

Energy Source of Your Business

## **PRODUCT RANGE**

## 1)UPS(UNINTERRUPTIBLE POWER SUPPLY) 2)SERVO VOLTAGE REGULATORS 3)STATIC VOLTAGE REGULATORS 4)SOLAR PANELS 5)ELECTRIC VEHICLE CHARGING STATIONS 6)INVERTORS 7)BATTERIES



## TEM PLUS 3-3 MODEL UPS

## **UPS MODELS**

### 10 KVA-250 KVA



#### **General features**

- Advan ced Micropro cessor Control
- Real Online Double Conversion
- IGBT Rectifier and Inverter
- Transformerless Design with True Digital Signal Processor Control
- A ctive Input Power Factor Correction (;;;: 0.99)
- Low Input THDi <3% Excellent Generator Compatibility
- Ex cellent Energy for Your Low Output THDv <3% Loads
- Low Total Harmoni c Distortion Level
- Ex cellent Compatibility with Different Power Factor Loads
- Sele ctable Input/Output Voltage and Frequency
- Wide Input Voltage Range (160 260 VAC)
- High Efficiency Up To 95%
- Ultra High Efficiency (98%) with Smart Eco Mode
- Reliable Parallel / Redundant Operation with Load Syn chronization
- Intelligent Fan Control
- EMI / RFI Filter
- Battery Start Feature (Cold Start)
- Short Circuit, High/Low Voltage and Overload Protections
- Adjustable Time for Battery Operation
- Battery Deep Dis charge Protection
- Standard Static and Maintenance By-Pass
- Temperature Compensated Battery Charge, Sele ctable Charge Current
- Advan ced Fault Identification, 1000x Warning/Event Memory
- Advan ced Communi cation Options with RS232 / RS485
- 100% MADE IN TURKEY



- Low Installation and Operating Costs
- Easy Maintenan ce and Servi ce
- 10 Years Spare Parts Availability
- 7/24 Te chni cal Servi ce and Customer Servi ce
  - **Optional features**
- Advan ced Remote Monitoring and Management with SNMP
- 4 Programmable Dry Contacts
- GPRS Modem / CAN BUS Communication Options
- Easy Scalability with Paralleling
- Microprocessor Controlled Intelligent Battery Management
- Customizable Input/Output Options
- E co-Friendly Design, Quietest in Class standards
- EN 62040-1 (Safety), EN 62040-2 (EMC)
- TSEK, CE, ISO 9001



## 10 KVA-250 KVA

## **UPS Modelleri**

#### <u>3 Phase Input / 3 Phase Output ; ON - LINE 'Double Conversion'' Teknology</u> DSP Controlled IGBT Rectifier UPS / 10 KVA. – 250 KVA.

\*IGBT Rectifier, DSP Controlled Transformerless desing

\*İnput Power Factor Correction PFC ( >0,99)

\*Low Total Harmonic Distorsion Level, High Efficiency ( Up to %95)

\*Wide Input Voltage Range, Generator Compatible Operation, ECO Mode

\*Intelligent battery management system extends the lifetime of batteries

\*Static and Manuel Bypass, Expandable battery blocks, Low installation and operation costs

