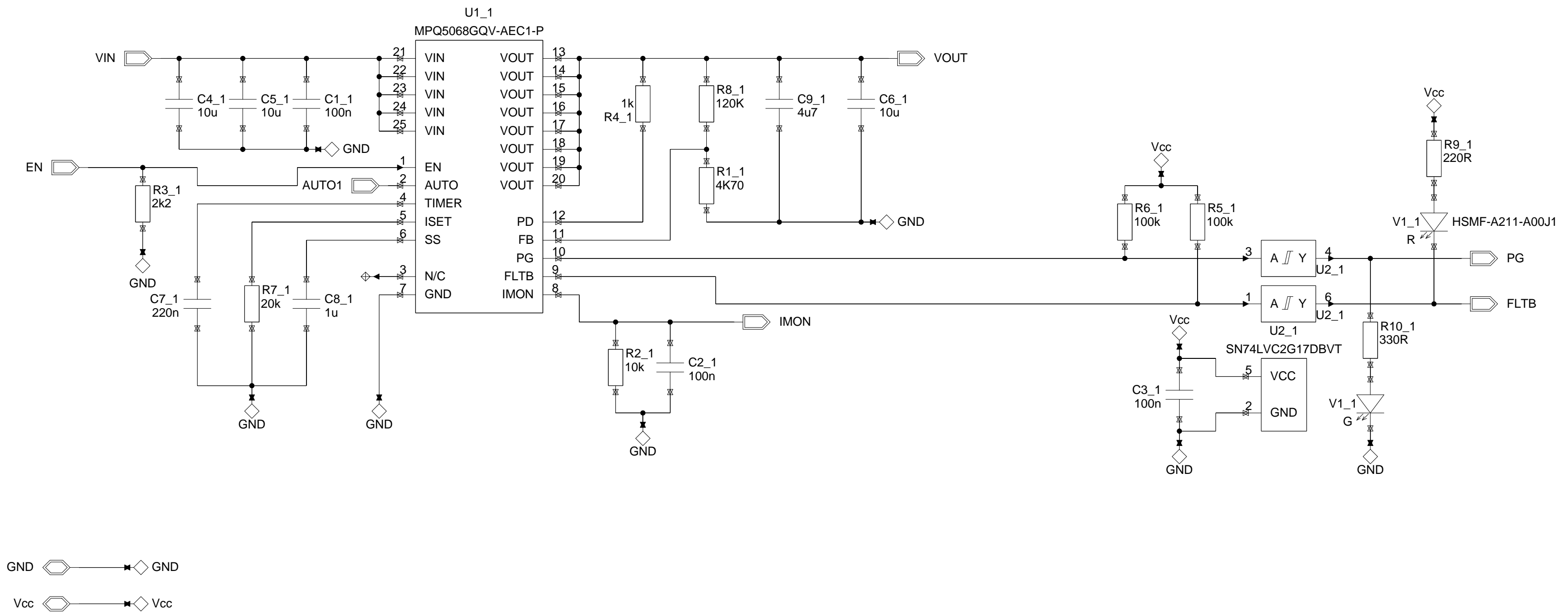
# ADC3 & 4



# Switches 1

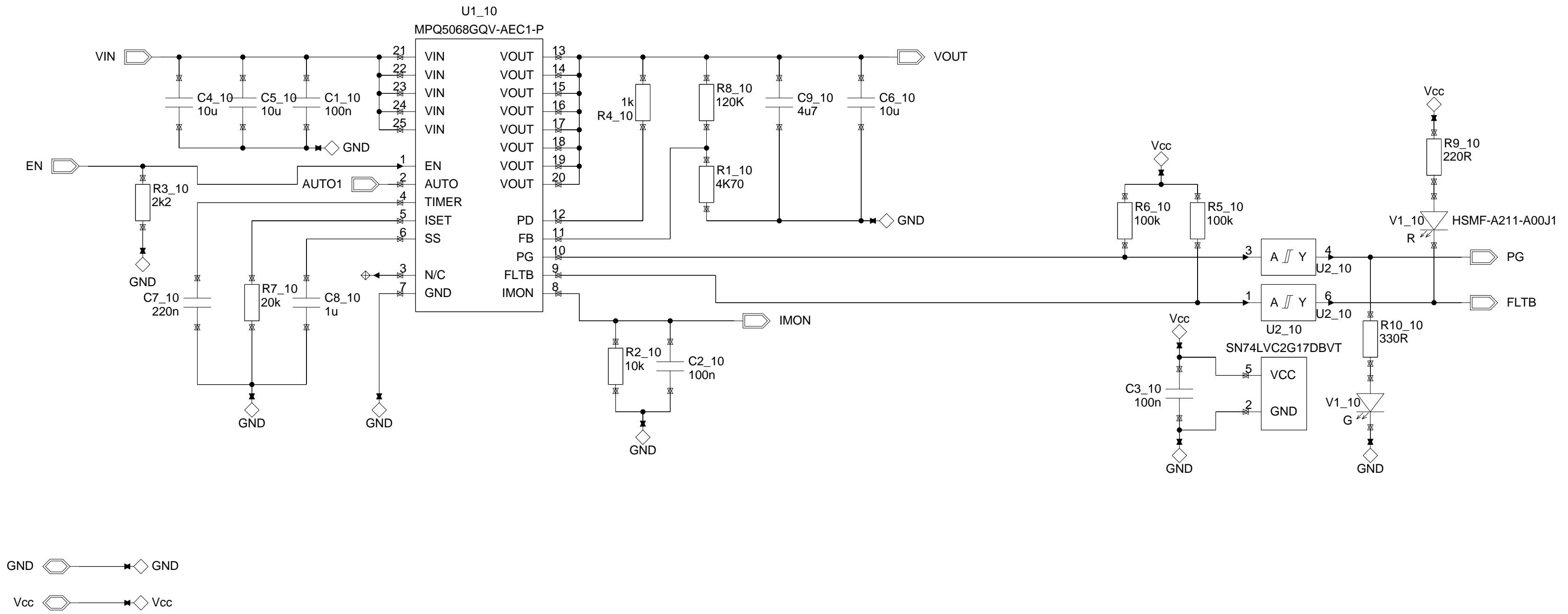



# Switch\_1



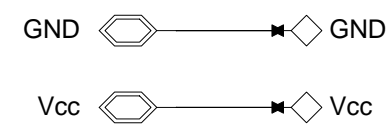
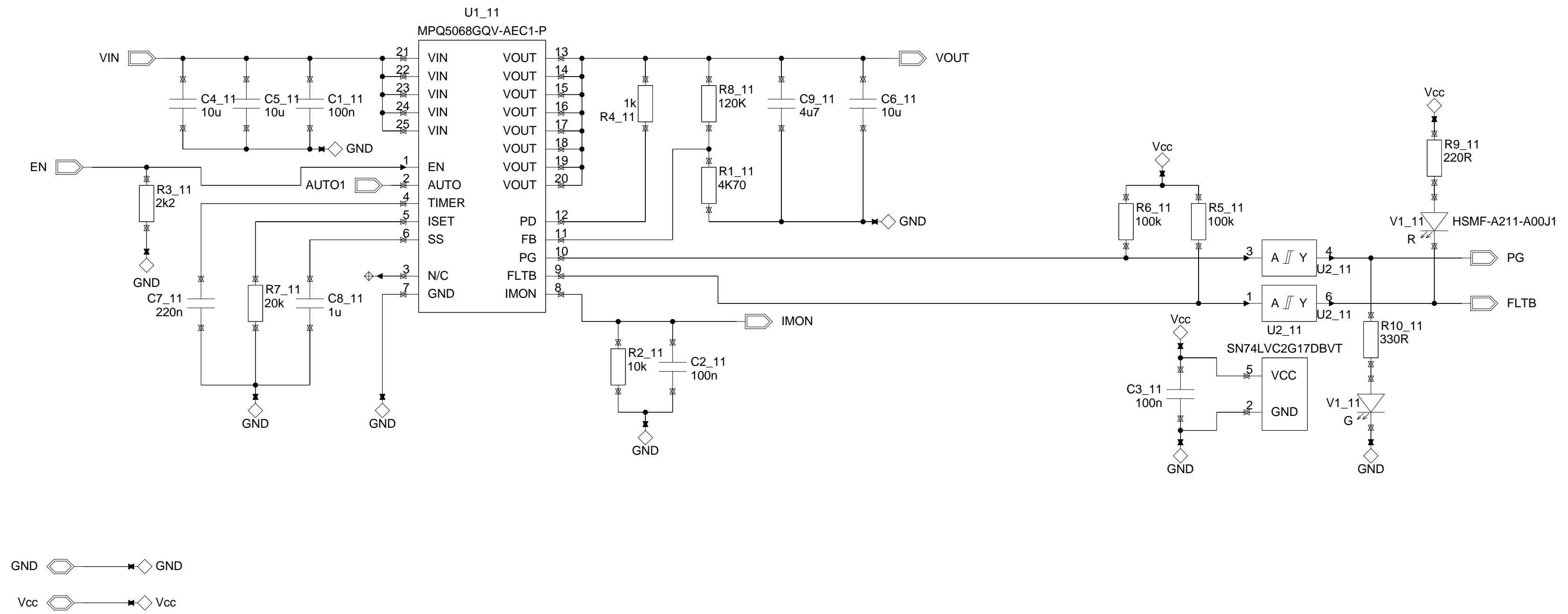
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at:	11-A8
	1381	Variant Name:	Block page:	1 of 1
		Date Time: 24/06/2022:12:12	Sheet Nr.: 12	Total: 47


# Switch\_1



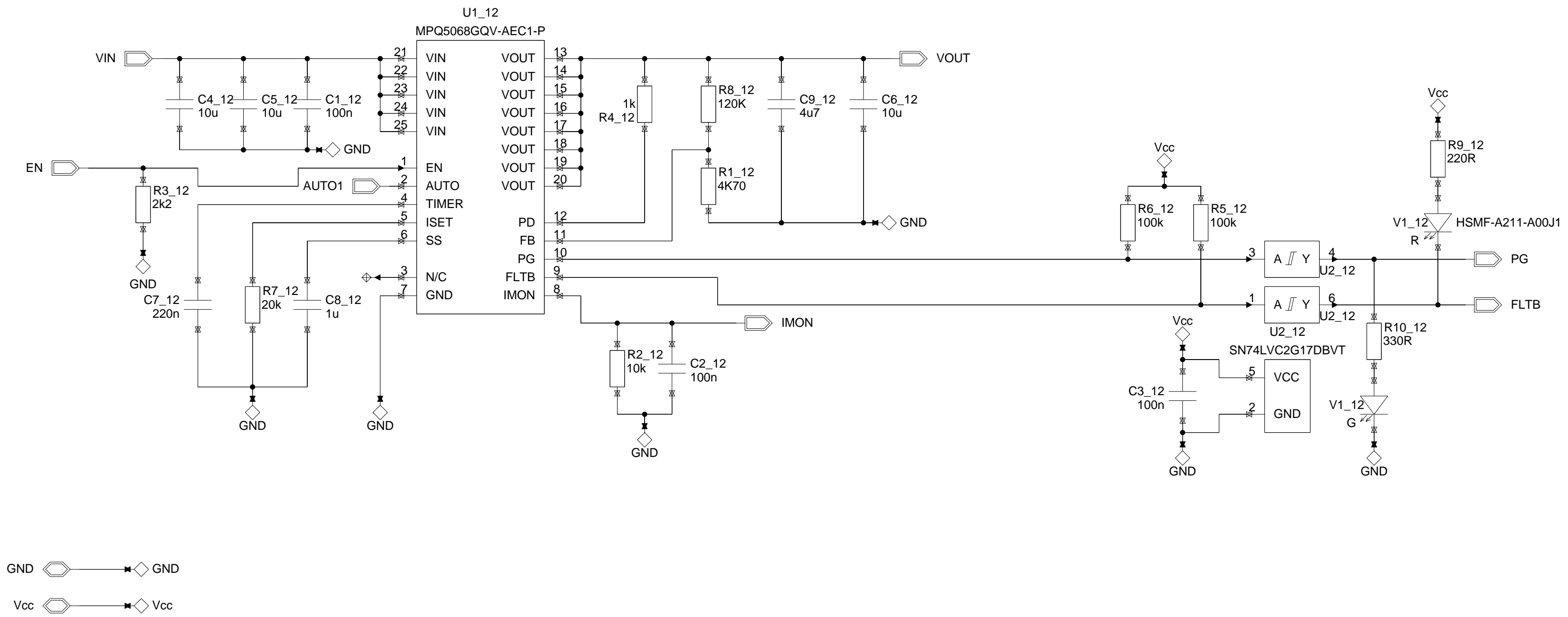
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: 11-D5	
	1381	Variant Name:	Block page: 1 of 1	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 13	Total: 47


# Switch\_1



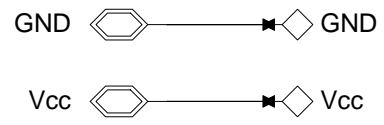
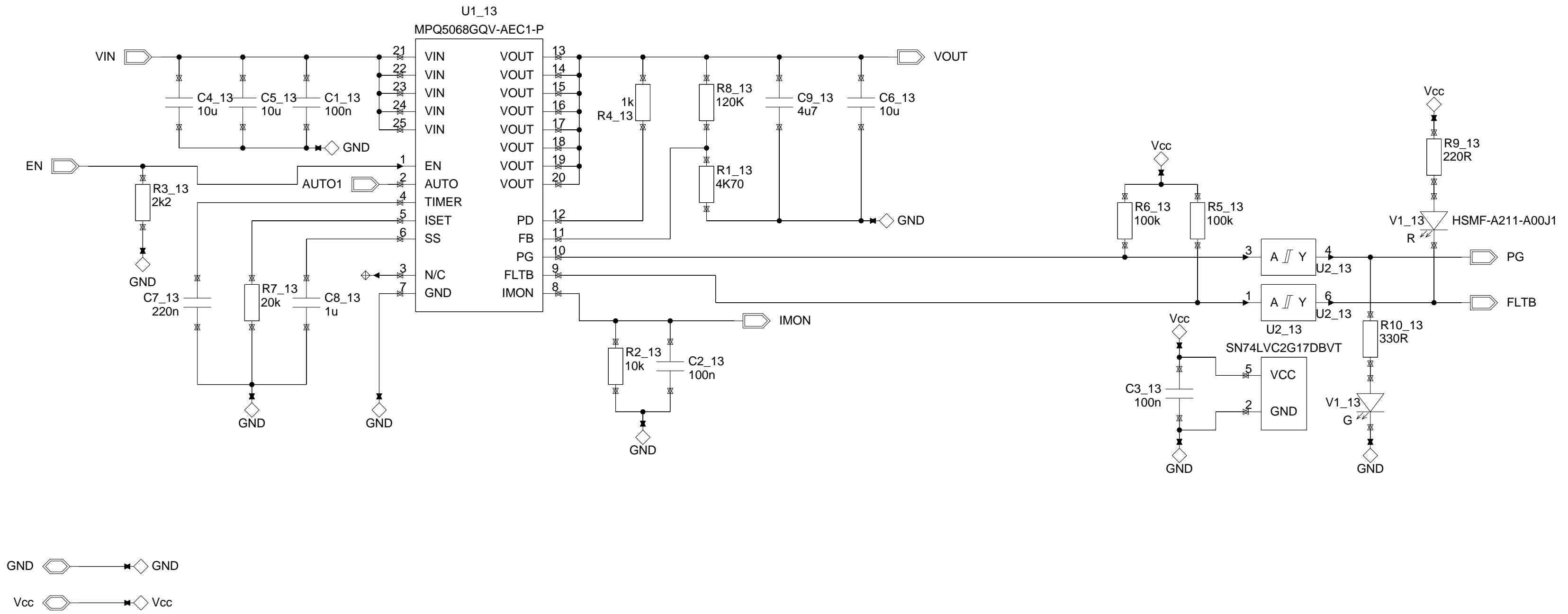
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at:	11-F5
	1381	Variant Name:	Block page:	1 of 1
		Date Time: 24/06/2022:12:12	Sheet Nr.: 14	Total: 47


# Switch\_1



Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
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	1381	Variant Name:	Block page:	1 of 1
		Date Time: 24/06/2022:12:12	Sheet Nr.: 15	Total: 47

