

Primärgetaktetes Schaltnetzteil

Typ SNT 3.0/5.0/10.0/20.0

1. Allgemein

Die Schaltnetzteile der Serie SNT/xx wurden speziell für den Einsatz in industrieller Umgebung entwickelt und sind u.a. zur Spannungsversorgung von EPH-Regelgeräten mit Niederspannung ausgelegt. Die sehr hohen elektrischen Spezifikationen garantieren eine zuverlässige Stromversorgung in der Prozessautomation, der Maschinenindustrie, sowie in anderen elektronischen Systemen.

1.1 Übersicht Schaltnetzteile Typ SNT/xx

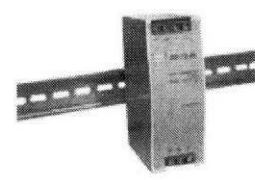
Typ	SNT 3.0	SNT 5.0	SNT 10.0	SNT 20.0
<u>Eigenschaften</u>				
Eingangsspannung 264VAC	85 – 264 VAC	88-132 VAC/ 176- 264VAC	85- 264VAC	180-
Sekundärspannung	24 V	24V	24V	24V
Nennstrom	3,2A	5,0A	10,0A	20,0A
Kurzschlussfest	ja	ja	ja	ja
Wirkungsgrad	80%	84%	84%	89%
Arbeits-temperaturbereich	-10...+60°C	-10. ...+60°C	-10... +70°C	-20...+70°C
Befestigung 35mm Tragschiene	ja	ja	ja	ja
Abmaße LxBxH in mm	100x55,5x125	100x65,5x125	125,5x100x125	227x100x125
Gewicht in Kg	0,55	0,65	1,1	2,1

2. Technische Daten

2.1. SNT 3.0 A

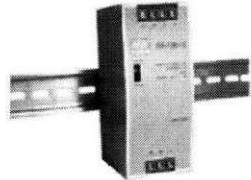
Schaltnetzteil Typ SNT 3.0

.LOW COST, HIGH RELIABILITY		.COMPACT SIZE, LIGHT WEIGHT	
.105°C OUTPUT CAPACITOR		.100% FULL LOAD BURN-IN TEST	
.INTERNATIONAL AC INPUT RANGE		.BUILT IN EMI FILTER, LOW RIPPLE NOISE	
.HIGH EFFICIENCY, LOW WORKING TEMPERATURE			
.SOFT-START CIRCUIT, LIMITING AC SURGE CURRENT			
.SHORT CIRCUIT, OVERLOAD, OVER VOLTAGE PROTECTED			
MODEL		SNT3.0	
SPECIFICATION			
DC OUTPUT VOLTAGE		24V	
OUTPUT V. TOLERANCE		±1%	
OUTPUT RATED CURRENT		3.2A	
OUTPUT CURRENT RANGE		0-3.2A	
RIPPLE & NOISE		150mVp-p	
LINE REGULATION		±0.5%	
LOAD REGULATION		±1%	
DC OUTPUT POWER		76.8W	
EFFICIENCY		80%	
DC VOLTAGE ADJ.		24-28V	
INPUT VOLTAGE RANGE	85-264VAC 47-63Hz; 120-370VDC		
AC CURRENT	2.0A/115V 1.2A/230V		
INRUSH CURRENT	COLD START 30A/115V 60A/230V		
LEAKAGE CURRENT	<1mA/240VAC		
OVERLOAD PROTECTION	105%-150% TYPE:CONSTANT CURRENT LIMITING RESET:AUTO RECOVERY		
OVER VOLTAGE PROTECTION		29-33V	
OVER TEMP. PROTECTION	85° C± 5° C 12V ONLY / 90° C±5° C TYPE:SHUTDOWN RESET:AUTO RECOVERY(TSW1)		
TEMP. COEFFICIENT	±0.03%/° C (0-50° C)		
SETUP, RISE, HOLD UP TIME	1000ms;60ms;50ms/230V;1200ms;60ms;10ms/115V		
VIBRATION	10-500Hz, 2G 10min./1cycle, PERIOD FOR 60min. EACH AXES		
WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC		
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:500VDC / 100M Ohms		
WORKING TEMP., HUMIDITY	-10° C~+60° C(REFER TO OUTPUT DERATING CURVE), 20%-90% RH		
STORAGE TEMP., HUMIDITY	-20° C~+85° C, 10%-95% RH		
DIMENSION	100*55.5*125.2 mm		
WEIGHT	0.55Kgs		
SAFETY STANDARDS	MEET TUV EN60950, UL508		
EMC STANDARDS	MEET EN55022 CLASS B, EN61000-4-2,3,4,5,6,8,11; ENV50204, EN61000-3-2,-3		
NOTE : 1.ALL PARAMETERS ARE SPECIFIED AT 230VAC INPUT, RATED LOAD, 25° C 70% RH. AMBIENT. 2.TOLERANCE GINCLUDE SET UP TOLERANCE, LINE REGULATION, LOAD REGULATION. 3.RIPPLE & NOISE ARE MEASURED AT 20MHz BY USING A 12" TWISTED PAIR TERMINATED WITH A 0.1uF & 47uF CAPACITOR. 4.LINE REGULATION IS MEASURED FROM LOW LINE TO HIGH LINE AT RATED LOAD. 5.LOAD REGULATION IS MEASURED FROM 0% TO 100% RATED LOAD.			
2002-01-29			



