

Product Name: CNC Operator Panel Overlay / MDI Keypad Mask **Part Number (P/N):** A98L-0031-0028 **Brand Compatibility:** FANUC **Category:** Industrial Automation Spare Parts

1. Product Description

The **A98L-0031-0028** is a high-performance industrial-grade membrane overlay designed specifically for the **FANUC Series 0i MDI Unit** (Manual Data Insert). This component serves as the primary interface protection, featuring high-durability material and integrated key legends to protect underlying micro-switches from harsh machining environments, including oil, coolants, and mechanical wear.

2. System Compatibility

This overlay is engineered for use with the following FANUC control systems and hardware units:

- **Controller Series:** FANUC Series 0i-MD, 0i-MF, 0i-Mate-MD, and relevant 0i-D/F versions.
- **MDI Unit Type:** Standard Horizontal/Vertical MDI units (Small Key layout).
- **Typical Hardware Models:** Fits A02B-0319/0321 series operator panels.

3. Material & Physical Specifications

Property	Specification
Base Material	Industrial Grade Hardened Polyester (Autotex/PC equivalent)
Total Thickness	0.17mm – 0.25mm (excluding adhesive layer)
Surface Finish	Matte / Anti-glare textured finish
Printing Technology	Reverse-printed (Sub-surface) for permanent legend protection
Adhesive Backing	High-tack 3M Industrial Pressure Sensitive Adhesive (PSA)
Operating Temp	-10°C to +60°C (14°F to 140°F)

4. Environmental & Chemical Resistance

- **Oil & Coolant Resistance:** Excellent. Designed to withstand prolonged exposure to mineral oils, synthetic coolants, and cutting fluids without swelling or peeling.
- **Mechanical Durability:** Keypad zones tested for >1,000,000 actuations without stress cracking.
- **Chemical Stability:** Resistant to common industrial solvents, weak acids, and alkaline cleaners.
- **Ingress Protection:** Provides an IP65-rated seal for the front panel when installed correctly.

5. Layout & Dimensions

- **Form Factor:** Exact 1:1 fit for FANUC Small-Button MDI units.
- **Key Inventory:** Includes Alphanumeric keys (A-Z, 0-9) and Command Navigation keys (POS, PROG, OFFSET, SETTING, SYSTEM, MESSAGE, GRAPH, etc.).
- **Visual Indicators:** Transparent windows aligned for integrated LED status lights.

6. Installation Procedure

1. **Preparation:** Remove the old damaged overlay. Surface must be 100% free of residue, oil, and moisture. Clean with Isopropyl Alcohol (IPA).
2. **Alignment:** Without removing the adhesive liner, dry-fit the overlay to ensure all key holes and LED windows align perfectly with the panel.
3. **Application:** Peel a small portion of the backing. Apply from one edge to the other using a squeegee or soft cloth to prevent air bubbles.
4. **Curing:** Maintain at room temperature for at least 2 hours before exposing to high-pressure coolant or heavy usage.

7. Storage & Handling

- **Storage Environment:** Store in a cool, dry place away from direct UV radiation.
- **Shelf Life:** 24 months from date of manufacture in original packaging.

Disclaimer: *This data sheet is provided for informational purposes only. While the information is based on standard field specifications for FANUC-compatible*

components, users are advised to verify physical dimensions against their specific machine hardware before application.