

Application Note – Isolation of Follower Signals

Voltage Signals

Dart drives with speed-pot inputs can also follow a voltage control signal instead of the speed-pot by connecting the voltage signal leads to the WIPER and POT LO terminals the POT HI terminal open.

If a voltage signal is used in place of the speed-pot, the signal must be isolated from ground or major damage to the control will result. Some voltage signals may already be isolated from ground, in which case no further isolation is necessary. If the voltage signal is not isolated, use either use an isolation board provided by Dart Controls or install some other means of isolation.

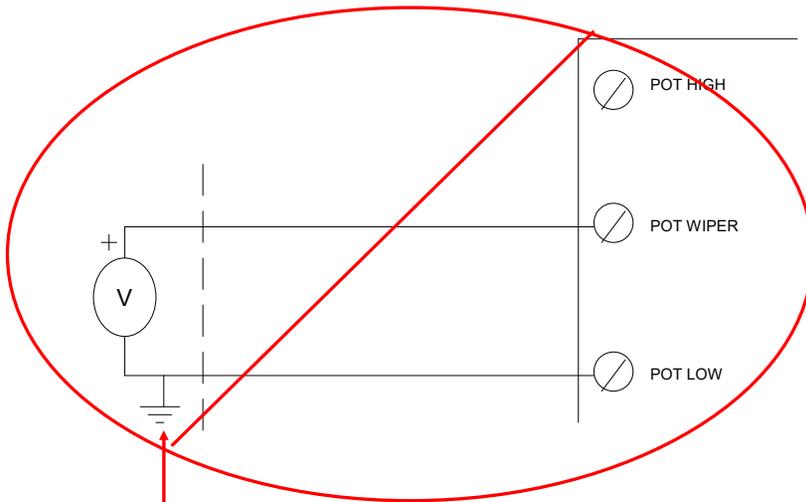
Dart isolation boards may be options within the product series of your control (i.e. -55), or you may also use the stand-alone VSI2 product if an option is not available within your series.

4-20mA Signals

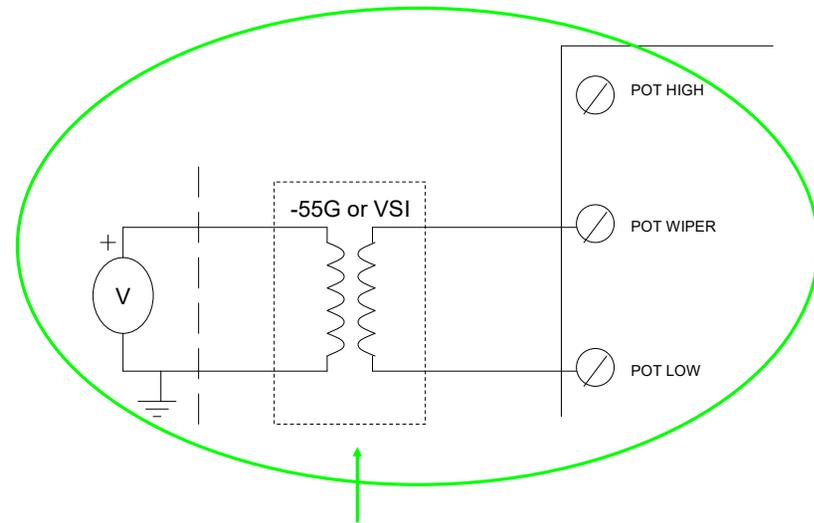
Another solution involves 4-20mA signals. The -5 (signal only), and -7/-56 options (auto/manual where a contact input can choose between manual = speed pot/auto = signal) for the Dart 125 / 150 / 250 / 500 Series all provide an isolated input for this type of input signal to change the output of the drive (motor speed) accordingly. IF THE 4-20mA SIGNAL IS ALREADY ISOLATED AT THE SOURCE, it is not necessary to use the option board but rather a 1/2W 500Ω resistor across the WIPER / POT LO terminals will convert the 4-20mA to the 0-10V the drive needs. Please be certain the 4-20mA is truly isolated to prevent product damage using this method.



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A non-isolated voltage signal input will damage the motor control electronics.



A Dart isolator board is used to protect the motor control from ground.