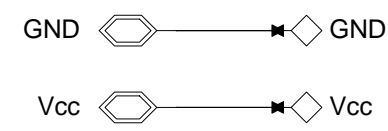
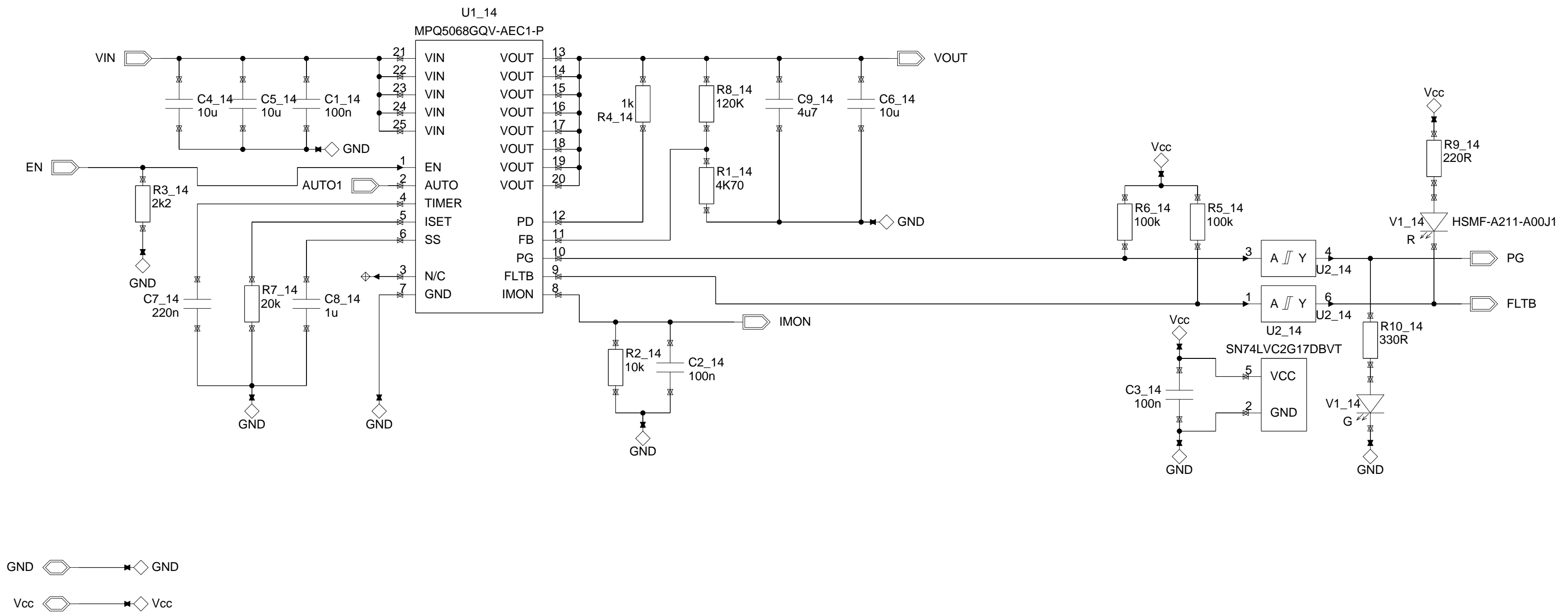
# Switch\_1




Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
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	1381	Variant Name:	Block page: 1 of 1	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 16	Total: 47

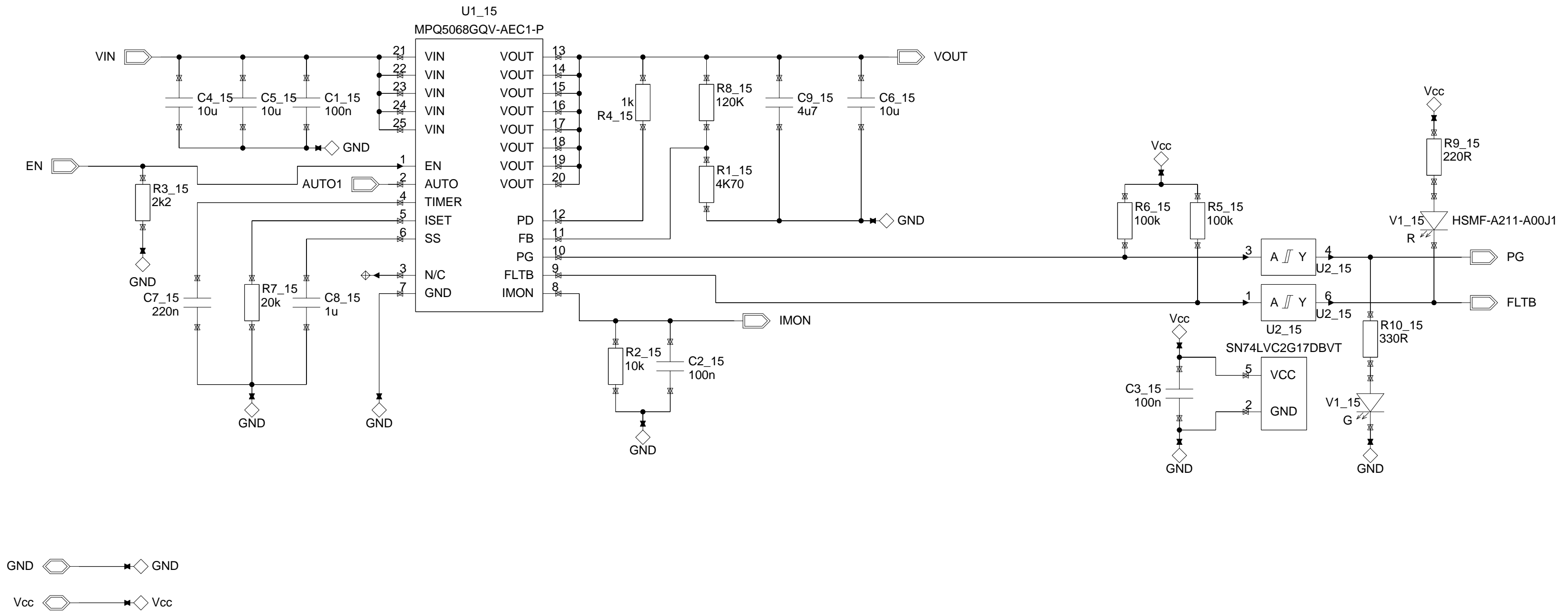



# Switch\_1



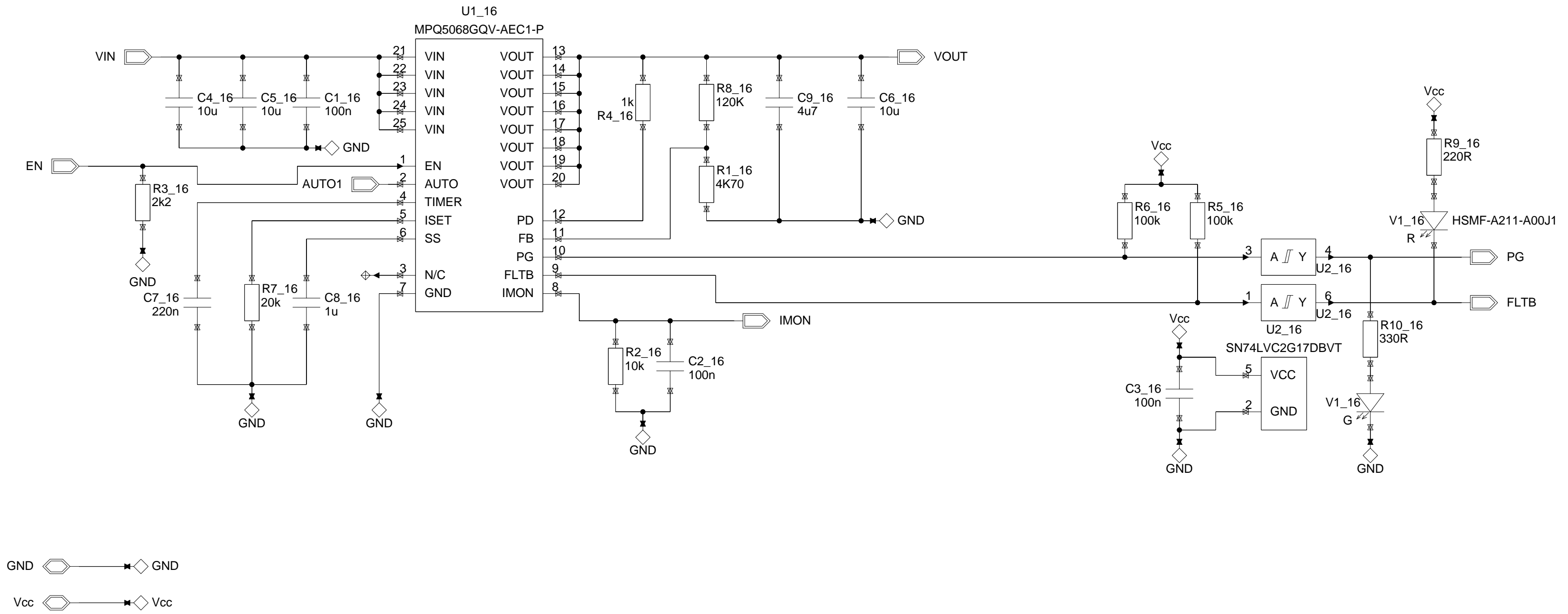
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at:	11-D3
	1381	Variant Name:	Block page:	1 of 1
		Date Time: 24/06/2022:12:12	Sheet Nr.: 17	Total: 47


# Switch\_1



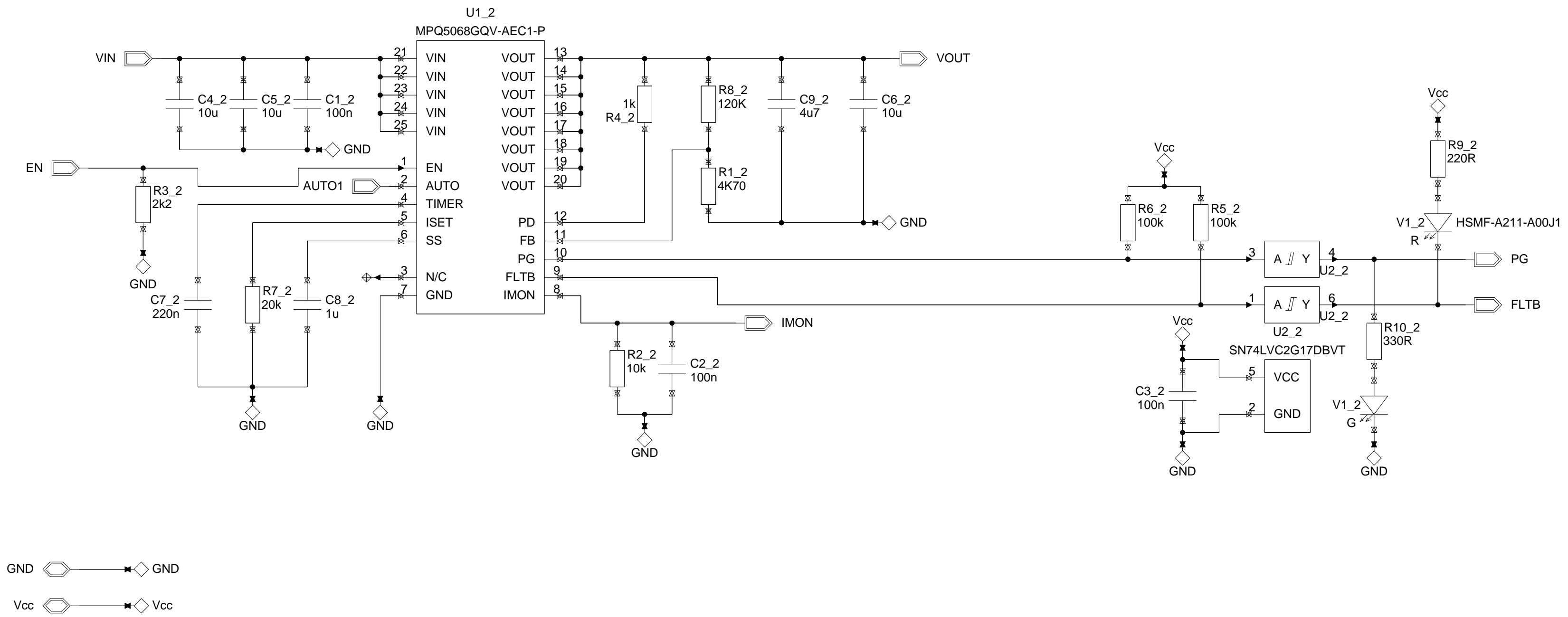
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at:	11-F3
	1381	Variant Name:	Block page:	1 of 1
		Date Time: 24/06/2022:12:12	Sheet Nr.: 18	Total: 47


# Switch\_1



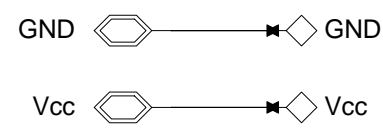
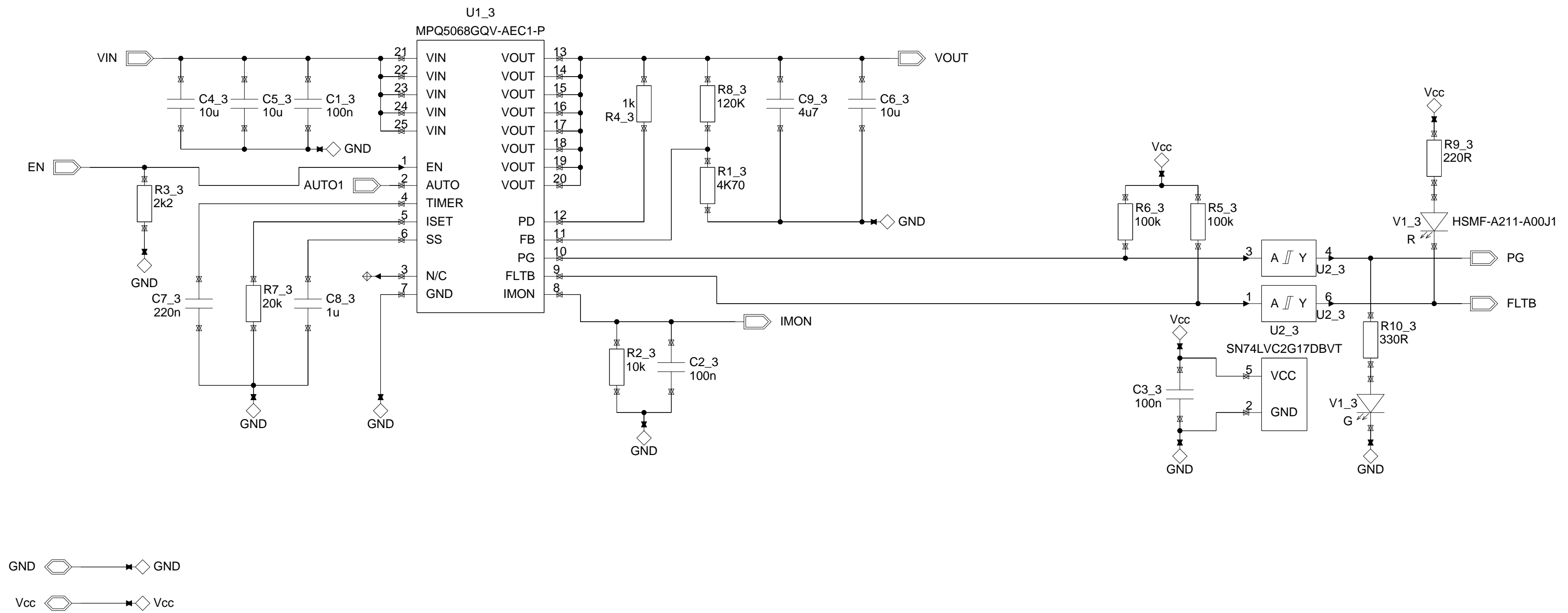
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
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PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
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# Switch\_1



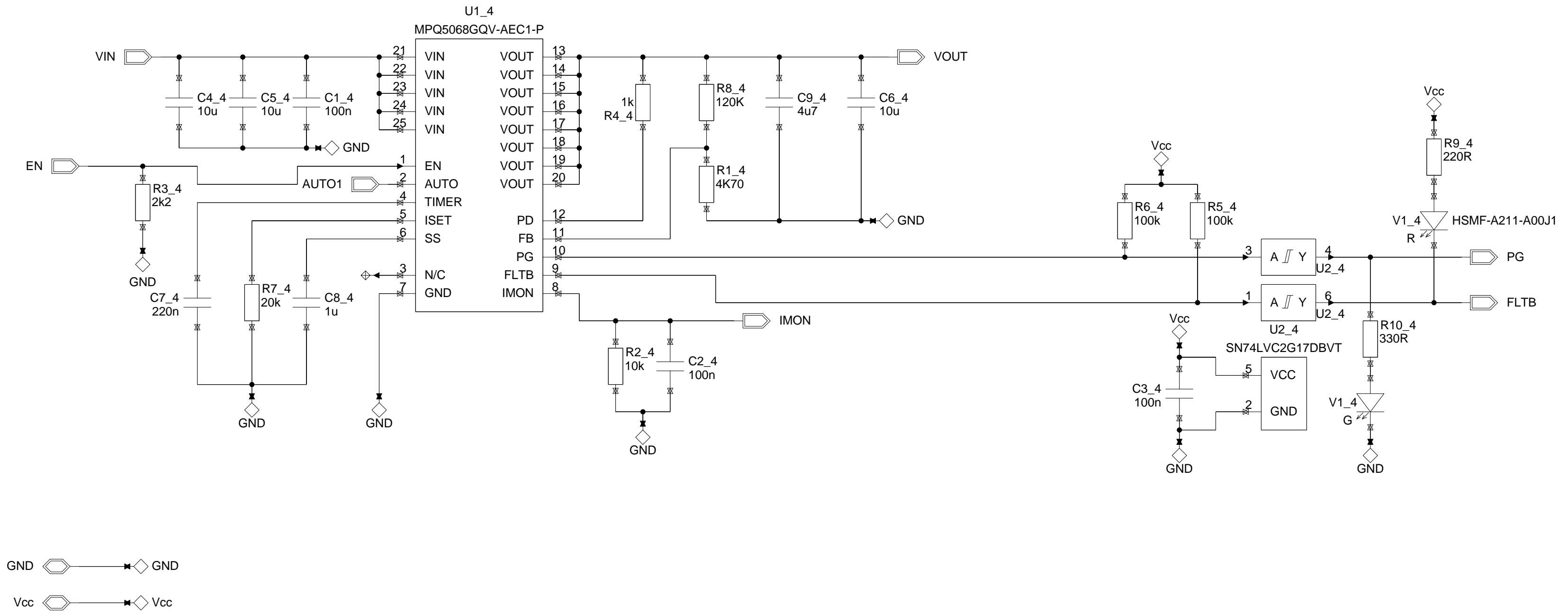
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Drawn by:	Ernst Tobias	Schematic:	Switch1
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PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr:	220201
	PER	Rev:	A
	1381	Size:	A3
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	Date Time:	24/06/2022:12:12	Sheet Nr.: 20 Total: 47


