

# Assured XP

## High Rate Batteries

XP Series batteries incorporate advanced VRLA & TTP technology designed for ultra high rate performance in critical UPS & power supply applications . By using strong grids and double sided pasted plate insures extremely durable & consistent performance under high rate discharges.



### Application

- Critical high rate UPS support
- High power back-up systems
- Emergency power supply
- AUX power back-up batteries
- Emergency lighting
- Diesel starting battery system



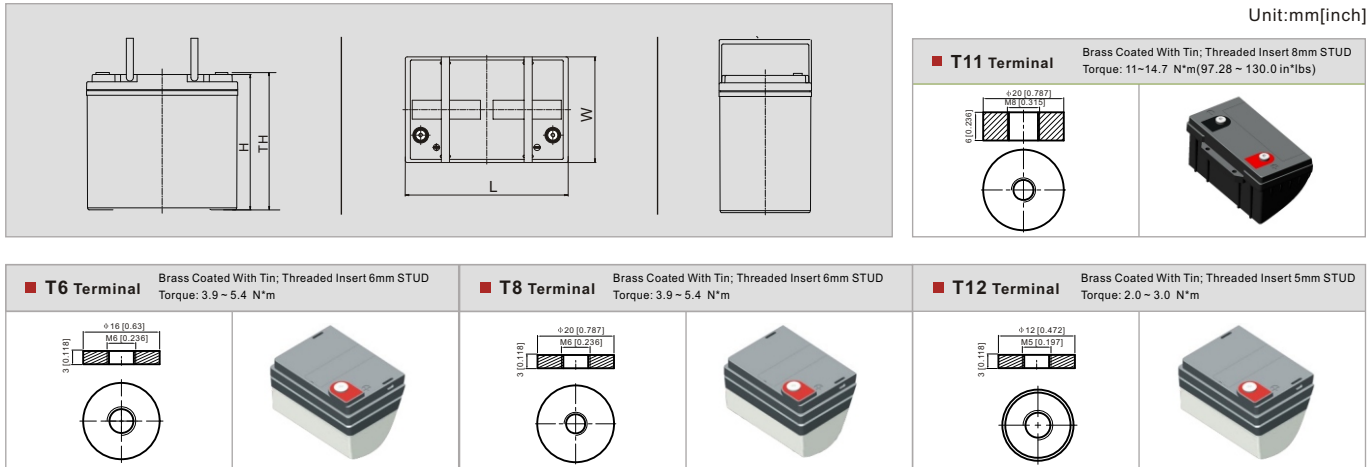
### Features and benefits

- 92.8 to 810 WPC for 15 min to 1.67 VPC
- Virgin lead plates with copper alloy terminals inserts ( low Resistance)
- Standard solid flame retardant ABS jar and covers to UL94V-0
- Strong gravity casting grids for long life
- Automated COS & TTP welding for low resistance
- 100% initial capacity, voltage & internal resistance matched.
- Designed for critical high rate UPS applications 7-10 years design life
- UL recognized
- IEC60896 -21 & 22, third party tested & compliant
- IATA approved for AIR freight

## Dimensions & Terminal Options

Note: the figures below just show the appearance and dimension.  
For the positioning on each battery model, please check the specification

Unit:mm[inch]



## Specifications

Model	Nominal Voltage (V)	Rated Capacity		Approx Dimension (mm)				Approx Weight (Kg)	Internal Resistance (ohm)	Terminal Type
		15min WPC 1.67 VPC	20Hr(AH) 1.80 VPC	L	W	H	TH			
XP12-100FR	12	92.8	27	164	125	172	175	7.9	12.0	T12
XP12-150FR	12	150.0	35	195	130	164	167	10.2	7.0	T6
XP12-210FR	12	225.1	55	229	138	200	203	17.3	5.0	T6
XP12-300FR	12	324.6	82	260	168	208	211	24.0	4.5	T6
XP12-350FR	12	370.3	95	306	168	207	210	28.0	4.0	T6
XP12-400FR	12	405.7	100	325.5	170	213	216	31.4	3.6	T8
XP12-490FR	12	490.9	142	335	172	275	278	42.0	3.2	T8
XP12-540FR	12	539.0	155	335	172	275	278	42.4	3.1	T8
XP12-740FR	12	740.0	220	522	240	218	224	64.0	2.6	T11
XP12-810FR	12	810.0	250	522	268	220	226	73.0	2.5	T11
XP6-620FR	6	681.0	210	322	178	228	231	29.0	1.3	T8

