

SERIES TBC



Model TBC 24-25M Rack mount style

Kepeco's TBC are designed as battery chargers for float-equalize service to maintain battery arrays as found in many telecommunication installations. The TBC are fully filtered and stabilized battery eliminators that also find application as burn-in power supplies.

The float and equalize settings are fully independent adjustments whose settings are made by screwdriver access through small sliding doors in the front panel. The digital voltmeter allows precise adjustment. A digital ammeter displays the charging current.

If the current drops to zero, either because the a-c mains power to the TBC is lost, the front panel circuit breaker is turned off or the voltage setting is adjusted below the battery's voltage, a "charging stopped" LED is illuminated and a flag signal is provided.

Equalize mode can be selected either with a front panel push button, or a remote contact closure. This sets the voltage to the equalize level (adjustable). A timer is activated that will reset back to float mode after a period of time (0.1 to 99.9 hrs) that can be set from the front panel with a thumbwheel selector. A flag signal is produced when the TBC is in equalize mode.

Kepeco's TBC employ high frequency switching technology (100-150KHz forward converters) for high efficiency, small size and light weight. The output is filtered so that residual voice band noise (on battery) is below 22dB rnC.

TBC MODEL TABLE

MODEL(1)	OUTPUT VOLTS NOMINAL RANGE		OUTPUT CURRENTS	SIZE(3)	INPUT VOLTS	INPUT AMPS	EFFICIENCY
TBC 12-20M	12V	11.5-15V	0-20A	A	115/230	4.6A(2)	77%
TBC 12-50M	12V	11.5-15V	0-50A	A	115/230	12.5A(2)	80%
TBC 12-120M	12V	11.5-15V	0-120A	A	230	16A	82%
TBC 24-25M	24V	23-30V	0-25A	A	115/230	12A(2)	85%
TBC 24-60M	24V	23-30V	0-60A	A	230	16A	83%
TBC 24-120M	24V	23-30V	0-120A	B	230	32A	82%
TBC 48-12M	48V	47-60V	0-12A	A	115/230	12A(2)	85%
TBC 48-30M	48V	47-60V	0-30A	A	230	16A	84%
TBC 48-60M	48V	47-60V	0-60A	B	230	32A	83%

- (1) Add suffix "W" for wall mount style.
- (2) Input current with input selector set to 115V a-c.
- (3) Size A—5¼ x 19 x 13½ inches, 133 x 483 x 343 mm (See outline drawing).
Size B—8¼ x 19 x 15 inches, 222 x 483 x 351 mm (See outline drawing).
Wall—15 x 19 x 8¾ inches, 381 x 483 x 222 mm.

TBC GENERAL SPECIFICATIONS

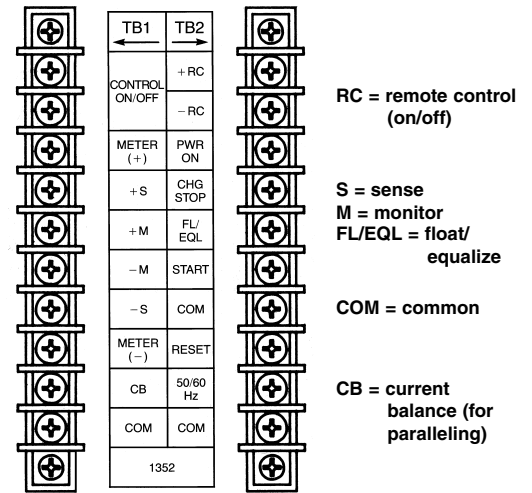
SPECIFICATION	RATING/DESCRIPTION	CONDITION
Circuit Type	Forward converter	
Switching Frequency	~ 150KHz	
Temperature Range	0-50°C	Operating
	-40 to +75°C	Storage
Humidity	95% RH	Non-condensing
Isolation	500V d-c, 100MΩ	Output-case
	3.75KV a-c 1 min	Input-output
	2.0KV a-c 1 min	Input-case
Cooling	Built-in d-c fans with fan-stop sensor	

TBC are available with wide-range a-c input and power factor correction. Please consult the factory.



Model TBC 48-12MW Wall mount style

CONTROL TERMINALS



Flags optionally available as isolated form C contacts. Consult factory.

Optional connections to monitor battery temperature and adjust output setting are available. Consult factory.

TBC INPUT CHARACTERISTICS

SPECIFICATION	RATING/DESCRIPTION	CONDITION
Voltage Range 300W & 600W models	100-260V a-c	Universal with PFC
1500W & 3000W models	200-260V a-c	230V a-c only
Initial Surge at Turn-on	20A	115V a-c
	40A	230V a-c
Input Frequency	47-63Hz ⁽¹⁾	
Conducted EMI	FCC Class A	Back to mains
Leakage to Ground	1.0mA	115V a-c (UL method)
	2.0mA	230V a-c (VDE method)
Start-up Time	800msec	
Hold-up Time	20msec	Loss of mains

(1) 400Hz available, consult factory.



