

### FEATURES

- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- LED indicator for power on
- Can be installed on DIN rail TS-35/7.5 or TS-35/15
- 100% full load burn-in test
- Fixed switching frequency at 55kHz
- 3 years warranty



BP 2024S

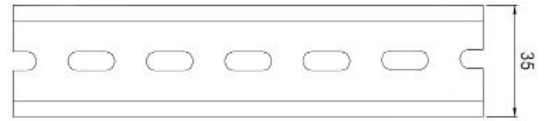


BP 2024T +  
THREE-PHASE  
DC OK RELAY CONTACT

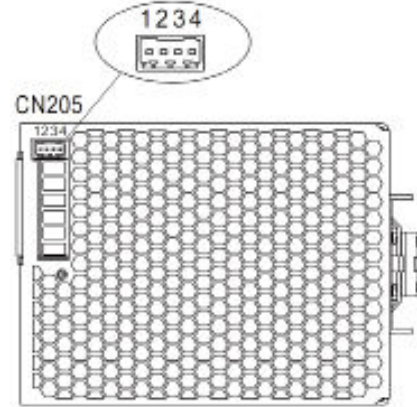


BP 4024T +  
THREE-PHASE  
DC OK RELAY CONTACT

		BP 2024S	BP 2024T +	BP 4024T +
OUTPUT	DC VOLTAGE	24V	24V	24V
	RATED CURRENT	20A	20A	40A
	CURRENT RANGE	0 ~ 20A	0 ~ 20A	0 ~ 40A
	RATED POWER	480 W	480W	960W
	RIPPLE NOISE (Max.)	150mVp-p	150mVp-p	180mVp-p
	VOLTAGE ADJ. RANGE	24 ~28V (26.4V)	24 ~28V (26.4V)	24 ~28V (26.4V)
	LINE REGULATION	(+/-) 0.5%		
	LOAD REGULATION	(+/-) 1.0%	(+/-) 1.0%	(+/-) 1.0%
	SETUP, RISE TIME	1200ms, 40ms/230V <sub>AC</sub> at full load	1200ms, 60ms/400V <sub>AC</sub> at full load	1000ms, 100ms/400V <sub>AC</sub> , 800ms, 100ms/500V <sub>AC</sub> at full load
	HOLD UP TIME (Typ.)	16ms/230V <sub>AC</sub> at full load	20ms/400V <sub>AC</sub>	12ms/400V <sub>AC</sub>
	INFORMATION	Please adjust output voltage required with the potentiometer according to the battery charger		
INPUT	VOLTAGE RANGE	90 ~ 264V <sub>AC</sub> 127 ~ 370V <sub>DC</sub>	3-Phase 340~ 550V <sub>AC</sub> (Dual phase operation possible)	340~ 550V <sub>AC</sub>
	FREQUENCY RANGE	47 ~ 63Hz		
	EFFICIENCY (Typ.)	92.5%	92.5%	94%
	AC CURRENT (Typ.)	2.4A/230V <sub>AC</sub>	0.85A/400V <sub>AC</sub> 0.7A/500V <sub>AC</sub>	2A/400V <sub>AC</sub> 1.4A/500V <sub>AC</sub>
	INRUSH CURRENT (Typ.)	Cold start 35A/230V <sub>AC</sub>	Cold start 50A	Cold start 60A
	LEAKAGE CURRENT	<2mA / 240V <sub>AC</sub>	<3.5mA / 530V <sub>AC</sub>	
PROTECTION	OVERLOAD (Rated output power)	95 ~ 100% Protection type: constant current limiting.		
	OVER VOLTAGE	29 ~ 33V	29 ~ 33V Protection type: shut down o/p voltage.	
	OVER TEMPERATURE	100°C (+/-)5°C (TSW1)	110°C (+/-)5°C (TSW1)	110°C (+/-)5°C (TSW1)
		Protection type: shut down o/p voltage, recovers automatically after temperature goes down.		
	IP RATING	IP20	IP20	IP20
ENVIRONMENT	WORKING TEMPERATURE (Refer to output load derating curve)	(-)20 ~ (+)70°C	(-)30 ~ (+)70°C	(-)30 ~ (+)70°C
	WORKING HUMIDITY	20 ~ 95% RH non condensing		
	STORAGE TEMP, HUMIDITY	(-)40 ~ (+)85°C, 10 ~ 95% RH	(-)40 ~ (+)85°C, 10 ~ 95% RH	
	TEMP. COEFFICIENT	(+/-)0.03%/°C (0 ~ 50°C)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes ; Mounting: Compliance with IEC60068-2-6		
SAFETY & EMC	WITHSTAND VOLTAGE	I/P-O/P:3KV <sub>AC</sub> I/P-FG:2KV <sub>AC</sub> O/P-FG:0.5KV <sub>AC</sub>		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohm / 500V <sub>DC</sub> / 25°C / 70% RH		
	EMI CONDUCTION & RADIATION	Compliance with EN55032 (CISPR32), EN61204-3, class B		
	HARMONIC CURRENT	Compliance with EN61000-3-2, class A		
	EMT IMMUNITY	Compliance with EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A		
OTHERS	MTBF	146.8Khrs min MIL-HDBK-217F (25°C)	391.7Khrs min MIL-HDBK-217F (25°C)	59.4Khrs min MIL-HDBK-217F (25°C)
	DIMENSION (W x H x D)	85,5 x 125,2 x 128,5mm	85,5 x 125,2 x 128,5mm	110 x 125,2 x 150mm
	PACKING	1.5kg	1.51kg	2.47kg
NOTES	All parameters NOT specially mentioned are measured at 230V <sub>AC</sub> (400V <sub>AC</sub> for 2024T+ and 4024T+) input, rated load and 25°C of ambient temperature.			
	Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair wire terminated with a 0.1 uf & 47 uf parallel capacitor.			
	The battery chargers is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives.			
	Installation clearances: 40mm on top, 20mm on bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.			
Derating may be needed under low input voltage. Please check the derating curve for more details.				



