Tescom®



T MALLS & FACILITIES



DS 300T-IS1



INDUSTRIAL UPS	
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Specially rainforced and designed as a complete system for industrial applications. With DSP technology, efficiency, reliability and functionality have been reaised to levels unattainable with old analog technology. This technology not only creates a significant increase in MTBF, but the DSP's ability to accurately process signals at very high speed allows all UPS subsystems to be controlled with greatly increased precision.

It provides safe operation for critical loads, especially for industrial applications, with its internal inverter isolation transformer and Bi-directional rectifier offered as standard. With the less number of batteries and flexible configuration provide significant savings in your system ownership costs, the safety of your devices and loads is at the highest level with smart battery management.

GENERAL SPECIFICATIONS

- Seperate DSP control for PFC and inverter
- High efficiency and fully digital structure
- Online true double conversion
- Small footprint design
- ECO mode operation (optional)
- Selectable input/output voltage/frequency range
- Split by-pass input (dual input)
- Bi-directional rectifier
- High input power factor
- Internal input, output, battery breakers
- Static and maintanance bypass switches
- Interactive battery breakers
- ${\boldsymbol \cdot}$ Working in harmony with the generator, generator contact input
- 3-Level battery protection
- High battery charging capacity
- Temperature compensated charge system

- Internal regenerative load module (Optional)
- Automatic and manual battery test
- In-Built inverter isolataion transformer
- Advance communication features
- 7" Color TFT resistive touch panel (16M color)
- External REPO input
- 4MByte (175000 alarms) event data logs
- Clock and calender (battery supported)
- 1 RS232 serial port and 4 dry contact output (12 optional)
- High protection (fuses, over heat, over current, DC leakage and over load)
- Maximum security with two level user and central service password
- Optional SNMP/MODBUS modules
- VNC Server, Easy Access 2.0 (VPN)
- Compliant with IEC EN62040 directive
- Conforms to CE, TSE and GOST standards
- ISO9001, ISO14001 compliant production

ON-LINE TRUE DOUBLE CONVERSION

DS300T-IS1 is an on-line uninterruptible power supply with True-Double Conversion technology. It is based on the principle of converting AC voltage to DC energy by eliminating all anomalies such as sudden increases and distortion, keeping the DC voltage stable by storing and supply load with pure and safe energy with converted energy. While energy is stored in the DC Bus capacitors, it also keeps the batteries at the float charge voltage. In case of any interruption in the AC input voltage or if it goes out the tolerance limits, the continuity of your loads is ensured by transferring the load to the inverter through the batteries without interruption.

RECTIFIER / INVERTER DSP CONTROL

Two separate DSP processors available developed with full digital control. Thus, while each unit process maximum speed and reliability in itself, it also communicates with each other and offers a modular system convenience.

With DSP control, efficiency is ensured by minimizing losses such as temperature and switching, and your system total ownership costs (TCO) are reduced. Your network is protected by minimizing the noise on your system. Thanks to the high performance DSP control, system updates can be programmed via the independent processor on the mainboard, providing convenience for service operations. In addition, with advanced control algorithms, the security of your device and loads is increased to the upper level.





LOW THDI

Thanks to the environmentally friendly input module that protects the national electricity grid, It does not affect the operation of your other systems operating on the same line.

Because of low Input Current Harmonic Distortion (THDI) (<4%), sinus current is drawn from the mains and provides suitable working conditions for your grid, UPS and therefore your loads. This feature also reduce your infrastructure costs such as cable and fuse elements.

ACTIVE POWER FACTOR CORRECTION IN EACH PHASE

Thanks to the high power factor correction, the input power factor gets closer to 1 (>99%) and the reactive power cost is eliminated. At high power, the amount of savings is at the highest level. In addition, with active power factor correction, do not need any compensation regarding UPS operation.

POWER WALK-IN FEATURE

Thanks to IGBT and DSP controlled rectifier, input and output contactor structure and start delay function, energy is transferred gradually and proceeds on the device step by step. Thanks to the soft start feature, the necessary controls can be made in low voltage operation in case of a possible malfunction, thus protecting itself when necessary, thus preventing high breakdown costs.

