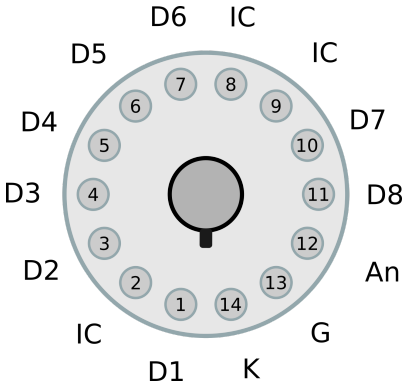
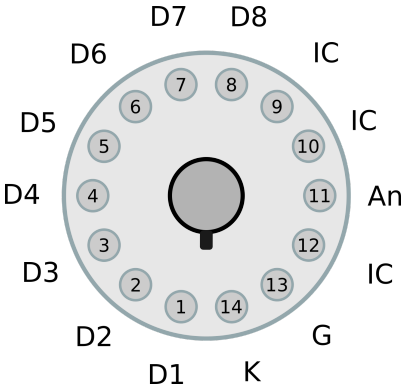
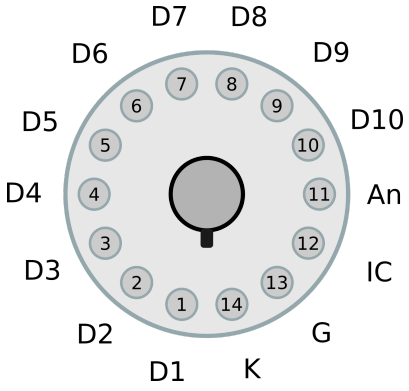
PMT-1000 Pinouts

Plug-on MCA with high voltage supply

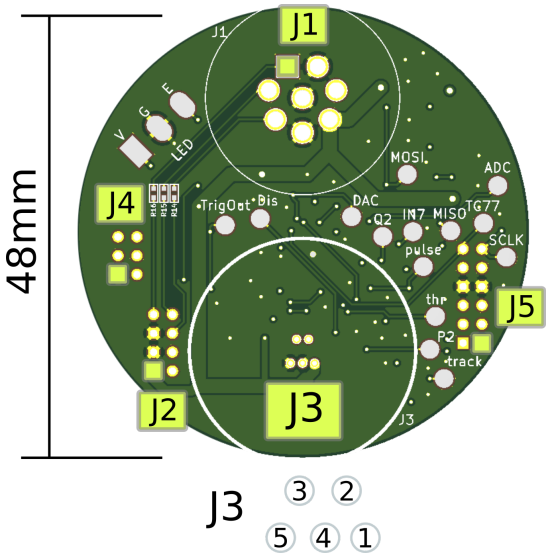
8-pin GPIO Connector, Switchcraft EN3P8MXPKG		
Pin	***Name***	***Function***
1	SWD_IO / RX	Software Debug Data / UART RX
2	SWD_CLK / TX	Software Debug Clock / UART TX
3	SWD_RST#	Software Debug Reset (active low)
4	GND	Ground
5	Vin	+5V nominal, 30mA
6	Trigout	Trigger output with line driver
7	GND	Ground
8	GND	Ground

The PMT-1000 can be powered and operated solely via the 8-pin GPIO connector. Power consumption is 30mA (150mW) at room temperature and HV=1000V;

Three common PMT pinouts		
		
R6231, R6233	R1306, R1307	10-stage
P81T, N81T, P81L, N81L	P80T, N80T, P80L, N80L	P10T, N10T, P10L, N10L

Common PMT pinouts; For each pinout we show a typical PMT and the high voltage divider options.

PMT-1000 PCB connectors



PMT-1000 PCB, MCA only, no HV.