# Switch\_1



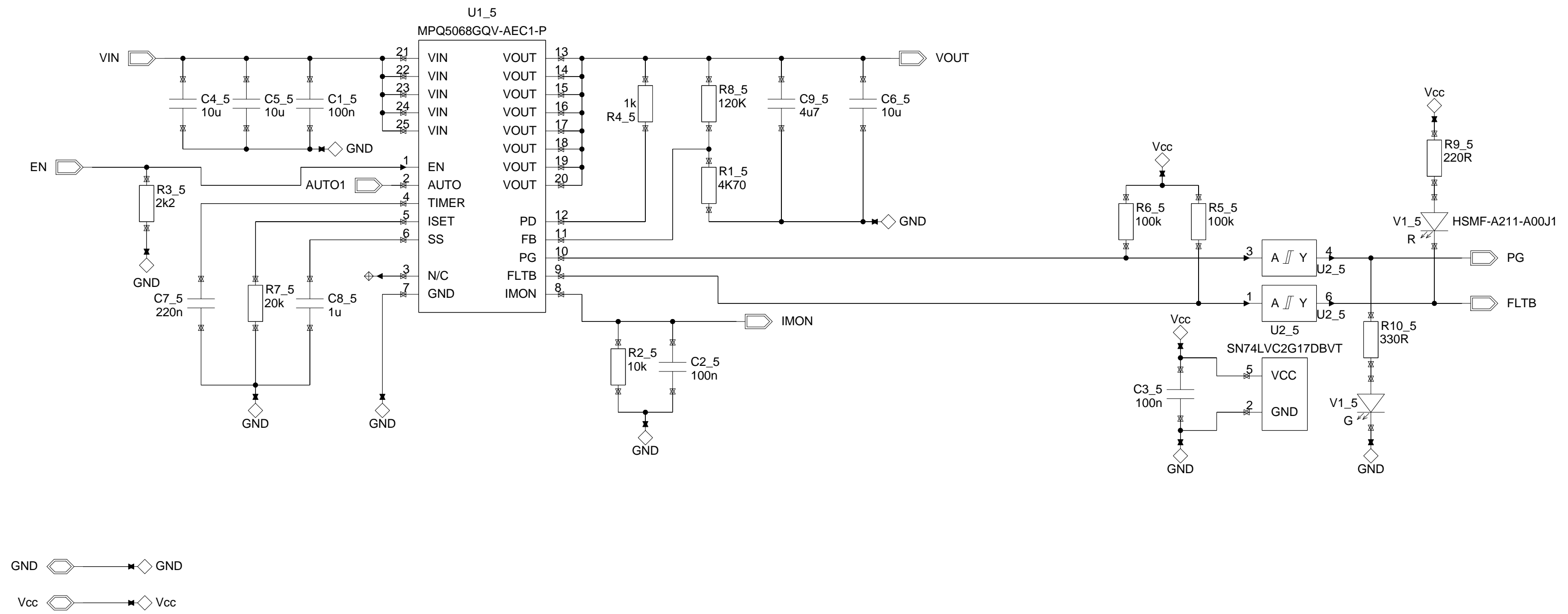
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
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PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: 11-F8	
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# Switch\_1



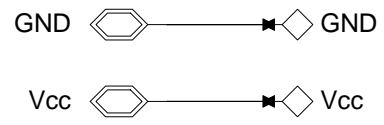
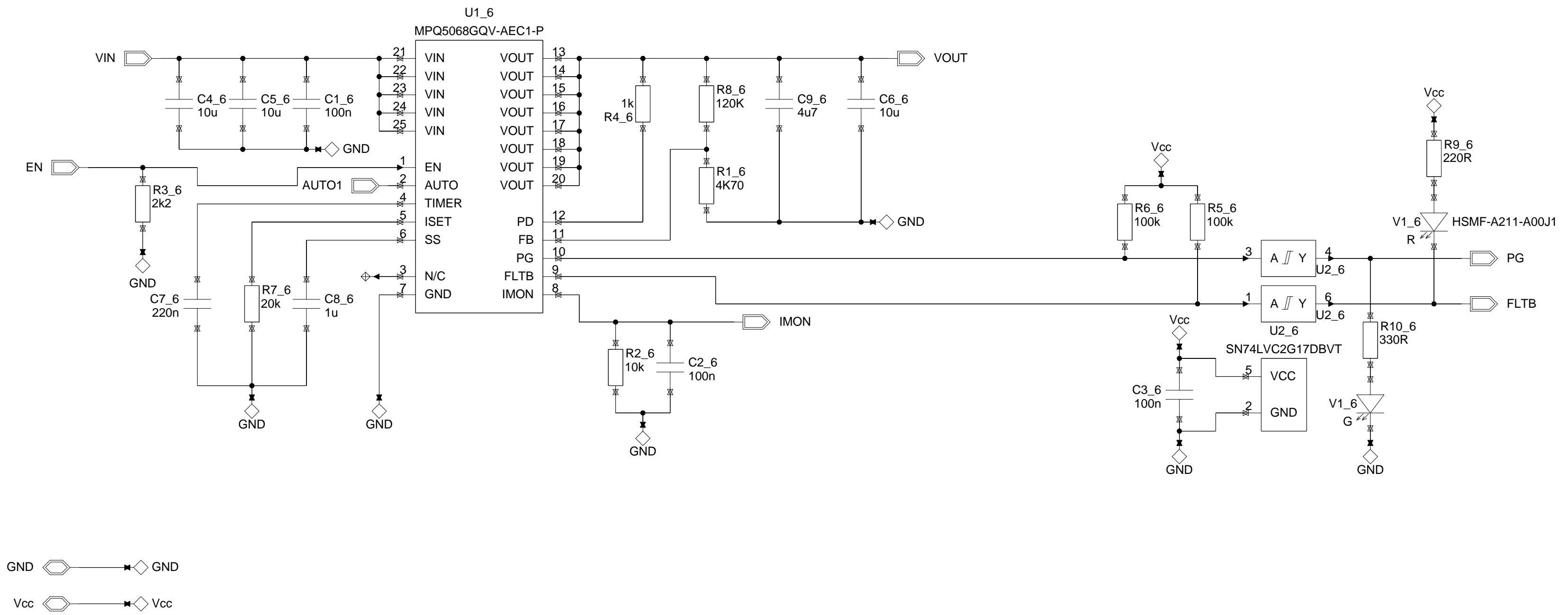
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
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PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
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		Date Time: 24/06/2022:12:12	Sheet Nr.: 22	Total: 47


# Switch\_1



Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
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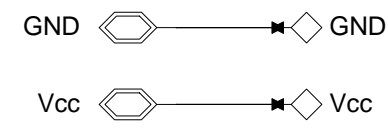
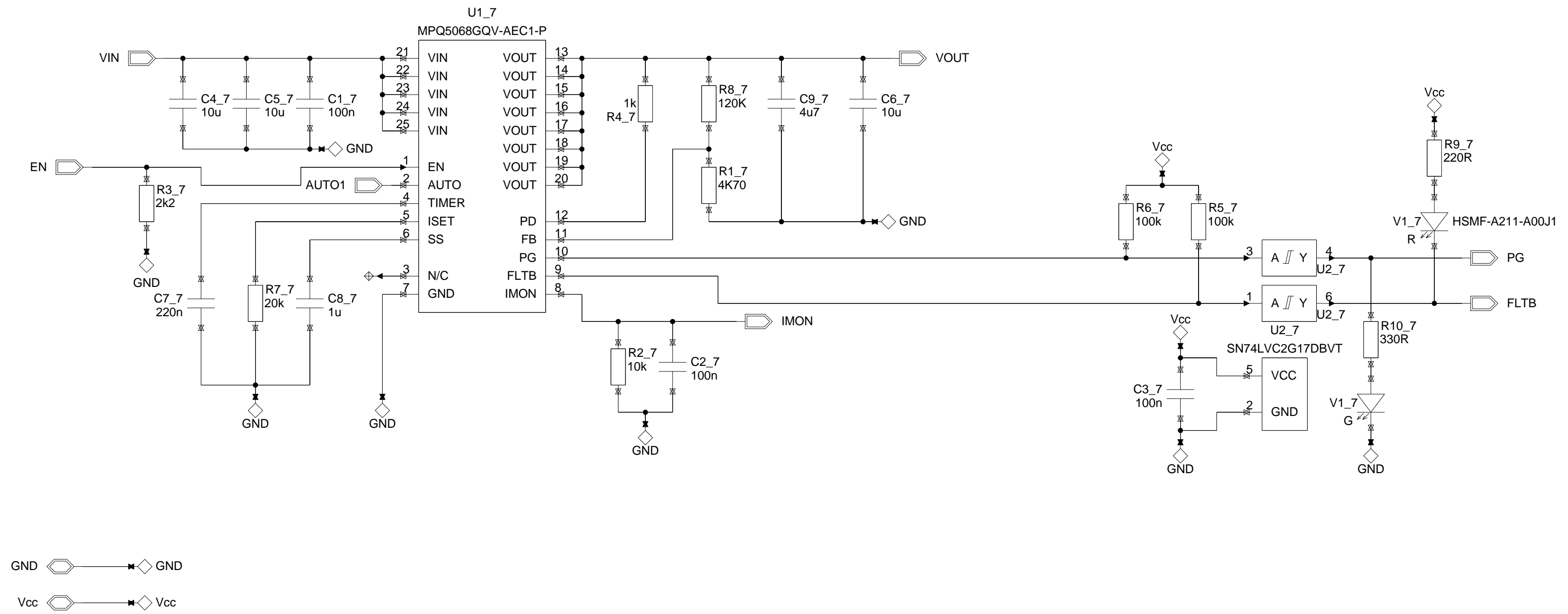
# Switch\_1




Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at:	11-D6
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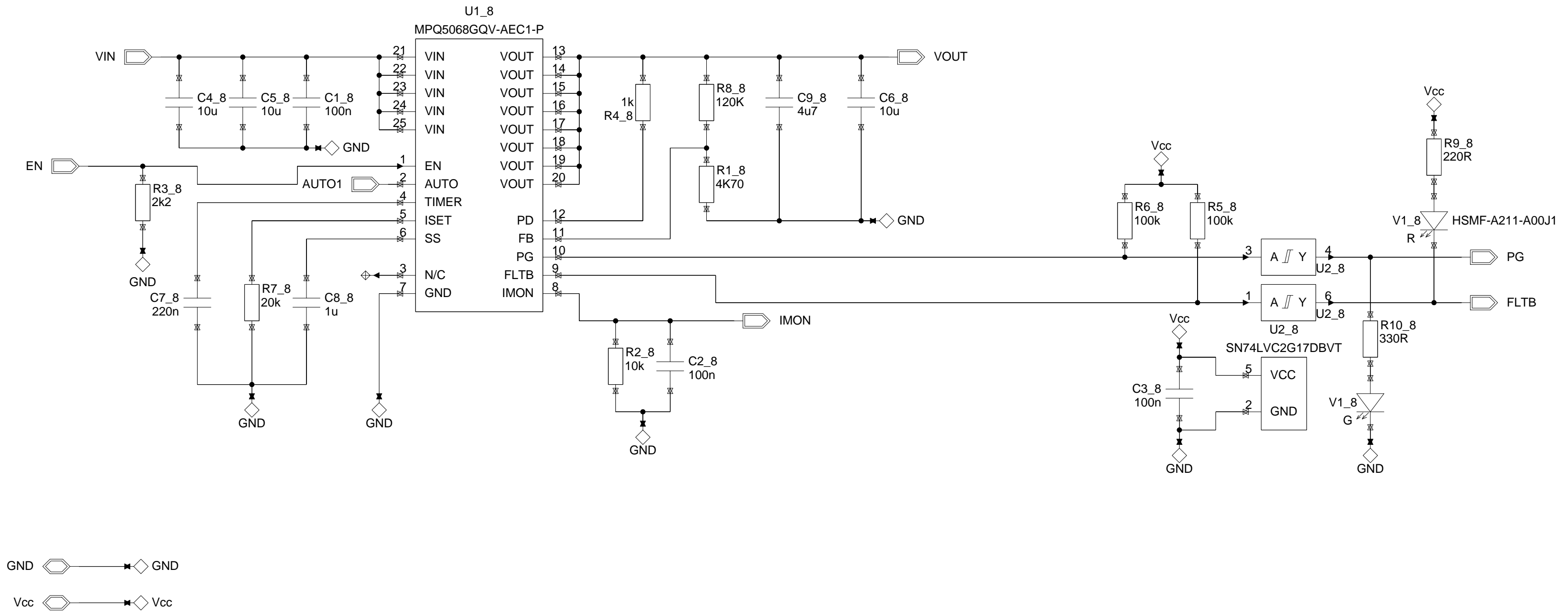



# Switch\_1



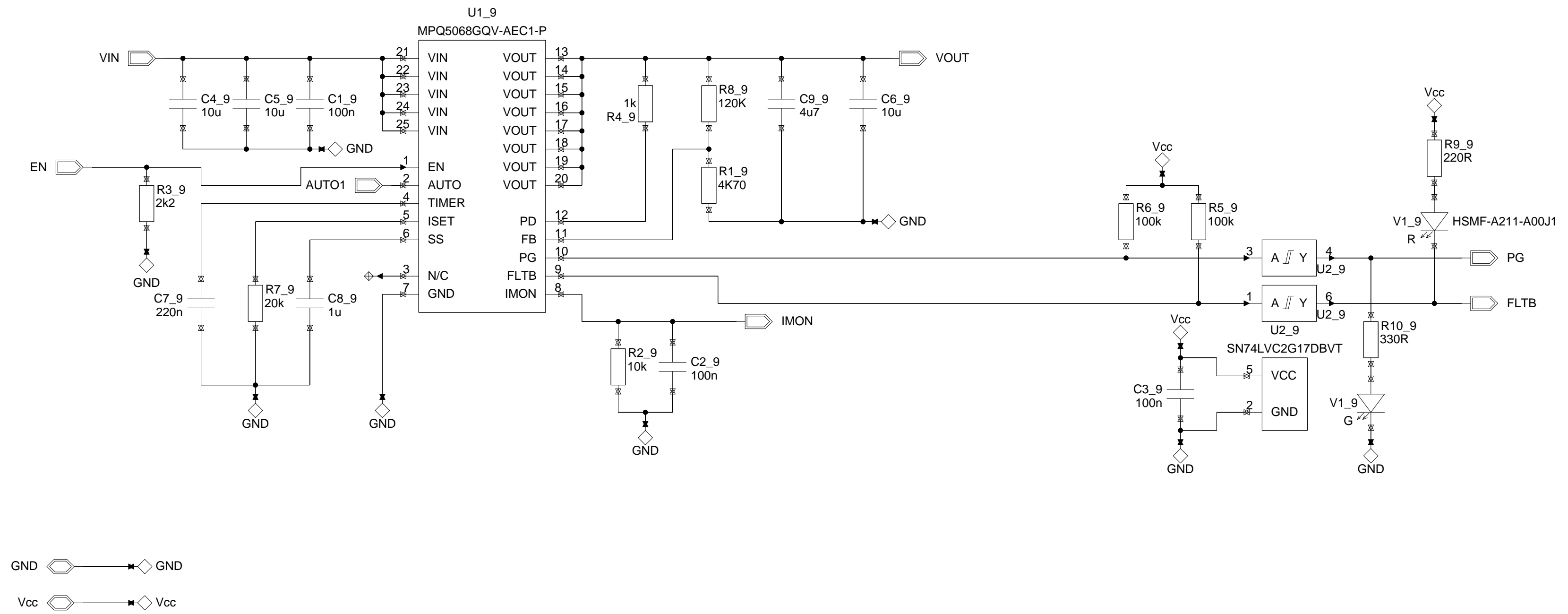
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
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PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at:	11-F6
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# Switch\_1



