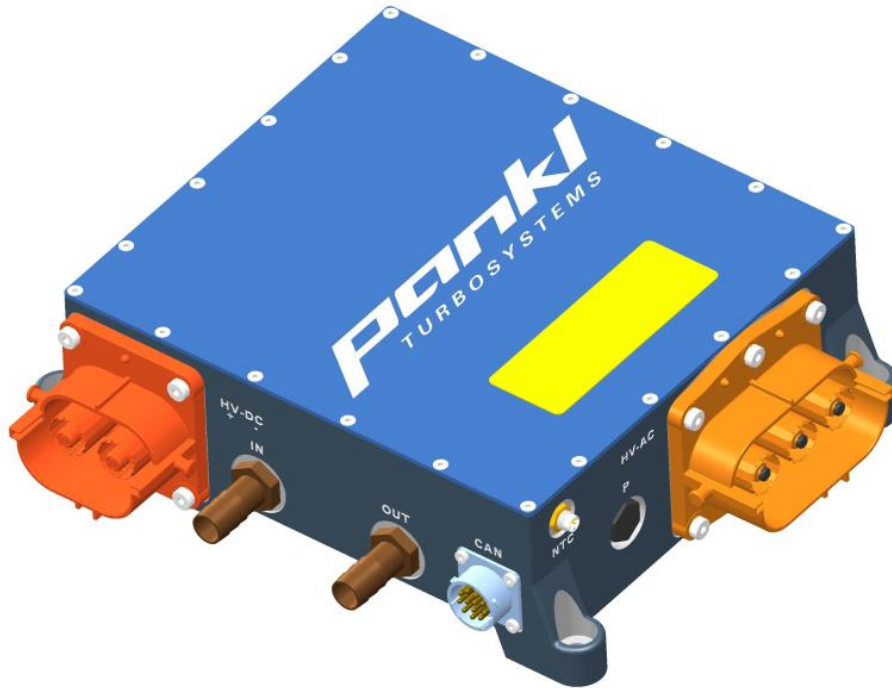


“Estoril HP”-Type High Frequency Inverter



General Description

Optimized for use in high power hybrid and fuel cell applications

- High power density
- Ultra-wide operating voltage range
- High current output
- Prepared for use in harsh environments

Features

- Up to 72 kHz switching frequency for field oriented high-speed motor control
- Sensorless motor control
- Voltage measurement on DC-link
- 3x motor current measurement and overcurrent-protection
- Temperature monitoring for motor windings (up to 4 sensors NTC)
- CAN interface, CAN FD on request
- Based on SiC-MOSFET power modules
- Liquid cooled
- IP6K9K enclosure

1. Characteristics 800V-Software

Symbol	Conditions	Min.	Nom.	Max.	Unit
V_{DC}	DC Supply Voltage	600	800	850	V
I_{cont}	$f_{sw} = 72 \text{ kHz}$, $T_{inlet} = 60^\circ\text{C}$, $dV/dt = 10 \text{ l/min}$		150		Arms
η	nominal Efficiency		98		%
f_{sw}	Switching frequency		72		kHz
C_{DC}	DC link capacitance		60		μF
V_{CC}	Low voltage supply	9	12/24	26	V
P_{LV}	Low voltage power consumption	6		15	W
Φ	Power Density (nominal)		59		kVA/l
m	Weight		4,9		kg
L	Length*		220		mm
W	Width*		200		mm
H	Height*		80		mm
dV/dt	Flow rate	8	10	12	l/min
T_{inlet}	Coolant Inlet temperature		60	70	$^\circ\text{C}$
p	Coolant operating pressure			4	BarA
Δp	Coolant pressure drop		200		mBar
T_{amb}	Ambient temperature	-20	25	100	$^\circ\text{C}$
T_{sto}	Storage temperature	-40		105	$^\circ\text{C}$
IP	Enclosure protection level		6K9K		
a	Altitude			4000	m

* Housing dimensions, without connectors and mounting points

2. Characteristics 400V-Software

Symbol	Conditions	Min.	Nom.	Max.	Unit
V_{DC}	DC Supply Voltage	220	400	450	V
I_{cont}	$f_{sw} = 72 \text{ kHz}$, $T_{inlet} = 60^\circ\text{C}$, $dV/dt = 10 \text{ l/min}$		150		Arms
η	nominal Efficiency		98		%
f_{sw}	Switching frequency		72		kHz
C_{DC}	DC link capacitance		60		μF
V_{CC}	Low voltage supply	9	12/24	26	V
P_{LV}	Low voltage power consumption	6		15	W
Φ	Power Density (nominal)		29,5		kVA/l
m	Weight		4,9		kg
L	Length*		220		mm
W	Width*		200		mm
H	Height*		80		mm
dV/dt	Flow rate	8	10	12	l/min
T_{inlet}	Coolant Inlet temperature		60	70	$^\circ\text{C}$
p	Coolant operating pressure			4	BarA
Δp	Coolant pressure drop		200		mBar
T_{amb}	Ambient temperature	-20	25	100	$^\circ\text{C}$
T_{sto}	Storage temperature	-40		105	$^\circ\text{C}$
IP	Enclosure protection level		6K9K		
a	Altitude			4000	m