

APPLICATION NOTE

BVM Torkel parallel connections

This document gives additional information about the battery voltage monitoring system BVM and how those units are connected in parallel battery strings.

Max voltage for 1 BVM loop is 300 V

If 2 loops used and connected to Torkel 900, and total voltage exceeds 300 V.

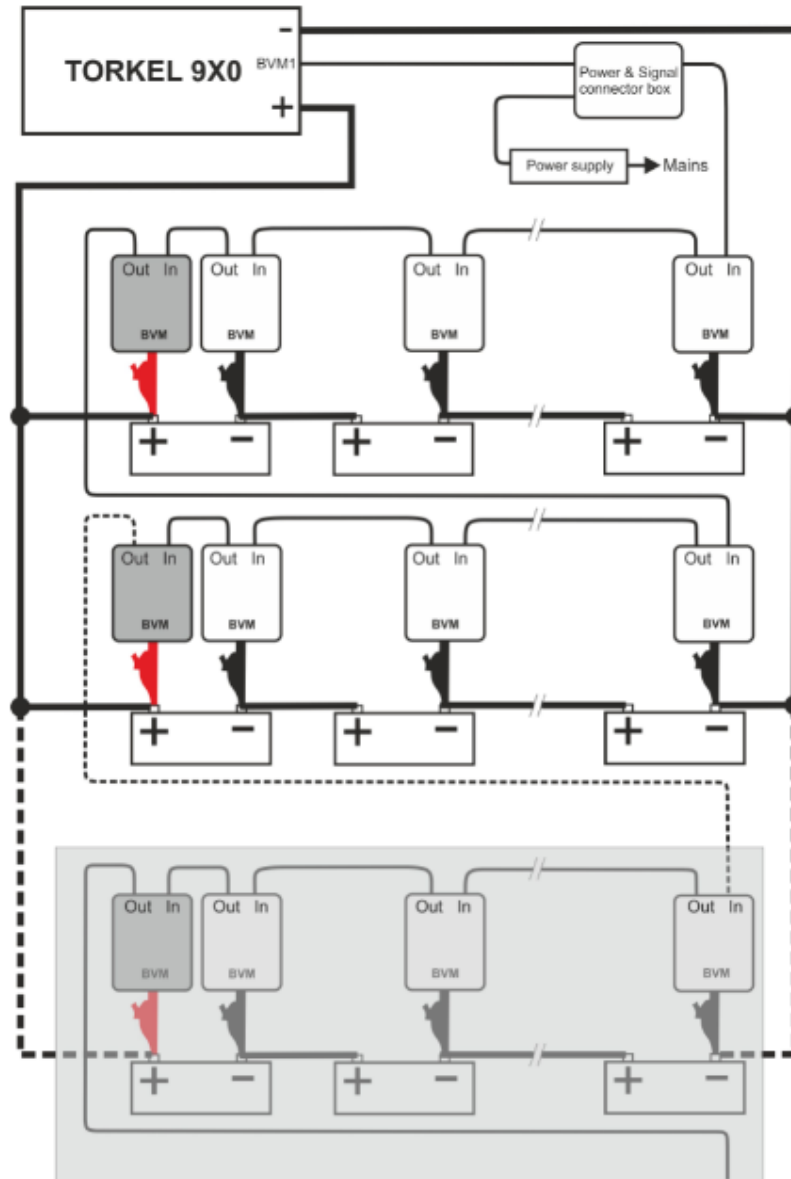
Then the opto couplers have to be used.

See picture on next pages about parallel connection for both Torkel 800 and Torkel 900.

If more than 61 BVM used in 1 loop, the last BVM unit shall also be connected to the "Power & Signal connector"

Note. The BVM module can measure a voltage up to 20 V. When the BVM modules are connected in parallel as this application note describes. It will be a negative measured voltage between the parallel strings. That is not a problem as long as it doesn't exceed 300 V.

1. Connection examples with Torkel 900



Torkel 800 and parallel battery string

The schematic diagram illustrates the electrical connections for the TORQUE 8X0 system. At the top left, a box labeled 'TORQUE 8X0' has a '-' terminal at the top and a '+' terminal at the bottom. To its right is a 'PC' box. Further right is a 'Power & Signal connector box' which is connected to a 'Power supply' box, which in turn is connected to 'Mains'. Below these are three identical BVM (Battery Voltage Monitor) units, each consisting of an 'Out In' block and a battery symbol with '+' and '-' terminals. The first BVM unit is shaded grey and has a red arrow pointing to its '+' terminal. The second and third BVM units are white. The diagram shows the interconnection of these units and their connection to the main power lines. A dashed line encloses the bottom two BVM units, indicating they are part of a separate module or section.