PLC-VFD-Motor Control System Maintenance Checklist

1). Safety Inspection Checklist

S.No	Equipment	Inspection	Procedure	Acceptance Criteria	Status	Remarks
1	Panel	Power Isolation	Verify supply OFF	0 Voltage		
2	Panel	LOTO	Verify lockout/tagout	Properly applied		
3	System	Earthing	Check continuity	< 1 Ohm		
4	Personnel	PPE	Verify PPE use	All PPE worn		

2). PLC Maintenance Checklist

S.No	Component	Inspection	Procedure	Acceptance Criteria	Status	Remarks
1	PLC Power Supply	Voltage Check	Measure voltage	Within rated range		
2	PLC Module	Module Health	Check status LEDs	Normal indication		
3	PLC Wiring	Terminal Tightness	Check connections	Secure		
4	PLC Program	Program Backup	Backup to PC	Backup completed		
5	PLC Communication	Communication Test	Check PLC communication	No error		

3). VFD Maintenance Checklist

S.No	Component	Inspection	Procedure	Acceptance Criteria	Status	Remarks
1	VFD Input	Voltage Check	Measure input voltage	Rated voltage		
2	VFD Output	Output Voltage	Measure output	Correct output		
3	Cooling Fan	Fan Operation	Visual inspection	Normal operation		
4	Parameters	Parameter Backup	Backup settings	Backup completed		
5	Fault Log	Fault Monitoring	Check logs	No abnormal faults		

4). Motor Maintenance Checklist

S.No	Component	Inspection	Procedure	Acceptance Criteria	Status	Remarks
1	Motor Winding	Insulation Resistance	Measure IR value	> 1 MΩ		
2	Motor Bearings	Bearing Condition	Check noise/temp	Normal		
3	Motor Current	Current Measurement	Measure current	Within rated		
4	Motor Terminals	Connection Tightness	Inspect terminals	Secure		

5). Control Wiring Checklist

S.No	Component	Inspection Item	Procedure	Acceptance Criteria	Status	Remarks
1	Control Wiring	Wire Condition	Visual inspection	No damage		
2	Signal Wiring	Signal Integrity	Check signals	Correct signal		
3	Earthing	Ground Continuity	Measure resistance	< 1 Ohm		

6). Functional Testing Checklist

S.No	Test	Procedure	Expected Result	Status	Remarks
1	Start Test	Start motor	Motor runs		
2	Stop Test	Stop motor	Motor stops		
3	Speed Control	Change speed	Speed varies		
4	Fault Test	Simulate fault	Fault detected		
5	Feedback Test	Check PLC feedback	Correct feedback		

7). Preventive Maintenance Schedule

S.No	Activity	Equipment	Frequency	Responsible	Status	Remarks
1	Inspection	PLC	Monthly			
2	Inspection	VFD	Monthly			
3	Inspection	Motor	Monthly			
4	Functional Test	System	Quarterly			
5	Full Maintenance	System	Yearly			

Maintenance Engineer:

Name/Signature

Date

Next Maintenance Date:

Seal