



## EV / HEV three-phase IGBT inverter BITR-150-0,52-1-W-N2



### PRODUCT SUMMARY

Inverter BITR-150-0,52-1-W-N2 is designed for on- and off-road Electric (EV) or Hybrid (HEV) vehicles.

These motor controllers convert the DC power from the vehicle ESS (energy storage system/battery) to the three-phase AC required by the motor.

### Characteristics

#### FEATURE SUMMARY

- Three-phase IGBT inverter
- High power density (9kW/kg)
- High overload capability
- Compact integration in IP67 enclosure
- 3 half-bridge IGBT modules 1200V / 450 A
- Liquid cooling
- DC-link capacitor
- Gate driver with protection features (OC, OU, OT, UV)
- Over-current, DC overvoltage, over-temperature protection
- EMI filters
- Max. power output - 135 kVA

Parameter	Symbol	Unit	Min.	Nom.	Max.
DC supply voltage	$V_{DC}$	V		800	900
Output phase current	$I_{AC}$	A rms		150	250
DC-link capacitor	$C_{DC}$	$\mu F$		600	
Switching frequency	$f_{sw}$	kHz		4	8
Auxiliary supply voltage	$V_s$	V	8		32
Auxiliary supply current	$I_s$	mA			1500
Storage temperature	$T_{stg}$	$^{\circ}C$	-40		+85
Storage temperature	$T_{op}$	$^{\circ}C$	-40		+65
Coolant temperature	$T_h$	$^{\circ}C$	-40		+65
Coolant flow rate	---	l / min		10	
Weight	---	kg		14,8	15
Height	---	mm		100	
Width	---	mm		352	
Length	---	mm		311	

## Characteristics I/O signals

Type	Signal	Description
INPUT	Vs	Supply of control circuits
	PWM_A	The PWM signal of phase A
	PWM_B	The PWM signal of phase B
	PWM_C	The PWM signal of phase C
OUTPUT	AC A	Current signal of phase A
	AC B	Current signal of phase B
	AC C	Current signal of phase C
	U DC	DC-bus voltage signal
	TEMP	Temperature signal
	ERROR	Common error signal

## TYPICAL APPLICATION

**Plug-in electric vehicle (PEV)  
Hybrid electric vehicle (HEV)**

- Railway
- Electric buses
- Electric trucks
- Agriculture

## MAIN LV I/O CONNECTOR

**AMPSEAL 35p**

## Power Connectors

Terminal	Cable size mm	V rated terminal	I rated terminal
DC +	70	1kV DC	300A rms
DC -	70	1kV DC	300A rms
A	70	1kV DC	300A rms
B	70	1kV DC	300A rms
C	70	1kV DC	300A rms

## MAIN HV I/O CONNECTORS

**AMPHENOL POWERLOK**

**PL182X-301-xx**

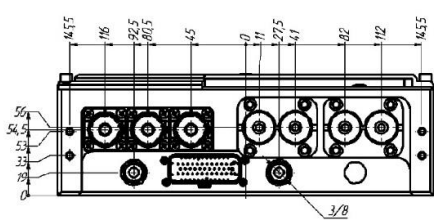
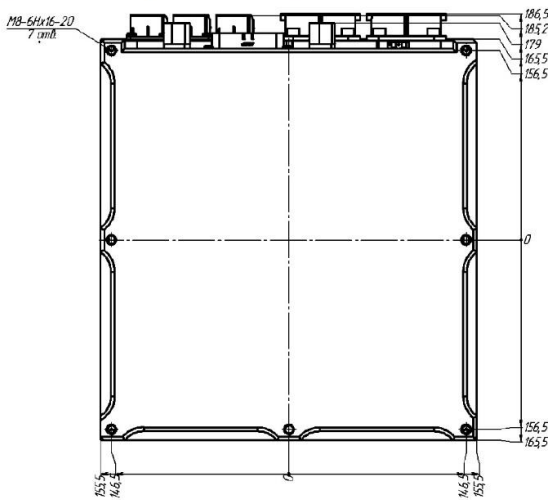
**(DC cable harness assembly)**

**PL183X-301-xx**

**(AC cable harness assembly)**

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## Block diagram

