



Speciality Magnetic Components  
QUALIFIED to ISO 9001:2008

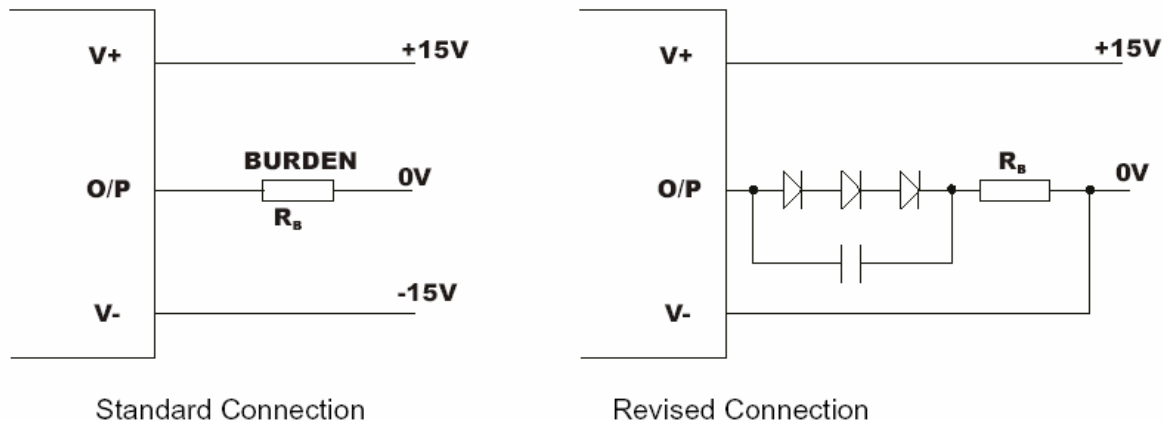
## CHANGES TO HES APPLICATION NOTE FOR SINGLE RAIL OPERATION

To achieve single rail operation, for example, from a single +15V rail, the following amendments should be made to the information given on our current Application Note for the TELCON HES range.

### CONNECTIONS

The connection to (V-) is now made to the 0V rail. The output, instead of the usual connection via the Burden resistor to the 0V rail, now has three diodes and a capacitor connected as shown below in series with the Burden.

The diodes are used to provide a voltage threshold within the output voltage swing of the output stage; the capacitor gives improvement to the dynamic performance.



Capacitor 100nF, 30V, Ceramic  
Typical Diodes: 1N4148/BAV99/BAS16  
For HES200,500HR, use BYD11/GF1

### COMPONENT VALUES

The only change to component values required is that the two resistors R1, R2 which are connected in series with the Hall Element (terminals 1 and 3 on the HES unit). As the rail-to-rail voltage is effectively halved for +15V working, reducing the values of R1, R2 will maintain the current through the Hall Element. A value of 560R is used in the TELCON HTP50SV (intended for +15V working) and the value should be increased/reduced pro rata for other supply voltages.