8-pin GPIO Connector, J1		
Pin	***Name***	***Function***
1	SWD_IO / RX	Software Debug Data / UART RX
2	SWD_CLK / TX	Software Debug Clock / UART TX
3	SWD_RST#	Software Debug Reset (active low)
4	GND	Ground
5	Vin	+5V nominal, 30mA
6	Trigout	Trigger output with line driver
7	GND	Ground
8	GND	Ground

The PMT-1000 can be powered and operated just via the 8-pin GPIO connector. Power consumption is 30mA (150mW) at room temperature and HV=1000V;

Connector J2, DF11-8	
#	***Name***
1	Vin; USB power input
2	USB Data −
3	GND; Ground
4	USB Data +
5	GND; Ground
6	SWD_RST#; Software Debug Reset (active low)
7	SWD_IO / RX; Software Debug Data / UART RX
8	SWD_CLK / TX; Software Debug Clock / UART TX

Pinout of the ARM programming and testing connector

USB Connector J3, Bulgin PX0447	
#	***Name***
1	Vin; USB power input
2	USB Data −
3	USB Data +
4	GND; Ground
5	GND; Ground

Pinout of the USB connector; Note the unusual pin numbering.

PMT-1000 PCB connectors

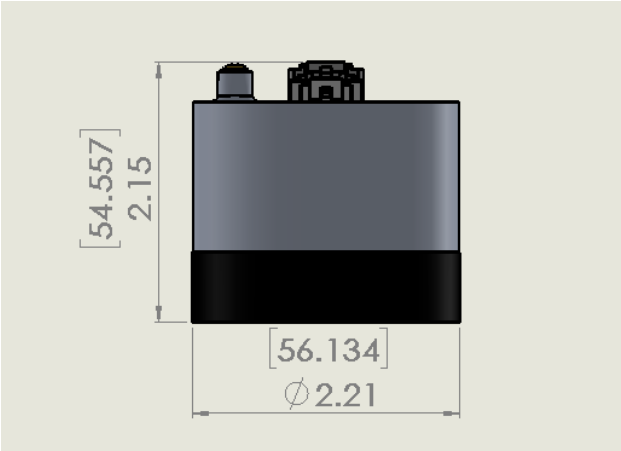
Connector J5, DF11-12		
#	*Name*	*Description*
1	An	PMT Anode
2	GND	Ground
3	HV33	3.3V supply for high voltage generator.
4	N/C	No connect
5	N/C	No connect
6	N/C	No connect
7	GND	Ground
8	GND	Ground
9	TC77-DATA	Serial data from TC77 temperature sensor
10	Vctrl	Analog high voltage control
11	TC77-CSB	Chip-select # for TC77
12	TC77-CLK	Serial clock for TC77

Pinout of the detector connector

Connector J4, DF11-6		
#	*Name*	*Description*
1	GND	Ground
2	N/C	No connect
3	N/C	No connect
4	N/C	No connect
5	N/C	No connect
6	N/C	No connect

Connector J4 is unused.

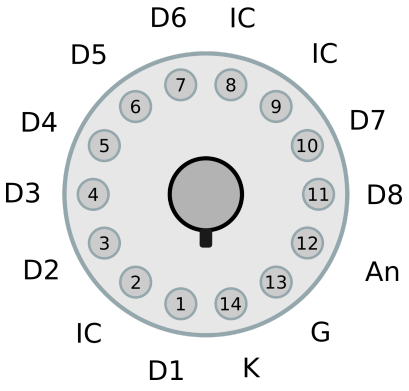
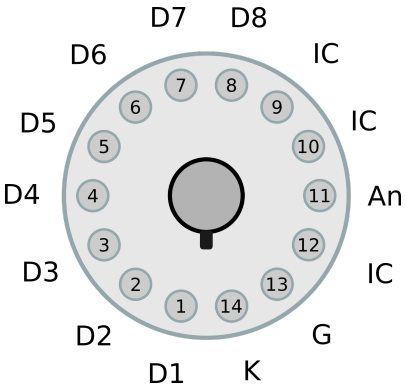
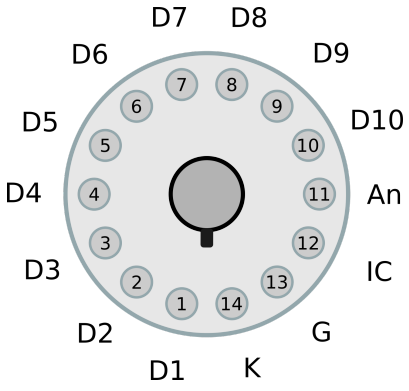
PMT-1000-OEM Pinouts



