

UP Series

TFS250-12

DEEP CYCLE



Main Features

- AGM technology.
- Extremely high cyclic life.
- EUROBAT classification; 12+ years design life, Long Life.
- VRLA batteries, maintenance free, internal gas recombination efficiency 99%.
- Easy installation and commissioning.
- ABS V0 (flame retardant) container and lid.
- Battery 100% recyclable.

Certification



- ISO 9001
- ISO 14001
- OHSAS 18001
- AQAP 2110

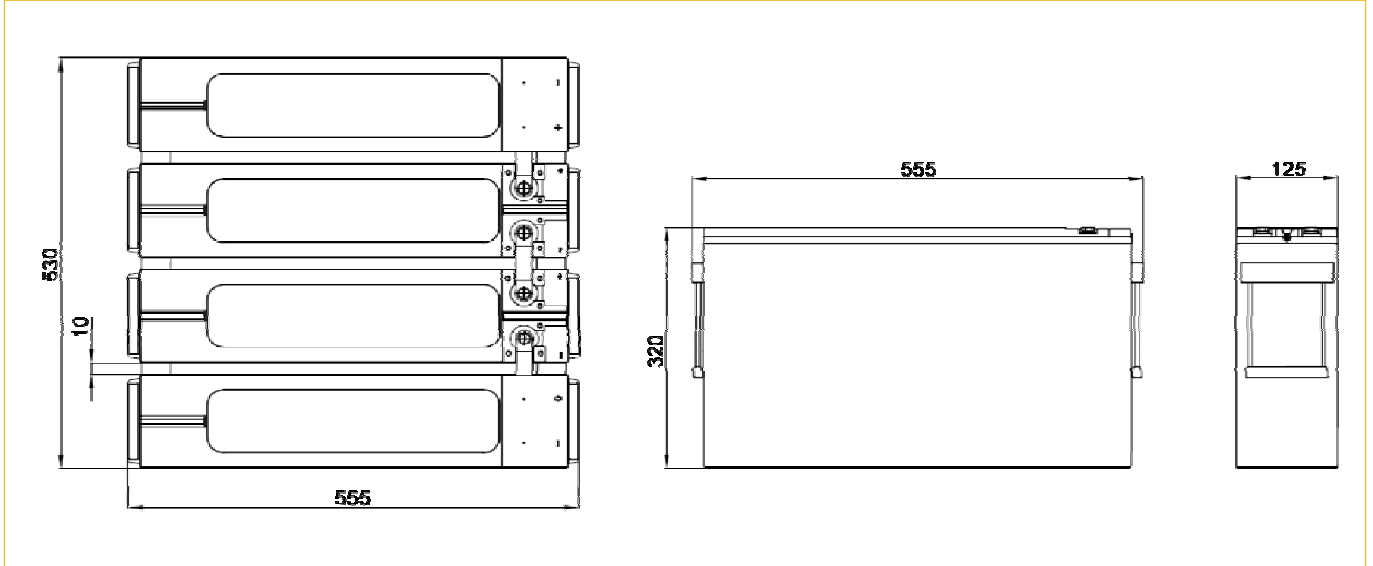
*All batteries are fully compliant with
IEC 60 896 - 21/22, EN 60 896 - part 2,
BS 6290 - part 4*

Technical Specifications

Capacity - 100h to 1.80 Vpc (Ah)	250
Nominal Voltage (V)	12
Charging Voltage	Float 2.25 - 2.29 Vpc at (20 - 25°C) Boost charge 2.40 Vpc at 20°C
Short Circuit Current (A)	3200 (IEC 60 896 - 21/22)
Internal Resistance	3.89 mOhms (IEC 60 896 - 21/22)
Self Discharge	Less than 2.5% per month at 20°C
Storability without Recharging	Up to 6 months at 20°C
Recommended End of Discharge Voltage	From 5 min to 1 hour: 1.65 Vpc From 1 to 5 hours: 1.70 Vpc From 5 to 8 hours: 1.75 Vpc From 8 to 12 hours: 1.80 Vpc From 12 to 20 hours: 1.85 Vpc
Terminal Type	Front
Grid Alloy	Lead-Calcium-Tin alloy
Plates	Flat Pasted
Separators	AGM
Active Material	Very high purity lead
Case and Cover	FR ABS class V0
Carrying Handles	Yes
Terminal Torque	8 Nm
Electrolyte	Sulphuric acid, Analytical grade purity
Venting Valve	One way, self resealing, - Opening pressure 120 mBar - Resealing pressure 105 mBar
Central Degassing System	Available
Terminal Sealing	Mechanical + epoxy double sealing
Connectors	Supplied as standard
Shelf Life	Up to 1 year