2.2. SNT 5.0 A

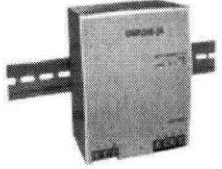
Schaltnetzteil Typ SNT 5.0

. LOW COST, HIGH RELIABILITY		. COMPACT SIZE, LIGHT WEIGHT	
. 105°C OUTPUT CAPACITOR		. 100% FULL LOAD BURN-IN TEST	
. INTERNATIONAL AC INPUT RANGE		. BUILT IN EMI FILTER, LOW RIPPLE NOISE	
. HIGH EFFICIENCY, LOW WORKING TEMPERATURE			
. SOFT-START CIRCUIT, LIMITING AC SURGE CURRENT			
. SHORT CIRCUIT, OVERLOAD, OVER VOLTAGE PROTECTED			
			
MODEL		SNT 5.0	
SPECIFICATION			
DC OUTPUT VOLTAGE		24V	
OUTPUT V. TOLERANCE		±1%	
OUTPUT RATED CURRENT		5A	
OUTPUT CURRENT RANGE		0-5A	
RIPPLE & NOISE		80mVp-p	
LINE REGULATION		±0.5%	
LOAD REGULATION		±1%	
DC OUTPUT POWER		120W	
EFFICIENCY		84%	
DC VOLTAGE ADJ.		24~28V	
INPUT VOLTAGE RANGE		88~132VAC/176~264VAC	
AC CURRENT		2.8A/115V 1.7A/230V	
INRUSH CURRENT		COLD START 30A/115V 60A/230V	
LEAKAGE CURRENT		<3.5mA/240VAC	
OVERLOAD PROTECTION		105%~150% TYPE:CONSTANT CURRENT LIMITING RESET:AUTO RECOVERY	
OVER VOLTAGE PROTECTION		29~33V	
OVER TEMP.PROTECTION		85 ° C±5 ° C(TSW1)	90 ° C±5 ° C TYPE:SHUT DOWN RESET:AUTO RECOVERY(TSW1)
TEMP. COEFFICIENT		±0.03% / ° C (0~50° C)	
SETUP, RISE, HOLD UP TIME		500ms;70ms; 30ms/230V,115V	
VIBRATION		10~500Hz, 2G 10min./1cycle, PERIOD FOR 60min. EACH AXES	
WITHSTAND VOLTAGE		I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC	
ISOLATION RESISTANCE		I/P-O/P, I/P-FG, O/P-FG:500VDC / 100M Ohms	
WORKING TEMP., HUMIDITY		-10° C~+60° C(REFER TO OUTPUT DERATING CURVE), 20%~90% RH	
STORAGE TEMP., HUMIDITY		-20° C~+85° C, 10%~95% RH	
DIMENSION		100*65.5*125.2 mm	
WEIGHT		0.65Kgs	
SAFETY STANDARDS		TUV EN60950, UL508 APPROVED	
EMC STANDARDS		EN55022 CLASS B, EN61000-4-2,3,4,5,6,8,11; ENV50204, EN61000-3-2,-3 VERIFICATION	
NOTE : 1.ALL PARAMETERS ARE SPECIFIED AT 230VAC INPUT, RATED LOAD, 25° C 70% RH. AMBIENT. 2.TOLERANCE (INCLUDE SET UP TOLERANCE, LINE REGULATION, LOAD REGULATION). 3.RIPPLE & NOISE ARE MEASURED AT 20MHz BY USING A 12" TWISTED PAIR TERMINATED WITH A 0.1uF & 47uF CAPACITOR. 4.LINE REGULATION IS MEASURED FROM LOW LINE TO HIGH LINE AT RATED LOAD. 5.LOAD REGULATION IS MEASURED FROM 0% TO 100% RATED LOAD.			
2002-01-29			