Plug-on MCA with high voltage supply

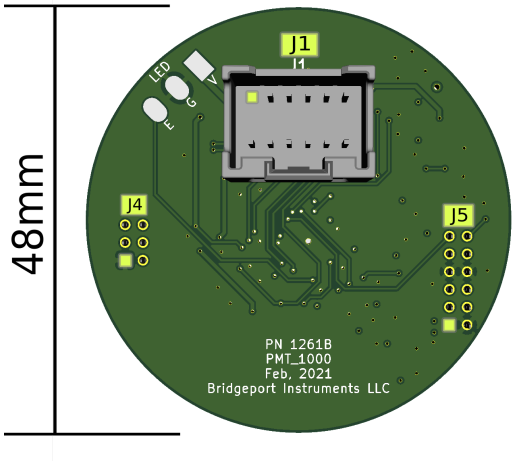
12-pin GPIO Connector, Molex 559171210		
Pin	***Name***	***Function***
1	Trigout	Trigger output with line driver
2	Q485 +	RS-485 Bus +
3	SWD_IO / RX	Software Debug Data / UART RX
4	Q485 -	RS-485 Bus -
5	SWD_CLK / TX	Software Debug Clock / UART TX
6	SWD_RST#	Software Debug Reset (active low)
7	USB_DP	USB positive data terminal
8	Vin	+5V nominal, 30mA
9	USB_DM	USB negative data terminal
10	GND	Ground
11	LONG_EN	RS-485 enable
12	GND	Ground

The PMT-1000-OEM can be powered and operated solely via the 12-pin GPIO connector. Power consumption is 30mA (150mW) at room temperature and HV=1000V;

Three common PMT pinouts		
		
R6231, R6233	R1306, R1307	10-stage
P81T, N81T, P81L, N81L	P80T, N80T, P80L, N80L	P10T, N10T, P10L, N10L

Common PMT pinouts; For each pinout we show a typical PMT and the high voltage divider options.

PMT-1000-OEM PCB connectors PMT-1000-OEM



PMT-1000-OEM PCB, MCA only, no HV.

12-pin GPIO Connector, Molex 559171210		
Pin	***Name***	***Function***
1	Trigout	Trigger output with line driver
2	Q485 +	RS-485 Bus +
3	SWD_IO / RX	Software Debug Data / UART RX
4	Q485 -	RS-485 Bus -
5	SWD_CLK / TX	Software Debug Clock / UART TX
6	SWD_RST#	Software Debug Reset (active low)
7	USB_DP	USB positive data terminal
8	Vin	+5V nominal, 30mA
9	USB_DM	USB negative data terminal
10	GND	Ground
11	LONG_EN	RS-485 enable
12	GND	Ground

The PMT-1000-OEM can be powered and operated solely via the 12-pin GPIO connector. Power consumption is 30mA (150mW) at room temperature and HV=1000V;

Connector J4, DF11-6		
#	***Name***	***Description***
1	GND	Ground
2	N/C	No connect
3	N/C	No connect
4	N/C	No connect
5	N/C	No connect
6	N/C	No connect

Connector J4 is unused.

Connector J5, DF11-12		
#	***Name***	***Description***
1	An	PMT Anode
2	GND	Ground
3	HV33	3.3V supply for high voltage generator.
4~6	N/C	No connect
7	GND	Ground
8	GND	Ground
9	TC77-DATA	Serial data from TC77 temperature sensor
10	Vctrl	Analog high voltage control
11	TC77-CSB	Chip-select # for TC77
12	TC77-CLK	Serial clock for TC77

Pinout of the detector connector