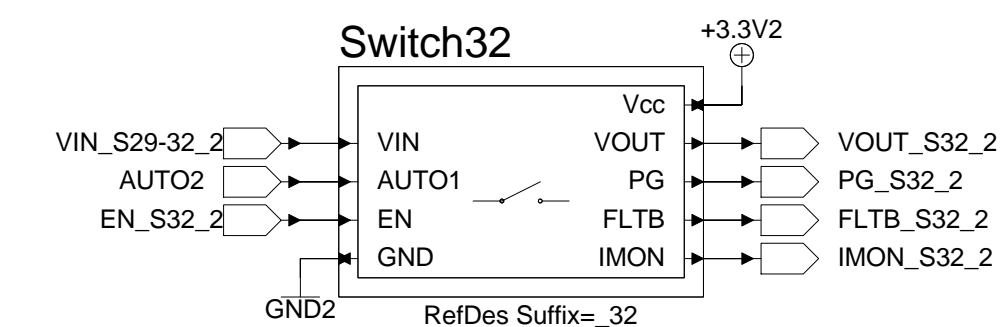
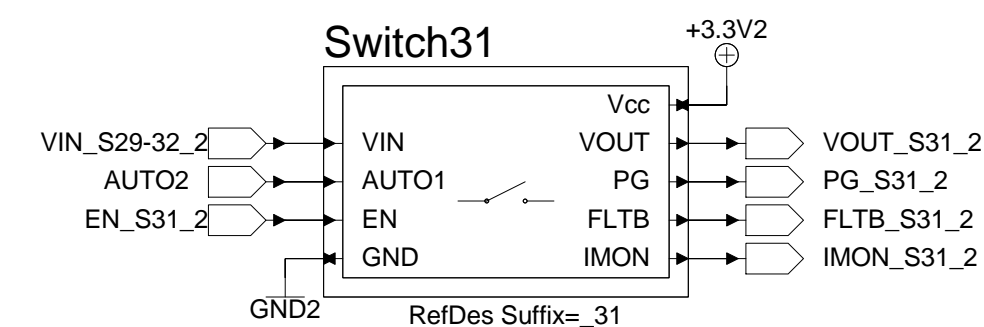
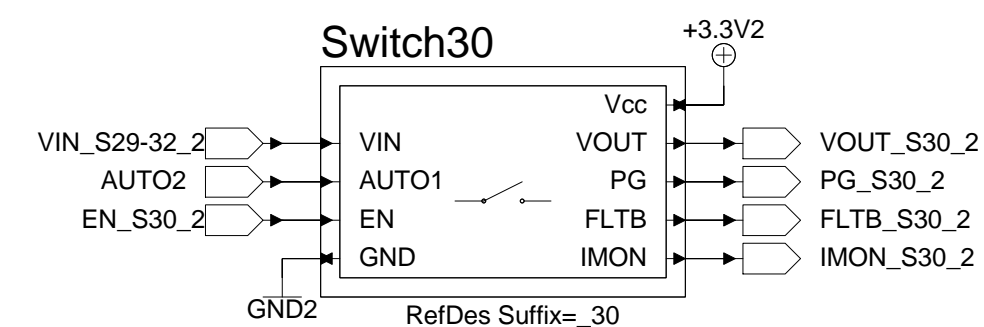
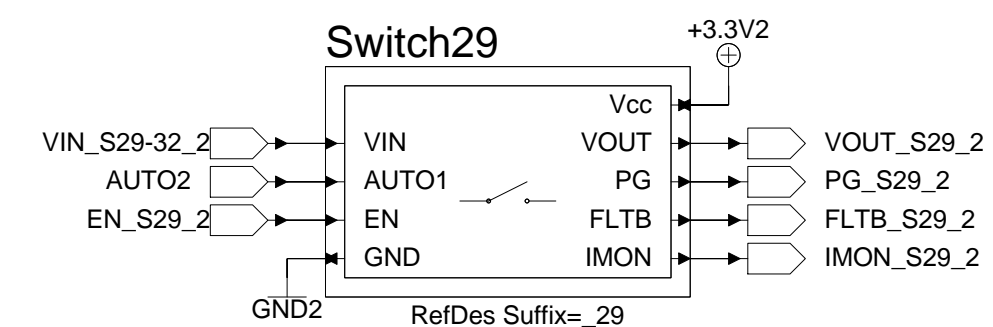
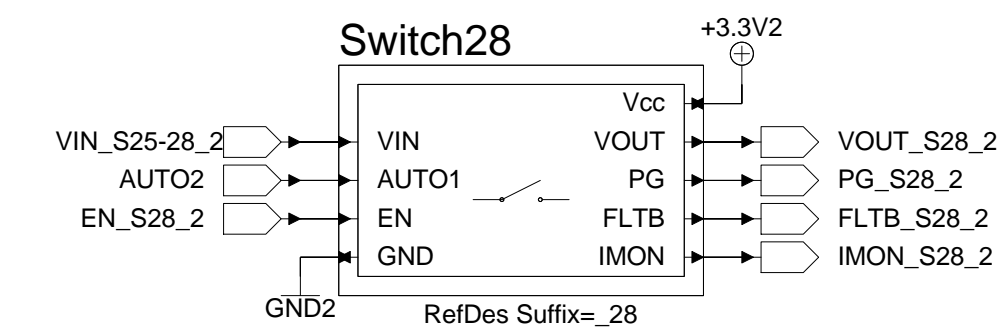
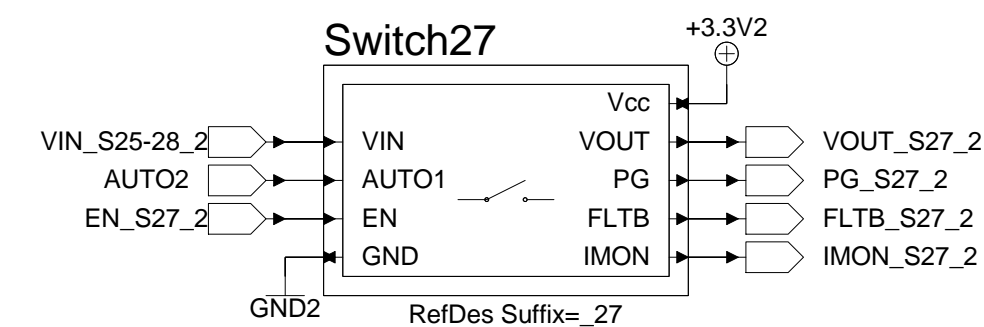
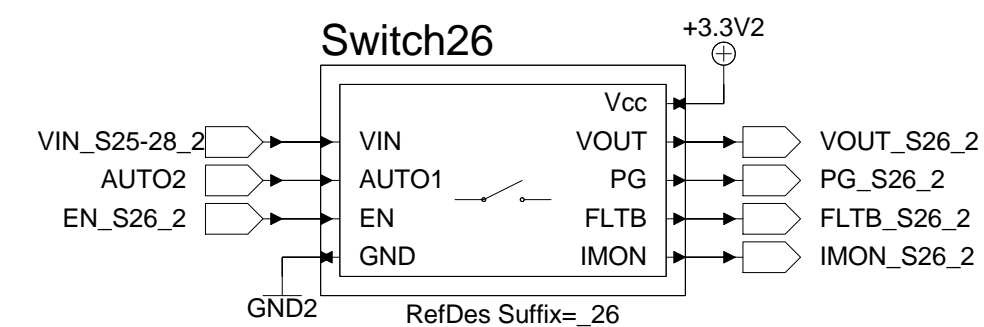
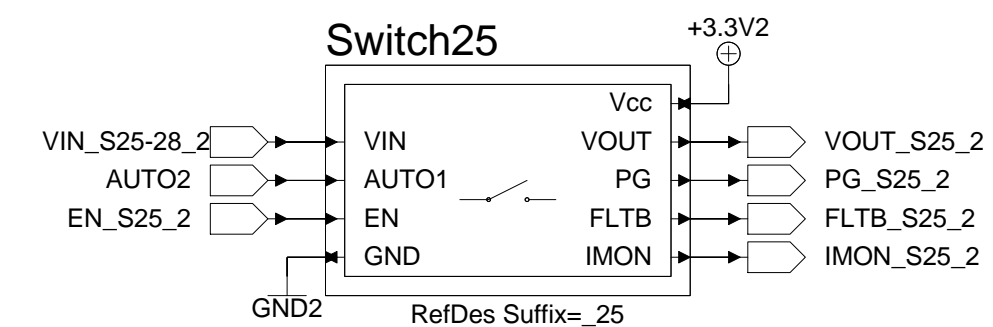
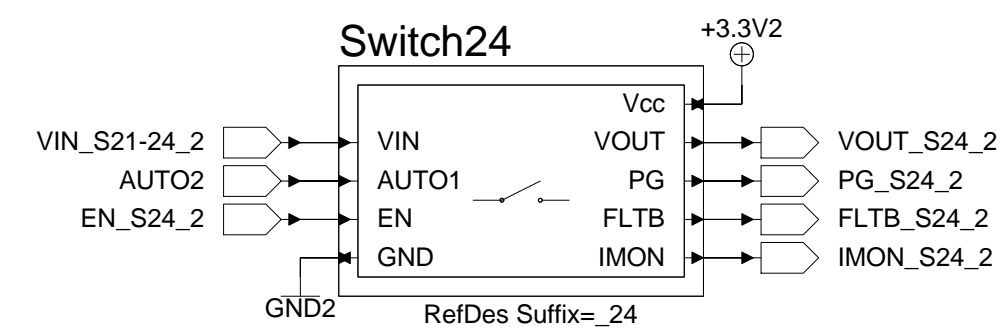
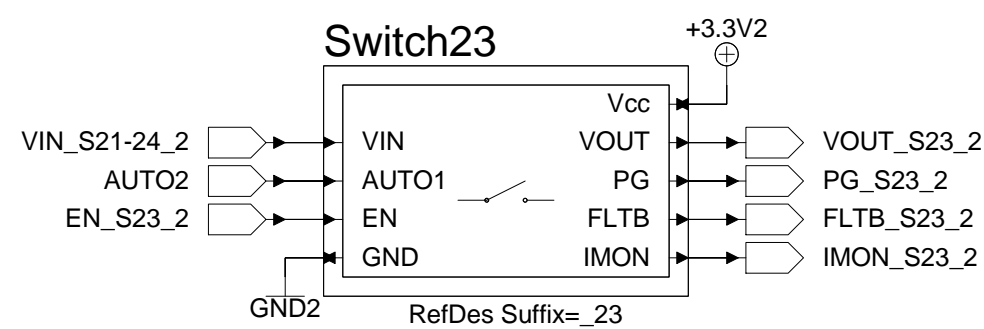
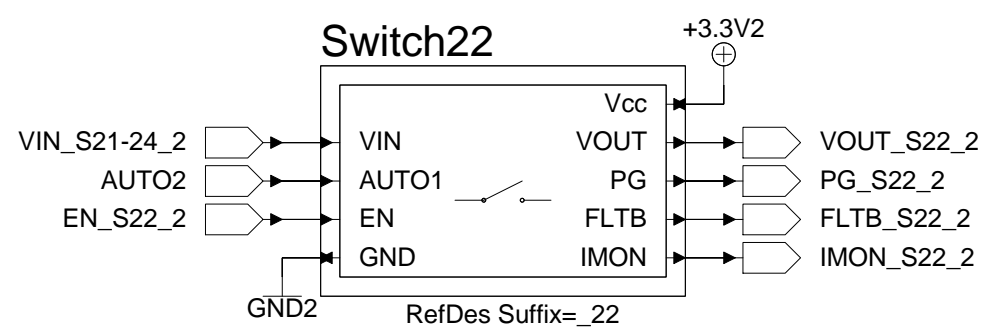
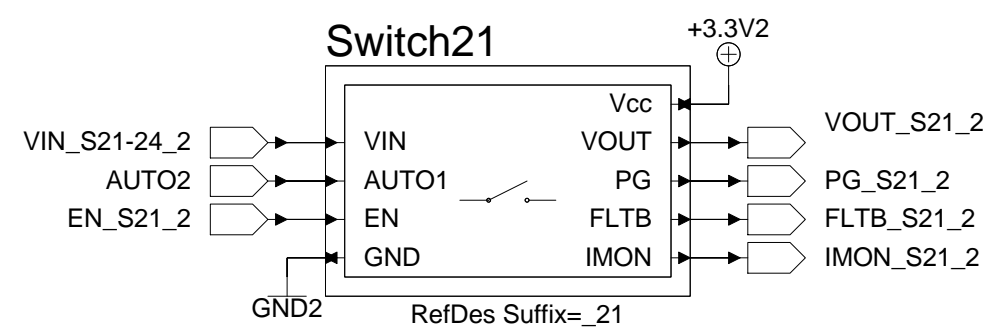
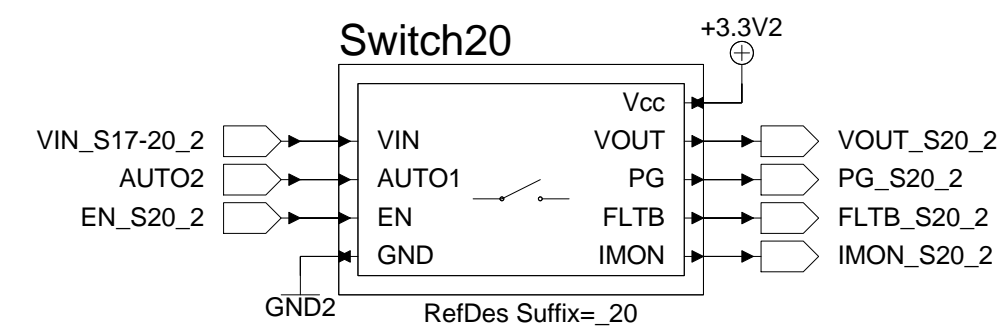
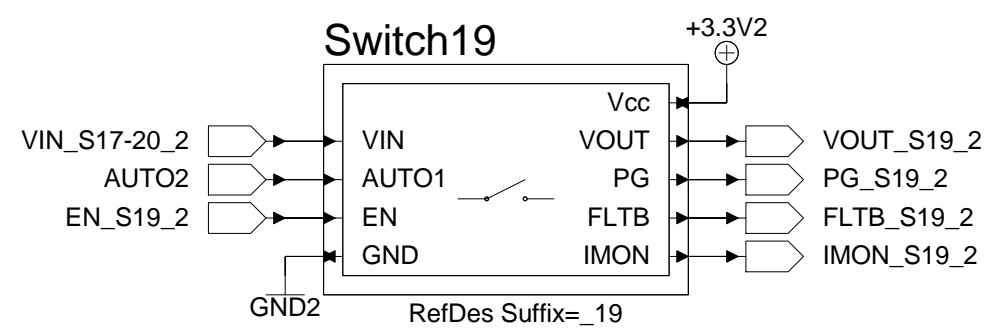
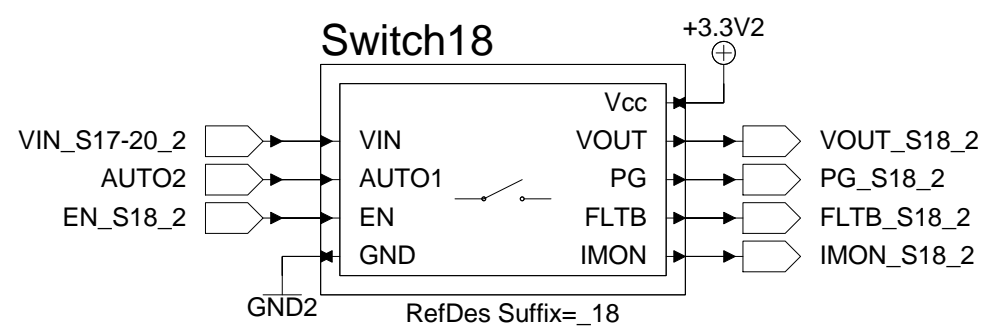
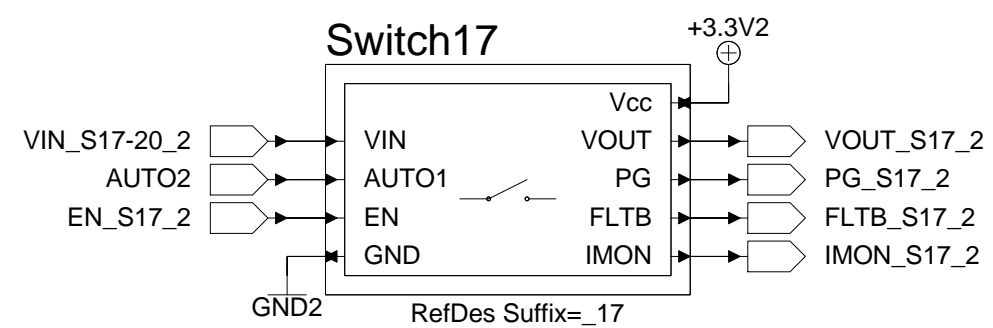
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr:	220201	Rev: A
	PER	PER Distributor_Controller_(MPDC)	Located at: 11-16	
	1381	Variant Name:	Block page: 1 of 1	
		Date Time:	24/06/2022:12:12	Sheet Nr.: 26