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

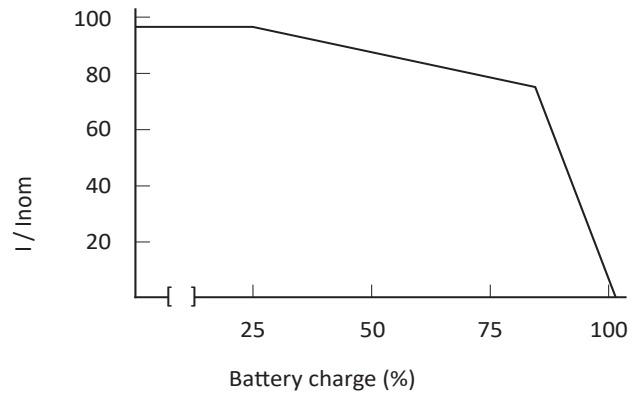


### DC OK RELAY CONTACT

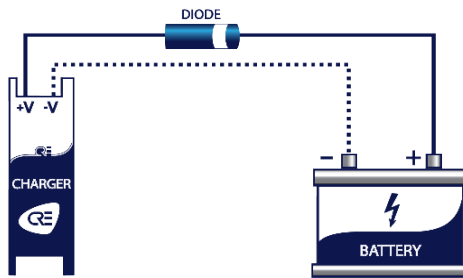
**PIN number 3 and 4 connections:**

- DC contact relay closed : DC OK
- DC contact relay opened : DC not OK
- Contact ratings (max.) : 30V / 1A resistive load

### BATTERY CHARGE CURVE

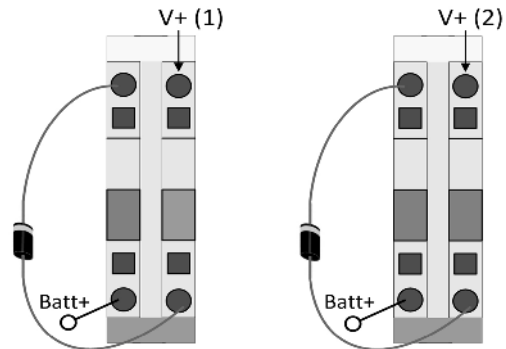


### BP DIODE KIT PROVIDED WITH CHARGER



**ASSEMBLY INSTRUCTIONS**

P/N: BPX DIODE



For BP4024T+: Put 2 diods in parallel