



High-Voltage Non-isolated Converters

High Voltage, Non-isolated DC-DC Converters for Industrial Applications

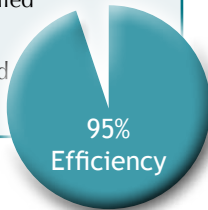
The high input voltage NiQor family of DC-DC converters offers unique solutions for converting high-powered, variable voltages to a wide range of output voltages. The converter is a non-isolated buck-boost regulator, which employs synchronous rectification to achieve extremely high conversion efficiency. These products are suitable for use in IBA, or to provide a regulated output voltage from a variable voltage source such as a battery. They can be configured to 'buck' the input voltage down or 'boost' the input voltage up using a single external resistor.

BATTERY CHARGING

- ◆ Provides the power conversion platform for battery charging
- ◆ Output current limit is externally controlled for constant-current charging
- ◆ Current can be set with an external resistor or an active circuit
- ◆ Current analog signal provided for instrumentation and control functions
- ◆ Ideal diode output stage with zero back-drive currents prevents discharge of battery when not charging
- ◆ Output voltage set-point is independently controlled through trim pin
- ◆ Unit will smoothly transition between current and voltage modes as charging cycle needs charge

Operational Features

- ◆ Ultra-high efficiency up to 96%
- ◆ Wide input voltage ranges:
- ◆ 9-20V (NQ20); 9-40V (NQ40); 9-60V (NQ60); 9-90V (NQ90)
- ◆ Buck or Buck/Boost Mode available
- ◆ Maximum input/output currents up to 55A
- ◆ Suitable for use in Intermediate Bus Architectures
- ◆ On-board input and output filtering
- ◆ No minimum load requirement
- ◆ Remote sense and wide output voltage trim



Protection/Control Features

- ◆ Input under-voltage lockout (UVLO)
- ◆ Output current limit (OCP) and short circuit protection
- ◆ Output over-voltage protection (OVP)
- ◆ Thermal shutdown (OTP)
- ◆ Output voltage trim

NQ20		SERIES	0-20V
9-20VDC INPUT RANGE			
Quarter Brick	QG		40A
Eighth Brick	ET		20A
	EG		10A

NQ40		SERIES	0-40V
9-40VDC INPUT RANGE			
Half Brick	HG		55A
Quarter Brick	QT		35A
	QG		30A
Eighth Brick	EP		20A
	ET		15A
	EG		8A

NQ60		SERIES	0-60V
9-60VDC INPUT RANGE			
Half Brick	HG		40A
Quarter Brick	QT		25A
	QG		20A
Eighth Brick	EP		15A
	ET		10A
	EG		5A

NQ90		SERIES	0-90V
9-100VDC INPUT RANGE			
Half Brick	HG		26A
Quarter Brick	QT		18A
Eighth Brick	EP		10A

FAMILY	INPUT VOLTAGE	MODE	OUTPUT VOLTAGE	PACKAGE SIZE	SERIES	THERMAL DESIGN	MAXIMUM CURRENT	OPTIONS DESCRIPTION:		
								ENABLE LOGIC	PIN LENGTH	FEATURE SET
NQ	20: 9-20V 40: 9-40V 60: 9-60V 90: 9-90V	T: Buck (1/8 & 1/4) W: Buck/Boost	20: 0-20V 40: 0-40V 60: 0-60V 90: 0-90V	E: Eighth Brick Q: Quarter Brick H: Half Brick	G: Giga T: Tera P: Peta	C: Encased D: Encased, Non-threaded Baseplate V: Encased, Flanged Baseplate	05: 5A 08: 8A 10: 10A 15: 15A 20: 20A 26: 26A 30: 30A 40: 40A	N: Neg.	K: 0.110" N: 0.145" R: 0.180" Y: 0.250"	S: Standard (1/8 & 1/4 only) C: Current monitor output/trimmable current limit (1/8 & 1/4 only) F: Current share/trimmable current limit (half brick only)

Part Numbering Example: NQ20W20ETC20NRS-G

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