# Switch\_1

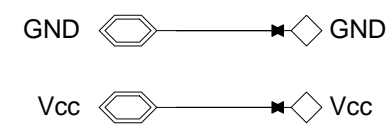
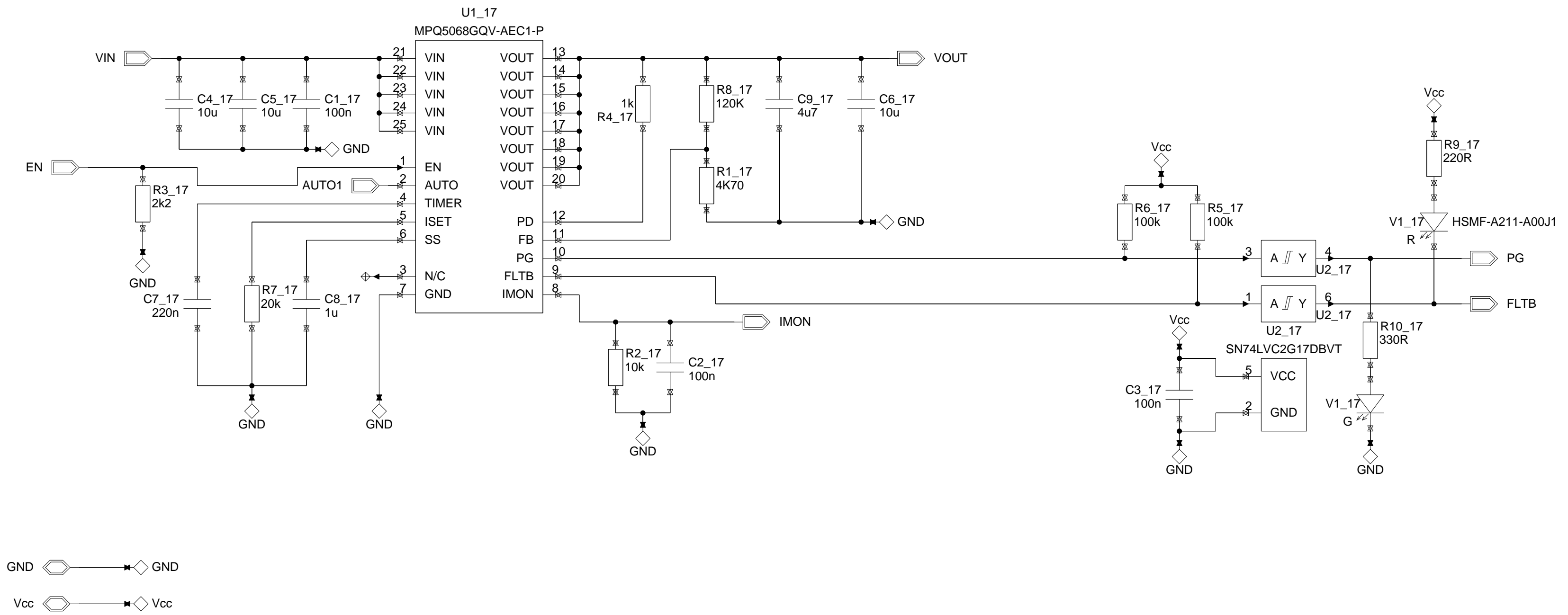



Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at:	11-A5
	1381	Variant Name:	Block page:	1 of 1
		Date Time: 24/06/2022:12:12	Sheet Nr.: 27	Total: 47

# Switches 2

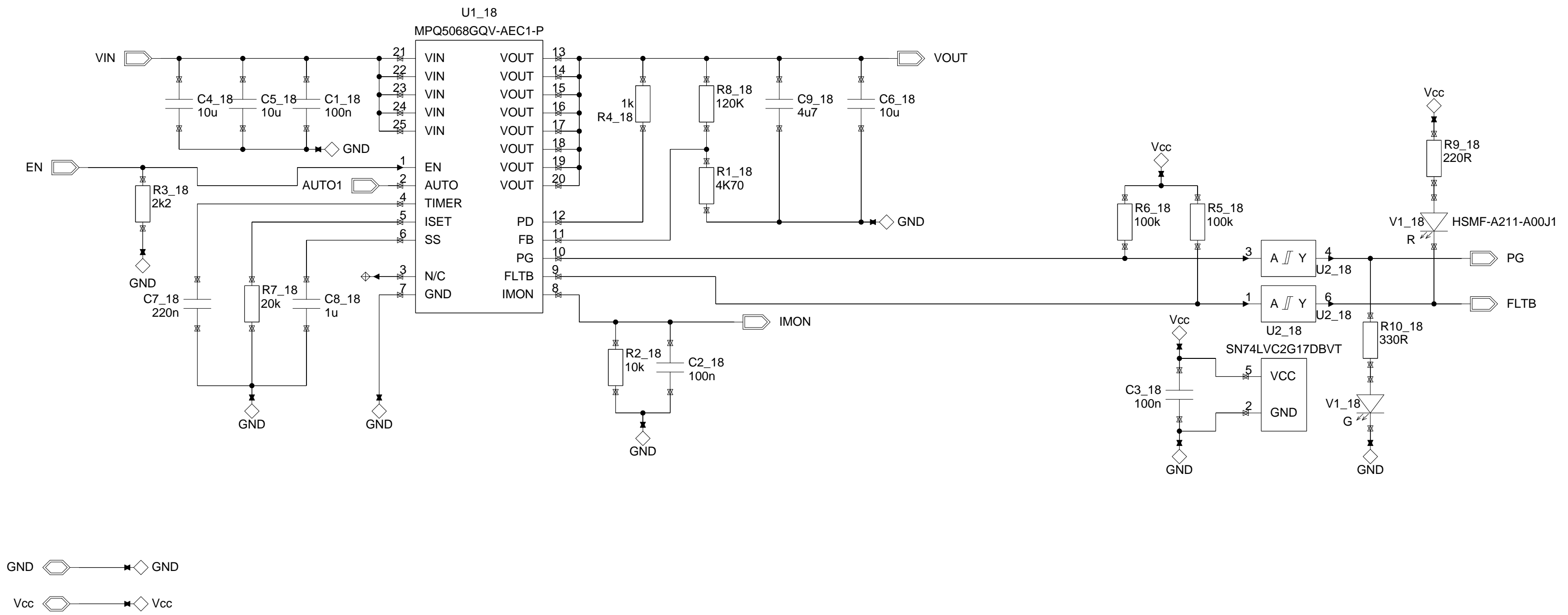



# Switch\_1



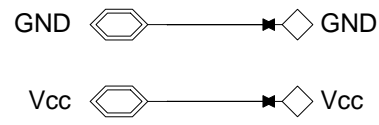
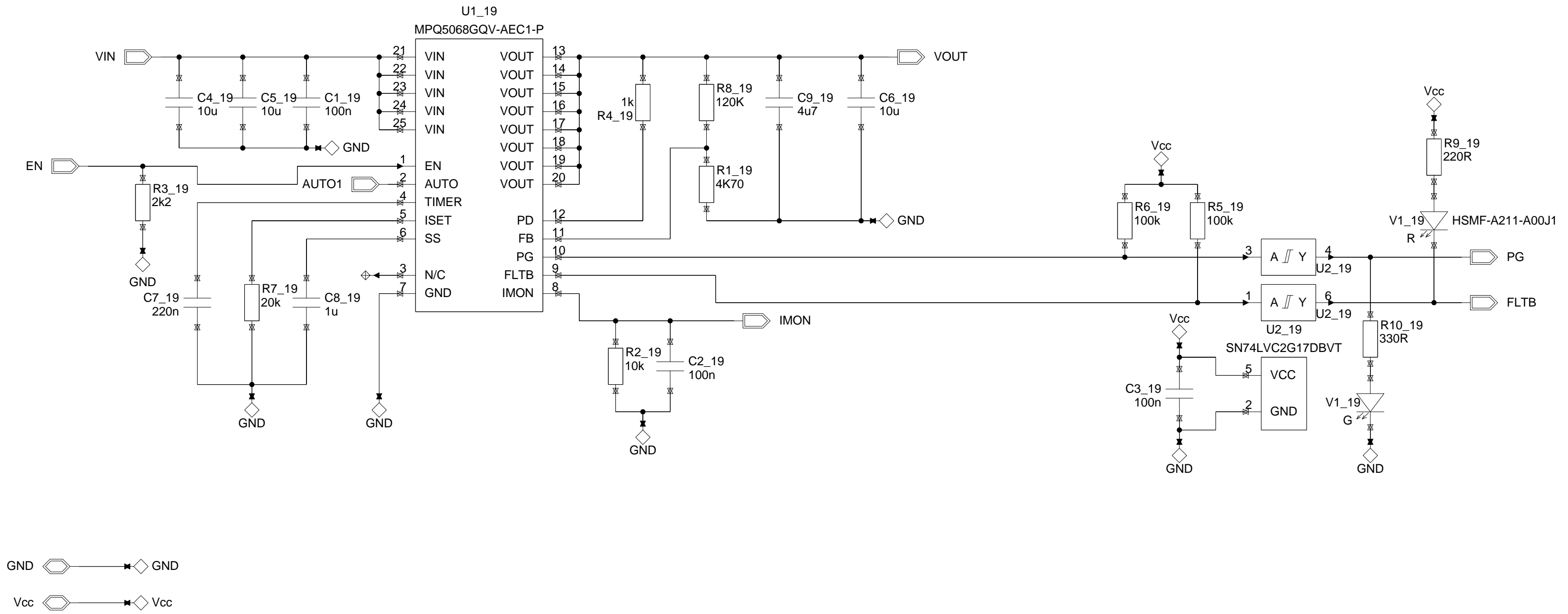
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	PER Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 29	Total: 47


# Switch\_1



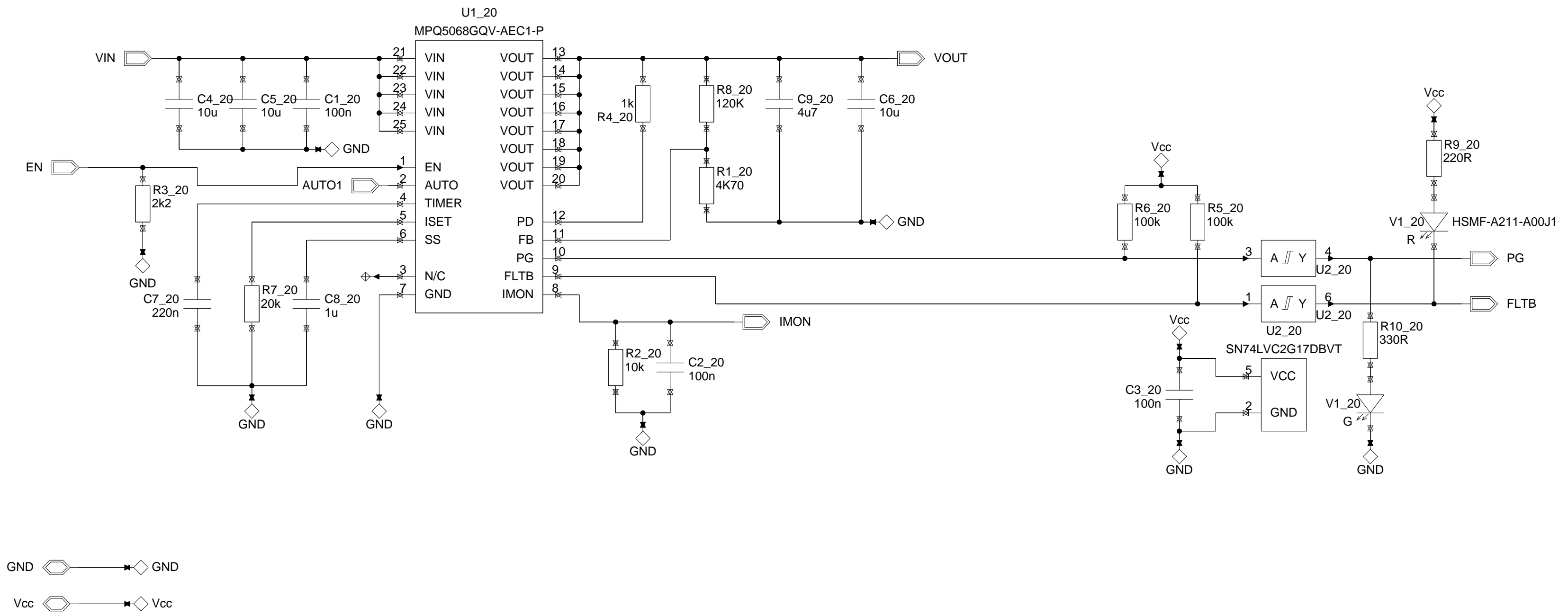
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	PER Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 30	Total: 47


# Switch\_1



Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 31	Total: 47

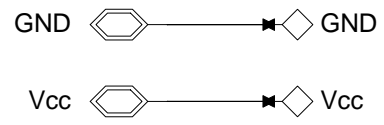
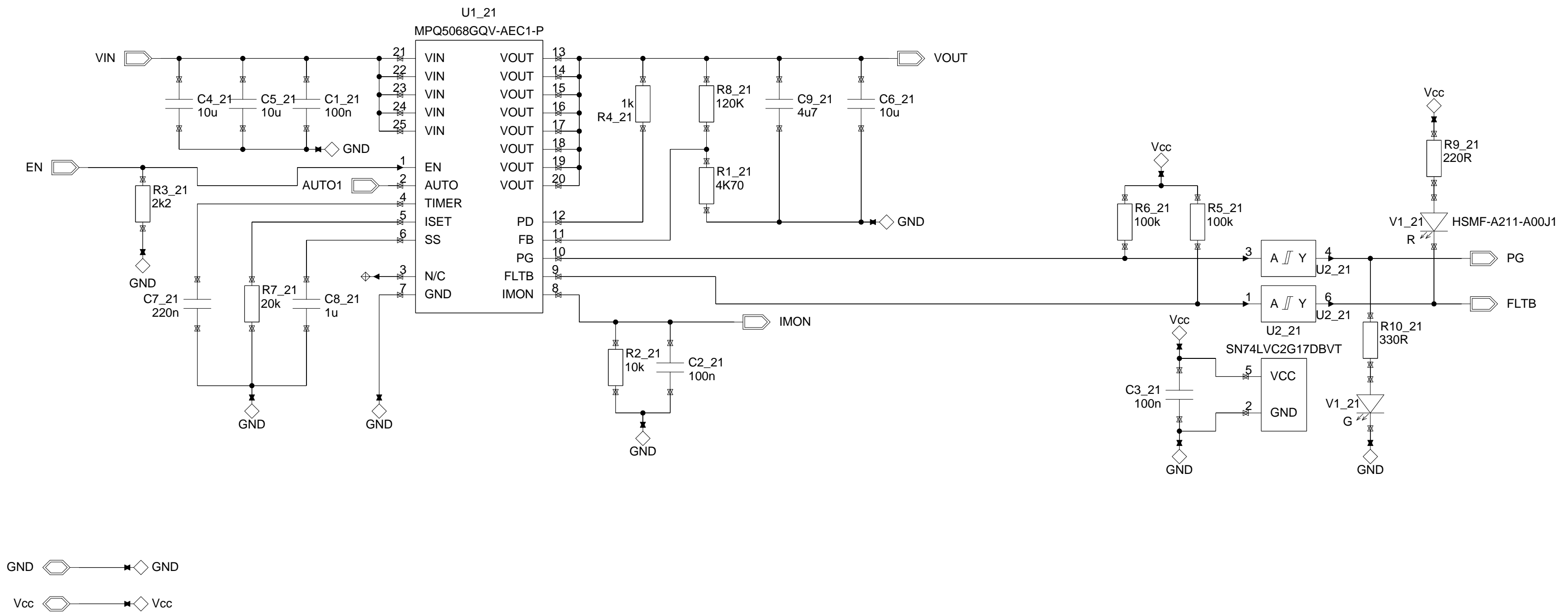
# Switch\_1




Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 32	Total: 47

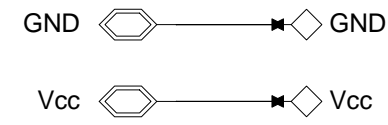
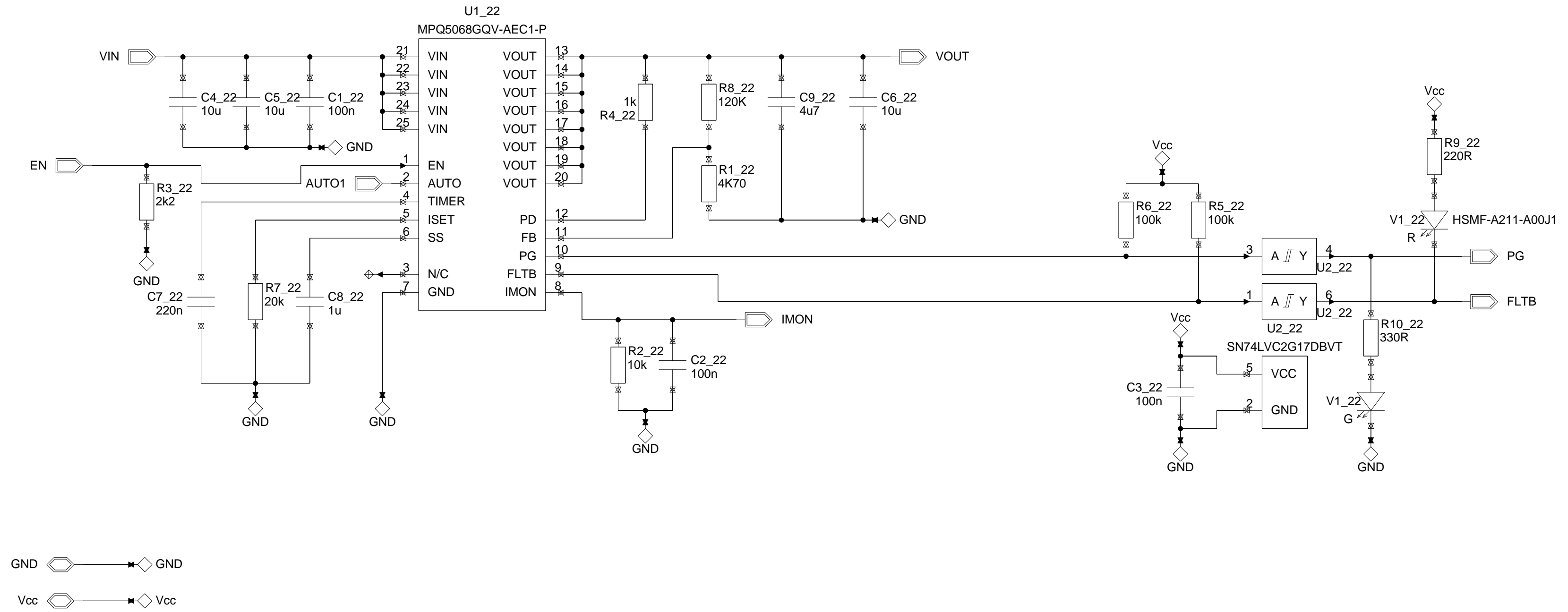



# Switch\_1



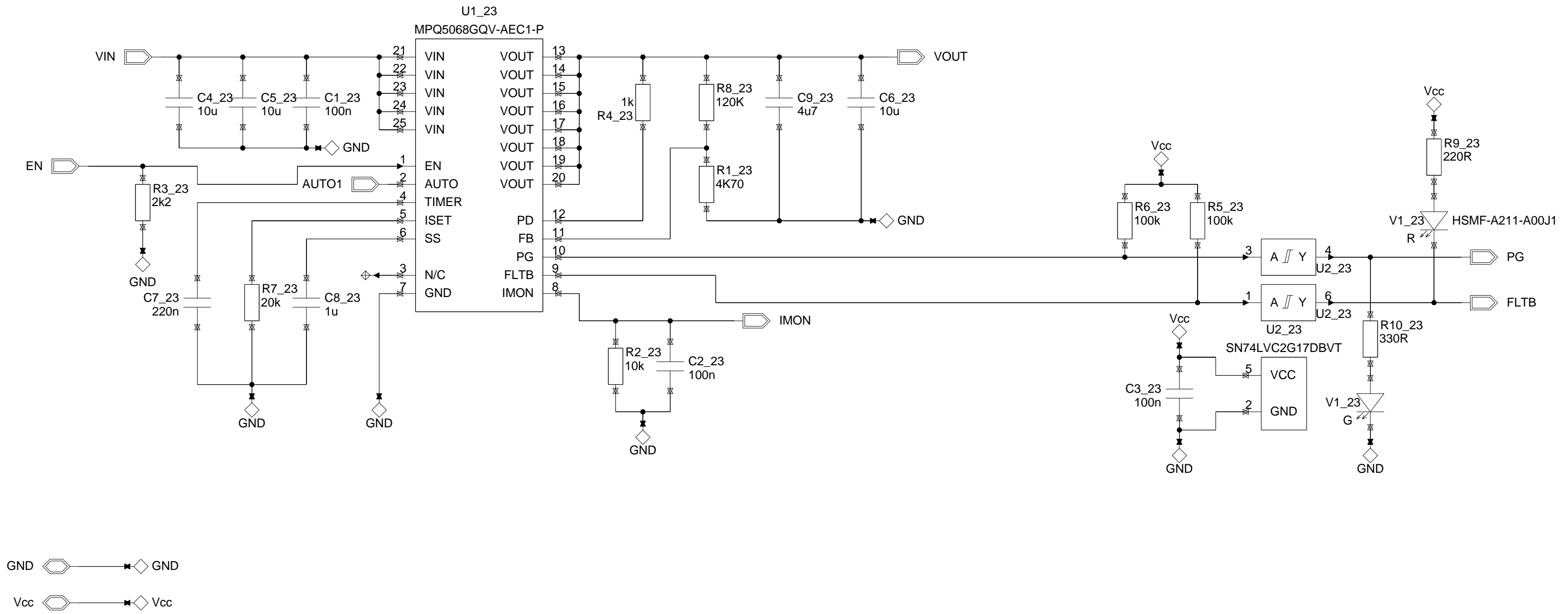
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	PER Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 33	Total: 47


# Switch\_1



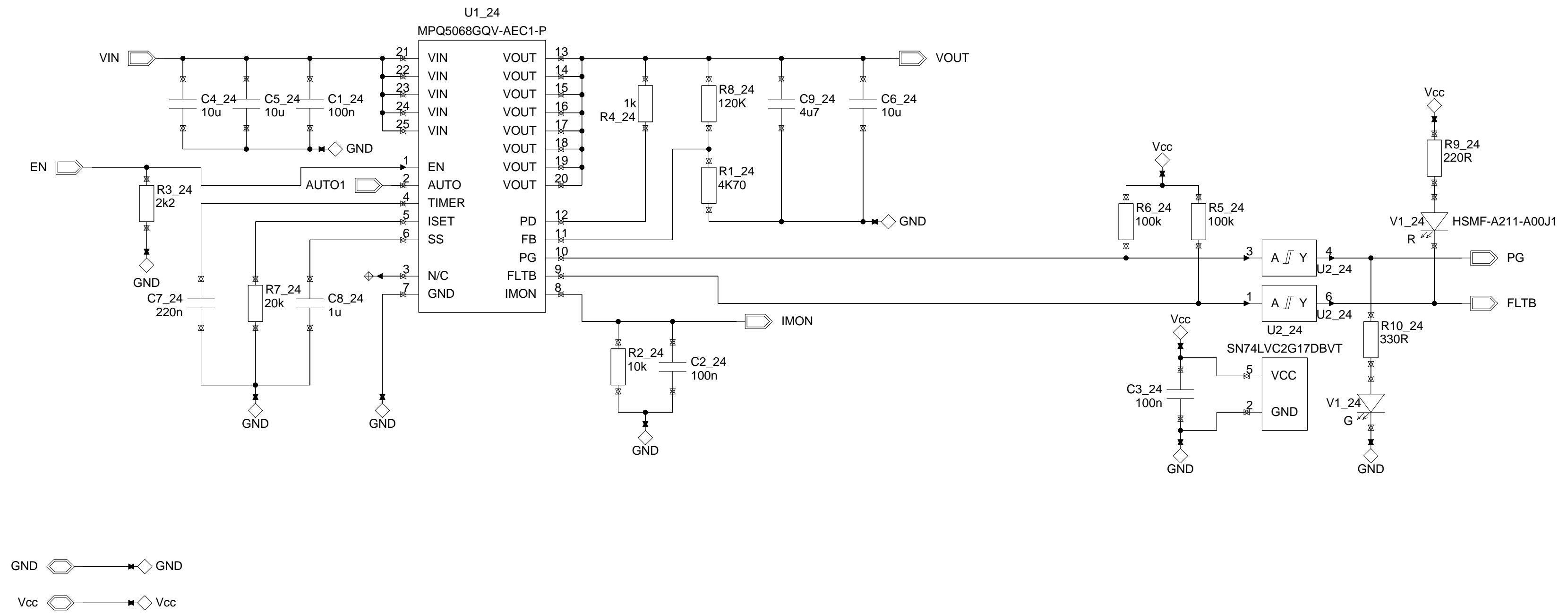
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	PER Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 34	Total: 47


# Switch\_1



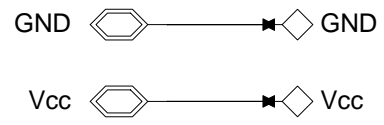
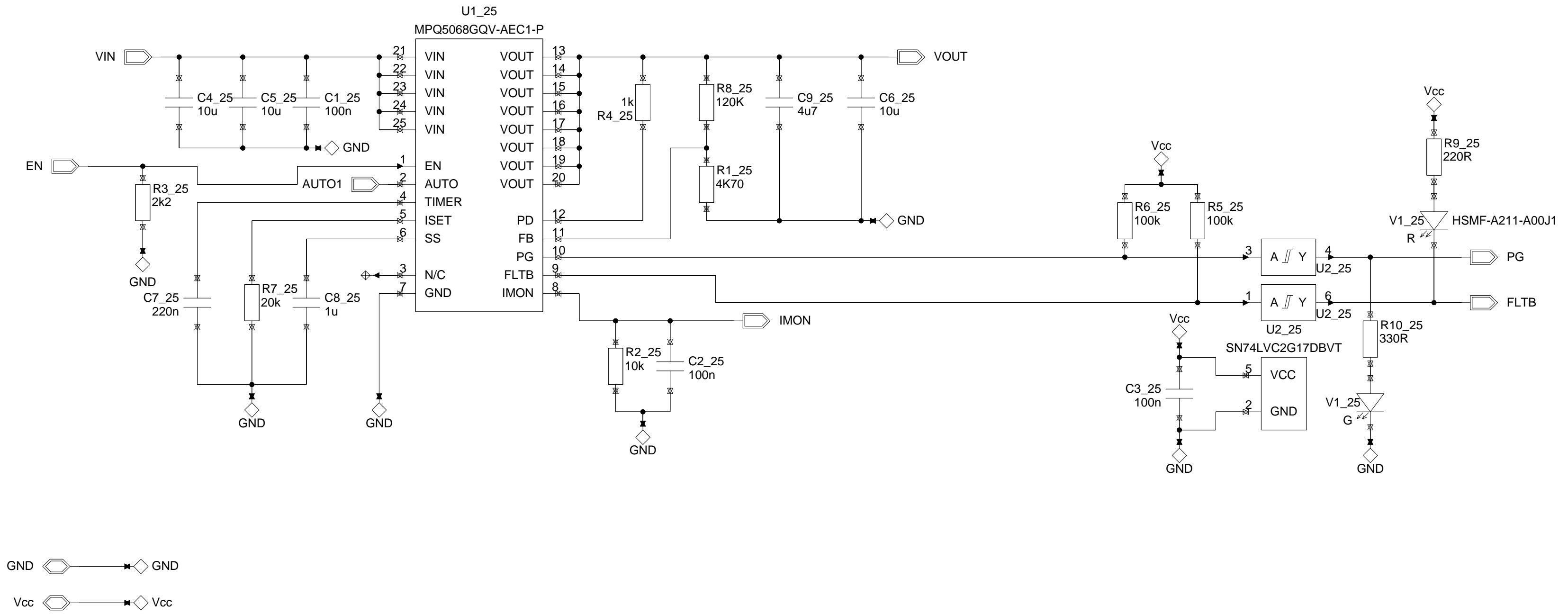
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	PER Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 35	Total: 47


# Switch\_1



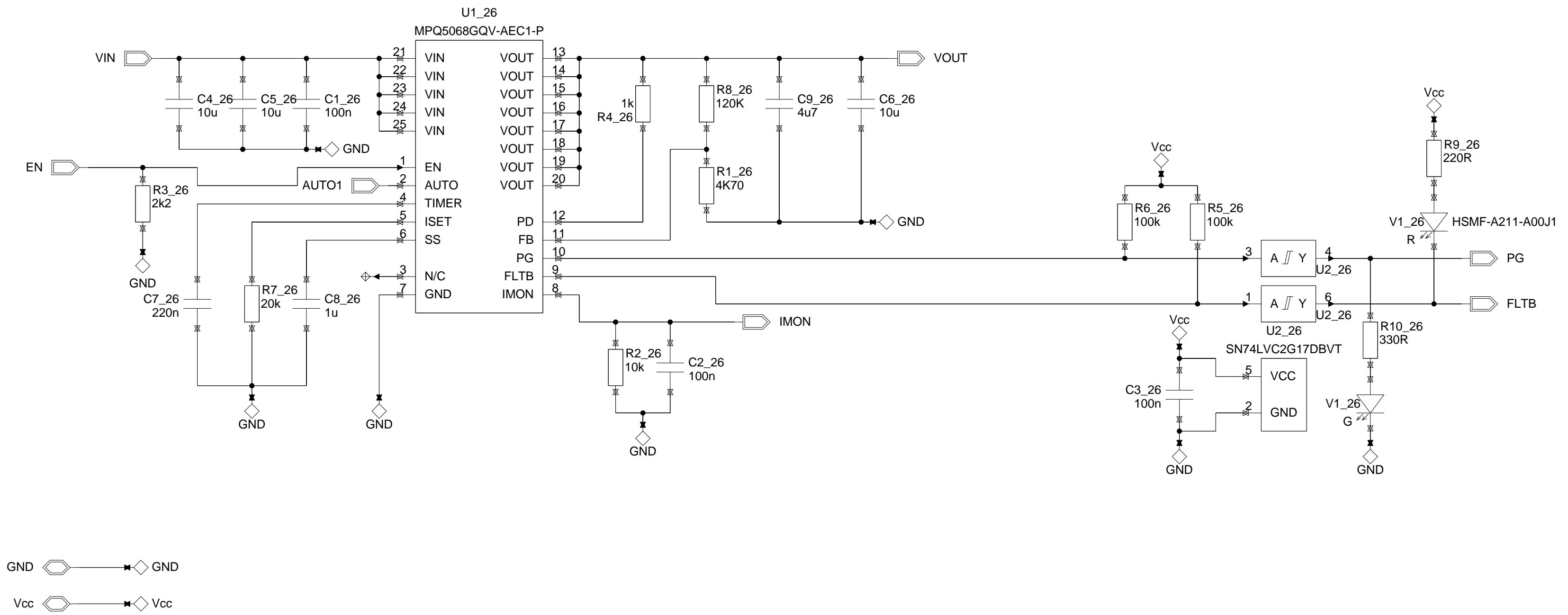
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	PER Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 36	Total: 47


# Switch\_1



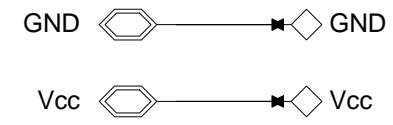
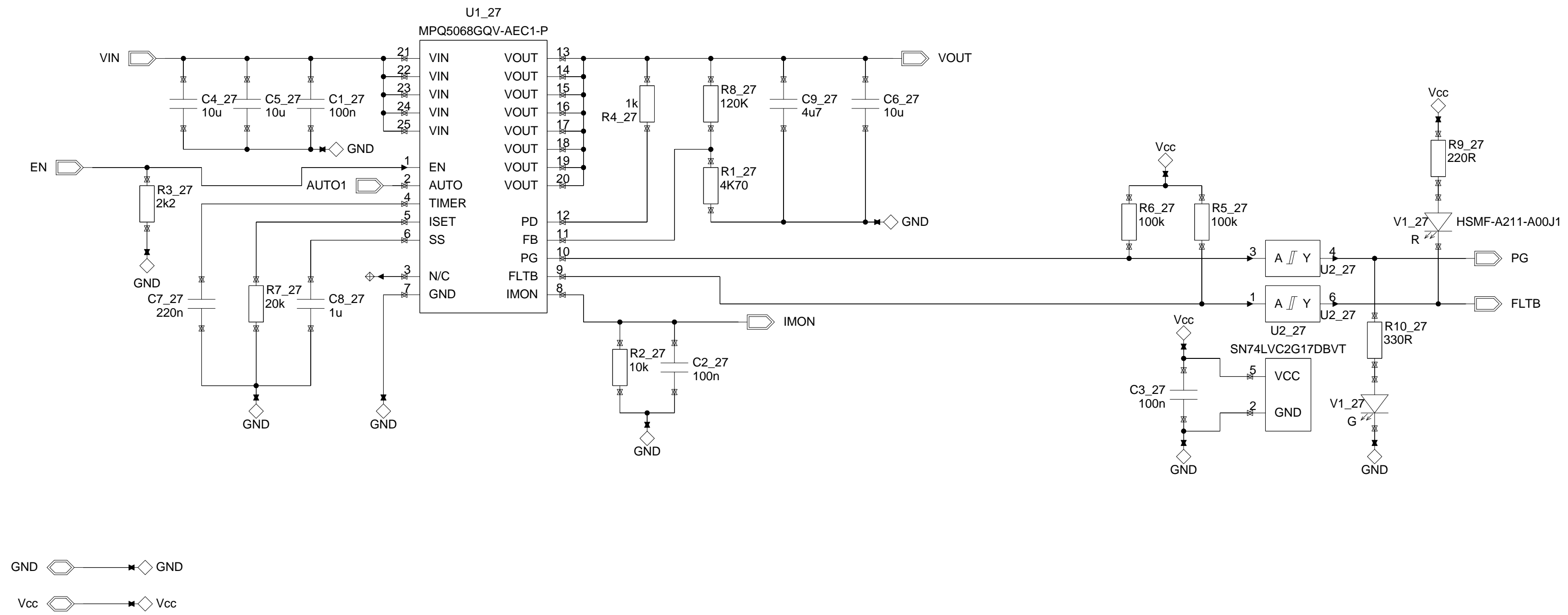
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 37	Total: 47


