

McQuay MCS Fault Code Quick Reference

McQuay - MCS fault codes | Model Type: Modular Chiller System

Code	Alarm Description	Severity	Probable Causes	First Inspection Step
E01	Module 1 compressor high pressure	Critical	Module 1 condenser fouled; Non-condensables in module 1; Refrigerant overcharge in module 1	Clean module 1 condenser
E02	Module 1 compressor low pressure	Warning	Low refrigerant in module 1; Expansion valve in module 1; Evaporator flow low	Check charge in module 1
E03	Module 2 compressor fault	Warning	Module 2 compressor overload; Module 2 mechanical fault; Module 2 contactor fault	Measure module 2 current
E04	Module 3 compressor fault	Warning	Module 3 compressor overload; Module 3 mechanical fault; Module 3 contactor fault	Measure module 3 current
E05	Module communication fault	Warning	Inter-module communication cable damaged; Module controller offline; Address conflict	Check inter-module cable
E06	Common evaporator water flow fault	Warning	Chilled water pump stopped; Flow switch fault; Strainer clogged	Verify pump
E07	Module isolation valve fault	Warning	Isolation valve motor failure; Valve position sensor fault; Valve stuck	Check valve motor
E08	Capacity control fault	Warning	Capacity staging logic error; Module capacity mismatch; Lead/lag rotation fault	Check staging configuration
E09	Sensor fault	Warning	Sensor element failure; Wiring fault; Connector corrosion	Measure resistance
E10	Phase fault	Warning	Phase loss; Incorrect sequence; Blown fuse	Check phases
E11	Oil pressure fault	Warning	Oil pump wear; Filter clogged; Low oil level	Check oil level
E12	Power supply fault	Warning	Voltage outside spec; Phase imbalance; Transformer failure	Measure voltage
E13	Freeze protection	Critical	Evaporator water temp near freezing; Flow too low; Setpoint too low	Check water temp
E14	Expansion valve fault	Warning	Valve motor failure; Controller communication lost; Valve stuck	Check wiring
E15	Fan motor fault	Warning	Motor winding failure; Capacitor defective; Relay fault	Check winding resistance
E16	Condenser water temperature high	Warning	Cooling tower issue; Condenser water flow low; Condenser tubes fouled	Check cooling tower
E17	Condenser fan 2 fault	Warning	Fan 2 motor failure; Capacitor defective; Relay fault	Check winding
E18	Compressor vibration alarm	Warning	Mounting loose; Bearing wear; Foundation issue	Measure vibration

Code	Alarm Description	Severity	Probable Causes	First Inspection Step
E19	Pumpdown failure	Warning	Solenoid not closing; Pressure not reaching setpoint; Timer expired	Check solenoid
E20	Compressor surge alarm	Warning	Near surge line; Condenser conditions severe; Charge incorrect	Check conditions
E21	High bearing temperature	Warning	Lubrication inadequate; Bearing wear; Oil flow insufficient	Check bearing sensors
E22	Low subcooling alarm	Warning	Charge low; Condenser not subcooling; Valve overfeeding	Check subcooling
E23	High superheat alarm	Warning	Valve starving; Charge low; Subcooling low	Check superheat
E24	Compressor start inhibit	Warning	Safety interlock preventing start; Anti-recycle timer; Oil heater	Check interlocks
E25	Evaporator approach temperature high	Warning	Fouled tubes; Low charge; Distribution issue	Calculate approach
E26	Condenser approach temperature high	Warning	Fouled condenser; Non-condensables; Overcharge	Calculate approach
E27	Energy efficiency alarm	Warning	Below expected efficiency; Approach temps high; Charge incorrect	Check kW/ton
E28	Compressor runtime exceeded	Warning	Exceeded max runtime; Maintenance interval; Inspection required	Check runtime log
E29	Refrigerant level alarm	Warning	Level sensor low; Refrigerant leak; Subcooling low	Check level sensor
E30	Cooling tower water fault	Warning	Tower fan not operating; Tower water level low; Condenser water temp high	Verify tower fan

Disclaimer: All fault code data is for reference only. Do not use this information to replace certified professional HVAC technician judgment. Always refer to original OEM official service manual.