2.3. SNT 10.0 A

Schaltnetzteil Typ SNT 10.0

. LOW COST, HIGH RELIABILITY		. COMPACT SIZE, LIGHT WEIGHT	
. 105°C OUTPUT CAPACITOR		. 100% FULL LOAD BURN-IN TEST	
. INTERNATIONAL AC INPUT RANGE		. BUILT IN EMI FILTER, LOW RIPPLE NOISE	
. HIGH EFFICIENCY, LOW WORKING TEMPERATURE		. BUILT IN PFC CIRCUIT	
. SOFT-START CIRCUIT, LIMITING AC SURGE CURRENT		. OVER TEMPERATURE PROTECTED	
. SHORT CIRCUIT, OVERLOAD, OVER VOLTAGE PROTECTED			



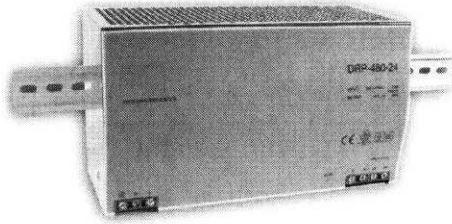
MODEL	SNT 10.0	
SPECIFICATION		
DC OUTPUT VOLTAGE	24V	
OUTPUT V. TOLERANCE	±1%	
OUTPUT RATED CURRENT	10A	
OUTPUT CURRENT RANGE	0-10A	
RIPPLE & NOISE	80mVp-p	
LINE REGULATION	±0.5%	
LOAD REGULATION	±1%	
DC OUTPUT POWER	240W	
EFFICIENCY	84%	
DC VOLTAGE ADJ.	24V-28V	
INPUT VOLTAGE RANGE	85-264VAC 47-63Hz; 120-370VDC	
AC CURRENT	3.5A/115V 1.8A/230V	
POWER FACTOR	PF>0.95, PF>0.98/115VAC	
INRUSH CURRENT	COLD START 30A/115V 50A/230V	
LEAKAGE CURRENT	<3.5mA/240VAC	
OVERLOAD PROTECTION	105%-150% TYPE:CONSTANT CURRENT LIMITING RESET:AUTO RECOVERY	
OVER VOLTAGE PROTECTION		54-60V
OVER TEMP.PROTECTION	95° C±5° C(TSW) TYPE:SHUT DOWN RESET:AUTO RECOVERY	
TEMP. COEFFICIENT	±0.03% / ° C (0~50° C)	
SETUP, RISE, HOLD UP TIME	800ms;40ms; 20ms/230V,115V	
VIBRATION	10-500Hz, 2G 10min./1cycle, PERIOD FOR 60min. EACH AXES	
WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC	
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:500VDC / 100M Ohms	
WORKING TEMP., HUMIDITY	-10° C~+70° C(REFER TO OUTPUT DERATING CURVE), 20%-90% RH	
STORAGE TEMP., HUMIDITY	-20° C~+85° C, 10%-95% RH	
DIMENSION	125.5 *100 *125.2 mm (L*W*H)	
WEIGHT	1.1Kgs	
SAFETY STANDARDS	MEET TUV EN60950, UL508	
EMC STANDARDS	MEET EN55022 CLASS B ,EN61000-4-2,3,4,5,6,8,11; ENV50204 ,EN61000-3-2,-3 ,EN50082-2	

