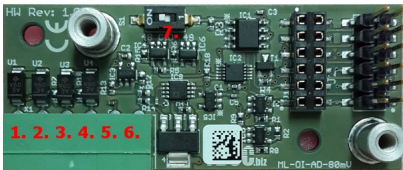

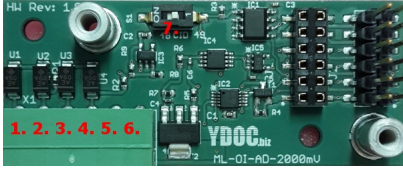




## ML-x17 option boards

Option boards can be used to add additional inputs/features to an ML-x17 data logger or to perform signal conditioning. You can mechanically stack up to 3 option boards, but only one board per category ID (CID). Some boards are having a switch to choose a different CID, so you can stack multiple similar boards. Converter(OC) or Power (OP) boards don't have CID's and you can stack as many OC/OP-boards as mechanical feasible. OC-boards don't make use of the internal control bus, but are wired to existing inputs/outputs/ports.

Cat.	CID	SKU, Description	Ranges	Excitation	Terminals
AD	0x48 & 0x49	<b>ML-OI-AD-80MV</b> , Dual channel 16-bit differential input  a/o to connect pyranometers or load-cells	$\pm 80\text{mV}$ $\pm 40\text{mV}$ $\pm 20\text{mV}$ $\pm 10\text{mV}$	5V@80mA (accurate)	1. Input 1 (+) 2. Input 1 (-) 3. Input 2 (+) 4. Input 2 (-) 5. Excitation 6. Ground 7. CID selector
		<b>ML-OI-AD-2000MV</b> , Dual channel 16-bit differential input  a/o to connect thermistors or pH-probes	$\pm 2000\text{mV}$ $\pm 1000\text{mV}$ $\pm 500\text{mV}$ $\pm 250\text{mV}$	5V@80mA (accurate)	1. Input 1 (+) 2. Input 1 (-) 3. Input 2 (+) 4. Input 2 (-) 5. Excitation 6. Ground 7. CID selector
		<b>ML-OI-AD-10V</b> , Quad channel 16-bit single ended input 	$\pm 10\text{V}$ $\pm 5\text{V}$ $\pm 2.5\text{V}$ $\pm 1.25\text{V}$	12V@80mA	1. Input 1 2. Input 2 3. Input 3 4. Input 4 5. Excitation 6. Ground 7. CID selector
		<b>ML-OI-AD-20mA</b> , Quad channel 16-bit single ended input 	$\pm 20\text{mA}$	12V@80mA	1. Input 1 2. Input 2 3. Input 3 4. Input 4 5. Excitation 6. Ground 7. CID selector
BARO	0x76	<b>ML-OI-BARO</b> , Atmospheric pressure & temperature sensor a/o to compensate readings of level sensors	300...1200hPa -30...+70°C	$\pm 1\text{hPa}$ $\pm 1^\circ\text{C}$	
COM	0x4C	<b>ML-OI-COM-UART</b> , Serial sensor input (UART)  to connect sensors with TTL UART port	Tx (0...3.3V) Rx (0...5V) 300... 230k4bps	3.3V	1. Excitation 2. Transmit 3. Receive 4. Ground

**ML-OI-COM-RS232**, Serial sensor input (RS232)



a/o to connect an GPS-receiver

300...  
230k4bps

12V

1. Excitation
2. Transmit
3. Receive
4. Ground

**ML-OI-COM-RS485**, Serial sensor input (RS485)



a/o to connect a MODBUS/RTU sensor

300...  
230k4bps

12V

1. Excitation
2. Transmit
3. Receive
4. Ground

**ML-OI-COM-SDI12**, SDI-12 sensor input



12V

1. Excitation
2. Ground
3. Data

<b>OC</b>	n/a	<b>ML-OC-W2P</b> , Waveform to digital pulse converter	0...50kHz 60mV...24V  Pulse 0/3.6V	1. Coil input (+) 2. Coil input (-) 3. Pulse output
	To connect flow meters or anemometer with a passive coil output			
<b>OP</b>	n/a	<b>ML-OP-524</b> , to power external sensors or peripherals	5V@300mA, 12V@200mA, 24V@100mA  0V=Off, 3...24V=On 3.6V (from batteries)	1&2. Output  3&4. Ground 5. Control signal
	Power switches on in parallel with logger sensor			