

Application Note

AN-VTC-06

## ***Configuring voltage and current reference inputs***

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- ***General:***

The speed of the Optidrive VTC can be controlled by either voltage based or current based reference signals. This allows the speed to be controlled from a potentiometer or from a remote intelligent control system (eg PLC), where the analog speed reference is usually current based.

- ***Parameters***

### **P2-30 Bipolar Analog input format**

This parameter allows the user to configure the format of the signal connected to the bipolar analog input (drive terminal 6). The following formats are supported:

0-24 V :	Voltage input,	0V ... 24V
0-10 V :	Voltage input,	0V ... 10V
-10-10 V:	Voltage input,	-10V ... 10V (bipolar mode)
-24-24 V:	Voltage input,	-24V ... 24V (bipolar mode) * <i>available for v2.21 or later</i>

When set to 0..24V or 0...10V, all negative voltages will give a zero speed. When set to -10...10V or -24...24V, all negative voltages will result in the drive running with negative speeds, where the speed is proportional to the magnitude of the input voltage.

Please refer to AN-VTC-41 for more information on how to use bipolar analog input for current input signals

### **P2-33 2<sup>nd</sup> Analog input format**

This parameter allows the user to configure the format of the signal connected to the 2<sup>nd</sup> analog input (drive terminal 4). The following formats are supported:

0-24 V :	Voltage input,	0V ... 24V
0-10 V :	Voltage input,	0V ... 10V
4-20 mA :	Current input,	4mA ... 20mA
0-20 mA:	Current input,	0mA ... 20mA

***Note that all current input formats are unipolar.***

If the user wishes to control the motor speed using a current reference signal (eg 4-20mA), set P2-33 = 4-20mA, P2-01 = 19 and close the 2<sup>nd</sup> digital input to select the 2<sup>nd</sup> analog input as the speed reference

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