**S7 Core Upgrade**

**Product Description**
The S7 core logic upgrade incorporates all current Software Action Requests (SARs) for LM6000 PC engines.

**Upgraded includes all S6 benefits:**
- SPRINT® Logic optimization and Variable SPRINT added.
- Improved SPRINT® enabling.
- NOX water control improvements.
- T3 and T48 logic revisions.

The S7 core upgrades are:
- Long term PFC solution added (hardware upgrades required).
- Fast start capability, see Fast Start Upgrade page for full benefits.
- Maximum power is predicted realtime for both SPRINT® and non-SPRINT® operation.
- NOX and SPRINT® logic optimized further.
- T25 Sensor compensation for SPRINT®, better behavior in extreme transient conditions.
- N25 MAX Scheduling bias correction.

**Benefits**
- Allows temporary overload of 2 MW, improving engine response to grid fluctuations.
- PFC operating according to grid requirements and maximizing power output.
- Better NOX control.
- More robust flame out detection during start up, range expanded to N25 > 500 rpm, reducing risk of hung starts and improves false flame out detection.
- Reduced turbine trips help increase plant revenue and efficiency.
- False alarms reduced and major alarm logic revision.
- More developed frequency control algorithms to meet requirements from many different grid authorities.

**Applicable Units**

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