C&D TECHNOLOGIES
Power Solutions
TEL

C&D TECHNOLOGIES® TEL

C&D TRUE FRONT ACCESS®

TEL Series – Floating Service

TEL 12-105FNSG, TEL 12-115FNG
TEL 12-170FG, TEL 12-210FG/F

Valve Regulated Lead Acid Battery

Designed for Telecom Standby Power Applications

THE MOMENT OF TRUTH HAS ARRIVED

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 unique power system demands

APPLICATIONS

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

INDOOR/OUTDOOR INSTALLTIONS

- Cabinet Systems
- Rack Systems

FEATURES AND BENEFITS

- Long life alloy and over 10 years design life.
- Tested and qualified by Telecordia 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-0 with an Oxygen Limiting Index of greater than 28.
- 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-0, 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 parts171-189
- 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	16	18	20	24	36	48	72
TEL 12-105FNSG	72.9	82.8	88.9	93.8	97.2	99.5	101.6	103.7	104.7	106.0	108.3	112.1	113.7	115.1	117.7	119.8	121.4	123.6
TEL 12-115FNG	71.3	82.2	89.2	94.6	99.3	102.3	104.8	108.2	108.4	109.9	112.4	116.6	118.4	120.0	122.8	129.3	126.7	129.0
TEL 12-170FG	113.4	129.3	140.6	148.5	155.0	159.4	163.8	168.9	173.2	174.4	177.2	181.6	183.5	185.2	188.1	194.9	194.0	197.5
TEL 12-210FG/F	138.0	165.4	175.3	183.0	189.3	194.1	198.7	202.6	205.9	209.0	214.0	222.2	225.6	229.0	235.1	249.1	242.4	246.8

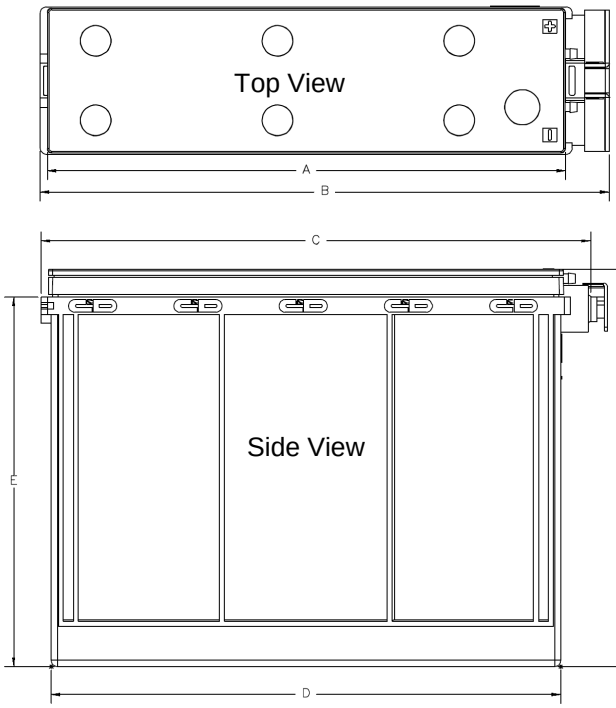
Battery * Model	Voltage Per Unit	Ampere Hours Capacity 8 Hour Rate @ 77°F (25°C) to 1.75EPV per cell	Ampere Hours Capacity 10 Hour Rate @ 68°F (20°C) to 1.80EPV per cell	IEC Short Circuit Current (A)	IEC Resistance (mOhms)	Weight
TEL 12-105FNSG	12V	104 Ah	102 Ah	1954	6.5	32.8 kg
TEL 12-115FNG	12V	108 Ah	106 Ah	2229	5.6	33 kg
TEL 12-170FG	12V	169 Ah	169 Ah	2630	4.8	49 kg
TEL 12-210FG/F**	12V	203 Ah	200 Ah	2982	4.2	60.2 kg

*** Note:**
F= True Front Access
N= Narrow Width Format
S= Short Depth
G= Central Gas Collection System
**** TEL 12-210FG and TEL 12-210F have the same capacity. And TEL 12-210FG has gas collection system which TEL 12-210F did not have.**

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 (TEL12-105FNSG, TEL12-170FG, TEL12-210FG, TEL12-210F), M6 bolt (TEL12-115FNG).
Terminal Hardware Initial Torque	160 in.-lbs. (18 N-m) for TEL12-105FNSG, TEL12-170FG, TEL12-210FG, TEL12-210F 107 in.-lbs. (12 N-m) for TEL12-115FNG

