

TEL- TFA

TRUE FRONT ACCESS

**TEL 12-100 TFA, TEL 12-105 TFA
TEL 12-150 TFA, TEL 12-165 TFA,
TEL 12-185 TFA, TEL 12-200 TFA**

Valve Regulated Lead Acid Battery

Designed for Telecom Standby Power Applications



THE MOMENT OF TRUTH HAS ARRIVED

TRUE Performance - 100% out of box capacity ratings at installation

TRUE Front Access Terminals - ensuring reliability & connection versatility

TRUE High Energy Density - highest true energy density solution in the market

TRUE Long life design - Telcordia SR-4228 industry leading over 10 year service life

TRUE Flexibility - multiple models to fit each customers power system demands



APPLICATIONS:

- Wireline
- Wireless
- Customer Premise / PBX
- Broadband
- Microwave Repeater
- Fiber Optic Regen Sites

INDOOR / OUTDOOR

INSTALLATIONS

- Cabinet Systems
- Rack Systems

FEATURES AND BENEFITS

- Long life alloy and over 10+ years design life (at 25°C)
- Tested and qualified by Telcordia to meet SR-4228 requirements.
- True Front Access threaded copper alloy inserts for reduced maintenance and increased safety.
- Terminal versatility - ease of diagnostic readings with C&D Ohmic Ring®.
- Reduced headspace driving higher energy density, in cabinet or rack applications.
- Removable handles for ease of installation.
- Innovative front terminal design maximizing energy density with direct connect extrusion fusion weld technology.
- Thermally welded case to cover bond to ensure a leak-proof seal.
- Flame-retardant polypropylene case and cover compliant with UL94 V-2.
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of over 99%.
- Flame-arresting, one-way pressure-relief vent for safety and long life.
- Complies with UL 1778, 924, 1989 and 94 V-2, BS6290-4, IEC60896.
- UL recognized components
- Can be used in upside, side or end mounting orientation.
- Multicell design for ease of installation and maintenance.
- Not restricted for air transport - Complies with IATA/ICAO Special Provisions A67.
- Not restricted for surface transport - Classified as non-hazardous material as related to DOT-CFR Title 49 parts 171-189
- Not restricted for water transport - Classified as non-hazardous material per IMDG Amendment 27.

Specifications

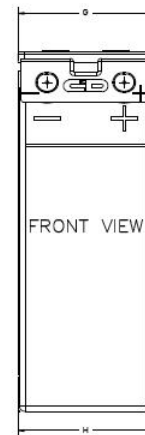
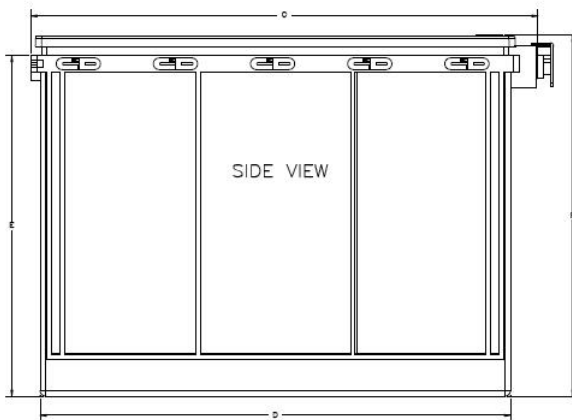
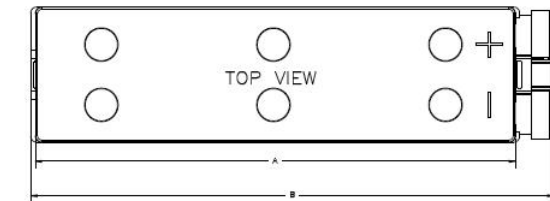
12 Volt Ampere Hour Capacity