## Discharge Performance

### ■ Constant Power Discharge

1.85V per cell - Constant Power (Watts/Cell) Discharge @ 25°C							
Model	5min	10min	15min	20min	30min	60min	90min
XP12-100FR	121.5	93.3	76.8	65.3	51.0	31.7	23.5
XP12-150FR	199.0	144.2	116.2	97.6	75.4	45.2	32.5
XP12-210FR	262.3	196.5	166.3	143.9	110.9	65.0	48.1
XP12-300FR	363.7	282.0	247.8	217.9	168.9	102.5	74.1
XP12-350FR	408.1	334.7	286.3	243.4	188.8	113.2	84.2
XP12-400FR	432.2	351.1	318.1	275.3	208.6	120.0	88.5
XP12-490FR	497.8	416.3	366.4	329.0	261.1	162.9	120.0
XP12-540FR	537.7	438.4	382.7	337.8	271.0	172.5	127.0
XP12-740FR	717.8	613.5	574.0	522.2	390.6	232.3	170.3
XP12-810FR	815.6	702.9	644.6	586.1	452.7	264.0	193.5
XP6-620FR	719.0	603.6	532.1	466.4	360.5	228.7	169.6

1.80V per cell - Constant Power (Watts/Cell) Discharge @ 25°C							
Model	5min	10min	15min	20min	30min	60min	90min
XP12-100FR	137.1	102.2	82.2	68.4	53.6	33.4	24.6
XP12-150FR	227.6	160.2	127.1	105.1	80.1	47.4	33.6
XP12-210FR	308.7	221.1	186.4	157.0	118.1	68.0	50.0
XP12-300FR	413.0	307.7	269.0	232.7	176.4	105.2	75.9
XP12-350FR	452.1	369.2	308.6	260.6	198.3	117.7	86.8
XP12-400FR	508.2	396.2	349.0	297.7	221.4	124.3	91.3
XP12-490FR	583.6	464.8	403.5	355.1	278.1	171.7	125.3
XP12-540FR	615.4	480.8	417.8	371.3	293.0	181.3	133.8
XP12-740FR	840.0	683.5	618.6	555.7	414.4	244.8	179.1
XP12-810FR	954.6	771.0	693.4	622.7	474.9	278.2	203.5
XP6-620FR	829.1	673.1	572.5	496.5	383.9	238.2	176.9

1.75V per cell - Constant Power (Watts/Cell) Discharge @ 25°C							
Model	5min	10min	15min	20min	30min	60min	90min
XP12-100FR	154.5	108.1	86.6	72.3	55.3	34.1	25.2
XP12-150FR	253.0	172.4	135.7	111.1	83.4	48.9	34.4
XP12-210FR	353.2	242.4	199.6	166.5	122.7	70.0	51.4
XP12-300FR	465.0	342.2	290.0	244.5	182.2	107.2	77.3
XP12-350FR	499.6	401.3	330.8	276.0	206.7	121.6	89.2
XP12-400FR	565.9	431.7	372.8	313.9	232.8	129.4	93.8
XP12-490FR	661.2	521.8	438.3	377.7	290.8	179.2	130.6
XP12-540FR	710.1	530.7	458.9	398.9	312.2	190.2	139.3
XP12-740FR	976.3	759.5	668.3	591.7	439.5	258.8	187.8
XP12-810FR	1071.2	832.5	738.1	652.3	499.4	294.1	213.4
XP6-620FR	962.1	721.4	612.2	522.0	403.5	247.0	182.2

1.70V per cell - Constant Power (Watts/Cell) Discharge @ 25°C							
Model	5min	10min	15min	20min	30min	60min	90min
XP12-100FR	167.8	114.3	89.2	74.2	56.6	34.8	25.5
XP12-150FR	271.2	183.3	142.9	116.2	86.3	49.9	35.3
XP12-210FR	378.4	261.2	211.5	175.2	127.6	71.8	52.4
XP12-300FR	506.0	366.8	305.4	257.5	189.6	109.5	78.3
XP12-350FR	547.6	430.4	348.0	290.7	214.9	124.3	90.5
XP12-400FR	611.7	454.5	388.4	325.8	239.7	133.7	95.2
XP12-490FR	722.4	555.3	462.8	397.6	303.2	185.4	134.9
XP12-540FR	785.4	577.9	499.2	430.2	332.1	197.9	143.2
XP12-740FR	1068.8	809.4	707.6	616.7	462.2	267.7	194.0
XP12-810FR	1163.0	892.3	781.7	682.4	525.3	304.2	220.5
XP6-620FR	1003.7	764.1	647.4	552.0	424.4	257.5	187.5