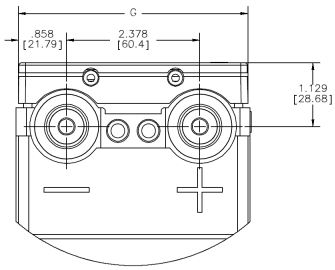
Dimensions



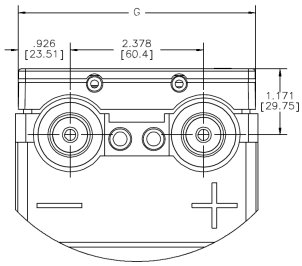
TEL 12-105FNSG/ 115FNG/170FG/210FG

TEL 12-210F

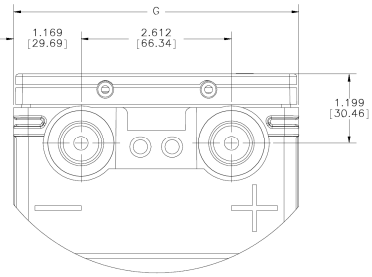
Detail of Terminal



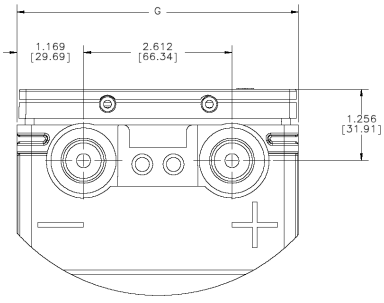
TEL 12-105FNSG



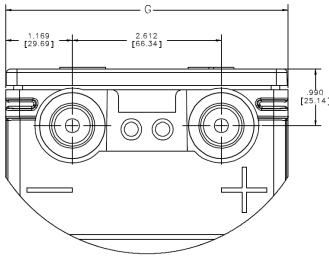
TEL 12-115FNG



TEL 12-170FG



TEL 12-210FG



TEL 12-210F

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
TEL12-105FNSG	17.698	373.32	16.142	410.00	15.659	397.74	14.528	369.01	11.319	287.50	10.523	267.28	4.094	103.99	4.094	103.99
TEL12-115FNG	18.834	473.31	20.100	510.53	19.617	498.28	18.486	469.54	9.269	235.45	8.473	215.22	4.229	107.43	4.250	107.95
TEL12-170FG	20.299	515.59	21.989	558.52	21.516	546.51	20.164	512.17	10.585	268.86	11.159	283.44	4.950	125.73	4.858	123.39
TEL12-210FG	20.294	515.47	21.989	558.52	21.516	546.51	20.164	512.17	12.217	310.31	12.848	326.34	4.950	125.73	4.858	123.39
TEL12-210F	20.349	516.86	21.989	558.52	21.516	546.51	20.164	512.17	12.217	310.31	12.582	319.58	4.950	125.73	4.858	123.39

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

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

TEL 12-105FNSG

Operating Time (hrs)

EPV	1	2	3	4	5	6	7	8	9	10	12	16	18	20	24	36	48	72
1.75	72.9	41.4	29.6	23.5	19.4	16.6	14.5	13.0	11.6	10.6	9.0	7.0	6.3	5.8	4.9	3.3	2.5	1.7
1.80	71.5	40.4	29.0	22.9	19.0	16.3	14.2	12.7	11.4	10.4	8.8	6.8	6.1	5.6	4.7	3.2	2.4	1.7
1.85	66.2	37.7	27.1	21.5	17.9	15.5	13.6	12.2	11.0	10.0	8.5	6.6	5.9	5.4	4.6	3.1	2.4	1.6
1.90	58.6	33.9	24.6	19.6	16.4	14.2	12.6	11.2	10.1	9.2	7.8	6.1	5.5	5.0	4.2	2.9	2.2	1.5

TEL 12-115FNG

Operating Time (hrs)

EPV	1	2	3	4	5	6	7	8	9	10	12	16	18	20	24	36	48	72
1.75	71.3	41.1	29.7	23.7	19.9	17.1	15.0	13.5	12.0	11.0	9.4	7.3	6.6	6.0	5.1	3.6	2.6	1.8
1.80	69.9	40.2	29.1	23.2	19.4	16.8	14.7	13.1	11.8	10.8	9.2	7.2	6.5	5.9	5.0	3.5	2.6	1.8
1.85	65.7	38.2	27.8	22.2	18.6	16.1	14.1	12.6	11.3	10.3	8.8	6.9	6.2	5.7	4.8	3.4	2.5	1.7
1.90	58.8	34.7	25.5	20.5	17.3	15.1	13.2	11.8	10.6	9.7	8.3	6.5	5.8	5.3	4.6	3.2	2.3	1.6

TEL 12-170FG

Operating Time (hrs)

EPV	1	2	3	4	5	6	7	8	9	10	12	16	18	20	24	36	48	72
1.75	113.4	64.6	46.9	37.1	31.0	26.6	23.4	21.1	19.2	17.4	14.8	11.4	10.2	9.3	7.8	5.4	4.0	2.7
1.80	110.2	64.0	46.0	36.4	30.3	26.1	23.1	20.9	19.0	17.3	14.6	11.2	10.0	9.1	7.7	5.3	4.0	2.7
1.85	101.9	60.2	43.5	34.5	28.9	25.1	22.2	20.0	18.3	16.6	14.0	10.7	9.6	8.7	7.4	5.1	3.8	2.6
1.90	91.1	54.1	39.5	31.6	26.6	23.1	20.4	18.4	16.8	15.2	12.8	9.8	8.7	8.0	6.7	4.6	3.5	2.4

TEL 12-210FG/TEL 12-210F

Operating Time (hrs)

EPV	1	2	3	4	5	6	7	8	9	10	12	16	18	20	24	36	48	72
1.75	138.0	82.7	58.4	45.8	37.9	32.3	28.4	25.3	22.9	20.9	17.8	13.9	12.5	11.5	9.8	6.9	5.1	3.4
1.80	133.5	80.8	57.1	44.6	36.9	31.5	27.6	24.6	22.3	20.3	17.4	13.5	12.2	11.2	9.6	6.8	4.9	3.4
1.85	122.4	76.3	54.0	42.3	35.0	30.0	26.3	23.5	21.3	19.4	16.6	13.0	11.8	10.8	9.2	6.5	4.8	3.2
1.90	108.5	69.2	49.3	38.8	32.2	27.6	24.3	21.7	19.7	18.0	15.4	12.1	11.0	10.1	8.6	6.2	4.5	3.0

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

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