

















# Industrial Battery Chargers - Head to Head

Silicon Controlled vs. Switch Mode Rectifier

7 Critical technology features and performance factors to consider

Silicon Controlled		Switch Mode
 <b>HARD SWITCHING</b> HIGH EMI - LOW EFFICIENCY	Phase Control EMI	<b>CONTROLLABLE SWITCHING</b> LOW EMI - HIGH EFFICIENCY 
 <b>LOW FREQUENCY</b> 45-65 Hz LARGER COMPONENTS	Switching Frequency	<b>HIGH FREQUENCY</b> 150-300 kHz SMALLER COMPONENTS 
 <b>MONOLITHIC DESIGN</b> SINGLE FAILURE POINT	Failure Point	<b>MODULAR POWER UNITS</b> BUILT-IN REDUNDANCY 
 <b>TWO CHARGERS</b> ONE PRIMARY, ONE BACK UP	Redundancy	<b>ONE CHARGER</b> MULTIPLE POWER UNITS N+1 OR N+N 
 <b>HEAVY+LARGE</b> 1X	Weight & Dimensions	<b>LIGHT+COMPACT</b> $1/2$ X 
 <b>SHUT DOWN TO REPAIR</b>	Maintenance	<b>HOT PLUGGABLE MODULES</b> 
 <b>SCALE WITH SEPARATE CHARGERS</b>	Scalability	<b>SCALE WITH POWER MODULES</b> 

For more information about ABB's Integritas Battery Chargers visit us at [go.ABB/Industrial](https://go.ABB/Industrial).