Dimensions



Mechanical Characteristics

	SI Units	US Units
Length	555 mm	21.8 inches
Width	125 mm	4.9 inches
Height	320 mm	12.6 inches
Typical Weight	59.8 kg	131.84 lbs
Terminal Torque	8.0 Nm	

Performance and Characteristics at Different Temperatures (Capacity Correction)

Discharge Time	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C
From 5 to 59 minutes	0.77	0.83	0.87	0.92	0.96	1	1.02	1.05	1.06
From 1 to 24 hours	0.83	0.87	0.91	0.94	0.97	1	1.02	1.03	1.04



Battery Capacity at Constant Current Discharge (Ah) for Battery at 25°C

Uf, Vpc	5min	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.60 V	45.4	84.7	111.5	129.0	153.0	156.3	168.0	173.9	183.7	192.5	195.4	209.0
1.65 V	44.7	82.0	109.5	125.5	152.0	155.2	166.8	172.0	182.4	191.1	194.0	208.0
1.70 V	41.4	79.0	106.0	118.0	146.0	153.0	164.0	171.0	180.2	190.4	193.0	206.5
1.75 V	36.8	74.5	100.5	117.4	140.0	150.2	159.8	169.4	177.6	189.6	192.5	206.0
1.80 V	31.8	69.5	87.0	115.9	136.8	148.2	157.7	167.2	171.0	187.2	190.0	202.0
1.85 V	28.0	61.2	83.5	112.0	135.0	145.9	155.2	164.6	168.3	184.0	187.0	198.0

Discharge Performance at Constant Current Discharge (A) for Battery at 25°C

Uf, Vpc	5min	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.60 V	545.0	339.0	223.0	129.0	76.5	52.1	42.0	34.8	30.6	24.06	19.5	10.5
1.65 V	537.0	328.0	219.0	125.5	76.0	51.7	41.7	34.4	30.4	23.9	19.4	10.4
1.70 V	497.0	316.0	212.0	118.0	73.0	51.0	41.0	34.2	30.0	23.8	19.3	10.3
1.75 V	442.0	298.0	201.0	117.4	70.0	50.0	39.9	33.8	29.6	23.7	19.2	10.3
1.80 V	382.0	278.0	174.0	115.9	68.4	49.4	39.4	33.4	28.5	23.4	19.0	10.2
1.85 V	336.0	245.0	167.0	112.0	67.5	48.6	38.8	32.9	28.0	23.0	18.7	9.9

Discharge Performance at Constant Power Discharge (W per cell) for Battery at 25°C

Uf, Vpc	5min	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.60 V	897.0	607.5	414.9	244.8	148.6	101.5	82.6	68.8	61.0	48.2	39.2	21.3
1.65 V	891.9	585.8	406.5	237.3	147.5	100.6	82.0	67.9	60.5	47.9	38.9	21.1
1.70 V	807.7	560.9	391.7	221.3	140.9	99.1	80.4	67.5	59.6	47.6	38.7	20.9
1.75 V	706.9	524.8	368.7	220.0	134.4	96.9	78.0	66.6	58.7	47.4	38.5	20.8
1.80 V	598.9	484.9	313.0	216.8	130.9	95.6	76.9	65.7	56.2	46.7	38.0	20.6
1.85 V	517.7	420.0	298.7	208.5	128.9	94.4	75.5	64.6	55.1	45.8	37.3	19.9

* Upower reserves the right to change or revise without notice any information or detail given in this publication.

