AC Power Source

Medium Frequency AC Power Source

Introduction

The TFC400 series are 400Hz AC power source, designed for avionics and military equipments. It can be used in aircraft and airborne equipment, radar, GPS, military equipments, and other equipments required 400Hz power source.

Features

- ✓ Adopt IGBT drive and SPWM modulation technology, good reliability, fast response and high efficiency
- ✓ Adopt double closed loop feedback control, good output stability
- ✓ Single phase or three phase output selectable
- ✓ Rated frequency 400Hz, adjustable range 350.0Hz ~450.0Hz
- ✓ Rated voltage 115V (L-N), adjustable range 10.0V~150.0V (L-N)
- ✓ Display for voltage, current, frequency, active power, power factor
- ✓ Temperature-controlled cooling fan
- ✓ RS-232 or RS-485 interface, support ModBus-RTU
- ✓ Optional function: 0-5V or 0-10V analog control, LIST mode function, STEP mode function
- ✓ Optional output voltage range 0~1000V
- ✓ Optional output frequency range 200Hz~2500Hz
- ✓ Customized specifications and functions acceptable

Applications

- ✓ Radar production and repair
- ✓ Aircraft production and repair
- ✓ Turbine engine production
- ✓ Military equipment production
- ✓ Air control tower
- ✓ National defense and military scientific research

Product photo

15KVA

TWINTEX · www.twintex.com.tw
Taipei, Taiwan: Tel: +886-02-2915 0101 · Fax: +886-02-2916 0101
Shenzhen, China: Tel.: +86-755-2812 9890 · Fax: +86-755-2814 9802

Specifications (Single Phase Output)

Circuit mode	IGBT/PWM
Output	
Phase	Single phase 2 wires +GND, transformer isolated
Rated voltage	115V (L-N) / 200V (L-L)
Adjustable voltage range	10.0V~150.0V (L-N) / 17.0V ~ 200.0V (L-L), setting resolution 0.1V
Rated frequency	400Hz
Adjustable frequency range	350.0Hz ~ 450.0Hz, setting resolution 0.1Hz Optional output frequency range 200Hz~2500Hz
Voltage stability	≤±1%FS
Frequency stability	≤±0.01%FS
Waveform	Sine
Total Harmonic Distortion	≤±2% FS (resistive load)
Efficiency	≥85%
Meter	
Voltmeter	Resolution 0.1V, accuracy ≤±0.5%rdg + (±0.2% FS)
Frequency meter	Resolution 0.1Hz, accuracy ≤±0.02%rdg
Ammeter	Resolution 0.01A, accuracy ≤±0.5%rdg + (±0.2% FS)
Power meter	Resolution 0.01kW, accuracy ≤±0.5%rdg + (±0.2% FS)
Remote control interface	RS232 or RS485
Protection	Fuse switch for input and output; Fast-response circuit to detect over voltage, over current, over load, over temperature (85℃±5℃) and short circuit; Output will be shut down in protection mode.
Preset function	Preset output voltage, output frequency and output voltage floating ratio
Alarm function	Audible and visual alarm once protective device activated; display error code.
Overload capacity	1.0Ie<Iout≤1.2Ie, Delay 60s
Withstanding voltage	Input/output to chassis: AC1500V/1min, Leakage current <20mA
Insulation resistance	Input/output to chassis: ≥20M ohm (DC500V)
Cooling	Cooling fan
Cabinet protection grade	IP20
Operation environment	0℃-40℃, ≤90% RH(Non-condensing), Altitude: 1500 feet

AC Power Source

Model	Capacity	Max.Current @115V	Input	N.W (kg)	G.W. (kg)	Dimension (mm)
TFC400-61005	500VA	4.3A	1P 220Vac	25	30	450W*176H*480D
TFC400-6101	1KVA	8.6A	1P 220Vac	35	40	450W*176H*480D
TFC400-6102	2KVA	17.3A	1P 220Vac	50	60	360W*600H*520D
TFC400-6103	3KVA	26A	1P 220Vac	60	70	360W*600H*520D
TFC400-6105	5KVA	43A	1P 220Vac	65	75	360W*600H*520D
TFC400-6106	6KVA	52A	1P 220Vac	75	85	360W*600H*520D
TFC400-6110	10KVA	87A	1P 220Vac	105	130	430W*700H*520D
TFC400-6115	15KVA	130A	3P 380Vac	110	155	480W*800H*600D
TFC400-6120	20KVA	174A	3P 380Vac	200	260	520W*110H*820D
TFC400-6130	30KVA	260A	3P 380Vac	270	330	520W*1000H*820D
TFC400-6145	45KVA	391A	3P 380Vac	350	410	660W*1260H*980D
TFC400-6150	50KVA	434A	3P 380Va	400	460	660W*1260H*980D
TFC400-6160	60KVA	521A	3P 380Vac	420	480	660W*1260H*980D
TFC400-6175	75KVA	652A	3P 380Vac	550	650	750W*1500H*1020D
TFC400-6190	90KVA	782A	3P 380Vac	650	750	750W*1500H*1020D
TFC400-61100	100KVA	870A	3P 380Vac	670	770	750W*1500H*1020D
TFC400-61120	120KVA	1043A	3P 380Vac	800	920	750W*1750H*1280D
TFC400-61150	150KVA	1304A	3P 380Vac	850	970	750W*1750H*1280D
TFC400-61180	180KVA	1565A	3P 380Vac	980	1100	750W*1750H*1280D
TFC400-61200	200KVA	1739A	3P 380Vac	1000	1120	750W*1750H*1280D
TFC400-61300	300KVA	2608A	3P 380Vac	1200	1450	2000W*1700H*1080D