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IN-BUILT INVERTER TRANSFORMER

With the built-in inverter transformer, a more stable and safe energy is provided in sensitive and critical load applications. It behaves as a protective shield for your device and loads against the harsh working conditions brought by industrial applications. In addition to the benefits by the use of isolated transformers, since it is located in the inverter section, it compensates for the fluctuations that may occur at the transformer output and transformer losses with PWM technology, always making the bypass line possible for an uninterrupted energy alternative.

INTERNAL DC REGENERATIVE LOAD PROTECTION (OPTIONAL)

One of the main reasons why it is a special product for use in industrial applications is the DC braking modules offered internally on it. With its completely independent (\pm DC braking) feature, it absorbs the damages that can be caused by regenerative loads that feed back energy. It saves money by eliminating the need to use external modules. Complete system security is guaranteed with advanced protection systems and bi-directional rectifier feature.





WORKING WITH LESS BATTERY

With the benefits of to the DC booster topology, works with less battery, reduces your system and ownership (TCO) costs. Increases inverter efficiency by reducing DC and switching losses. In addition to the mechanical protections in the battery section, 3-level battery protection and the Heat Compensated Charge balancing system offer smart battery management, while prolonging the healthy working life of your batteries. Thanks to its high charging current capacity, it allows long backup applications.

HIGH RELIABILITY AND REDUNDANCY

DS Power series has been designed to guarantee maximum security with its input/output contactor structure, suitable fuses, and gradual mechanical protection function, as well as superior software protections.

DS Power series can work in parallel with up to 8 units with power increasing and N+1 or N+X redundant operating modes. By allowing the parallel system to work with a common battery group, your ownership (TCO) and maintenance costs are reduced.

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ADVANCED COMMUNICATION

It offers a significant advantage with two standard RS232 serial communication port and 4 programmable dry contact cards. If desired, the number of dry contact outputs can be increased up to 12 with the optional dry contact card.

It also offers flexible usage with SNMP/MODBUS (RTU-TCP) protocol compatibility. Thanks to the built-in SNMP option, the flexibility of use for a different application can be provided by not using the RS232 port.

It provides ease of service thanks to real-time 4Mbyt (170.000 alarm) event log records and advanced diagnostic coding.

REMOTE MONITORING AND CONTROL

With T-MON Server/ T-MON Admin or compatible SNMP remote monitoring software, status, measurements and alarm records of UPS can be monitored via computer/mobile. When an alarm occurs (black outs or low battery, etc.) it can be monitor from the warning messages that appear on the screen, and status messages can be sent to the desired users via e-mail and SMS.

FLEXIBLE DESIGN

With settings such as output voltage, frequency and battery charging currents adjustable from the front panel and It can be configured in the site in accordance with customer needs.

It has the feature of working as a frequency converter at 50/60Hz.

Various battery configuration can be offered with compatible battery cabinets.





ADVANCED TFT TOUCH PANEL

Thanks to the 7"TFT touch panel, offers ease of use in displaying operating modes and measurement parameters.

It has superior performance with Cortex A8 600MHz CPU, 128MB Flash and 128MB RAM. Compatible with more than 300 different brands of PLCs and controls.

It has a stunning design with its resistive touch panel structure, 16M color screen, 800x480 resolution and wide viewing angles ($T:70^{\circ}/B:50^{\circ}/L:70^{\circ}/R:70^{\circ}$). It is resistant to external effects with its IP65 protection class. It provides flexibility for all kinds of communication options with its built-in RS232/RS485/Ethernet/USB outputs.

It has a superior capacity for recording and storing with 128MB internal memory, alarm and status log records up to 4Mbytes (170.000 units).

Optional VNC server provides efficient working in remote monitoring applications thanks to Easy Access 2.0 (VPN) software.