Ampere Hour Capacity to 1.75 Volts per Cell @ 25°C (77°F)
Discharge in Hours

Model	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
TEL 12-100 TFA	70.1	79.6	85.5	90.2	93.5	95.7	97.7	99.7	100.6	101.9	104.2	106.1	107.8	109.3	110.7	113.2	118.8	116.7	118.8
TEL 12-105 TFA	68.6	79.0	85.8	91.0	95.5	98.4	100.8	104.0	104.2	105.6	108.1	110.3	112.2	113.8	115.4	118.1	124.3	121.8	124.0
TEL 12-150 TFA	96.7	117.8	126.4	132.3	137.1	141.1	144.6	147.7	150.5	153.0	157.5	161.4	164.8	167.9	170.7	175.7	187.4	181.2	184.5
TEL 12-165 TFA	109.0	124.3	135.2	142.8	149.0	153.3	157.5	162.4	166.5	167.7	170.4	172.7	174.7	176.5	178.1	180.9	187.4	186.6	189.9
TEL 12-185 TFA	125.7	144.8	156.0	164.0	171.0	175.2	179.9	182.8	185.9	188.0	190.8	193.2	195.3	197.2	200.0	202.8	209.2	209.1	212.9
TEL 12-200 TFA	132.7	159.0	168.6	176.0	182.0	186.6	191.1	194.8	198.0	201.0	205.8	209.9	213.6	216.9	220.2	226.0	239.5	233.1	237.3

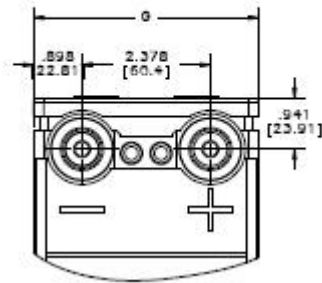
Battery Model	Voltage Per Unit	Ampere Hours Capacity 10 Hour Rate @ 77°F (25° C) to 1.80EPV per cell	Ampere Hours Capacity 10 Hour Rate @ 68°F (20° C) to 1.80EPV per cell	IEC Short Circuit Current (A)	IEC Resistance (mOhms)	Weight
TEL 12-100 TFA	12V	100	98	1954	6.5	32.8 kg
TEL 12-105 TFA	12V	104	101	2229	5.6	33 kg
TEL 12-150 TFA	12V	150	147	2327	5.4	47.3kg
TEL 12-165 TFA	12V	166	163	2630	4.8	49 kg
TEL 12-185 TFA	12V	184	180	2923	4.3	56.7kg
TEL 12-200 TFA	12V	196	192	2982	4.2	60.2 kg

Dimensions

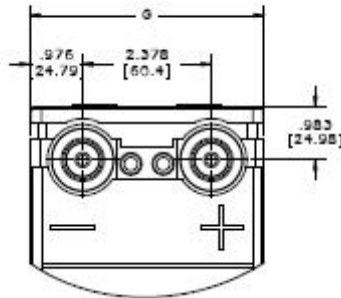


Model	A		B		C		D		E		F		G		H	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
TEL 12-100 TFA	14.7	373.3	16.1	410.0	15.7	397.7	14.5	369.0	10.5	267.3	11.2	283.5	4.2	105.9	4.1	104.0
TEL 12-105 TFA	18.6	473.1	20.1	510.5	19.6	498.3	18.5	469.5	8.5	215.2	9.1	231.4	4.3	109.0	4.3	108.0
TEL 12-150 TFA	20.3	516.9	22.0	558.5	21.5	546.5	20.2	512.2	10.6	268.9	11.0	278.7	4.9	125.0	4.9	123.4
TEL 12-165 TFA	20.3	516.9	22.0	558.5	21.5	546.5	20.2	512.2	10.6	268.9	11.0	278.7	4.9	125.0	4.9	123.4
TEL 12-185 TFA	20.3	516.9	22.0	558.5	21.5	546.5	20.2	512.2	12.2	310.3	12.7	321.6	4.9	125.0	4.9	123.4
TEL 12-200 TFA	20.3	516.9	22.0	558.5	21.5	546.5	20.2	512.2	12.2	310.3	12.7	321.6	4.9	125.0	4.9	123.4

