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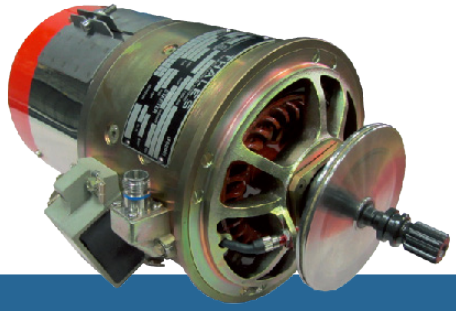
OPTIMIZED FOR CONTINUOUS OPERATION

The starter-generator developed by Thales is intended to be used on the platform main engine and/or APU. It ensures the engine starting, then supplies the DC platform network.

- Reduction of Direct Maintenance Costs
- Efficiency: optimized machine for continuous operation at rated load
- High starting performance
- IBWI (Integrated Brushwear Indicator) available

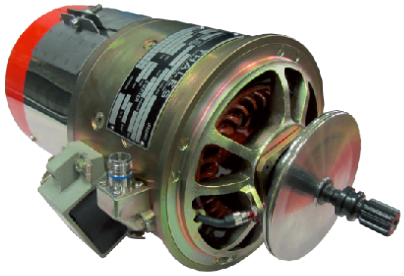


ELECTRICAL SOLUTIONS

DC Starter-Generator

Electrical Power Generation

THALES



ELECTRICAL SOLUTIONS

DC STARTER-GENERATOR

Electrical Power Generation

Thales provides a full range of DC starters-generators optimized for continuous operation. At the state-of-the-art, our DC starters-generators are design-to-cost for short development lead times.

Thales DC Starter-Generator ensures the engine starting, then supplies the DC platform network. Starter-Generator is a DC brushed rotating machine, air cooled by input and output forced air ducts in flight, a built-in fan insures the cooling by self-ventilation at ground level.

- Optimized scheduled maintenance (brush change at up to 1,200 FH/TBO up to 2,400 FH)
- Flexible shaft with damper and shear neck section
- Speed sensor
- Self cooling for ground operations
- Qualified (400 A) TSO-C56b - Up to 55,000 feet - Engine start of Pratt & Whitney 306

Generator Control unit (GCU) and Digital Generator Control unit (DGCU) match the generator's needs.

Under normal conditions the GCU closes its excitation relay and the line contractor, so the DC power supplies the DC bus bar.

The Digital Generator Control Unit (DGCU) maintains a constant generation output voltage and provides equal load distribution in a parallel generator system. Additionally, it provides electrical network protections, starter contractor and generator line contractor control and Built-In-Test functions.

Via an ARINC 429 line, the DGCU sends all electrical data to the EICAS (Engine Indicating Crew-Alerting System) and to the maintenance system.

STANDARDS

- Electrical: MIL-STD-740
- Environmental: DO160

MAJOR REFERENCES

- Civil aircraft: AC313 - ALH - ATR-600 - Dornier 328 - EC 120/130/155 - Gulfstream G280 - G200 - IL114 - Kamov 226 - Mi-38-6 - Y12E - Falcon 20/50/900/2000 Family
- Military aircraft: Alpha jet -Ansat - C295 -CN235 -HH 65 US Coast Guard - IJT36

Rated Power (kW)	Current (A)	Voltage (Vac)	Speed (RPM)	Current starter (A)	Voltage starter (A)	Speed Starter (RPM)	Torque (N.m)	Altitude (m)	Max overload (%)	Cooling	Polar moment of inertia (m2, kg)	Weight (kg)
4,8	160	28	8,000 - 12,150	300	20	1,750	14 - 21	6,000	160	Air	2.4x10-3	7.8 - 8
6	200	28	7,000 - 12,150	400	20	2,100	10 - 21	6,000/ 10,700	200	Air	3.1x10-3	9 - 11
9	300	28	4,500 - 12,300	600/ 750	16 - 18	1,000/ 1,400	41 - 44	14,900/ 15,500	150 - 200	Air	7.5x10-3	16 - 21
12	400	28	7,000 - 12,800	800/ 900	16 - 20	1,400/ 2,100	21 - 48	7,500/ 16,700	200	Air	8.6x10-3	17 - 19

Thales Avionics - For more detailed information, please contact us at avionics@fr.thalesgroup.com