

ISSUE: [May 2020](#)

Eighth-Brick DC-DC Converters Deliver 120 W For Industrial Applications

Additions to the UWE family of dc-dc converters, [Murata Electronics](#)' UWE-Q12 series converters deliver 120 W with high efficiency and high power density while operating from a 9-V to 36-V input range suitable for industrial applications. The UWE-Q12 series modules generate a fully regulated output of 5 V, 12 V, or 24 V, all rated at 120 W. The converters are offered in an open-frame package or with an integrated baseplate for conduction cooling applications (see the figure). They provide a basic I/O insulation system rated at 2,250 Vdc .

The UWE-Q12 series is best suited for industrial and integrated test environments. Target applications include industrial controls, railway systems, lighting, intermediate bus applications, networking equipment, wireless networking equipment for mobile applications, smart grid, and other functions requiring a 120-W regulated source.

All modules are configured with a standard positive on/off logic control function, however negative logic on/off control is offered as an option. In addition, the converters feature short circuit protection, overvoltage protection, V_{OUT} trim, and overtemperature protection. The topology employed in these converters supports a pre-biased output at start-up, simplifies the application of the modules in an IBC application, and eliminates reverse currents that can damage critical circuitry.



























"By leveraging Murata's proprietary combination of architectural and package design, component selection, and assembly techniques, we developed a solution that delivers the highest performance and reliability in the industry. We consider it another proof point of Murata's steadfast focus on innovation," said Bill Smith, director, product line management, Murata Power Solutions.

To view the data sheets and request samples, see the isolated dc-dc converters [search page](#) and search for "UWE-12". An excerpt from these search results, shown in the table below, includes the part numbers included in this series.



Figure. Operating from a 9- to 36-V input range suitable for industrial applications, the UWE-Q12 series isolated dc-dc converters in the eighth-brick format generate a fully regulated output of 5 V, 12 V, or 24 V, all rated at 120 W.

Table. Key specifications for members of the UWE-Q12 series.

Part Number ▼ ▲	Status ?	Appearance 	Output power(W)Max ▼ ▲	Vin(V)	Vin(V)typ ▼ ▲	Vout(V)	Vout(V)typ ▼ ▲	Isolation Voltage(V) ▼ ▲	Size(mm)W ▼ ▲	Size(mm)L ▼ ▲	Size(mm)T ▼ ▲	Operating temperature(degC)	Iout(A)Max ▼ ▲
<input type="checkbox"/> UWE-12/10-Q12N-C 			120W	9V to 36V	12V	12V	12V	2250V	58.4mm	22.9mm	10.2mm	-40°C to 85°C	10A
<input type="checkbox"/> UWE-12/10-Q12NB-C 			120W	9V to 36V	12V	12V	12V	2250V	58.4mm	22.9mm	13.2mm	-40°C to 85°C	10A
<input type="checkbox"/> UWE-12/10-Q12P-C 			120W	9V to 36V	12V	12V	12V	2250V	58.4mm	22.9mm	10.2mm	-40°C to 85°C	10A
<input type="checkbox"/> UWE-12/10-Q12PB-C 			120W	9V to 36V	12V	12V	12V	2250V	58.4mm	22.9mm	13.2mm	-40°C to 85°C	10A
<input type="checkbox"/> UWE-12/10-Q48N-C 			120W	18V to 75V	48V	12V	12V	2250V	58.42mm	22.86mm	9.91mm	-40°C to 85°C	10A
<input type="checkbox"/> UWE-12/10-Q48NB-C 			120W	18V to 75V	48V	12V	12V	2250V	58.42mm	22.86mm	12.8mm	-40°C to 85°C	10A
<input type="checkbox"/> UWE-12/10-Q48P-C 			120W	18V to 75V	48V	12V	12V	2250V	58.42mm	22.86mm	9.91mm	-40°C to 85°C	10A
<input type="checkbox"/> UWE-12/10-Q48PB-C 			120W	18V to 75V	48V	12V	12V	2250V	58.42mm	22.86mm	12.8mm	-40°C to 85°C	10A
<input type="checkbox"/> UWE-12/6-Q12N-C 			72W	9V to 36V	12V	12V	12V	1500V	22.9mm	58.4mm	9.7mm	-40°C to 85°C	6A