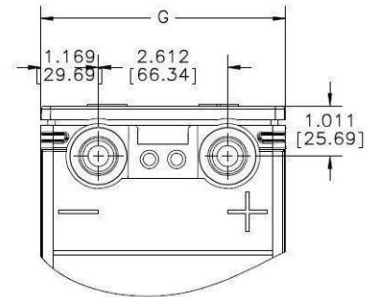
Detail of Terminal



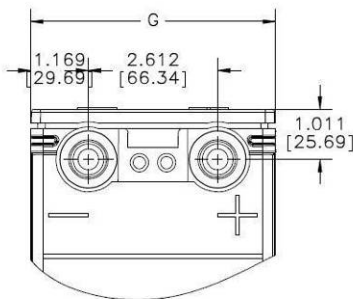
TEL 12-100 TFA



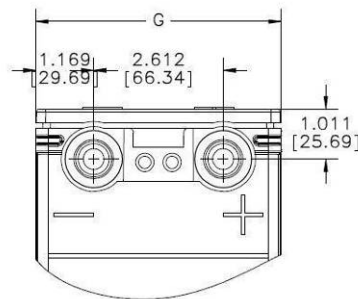
TEL 12-105 TFA



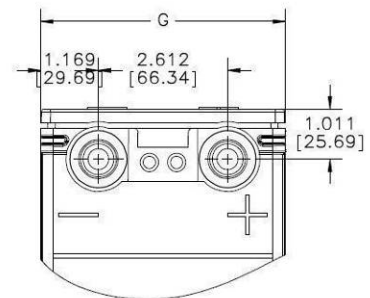
TEL 12-150 TFA



TEL 12-165 TFA



TEL 12-185 TFA



TEL 12-200 TFA

*All dimensions are for reference only. Contact a C&D Representative for complete dimensional information.

Specifications

Operating Temperature Range with Temperature Compensation	Discharge: -40° F (-40° C) to +160° F (71° C) Charge: -10° F (-23° C) to +140° F (60° C)
Nominal Operating Temperature Range	+74° F (23° C) to +80° F (27° C)
Recommended Maximum Charging Current Limit	C/5 amperes @ 20hr rate
Float Charging Voltage	13.65 ± 0.15 VDC average per 12V unit
Maximum AC Ripple (Charger)	0.5% RMS or 1.5% P-P of float charge voltage recommended for best results. Max voltage allowed = 1.4% RMS (4% P-P) Max current allowed = C/20
Self Discharge	Battery can be stored up to 6 months at 77° F (25° C) before a freshening charge is required. Batteries stored at temperatures greater than 77° F (25° C) will require recharge sooner than batteries stored at lower temperatures. See C&D brochure 41-7272, Self-Discharge and Inventory Control for details.
Equalize Charge and Cycle Service Voltage	14.40 to 14.80 VDC average per 12V unit @ 77° F (25° C)
Terminal	Threaded copper alloy insert terminal to accept: M8 bolt (TEL12-100 TFA, TEL12-150 TFA, TEL12-165 TFA, TEL 12-185 TFA, TEL12-200 TFA) M6 bolt (TEL12-105 TFA)
Terminal Hardware Initial Torque	160 in.-lbs. (18 N-m) for: TEL12-100 TFA, TEL12-150 TFA, TEL12-165 TFA, TEL12- 185 TFA, TEL12-200 TFA 107 in.-lbs (12 N-m) for TEL12-105 TFA

Constant Current Discharge Table - Amps @ 25°C (77°F)

TEL 12-100 TFA

Operating Time (hrs)

EPV	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
1.75	70.1	39.8	28.5	22.6	18.7	16.0	14.0	12.5	11.2	10.2	8.7	7.6	6.7	6.1	5.5	4.7	3.3	2.4	1.7
1.80	68.8	38.9	27.9	22.0	18.3	15.7	13.7	12.2	11.0	10.0	8.5	7.4	6.6	5.9	5.4	4.6	3.2	2.3	1.6
1.85	63.6	36.3	26.1	20.7	17.2	14.9	13.1	11.7	10.6	9.6	8.2	7.1	6.3	5.7	5.2	4.4	3.1	2.3	1.5
1.90	56.3	32.6	23.6	18.8	15.8	13.6	12.1	10.8	9.7	8.9	7.5	6.6	5.8	5.3	4.8	4.1	2.8	2.1	1.4

TEL 12-105 TFA

Operating Time (hrs)