Rear view of Model TBC showing control terminals



TBC STATIC SPECIFICATIONS

SPECIFICATION	TYP	MAX	CONDITION
Source Effect	0.8%	1.5%	Min-max
Load Effect	0.8%	1.5%	10% to 100%
Temperature Effect	1.0%	1.5%	0-50°C
Combined Effect	1.2%	3.0%	(Source, load, temp.)
Time Effect	0.1%	0.8%	(1/2-8 hrs)
Output Noise	—	<22dB rnC	Voice band on battery
	—	250mV	Wide band 12V
	—	300mV	24V
	—	500mV	48V
Load Recovery	—	<4%	Excursion 50-100%
	—	<1msec	Recovery within ±1%



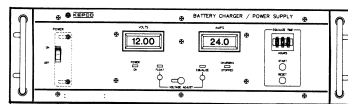
NET WEIGHT

MODEL	LBS	Kg
TBC 12-20M	28	12.7
TBC 12-50M	33	15.0
TBC 12-120M	40	18.2
TBC 24-25M	33	15.0
TBC 24-60M	40	18.2
TBC 24-120M	66	30.0
TBC 48-12M	33	15.0
TBC 48-30M	40	18.2
TBC 48-60M	66	30.0

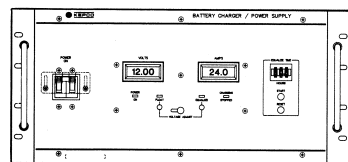
OUTLINE DIMENSIONAL DRAWINGS

Fractional dimensions in light face type are in inches.
 dimensions in bold face type are in millimeters.
 Tolerance: ± 1/64" (0.4) between mounting holes
 ± 1/32" (0.8) other dimensions

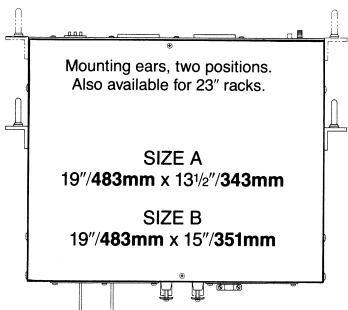
RACK MOUNT MODELS



SIZE A
 19"/483mm x 5 1/4"/133mm
FRONT VIEW



SIZE B
 19"/483mm x 8 3/4"/222mm
FRONT VIEW

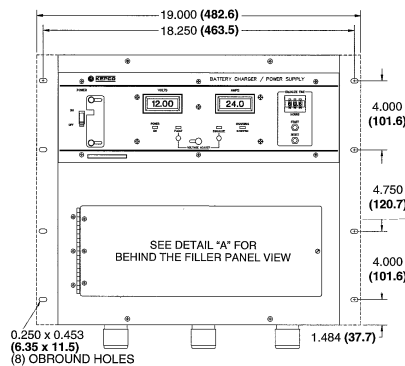


BOTTOM VIEW

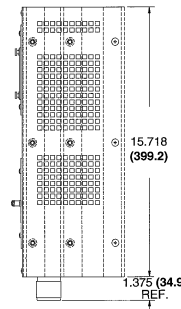
Mounting ears, two positions.
 Also available for 23" racks.

SIZE A
 19"/483mm x 13 1/2"/343mm
SIZE B
 19"/483mm x 15"/351mm

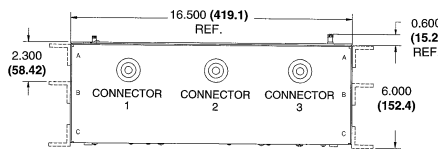
WALL MOUNT MODELS



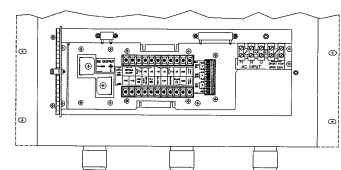
FRONT VIEW



SIDE VIEW



BOTTOM VIEW



DETAIL "A"

INPUT/OUTPUT CONNECTORS

FUNCTION	DESCRIPTION
a-c Input	Field wiring terminals behind rear panel door
d-c Output	Bus bars drilled, 8M hole

CONTROLS AND FLAGS

+ Sense and - Sense	Compensate up to 0.4V/wire for wire loss to load
Control On/Off	Install jumper to keep the meter display when a-c is off (powered from load battery)
Meter + and -	Separate connection for voltmeter
Remote Control	Remote on/off
Current Balance	For parallel operation
50/60Hz	Sets timer for 50Hz or 60Hz
Start and Re-set	Equalize mode timer
Charging Stopped	Flag signal
Power on	Flag signal
Equalize	Flag signal

INTERNAL PROTECTION

Oversvoltage Sense	Turns off power
Undersvoltage Sense (less than 70% for 20 sec)	Turns off power
Overtemperature	Turns off power
Fan Stop	Turns off power

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