

## Who We Are

PSP is a company specialized in custom design, manufacturing and servicing of power electronics equipment for ICT, industrial, oil & gas and energy applications. PSP R&D department is one of the most complete regarding the different disciplines in the field of power conversion.

Long experience in semiconductors and magnetic component design is combined with the most advanced digital regulation algorithms and microcontroller programming know-how.

PSP has a leading position in the oil and gas market thanks to its proven customizing expertise and continuous pursuit of excellence in a state-of-the-art product. However, wide experience in several branches of power electronics such as UPS systems for data centers and inverters make PSP a leader in this technology not only for oil and gas applications.



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1976  
2019

Listening to our customers  
and  
delivering state-of-the-art, tailored  
systems has been our vocation  
for more than  
45 years

## Services

With over 40 years of expertise in power electronic systems, PSP is renowned for its unparalleled services and technical support in critical application environments. The reliability of your installed power solution is supported by a global service team renowned for its short response time and trouble shooting efficiency. Choosing PSP preventive maintenance options gives you the ultimate peace of mind reassuring complete cost control, security and uninterrupted power supply in utmost critical situations.



# PSP.IN

## INDUSTRIAL THREE-PHASE INVERTERS

### PSP IN Industrial Inverter Three Phase Output

400 V line to line, 10-100 kVA

#### Engineering is Our Business

Inverter and UPS solutions engineered by PSP Power Solutions have been protecting oil and gas infrastructure, power stations and other industrial applications for more than 40 years.

#### Designed for all industrial applications

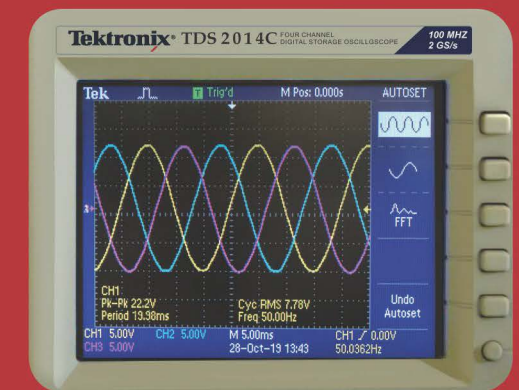
PSP5.INV, the latest generation of our inverter product range is extremely robust, both electrically and mechanically. It is custom-designed for use in harsh industrial environments to meet the toughest product customization requirements:

- » Specific mechanical protection degree
- » Specific input and output voltage
- » Customized documentation

PSP5.INV is just a part of the product range of inverters and UPS's suitable for industrial applications.

#### PSP Inverters for Industrial Applications

- » Oil and gas (petrochemicals, offshore, onshore, pipelines)
- » Energy and electricity generation (power generation, transmission, distribution)
- » Water (desalination, treatment)
- » Instrumentation and process control (chemicals, mining, steel, paper)
- » Emergency lighting
- » Telecommunication systems



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# PSP.IN

## Specification

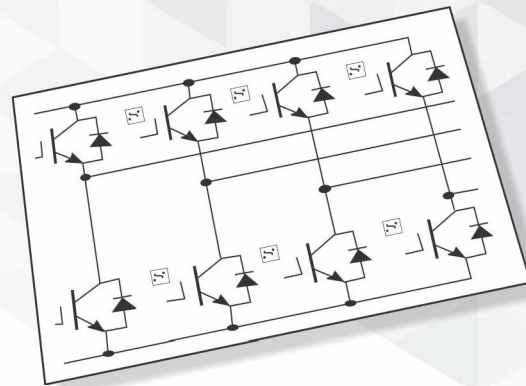


### Features and Benefits

- Built-in inverter transformer for DC-AC galvanic separation
- IGBT, PWM controlled inverter for high efficiency and low output THD
- High personalization grade with new mimic display for signals, alarms, meters
- History events continuous monitoring
- Comprehensive set of communication options for total remote monitoring of equipment operation.
- New four-leg design for providing fully balanced three phases out put voltage under any grade of unbalanced and non-linear loads.

### Main Options

- ✓ Bypass line isolation transformer with new generation of AC/AC dynamic voltage restorer with active filter features
- ✓ Improving the harmonic distortion of main in load side
- ✓ Fast transient response to main voltage fluctuations
- ✓ Output voltage regulation lower than 0.5% with very high resolution
- ✓ Automatic bypass capability under unit failure
- ✓ Lower maintenance service in comparison with traditional designs
- ✓ Higher mean time between failures
- ✓ Custom design for high power applications up to 400kW



Model	IN11510 IN22010	IN11520 IN22020	IN11530 IN22030	IN22040	IN22050 IN40050	IN40070	IN40100
<b>Nominal Rating (at cos φ 0.8 lag)</b>	10kVA	20kVA	30kVA	40kVA	50kVA	70kVA	100kVA
<b>INVERTER UNIT</b>							
<b>DC input ±20%</b>	110 V 220 V	110 V 220 V	110 V 220 V	220 V	220 V 380-400 V	380-400 V	380-400 V
<b>Nominal Ac voltage</b>	230V (220V-240V)-400 V line						
<b>Output voltage static response</b>	< ±1%						
<b>Recovery time</b>	< 4ms						
<b>Frequency</b>	50/60 Hz (selectable), ± 0.001 Hz free running, ± 2Hz synchronized with mains						
<b>Crest Factor</b>	Max 3						
<b>Total Harmonic Distortion-THD</b>	<1% Linear load; <5% non-linear load						
<b>Overload capacity</b>	125% for 10 min; 150% for 1 min; 200%for 100 ms						
<b>Static Bypass Switch</b>	Equipped with new generation of Stabilizer unit						
<b>AC voltage</b>	230 V (220 V, 240 V)-400 V line to line						
<b>Frequency</b>	50 Hz / 60 Hz						
<b>Efficiency</b>	Up to 92%						
<b>Maximum weight(kg)</b>	300	400	500	600	700	800	900
<b>Dimensions WxD(mm)</b>	Height is 2100 mm, width varies with output voltage range and rating						
	90x60	90x60	90x60	90x90	120x90	120x100	120x100

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## Specification



<b>Operating temperature</b>	-10°C + +50°C
<b>Storage temperature</b>	-20°C + +70°C
<b>Altitude</b>	<2000m (derating according to EN62040)
<b>Audible noise at 1 meter (dBA)</b>	<55 - 65 dB(A) - depending on rating
<b>Color</b>	Ral 7032, Ral 7035
<b>Efficiency</b>	Up to 94%
<b>Cooling</b>	Forced ventilation
<b>Protection degree (IEC 60529)</b>	IP20/IP21/IP42 (other options)
<b>Connectivity</b>	SPDT contact relay card Optional: RS232 serial port, RS485 Modbus-RTU serial ports Ethernet SNMP/WEB adapter, remote monitoring software Server Shutdown software

### INDICATORS & ALARMS

- INVERTER/AVR FAULT
- INPUT/OUTPUT AC ABNORMAL
- OVER HEAT
- OVER LOAD/SHORT CIRCUIT
- DC LOW
- WEAK BATTERY
- INVERTER/AVR ON/OFF
- SBS NORMAL/BYPASS
- FREQUENCY FAIL
- DC/AC EARTH FAULT
- SERVICE MODE
- AVR ON/OFF

### MBS MODE