TWINTEX · www.twintex.com.tw
Taipei, Taiwan: Tel: +886-02-2915 0101 · Fax: +886-02-2916 0101
Shenzhen, China: Tel.: +86-755-2812 9890 · Fax: +86-755-2814 9802

Specifications (Three Phase Output)

Circuit mode	IGBT/PWM
Output	
Phase	Three phase 3 wires +GND, transformer isolated
Rated voltage	115V (L-N) / 200V (L-L)
Adjustable voltage range	10.0V~150.0V (L-N) / 17.0V ~ 200.0V (L-L), setting resolution 0.1V
Rated frequency	400Hz
Adjustable frequency range	350.0Hz ~ 450.0Hz, setting resolution 0.1Hz Optional output frequency range 200Hz~2500Hz
Voltage stability	≤±1%FS
Frequency stability	≤±0.01%FS
Waveform	Sine
Total Harmonic Distortion	≤±2% FS (resistive load)
Efficiency	≥85%
3 phase voltage unbalance	Can be connected to unbalanced load, can be used as single phase
Meter	
Voltmeter	Resolution 0.1V, accuracy ≤±0.5%rdg + (±0.2% FS)
Frequency meter	Resolution 0.1Hz, accuracy ≤±0.02%rdg
Ammeter	Resolution 0.01A/0.1A, accuracy ≤±0.5%rdg + (±0.2% FS)
Power meter	Resolution 0.01kW, accuracy ≤±0.5%rdg + (±0.2% FS)
Remote control interface	RS232 or RS485
Protection	Fuse switch for input and output; Fast-response circuit to detect over voltage, over current, over load, over temperature (85℃±5℃) and short circuit; Output will be shut down in protection mode.
Preset function	Preset output voltage, output frequency and output voltage floating ratio
Alarm function	Audible and visual alarm once protective device activated; display error code.
Overload capacity	@125%, Delay 600s; @150%, Delay 60s; @200%, Delay 1s
Withstanding voltage	Input/output to chassis: AC1500V/1min, Leakage current <20mA
Insulation resistance	Input/output to chassis: ≥20M ohm (DC500V)
Cooling	Cooling fan
Cabinet protection grade	IP20
Operation environment	-20℃~50℃, ≤90% RH(Non-condensing), Altitude: 2000 feet

AC Power Source

Model	Capacity	Max.Current @115V	Input	N.W (kg)	G.W. (kg)	Dimension (mm)
TFC400-6301.5	1.5KVA	4.3A	1P 220Vac	30	40	450W*176H*500D
TFC400-6303	3KVA	8.6A	3P 380Vac	40	50	450W*176H*500D
TFC400-6306	6KVA	17.3A	3P 380Vac	150	175	500W*900H*680D
TFC400-6310	10KVA	29A	3P 380Vac	170	200	500W*900H*680D
TFC400-6315	15KVA	43A	3P 380Vac	200	240	500W*900H*680D
TFC400-6320	20KVA	58A	3P 380Vac	260	300	590W*1100H*800D
TFC400-6330	30KVA	86A	3P 380Vac	300	360	590W*1100H*800D
TFC400-6345	45KVA	130A	3P 380Vac	400	450	720W*1220H*1080D
TFC400-6360	60KVA	173A	3P 380Vac	500	580	720W*1220H*1080D
TFC400-6375	75KVA	217A	3P 380Vac	530	610	750W*1300H*1382D
TFC400-6390	90KVA	260A	3P 380Vac	650	730	750W*1300H*1382D
TFC400-63100	100KVA	289A	3P 380Vac	700	820	1380W*1580H*870D
TFC400-63120	120KVA	347A	3P 380Vac	800	900	1380W*1580H*870D
TFC400-63150	150KVA	434A	3P 380Vac	900	1000	1380W*1580H*870D
TFC400-63180	180KVA	521A	3P 380Vac	1200	1320	1650W*1800H*1150D
TFC400-63200	200KVA	579A	3P 380Vac	1300	1420	1650W*1800H*1150D
TFC400-63250	250KVA	724A	3P 380Vac	1500	1620	1650W*1800H*1150D
TFC400-63300	300KVA	869A	3P 380Vac	800	900	2000W*1700H*1080D
TFC400-63400	400KVA	1159A	3P 380Vac	1000	1150	2000W*1700H*1080D
TFC400-63500	500KVA	1449A	3P 380Vac	1800	2000	2700W*2100H*1100D
TFC400-63600	600KVA	1739A	3P 380Vac	2000	2200	2700W*2100H*1100D
TFC400-63750	750KVA	2173A	3P 380Vac	3000	3500	3200W*2200H*1400D

Specifications are subject to change without prior notice.

TWINTEX · www.twintex.com.tw
Taipei, Taiwan: Tel: +886-02-2915 0101 · Fax: +886-02-2916 0101
Shenzhen, China: Tel.: +86-755-2812 9890 · Fax: +86-755-2814 9802