COMPATIBLE BATTERY CABINETS









ACCESSORIES

Modules

- Internal SNMP Adaptor
- External SNMP Adaptor
- RSX-24 External RS232-RS485 Protochol Converter
- RS-NET External RS232-TCP/IP Protochol Converter
- RMP-X1 TFT Remote Monitoring Panel
- MDX2 External Modbus (RS485) Adaptor
- MDX NET External Modbus (TCP/IP) Adaptor
- GM1/GM2/GM3 GSM/GPRS Modul
- Internal regenerative load module (Optional)

Software

T-MON Admin Remote Monitoring Software (Multi user)

Optional Kits

- Heat Compensated Charging System
- Optional Additional Dry Contact Card (+8 Pieces)
- ECO Mode Card
- Parallel Kit

External Panel

- External Maintenance Bypass Panel
- External Battery Panel



TECHNICAL SPECIFICATIONS

MODEL			DS300T-IS1					
Power (kVA)	30	40	60	80	100			
INPUT								
Voltage	380/400 VAC 3P + N + G ± 20% (@ 100% load) / - 40% (@70% load)							
Frequency			50Hz / 60Hz, ± 10%					
Power factor (@100% load)			≥ 0.99					
THDI (*)			< 4%					
By-pass voltage		290/400 \/AC 2 Bbace + N ± 10						
	Fire							
Protections	ruses, voltage & riequency tolerance, input power limit, mase sequency indicator, input breaker contactor, Over voltage protection (Standard MOV / Optional SPD)							
OUTPUT								
Power (kW)	27	36	54	72	90			
Power factor (**)	09							
Voltage	380/400 VAC 3P + N + 1% (ontional 415 VAC)							
Frequency	50Hz / 60Hz							
Frequency tolerance	Line synchronized: + 2% Standard (+ 5% adjustable) / Free running: + 0.1%							
Efficiency (@100% load)	91% Q2%							
Crest factor	<u>۲۱ ۷۵ کالاکی</u> ۲۰۱							
Overload	3:1							
Capacity Online	100% - 125% load: 10 min, 125% - 150% load: 1 min, - > 150% load: by pass							
Other protections	Akıllı kısa devre koruması, Voltage tolerance protection, DC denge, Rejenerative load, Current limiting protections							
Voltage THD	≤ 1% (@ 100% linear load)							
BATTERIES								
Туре	Maintenance-free dry type lead acid and Ni-CD							
Battery number	1x40 pieces (40- 48 pieces adjustable)							
End of discharge voltage (adjustable)	414 VDC (40 Batteries)							
Battery operation temperature	25℃							
Protection	3-level alarm, Battery fuses, Charging current limitation, Temperature compensated battery charging system (optional)							
Battery test	Standard every 72 hours (adjustable)							
GENERAL								
Standards	EN62040-1. EN62040-2. EN62040-3							
User interface	TFT 7" 800*480 with Resistive Touch Panel 16M Color. Buzzer							
Indicators	P-N volta	P-N voltage, P-P voltage, Current, DC Bus, Battery voltage, Power, Energi Savaci, Crest Factor, Frequency, PF, Service time						
Advanced		Self diagnostics, 3 maintenance	ce time indicators, Calibration ove	r RS232, Operating hour meter				
Communication	1xRS2	232 serial port , MODBUS RTU over	RS485, MODBUS TCP, 4 standard	and 8 optional DRY contact alarm	n relays			
Inputs		FPQ input Interactive battery nanel input Generationut						
Genset kit		Standard						
Alarm logging	Time & Date Alarm Longing, 4MRvte (170,000 alarm)							
Protection	Power module over-temperature. Overcurrent Temperature high alarm							
Operation temperature range	0°C - 40°C							
Protection degree	IP20 (***)							
Humidity	ا۲۷۷ (۲۰۰۰) ۵۵۵4 may (non condensing)							
Altitudo	< 1000m above sea level							
Annuation preise (01000(local)					ماردجه			
Acoustic hoise (@100% load)	<0	406 405 570 74		<72dB				
	298	426	495	579	587			
Dimensions (mm) HxWxD	1040x400x930		1440x515x970		1770x825x970			
OPTIONS Different in the test test			Discourse					
Transformer	Please ask							
	Gaivanic Isolation transformer at the output (standard)							
SUTTWARE	VNL server, Easy Access 2.0 (VPN)							
Adaptors	SINIVIE, KERTIOLE MONITORING PAREI, ILEP/IE, GSM/GEKS MOGEM, COMPORT MUltiplexer							
Parallel operation	Up to 8 units							
Regenerative load module	Optional							
(*) Depending on power and input/output conditions								
(**) Please ask for PF 1.0								
	(***) Ask for other IP options							

