

Gen5 Advanced Lithium-ion Battery

TB20, TB30, TB40, TB50, TB60

Manufactured by Mid-Continent Instrument Co., Inc.



TB20, TB30, TB40, TB50, TB60

Gen5 lithium-ion aircraft batteries address the challenges of lead-acid and NiCad battery technology. The TB20, TB30, TB40, TB50 and TB60 offer on-condition maintenance, eliminating expensive battery maintenance, frequent capacity checks and low-voltage operational delays.

These intelligent battery systems deliver more accurate and more reliable state-of-health and state-of-charge data than any other battery on the market today.

Ultra-lightweight
up to 60% lighter

Product features

CAPACITY	TB20 20 amp-hour nominal at 23°C/73°F TB30 30 amp-hour nominal at 23°C/73°F TB40 40 amp-hour nominal at 23°C/73°F TB50 50 amp-hour nominal at 23°C/73°F TB60 60 amp-hour nominal at 23°C/73°F
WEIGHT	TB20 19.5 lbs. (8.9 kg) TB30 27.7 lbs. (12.6 kg) TB40 36.6 lbs. (16.7 kg) TB50 43.9 lbs. (19.9 kg) TB60 52.9 lbs. (24.0 kg)
TECHNOLOGY	Advanced NanoPhosphate® lithium-ion cell chemistry
EFFICIENCY	Higher voltage during engine start — Less wear, less maintenance and increased useful life
PERFORMANCE	Superior high-temperature and cold-weather performance from -40°C to +70°C (-40°F to +158°F)
ENERGY DENSITY	More than 1 amp-hour per pound
INTERNAL HEATER	Automatic internal heater
PROTECTION	Overcharge, over-discharge, over-current, short circuit, over-temperature, under-temperature and charge current limiting
COMMUNICATION	ARINC 429, Analog, Discrete Built-in Test (BIT) Indicator communicates real-time state-of-charge and state-of-health
MAINTENANCE	On-condition
DESIGNED AND MANUFACTURED	Wichita, Kansas, USA
WARRANTY	Two-year limited

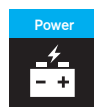
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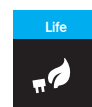
The NanoPhosphate® Advantage



Superior power by weight or volume in a cost effective solution



NanoPhosphate® is stable chemically, providing the foundation for safe systems



Excellent calendar and cycle life with consistent performance over extended use



Higher usable energy means greater battery utilization and lower cost

Gen5 Advanced Lithium-ion Battery

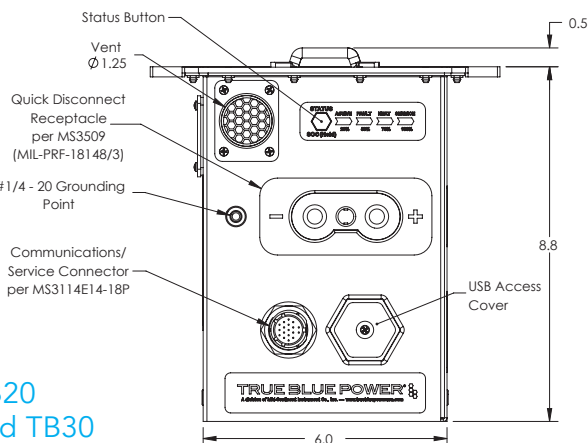
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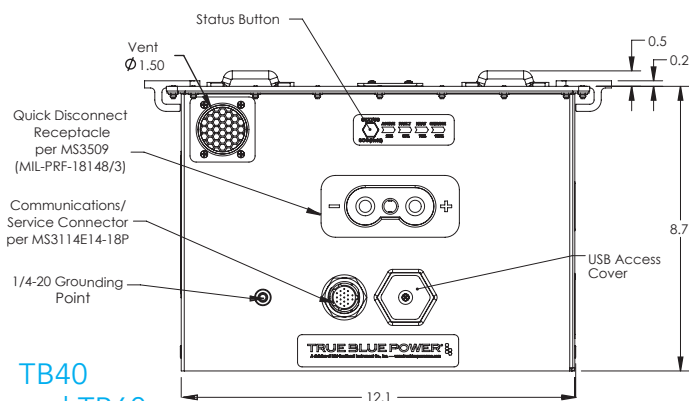
Technical specifications

CHARGE VOLTAGE	28 VDC nominal
OUTPUT VOLTAGE	26.4 VDC nominal
OUTPUT CURRENT	TB20 525A continuous, 1000A max TB30 575A continuous, 1500A max TB40 525A continuous, 1500A max TB50 460A continuous, 1500A max TB60 425A continuous, 1500A max
TECHNOLOGY	Advanced NanoPhosphate® lithium-ion cell chemistry
ENERGY DENSITY	TB20 59.7 Wh/kg TB30 62.9 Wh/kg TB40 63.2 Wh/kg TB50 66.3 Wh/kg TB60 66.0 Wh/kg
CHARGE CURRENT LIMITING	Programmable up to 8C or unlimited
OPERATING TEMPERATURE	-40°C to +70°C (-40°F to +158°F)
WEIGHT	TB20 19.5 lbs. (8.9 kg) TB30 27.7 lbs. (12.6 kg) TB40 36.6 lbs. (16.7 kg) TB50 43.9 lbs. (19.9 kg) TB60 52.9 lbs. (24.0 kg)
DIMENSIONS	TB20 9.1" L x 8.6" W x 8.8" H TB30 12.5" L x 8.6" W x 8.8" H TB40 9.1" L x 14.4" W x 8.9" H TB50 10.0" L x 9.6" W x 10.1" H TB60 12.5" L x 14.4" W x 8.9" H
CONFIGURATION	TB20 8P8S; 4 parallel x 8 in series x 2 TB30 12P8S; 4 parallel x 8 in series x 3 TB40 16P8S; 4 parallel x 8 in series x 4 TB50 21P8S; 7 parallel x 8 in series x 3 TB60 24P8S; 4 parallel x 8 in series x 6
LIFE EXPECTANCY	8 years (average)
MAINTENANCE	On-condition
CASE	Anodized aluminum, blue
CERTIFICATION	FAA TSO-C179b (Class A-4B) RTCA DO-311A RTCA DO-160G RTCA DO-178C DAL A UNDOT/IATA

TB20
and TB30



TB40
and TB60



TB50