1.67V per cell - Constant Power (Watts/Cell) Discharge @ 25°C							
Model	5min	10min	15min	20min	30min	60min	90min
XP12-100FR	177.1	118.7	92.8	76.3	57.9	35.5	26.0
XP12-150FR	291.5	194.5	150.0	121.4	89.3	51.2	36.1
XP12-210FR	406.6	274.0	225.1	183.2	131.4	73.7	52.9
XP12-300FR	555.3	396.5	324.6	267.6	196.7	112.0	79.1
XP12-350FR	600.7	457.2	370.3	304.6	223.9	127.2	92.3
XP12-400FR	663.5	478.4	405.7	338.2	246.7	137.0	97.0
XP12-490FR	777.5	591.1	490.9	416.4	317.3	191.8	138.7
XP12-540FR	852.0	630.1	539.0	454.3	344.4	203.8	147.2
XP12-740FR	1140.3	857.7	740.0	640.5	478.5	275.8	199.5
XP12-810FR	1253.7	942.3	810.0	709.6	543.7	313.4	226.6
XP6-620FR	1066.5	809.2	681.0	574.8	440.1	264.7	191.3

1.60V per cell - Constant Power (Watts/Cell) Discharge @ 25°C							
Model	5min	10min	15min	20min	30min	60min	90min
XP12-100FR	181.9	121.3	94.8	78.2	59.3	35.9	26.3
XP12-150FR	308.1	203.4	155.2	125.9	92.2	51.7	36.4
XP12-210FR	432.7	289.8	232.3	189.0	134.8	75.2	53.8
XP12-300FR	603.6	423.4	339.1	279.0	202.3	113.5	80.5
XP12-350FR	644.5	482.0	385.7	315.2	229.1	130.2	93.8
XP12-400FR	687.7	493.2	413.8	343.7	249.4	137.5	98.6
XP12-490FR	829.6	628.8	511.8	429.8	325.9	195.1	140.0
XP12-540FR	908.9	667.5	558.6	468.8	354.4	207.5	149.3
XP12-740FR	1223.4	903.3	764.8	657.9	490.9	282.1	203.5
XP12-810FR	1318.4	984.2	838.4	731.0	557.8	320.5	231.3
XP6-620FR	1134.4	847.4	706.0	589.9	448.6	268.6	194.5

## ■ Constant Current Discharge

1.75V per cell - Constant Current (Amps) Discharge @ 25°C							
Model	5min	10min	15min	20min	30min	60min	90min
XP12-100FR	81.1	56.4	44.8	37.3	28.3	17.3	12.7
XP12-150FR	132.8	89.9	70.3	57.2	42.7	24.7	17.4
XP12-210FR	185.3	126.4	103.4	85.8	62.8	35.4	25.9
XP12-300FR	244.0	178.4	150.2	126.0	93.3	54.3	39.0
XP12-350FR	262.2	209.2	171.4	142.2	105.8	61.6	45.0
XP12-400FR	297.0	225.1	193.1	161.7	119.2	65.5	47.3
XP12-490FR	355.0	277.1	230.3	196.8	150.7	91.7	66.6
XP12-540FR	381.3	281.8	241.2	207.9	161.8	97.3	71.1
XP12-740FR	535.9	409.3	353.8	309.5	226.2	130.5	94.4
XP12-810FR	588.0	448.7	390.7	341.3	257.0	148.3	107.3
XP6-620FR	516.6	383.0	321.7	272.0	209.0	126.4	93.0