EPV	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
1.75	68.6	39.5	28.6	22.8	19.1	16.4	14.4	13.0	11.6	10.6	9.0	7.9	7.0	6.3	5.8	4.9	3.5	2.5	1.7
1.80	67.2	38.7	28.0	22.3	18.7	16.1	14.1	12.6	11.3	10.4	8.8	7.7	6.9	6.2	5.7	4.8	3.4	2.5	1.7
1.85	63.2	36.8	26.7	21.3	17.9	15.5	13.6	12.1	10.9	9.9	8.5	7.4	6.6	6.0	5.5	4.7	3.3	2.4	1.6
1.90	56.5	33.4	24.6	19.8	16.7	14.5	12.7	11.3	10.2	9.3	8.0	7.0	6.2	5.6	5.1	4.4	3.1	2.3	1.5

TEL 12-150 TFA

Operating Time (hrs)

EPV	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
1.75	96.7	58.9	42.1	33.1	27.4	23.5	20.7	18.5	16.7	15.3	13.1	11.5	10.3	9.3	8.5	7.3	5.2	3.8	2.6
1.80	93.5	57.8	41.1	32.3	26.8	23.0	20.2	18.1	16.4	15.0	12.9	11.3	10.1	9.2	8.4	7.2	5.1	3.7	2.5
1.85	86.4	54.4	39.0	30.7	25.6	22.0	19.4	17.4	15.8	14.4	12.4	10.9	9.8	8.9	8.2	7.0	5.0	3.6	2.5
1.90	77.3	49.1	35.4	28.0	23.4	20.2	17.8	16.0	14.6	13.4	11.5	10.2	9.1	8.3	7.6	6.6	4.7	3.4	2.3

TEL 12-165 TFA

Operating Time (hrs)

EPV	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
1.75	109.0	62.1	45.1	35.7	29.8	25.6	22.5	20.3	18.5	16.8	14.2	12.3	10.9	9.8	8.9	7.5	5.2	3.9	2.6
1.80	106.0	61.5	44.2	35.0	29.2	25.1	22.2	20.1	18.3	16.6	14.0	12.2	10.7	9.6	8.7	7.4	5.1	3.8	2.6
1.85	98.0	57.9	41.8	33.2	27.8	24.1	21.3	19.3	17.6	16.0	13.5	11.7	10.3	9.3	8.4	7.1	4.9	3.7	2.5
1.90	87.6	52.0	38.0	30.4	25.6	22.2	19.6	17.7	16.2	14.7	12.3	10.7	9.4	8.4	7.7	6.5	4.4	3.3	2.3

TEL 12-185 TFA

Operating Time (hrs)

EPV	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
1.75	125.7	72.4	52.0	41.0	34.2	29.2	25.7	22.9	20.7	18.8	15.9	13.8	12.2	11.0	10.0	8.5	5.8	4.4	3.0
1.80	121.0	70.6	50.7	40.0	33.4	28.6	25.1	22.4	20.2	18.4	15.6	13.6	12.0	10.8	9.9	8.4	5.7	4.3	2.9
1.85	111.4	67.2	48.2	38.1	31.7	27.2	23.9	21.4	19.4	17.6	15.0	13.2	11.7	10.6	9.5	8.1	5.6	4.2	2.8
1.90	98.0	61.1	44.1	34.9	29.1	25.1	22.2	19.9	18.1	16.5	14.0	12.2	10.8	9.7	8.9	7.5	5.2	3.9	2.6

TEL 12-200 TFA

Operating Time (hrs)

EPV	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
1.75	132.7	79.5	56.2	44.0	36.4	31.1	27.3	24.4	22.0	20.1	17.2	15.0	13.4	12.0	11.0	9.4	6.7	4.9	3.3
1.80	128.3	77.7	54.9	42.9	35.5	30.3	26.6	23.7	21.4	19.6	16.7	14.6	13.0	11.8	10.8	9.2	6.5	4.7	3.2
1.85	117.6	73.3	52.0	40.7	33.7	28.8	25.3	22.6	20.4	18.7	16.0	14.0	12.5	11.3	10.4	8.9	6.3	4.6	3.1
1.90	104.3	66.6	47.4	37.3	30.9	26.5	23.3	20.9	18.9	17.3	14.9	13.1	11.7	10.6	9.7	8.3	5.9	4.3	2.9

* Note: TFA= True Front Access

* All data shall be changed without prior notice, C&D reserves the right to explain and update the information contained hereinto.