TECHNICAL DATA SHEET: INDUCTION FURNACE SELECTOR SWITCH

1. GENERAL DESCRIPTION

The **Induction Furnace Selector Switch** (Changeover Switch) is a heavy-duty, off-load electrical component designed to route high-frequency power from an induction power supply to multiple furnace crucibles. It is engineered to handle high thermal stress and intense electromagnetic fields typical in foundry operations.

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2. ELECTRICAL SPECIFICATIONS

Parameter	Range/Value
Rated Current (A)	1000A – 6000A
Rated Voltage (V)	Up to 3600V AC/DC

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3. MECHANICAL & MATERIAL CONSTRUCTION

- **Contacts:** ETP Grade Copper, Silver Plated (20+ Microns) to prevent oxidation.
- **Insulation:** G10 / FR4 Grade Epoxy Fiberglass (High dielectric & mechanical strength).
- **Structure:** Non-magnetic Stainless Steel fasteners to eliminate induction heating.
- **Drive Options:**
    - **Manual:** Hand-operated lever with locking detent.
    - **Pneumatic:** Air-operated cylinder (5 – 7 bar) for remote PLC control.

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4. OPERATIONAL SAFETY

- **Off-Load Operation:** Power must be disconnected at the source before switching to prevent arcing.
- **Interlocks:** Equipped with auxiliary limit switches (1NO+1NC or 2NO+2NC) to confirm position status to the Inverter/PLC.
- **Cooling:** Air-cooled (standard) or Water-cooled (for high-duty cycles > 3000A).

5. MAINTENANCE & STORAGE

- **Inspection:** Check contact pressure and silver plating wear every 1,000 operations.
- **Cleaning:** Use Isopropyl Alcohol (IPA) to remove conductive dust from fiberglass surfaces.
- **Lubrication:** Use non-conductive, high-temperature grease on mechanical pivot points only.