1.70V per cell - Constant Current (Amps) Discharge @ 25°C							
Model	5min	10min	15min	20min	30min	60min	90min
XP12-100FR	89.1	60.3	46.8	38.6	29.2	17.7	13.0
XP12-150FR	144.0	96.6	74.9	60.5	44.6	25.5	17.9
XP12-210FR	200.9	137.7	110.9	91.2	66.0	36.6	26.6
XP12-300FR	268.6	193.4	160.1	134.1	98.1	55.9	39.9
XP12-350FR	290.7	226.9	182.4	151.3	111.2	63.5	46.0
XP12-400FR	324.7	239.6	203.6	169.6	124.0	68.2	48.4
XP12-490FR	391.7	297.6	245.7	208.7	158.2	95.6	69.3
XP12-540FR	425.9	309.7	265.0	225.9	173.3	102.0	73.6
XP12-740FR	596.6	442.2	379.3	326.0	239.8	135.7	98.0
XP12-810FR	649.2	487.5	419.0	360.7	272.5	154.3	111.3
XP6-620FR	544.3	409.5	343.6	289.8	221.5	132.7	96.0

1.67V per cell - Constant Current (Amps) Discharge @ 25°C							
Model	5min	10min	15min	20min	30min	60min	90min
XP12-100FR	94.8	63.0	48.9	40.1	30.1	18.2	13.3
XP12-150FR	156.0	103.3	79.1	63.6	46.4	26.2	18.4
XP12-210FR	217.6	145.5	118.7	96.0	68.3	37.8	27.1
XP12-300FR	297.2	210.6	171.2	140.2	102.3	57.5	40.4
XP12-350FR	321.5	242.8	195.3	159.6	116.5	65.3	47.2
XP12-400FR	355.1	254.1	214.0	177.2	128.3	70.3	49.6
XP12-490FR	426.0	320.2	262.8	220.4	166.6	99.4	71.7
XP12-540FR	466.9	341.3	288.5	240.4	180.8	105.6	76.1
XP12-740FR	650.0	476.5	402.2	342.5	250.4	140.8	101.3
XP12-810FR	714.6	523.5	440.2	379.5	284.5	160.1	115.1
XP6-620FR	584.4	438.4	364.6	304.2	231.0	137.1	98.5

1.60V per cell - Constant Current (Amps) Discharge @ 25°C							
Model	5min	10min	15min	20min	30min	60min	90min
XP12-100FR	98.5	65.1	50.5	41.5	31.1	18.6	12.6
XP12-150FR	166.8	109.2	82.7	66.6	48.4	26.8	18.8
XP12-210FR	234.2	155.6	123.8	100.0	70.8	38.9	27.8
XP12-300FR	326.7	227.3	180.7	147.6	106.3	58.8	41.5
XP12-350FR	348.8	258.8	205.6	166.7	120.4	67.5	48.5
XP12-400FR	372.2	264.8	220.6	181.8	131.0	71.2	51.0
XP12-490FR	463.5	347.8	278.9	232.3	174.7	103.0	73.7
XP12-540FR	507.8	369.2	304.4	253.4	190.0	109.5	78.5
XP12-740FR	715.4	512.2	423.3	357.1	260.0	145.2	104.2
XP12-810FR	771.0	558.0	464.0	396.8	295.5	165.0	118.4
XP6-620FR	633.7	468.7	384.7	318.8	240.5	141.8	100.2

## Product Description

### Construction

Positive Plate	Lead-calcium grids minimize corrosion & prolongs life
Negative Plate	Balanced lead-calcium grids optimize recombination efficiency
AGM Separator	Mechanically strong, low electrical resistance, micro porous glass fiber which completely absorbs the electrolyte into its structure
Terminal Post	Lead casting terminal or threaded copper insert alternative (some models), the copper one provides maximum conductivity.
Venting Valve	EPDM Rubber 0.44 ~2.18 PSI resealing pressure. Releasing at 1.45~5.08 PSI.
Container	ABS - Flame Retardant Containers to UL94V-0 is standard.

### Operation temperature range

Nominal	20°C~25°C (68°F~77°F)
Discharge	-20°C ~55°C (-4°F~131°F)
Charge	0°C ~ 50°C (32°F~122°F ) With temperature compensated charger
Storage	-20°C ~ 55°C (-4°F~131°F )

### Performance

Recommended Maximum Charging Current Limit	Less than 0.3C A
Float Charging Voltage	13.5V~13.8V at 25°C, Temp. Coefficient -20mV/°C
Maximum AC Ripple (Charger)	±0.02V/cell
Self-Discharge	Low self-discharge rate less than 3% / month @20°C
Equalize charge & cycle service life voltage	13.8~14.4V for equalize charge and 14.4~15.0V for cycle charge voltage @25°C

Note: Design and/or specifications subject to change without notice. If questions arise, contact your local Leoch sales representative for clarification.

ETL SEMKO     TS16949 ISO14001 ISO9001

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