# Switch\_1



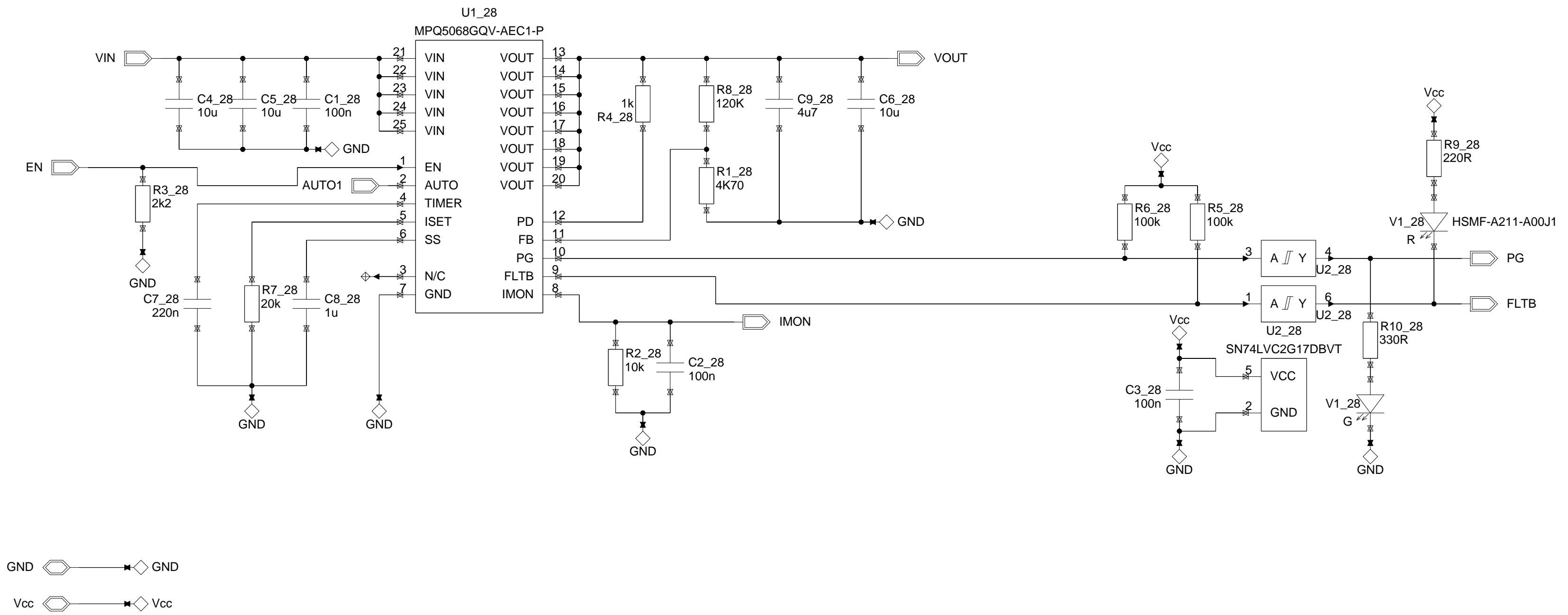
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	PER Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 38	Total: 47


# Switch\_1



Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 39	Total: 47

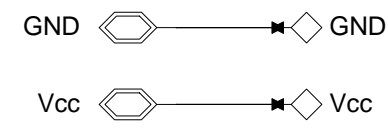
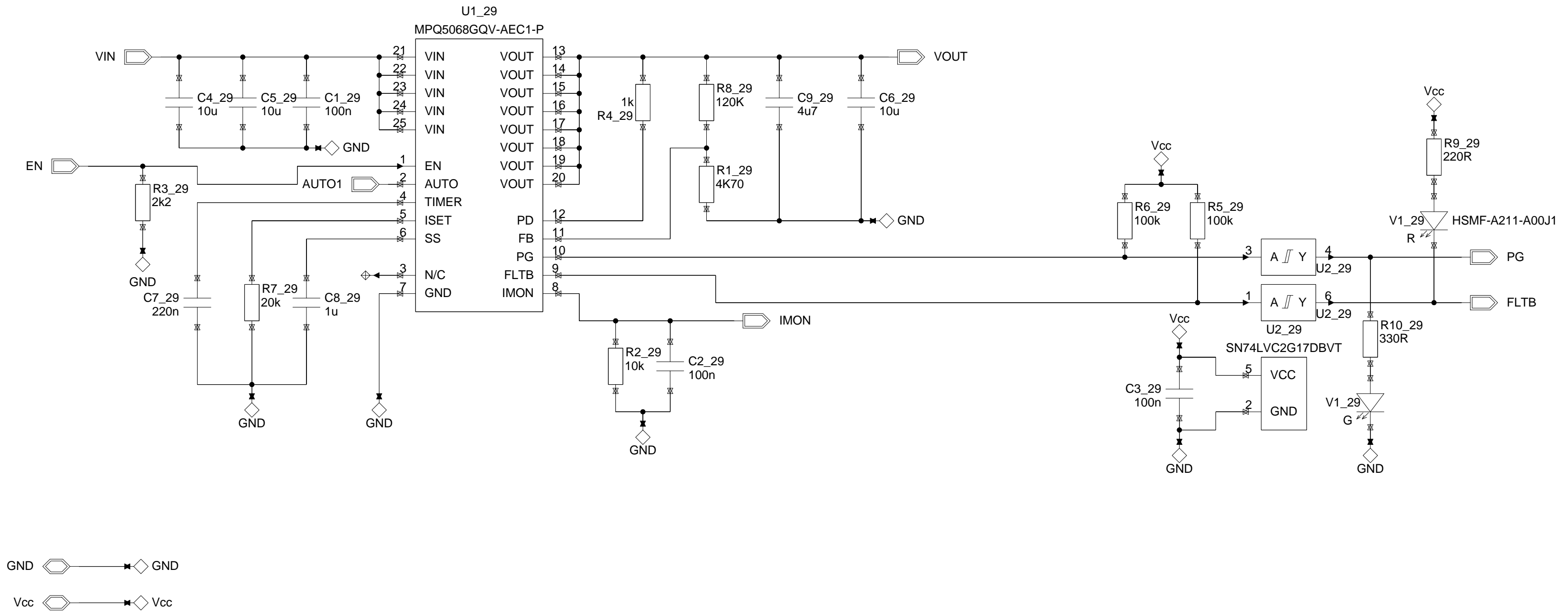
# Switch\_1




Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 40	Total: 47

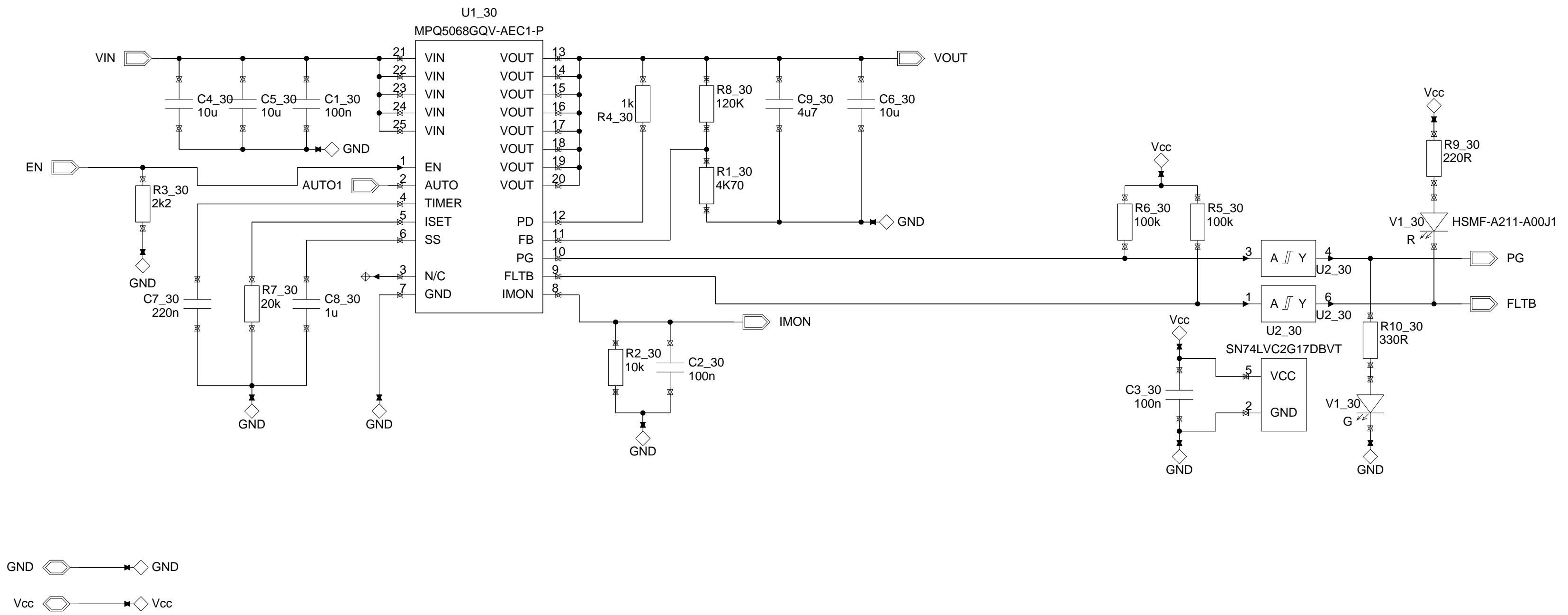



# Switch\_1



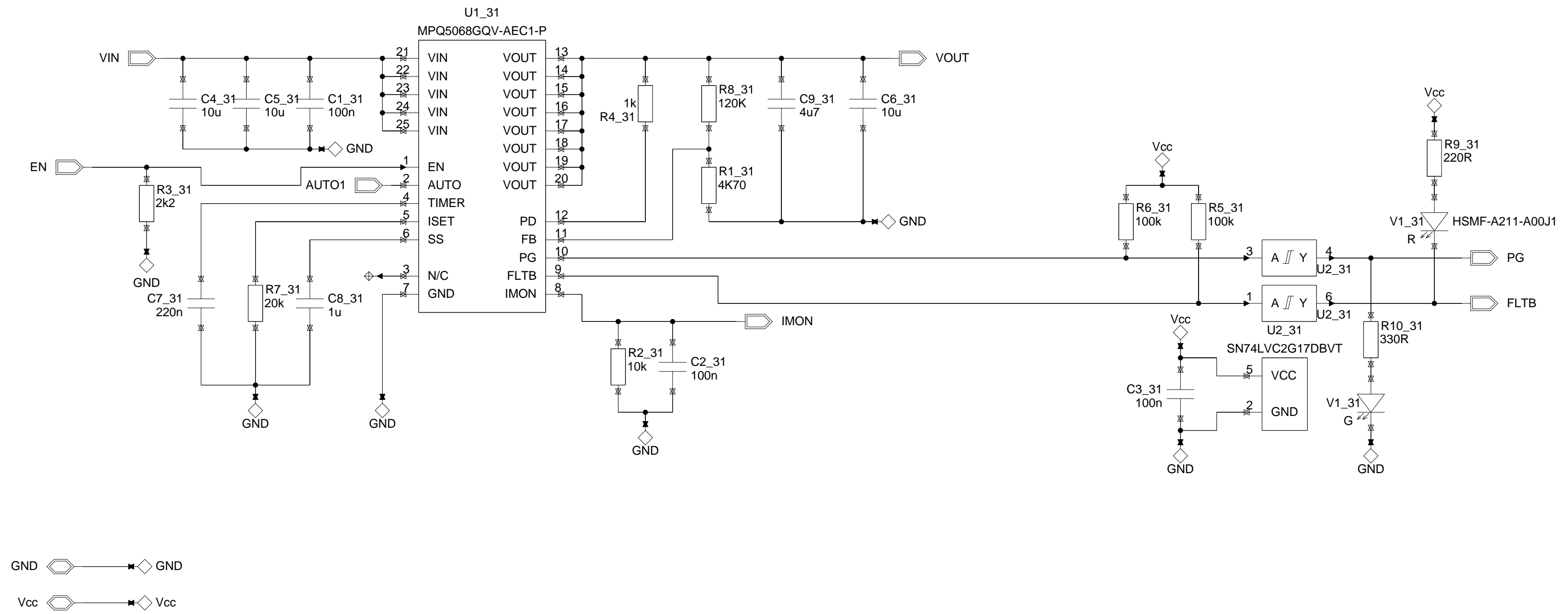
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 41	Total: 47


# Switch\_1



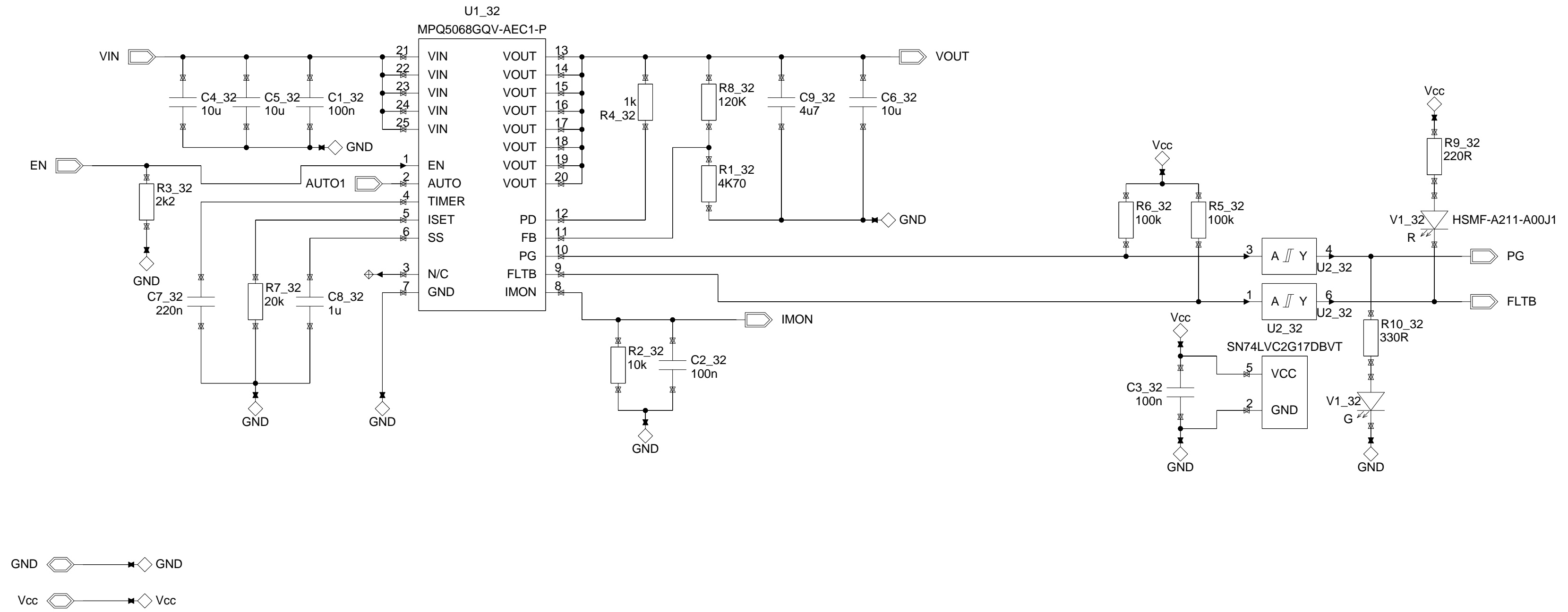
Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	PER Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 42	Total: 47