NOTE : 1.ALL PARAMETERS ARE SPECIFIED AT 230VAC INPUT, RATED LOAD, 25°C 70% RH. AMBIENT.
2.TOLERANCE INCLUDE SET UP TOLERANCE, LINE REGULATION, LOAD REGULATION.
3.RIPPLE & NOISE ARE MEASURED AT 20MHz BY USING A 12" TWISTED PAIR TERMINATED WITH A 0.1uF & 47uF CAPACITOR.
4.LINE REGULATION IS MEASURED FROM LOW LINE TO HIGH LINE AT RATED LOAD.
5.LOAD REGULATION IS MEASURED FROM 0% TO 100% RATED LOAD.

2002-01-28

2.4. SNT 20.0 A

Schaltnetzteil Typ SNT 20.0



■ Features :

- Built-in passive PFC function compliance to EN61000-3-2(For DRP-4)
- High efficiency 89% and low dissipation
- Protections:Short circuit/Over load/Over voltage/Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- EN61000-6-2(EN50082-2) industrial immunity level
- 100% full load burn-in test
- 3 years warranty



SPECIFICATION

MODEL	SNT 20.0		
OUTPUT	DC VOLTAGE	24V	
	RATED CURRENT	20A	
	CURRENT RANGE	0 ~ 20A	
	RATED POWER	480W	
	RIPPLE & NOISE (max.) Note.2	120mVp-p	
	VOLTAGE ADJ. RANGE	24 ~ 28V	
	VOLTAGE TOLERANCE Note.3	±1.0%	
	LINE REGULATION	±0.5%	
LOAD REGULATION	±1.0%		
SETUP, RISE, HOLD TIME	1200ms, 40ms, 16ms/230VAC at full load		
INPUT	VOLTAGE RANGE	180 ~ 264VAC	250 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR	≥ 0.7 (for DRP-480)	
	EFFICIENCY (Typ.)	89%	
	AC CURRENT	6A/230VAC	4A/230VAC
	INRUSH CURRENT (max.)	COLD START 50A/230VAC	
	LEAKAGE CURRENT	<3.5mA / 240VAC	
PROTECTION	OVER LOAD	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed	
	OVER VOLTAGE	30 ~ 36V Protection type : Shut down o/p voltage, re-power on to recover	
	OVER TEMPERATURE	100°C ±5°C (TSW : Detect on heatsink of power switch) Protection type : Shut down o/p voltage, recovers automatically after temperature goes down	
ENVIRONMENT	WORKING TEMP.	-20 ~ +70°C (Refer to output load derating curve)	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes	
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, TUV EN60950 Approved	
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC	
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC	
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B	
OTHERS	HARMONIC CURRENT	Compliance to EN61000-3-2,-3(For DRP-480)	
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61000-6-2 (EN50082-2) Heavy industry level, criteria A	
	MTBF	180.9Khrs min. MIL-HDBK-217F (25°C)	
NOTE	DIMENSION	227*125.2*100mm (W*H*D)	
	PACKING	2.1Kg; 6pcs/12.6Kg/1.75CUFT	
<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf & 47µf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</p>			