

Connections to Load Sharing and Speed Control

Speed Bias Output

Make connections to synchronizer terminals as shown and connect the cable shields to the control end only.

For single-unit 2301 application, use:

High impedance—terminal 20 ($\pm$) and 21 (common).

For 2301A, Load Sharing Modules (LSM), EPG, 2500 load control systems, and EGA or EGM with external resistors, use:

Low impedance—terminal 22 ($\pm$) and 21 (common).

For EPG speed controls without load sensors, use:

SPM-A terminal 24 ($\pm$) to EPG terminal 10;

SPM-A terminal 23 (common) to EPG terminal 5.

Paralleling a Bus to a Bus

The synchronizer can be used to parallel an isolated bus to another bus, as shown in Figure 2-2. Up to seven generators operating in parallel on an isolated bus may be synchronized to another bus. In this case, the synchronizer's low impedance output to the load sharing and speed control's SPM input is tied to each control (through a resistor if the control is not normally connected to the low impedance output). The resistor value is determined by the kind of control used (refer to the table below). A resistor with a wattage rating between 1/4 and 1 watt may be used. The resistor should be installed in the line from the synchronizer output terminal designated $\pm$ (terminals 20, 22, or 24 depending on type of control) and located close to the control to reduce noise pickup.

Type Control	Acceptable Resistance Value	Woodward Part Number
2301	1.6 to 2.0 M Ω	1649-333
2500 Load Sensor	No resistor required	
EGA	196 to 226 k Ω	1649-605
EG Load Signal Control or EGM	665 to 765 k Ω	1649-277
2301A	No resistor required	
Generator Load Sensor	No resistor required	

Sequentially Paralleling Generator to a Bus

Although the synchronizer can be switched to parallel generators in sequence to a bus, Woodward Governor Company does not recommend this option.