# Switch\_1

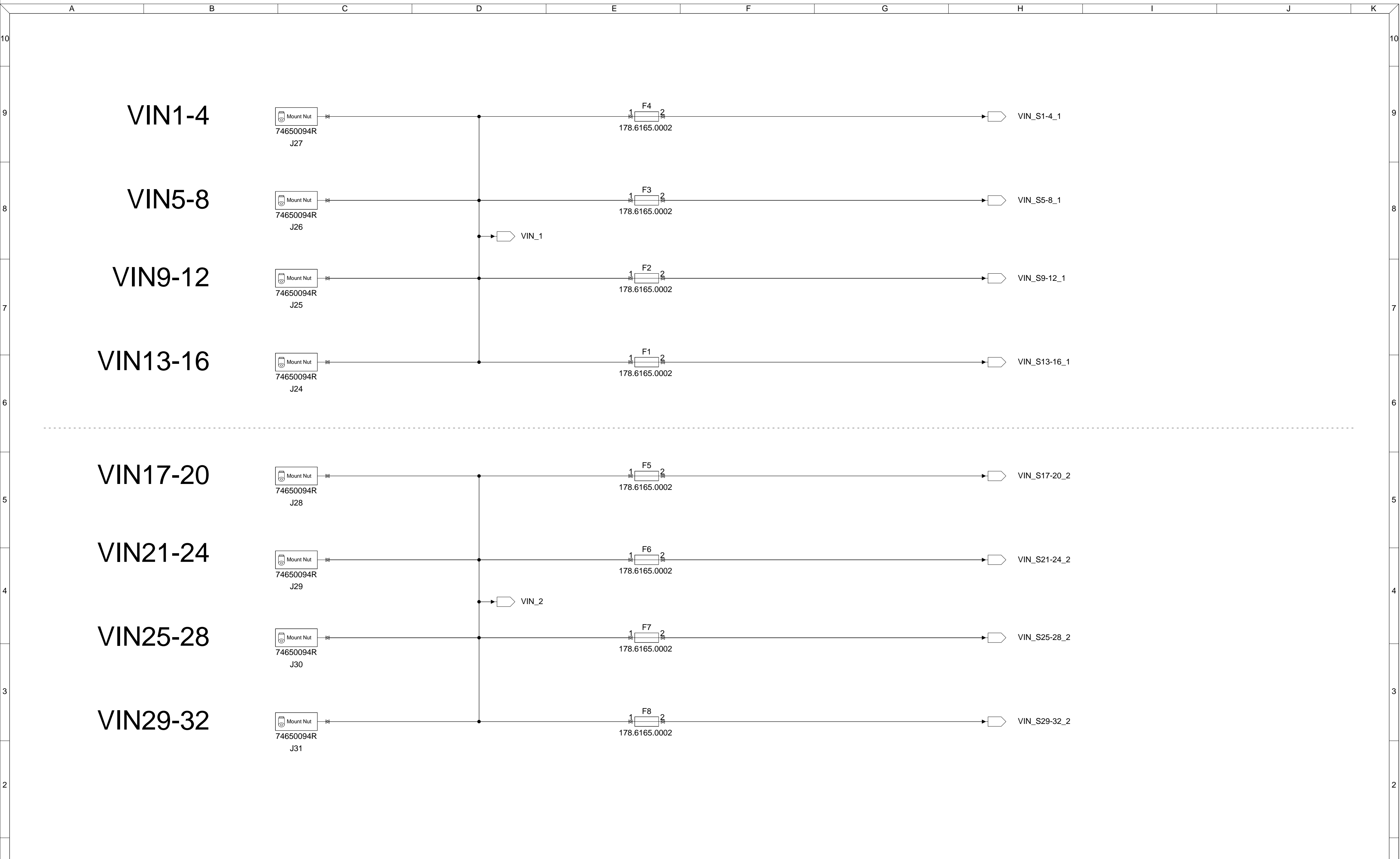



Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	PER Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
		Date Time: 24/06/2022:12:12	Sheet Nr.: 43	Total: 47

# Switch\_1

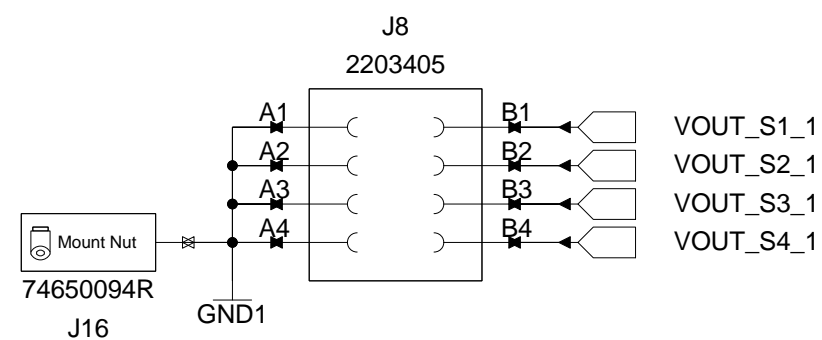


Developer:	Ernst Tobias	Project: Mu3e		
Drawn by:	Ernst Tobias	Schematic: Switch1	Sheet: 1	
Checked by:				
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: A	Size: A3
	PER	PER Distributor_Controller_(MPDC)	Located at: -	
	1381	Variant Name:	Block page: -	
	Date Time: 24/06/2022:12:12	Sheet Nr.: 44	Total: 47	

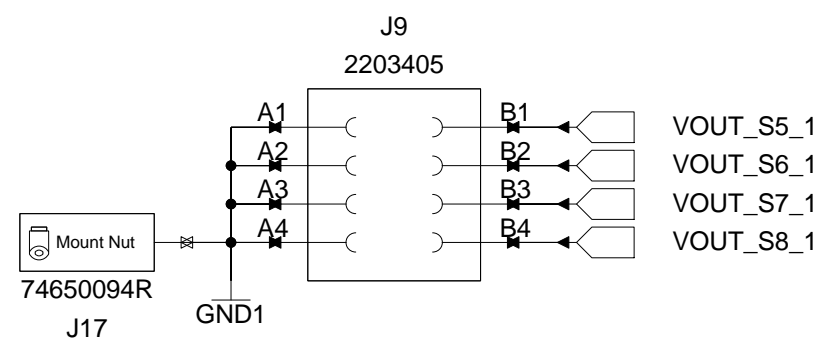


 PAUL SCHERRER INSTITUT 1001H 5232 Villigen - PSI	Department PSI PER 1381	Project: Mu3e Schematic: Top	Sheet: IN	Developer: Ernst Tobias Drawn by: Ernst Tobias Checked by: Variant Name:	PCB Nr: 220201 PCB Name: Mu3e_Power_Distributor_Controller_(MPDC) Date Changed: 24/06/2022:12:12 Date of prod. data:	Rev: A Located at: TOP-TopTop Block page: 13 of 14 Sheet Nr.: 45 Total: 47	Size: A4 Located at: TOP-TopTop Block page: 13 of 14 Sheet Nr.: 45 Total: 47
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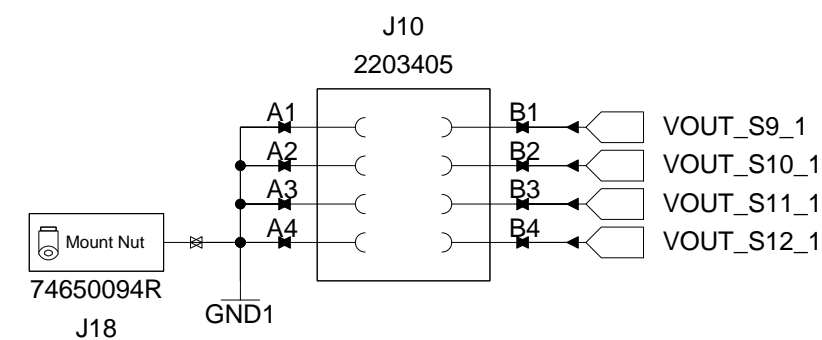
## VOUT1-4



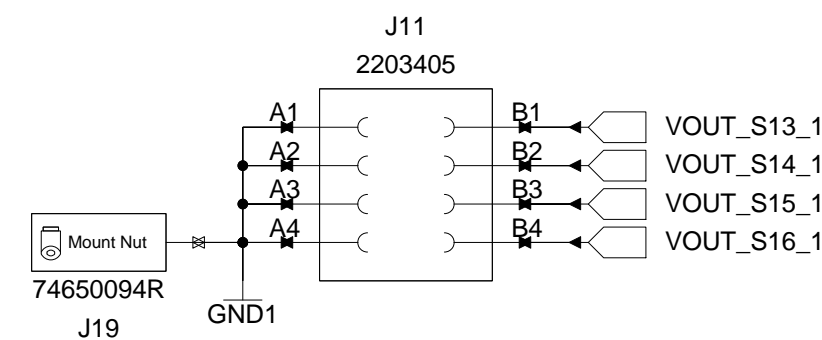
## VOUT5-8



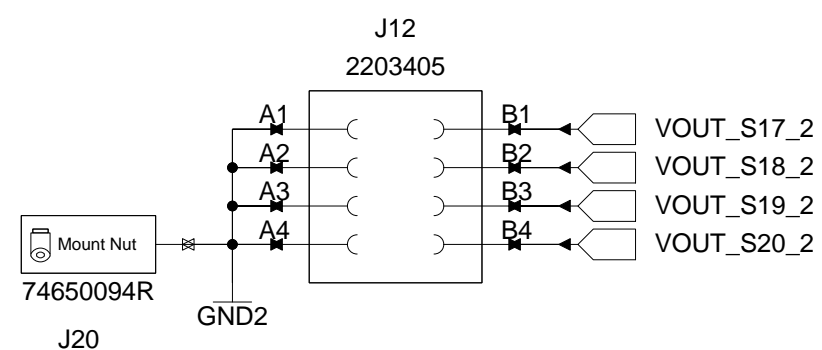
## VOUT9-12



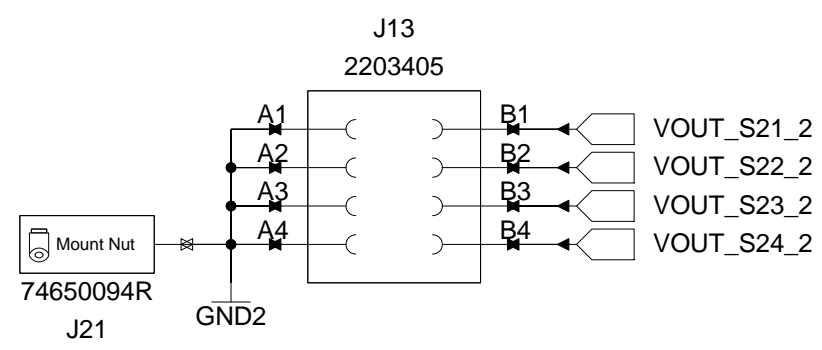
## VOUT13-16



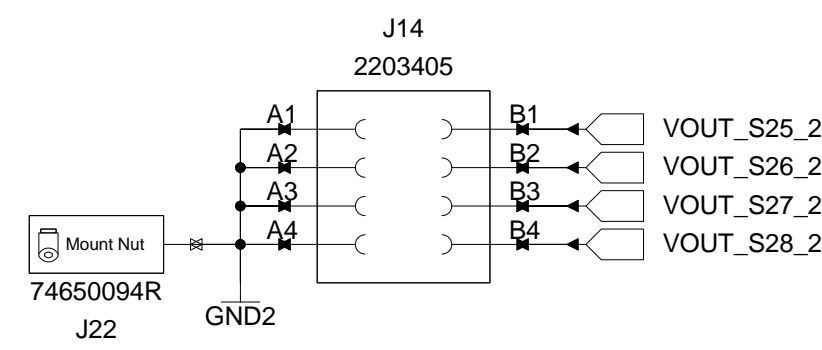
## VOUT17-20



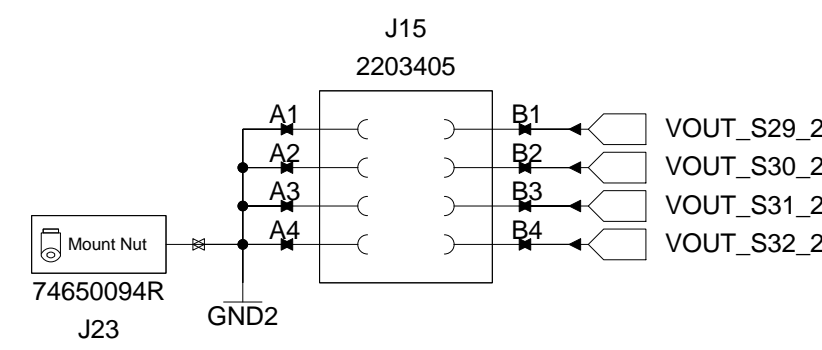
## VOUT21-24



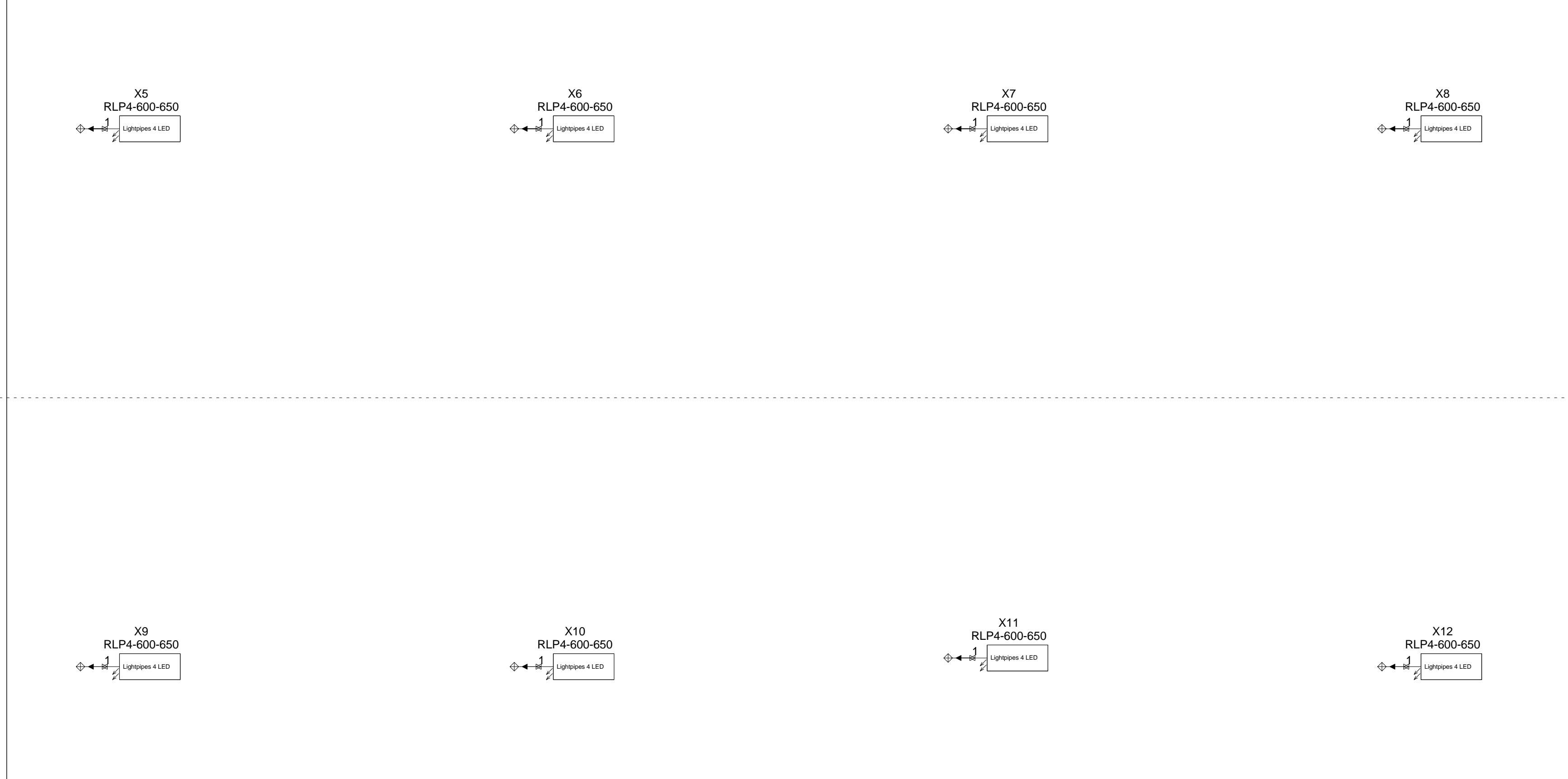
## VOUT25-28




## VOUT29-32



# Lighpipes



PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department PSI PER 1381	Project: Mu3e Schematic: Top	Sheet: Lightpipes	Developer: Ernst Tobias Drawn by: Ernst Tobias Checked by: Variant Name:	PCB Nr: 220201 PCB Name: Mu3e_Power_Distributor_Controller_(MPDC) Date Changed: 24/06/2022:12:12 Date of prod. data:	Rev: A Located at: TOP-TopTop Block page: 14 of 14 Sheet Nr.: 47 Total: 47	Size: A4 Located at: TOP-TopTop Block page: 14 of 14 Sheet Nr.: 47 Total: 47
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