

MX-400 Panel Sensor

15 kW variable-frequency drive · IP20 panel mount

Category **Motor control**

Model **DC-15**

The DC-15 is a 15 kW variable-frequency drive for three-phase motors. This manual covers the fan and capacitor service, the module-level repairs and the spare parts, for trained service staff working to the safety warnings below.

DANGER

Lethal voltage: wait to discharge

The DC link holds a lethal charge after power-off. Isolate, lock off, wait ten minutes and confirm below 50 V at the DC terminals before touching any component. Service by trained personnel only.

TOOLS & MATERIALS

TOOL	SPEC	NOTES
Insulated screwdriver set	1000 V VDE	Torx and slotted
DC-link voltmeter	0–1000 V DC	Confirm discharge < 50 V
Torque wrench	2–20 N·m	Terminal and busbar torque
ESD wrist strap	1 MΩ	Control-board handling
Thermal paste	Non-silicone	IGBT module reseal

FAN & CAPACITOR SERVICE

1. Isolate the supply, lock off and wait ten minutes for the DC link to discharge.
2. Confirm the DC-link voltage is below 50 V at the +/- terminals before touching anything.
3. Record the parameter set, then remove the control board on its ESD strap.
4. Replace the cooling fan or capacitor bank as required, observing polarity and torque.
5. Reseat the control board, reload the parameters and re-torque all power terminals.
6. Run the drive uncoupled and confirm no fault codes before returning to service.

REPLACEMENT PARTS

PART	ORDER CODE	QTY
Cooling fan	DC-15-FAN	1
DC-link capacitor set	DC-15-CAP	1
Control board	DC-15-CTL	1
Gate-driver board	DC-15-GDR	1
Terminal cover kit	DC-15-COV	1

RETURN-TO-SERVICE CHECKS

- ☐ Fault log downloaded before any reset
- ☐ DC-link confirmed discharged below 50 V
- ☐ Power terminals re-torqued to spec
- ☐ Parameter set reloaded and verified
- ☐ No fault codes on an uncoupled run