\*Communications with computers and network systems with SNMP availability

MODEL	TEM	TEM	TEM	TEM	TEM	TEM	TEM	TEM	TEM	TEM	TEM	TEM	TEM
OUTPUT POWER (KVA.)	10	15	20	30	40	45	60	80	100	120	160	200	250
NOM. ACTIVE POWER (KW.)	8	12	16	24	32	36	48	64	80	96	128	160	200
	input												
Nminal Voltage ( Ph-Ph)							80 Vac. / 400	) Vac / 415	Vac				
Voltage Range ( %100 load )							OAD - 176 /						
Voltage Nange ( /0100 load )							DAD - 170 / 2						
	%0-25 LOAD - 80/ 280 Vac. ± % 5												
Nominal Frequency (Hz.)						700 23	50 / 60		5				
Frequency Range							44 - 66						
İnput Current THD			< 9	2/1			44 - 00	ΠΖ.		< %5			
•			< 7	/04			0,99			< 705			
İnput Power Factor							0,99						
	OUTPUT												
Power Factor	0,8												
Voltage ( Ph-Ph)	3 FAZ - 380 Vac. / 400 Vac. / 415 Vac.												
Static Voltage Regulation	±%1												
THD-V	<%3												
Crest Factor	3:1												
Frequency ( Hz.)							50 / 60						
Free running Frequency (Hz.)							0,01 H					к. к. к.	
Overload Capasity						%125 for	10 minutes		) sec		· · ·	· · ·	0 0
Effiency				-	6 · ·	· • •		> %94			·	0	
						BATTERY							
Battery Quantity				2x	31						2x30		
Battery Protection						Depp discha	rge Protectio	on with Auto	cut off				
Battery Test						Sta	ndard (Auto a	& Manuel )					
						DİSPLAY							
LED Display	Line, Bypas, Battery, Inverter, Load, Fault Indications												
LCD Display		Loa	ad Input & ou	utput Freque					oltage & curren	t. Temperature	. Alarrms. Histo	orv	· · · · ·
								-,,		.,	,,	,	
STATİK BYPASS													
			175 / 253 Vac.										
Voltage Range For Bypass		r = 0	a 1 (	и и н		1			1 1			4 1 1	P
Frequency Range For Bypass							7-53 Hz. Or 5	57-63 Hz.				4 I I I I	-
Frequency Range For Bypass		· · · ·	0.8		VIRONME	NT / COMM	7-53 Hz. Or 5 1INICATION	57-63 Hz. N	Name O. 200			4 I I	1
Frequency Range For Bypass Temperature / Humminty			0 °(			NT / COMM	7-53 Hz. Or 5 IINICATION Longer Battr	5 <b>7-63 Hz.</b> N ry life time	- Nem; 0 - %9	95 ( non-conder	nsing)	• 1 1	
Frequency Range For Bypass Temperature / Humminty Max. Altştude			0 °(			NT / COMM	7-53 Hz. Or 5 IINICATION Longer Battr 1.000 N	<b>57-63 Hz.</b> I ry life time M.	- Nem; 0 - %S	95 ( non-conder	nsing)		
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level			0°0		25 °C Recom	NT / COMM nmended for	7-53 Hz. Or 5 IINICATION Longer Battr 1.000 N IP 20	<b>57-63 Hz.</b> N Ty life time	5 5 6 5	6 8	nsing)		
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications			0 °(		25 °C Recom	NT / COMM nmended for RS 232 / O	7-53 Hz. Or 5 IINICATION Longer Battr 1.000 N IP 20 psiyonel SNN	7-63 Hz. N ry life time	y contact signa	6 8	nsing)		
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level			0 °(		25 °C Recom Standarts	NT / COMM nmended for RS 232 / O ISO 9001,	7-53 Hz. Or 5 IINICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, (	7-63 Hz. N ry life time	y contact signa	6 8	nsing)		
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications			0 *(		25 °C Recom Standarts	NT / COMM nmended for RS 232 / O	7-53 Hz. Or 5 IINICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, (	7-63 Hz. N ry life time M. AP and ve di	y contact signa	6 8	nsing)		
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS				C- 40 °C (20-	25 °C Recom Standarts	NT / COMM nmended for RS 232 / O ISO 9001,	7-53 Hz. Or 5 IINICATION Longer Battr 1.000 M IP 20 psiyonel SNN ISO 14001, 0 ATIONS	77-63 Hz. I ry life time M. MP and ve du DHSAS 1800	y contact signa 1, CE	ls			
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications			0 °(	C- 40 °C (20-	25 °C Recom Standarts	NT / COMN nmended for RS 232 / O ISO 9001,	7-53 Hz. Or 5 IINICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, (	77-63 Hz. I ry life time M. MP and ve du DHSAS 1800	y contact signa	ls		10*82*160	
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS				C- 40 °C (20-	25 °C Recom Standarts	NT / COMM mmended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 IINICATION Longer Battr 1.000 M IP 20 psiyonel SNN ISO 14001, 0 ATIONS	77-63 Hz. I ry life time M. MP and ve du DHSAS 1800	y contact signa 1, CE	ls		10*82*160	
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)			56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time M. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS	115	120		C- 40 °C (20-	25 °C Recom Standarts	NT / COMM mmended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 IINICATION Longer Battr 1.000 M IP 20 psiyonel SNN ISO 14001, 0 ATIONS	77-63 Hz. I ry life time M. MP and ve du DHSAS 1800	y contact signa 1, CE	ls		10*82*160	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time M. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time M. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time M. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time M. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time M. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time M. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time M. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time M. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time y. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time y. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time y. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.)	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA	NT / COMIN mended for RS 232 / O ISO 9001, L SPECIFICA	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	7-63 Hz. y life time y. MP and ve di OHSAS 1800: 2*128	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420
Frequency Range For Bypass Temperature / Humminty Max. Altştude Protection Level Commilications STANDARTS Dimensions - WxDxH ( cm.) Weight ( Kg )	115		56*82	C- 40 °C (20-	25 °C Recom Standarts PHYSICA 140	NT / COMM Immended for ISO 9001, L SPECIFIC/ 140	7-53 Hz. Or 5 11NICATION Longer Battr 1.000 N IP 20 psiyonel SNN ISO 14001, 6 ATIONS 56*82	77-63 Hz. I ry life time M. MP and ve di DHSAS 1800: 2*128 170	y contact signa I, CE 56*10	ls 2*130	1	0 4 4	420



# **Energy Source of Your Business**

