

11. Troubleshooting

If you face with any problems amidst of using the motor, please deal with the issue as seeing the malfunction and table showing countermeasures. If the problem you are experiencing is not listed in the table below or is not resolved by applying the countermeasures, please contact Hyosung Heavy Industries or distributor.

Problem	Cause	Countermeasure
Motor fails to start	Cables have been disconnected.	Re-connect.
	Switch contact failure	Check and repair contact parts of the switch.
	Stator coil failure	Contact Hyosung Customer Support Center.
	Fuse failure	Check the appropriate capacity for the fuse and replace.
	Open circuit in winding	Check for loose wiring or contact Hyosung.
	Overload	Reduce the load to rated level.
	Damaged bearing	Replace bearing or contact Hyosung.
Damaged shaft	Belt connection angle is too small.	Adjust the diameter of the pulley.
	Belt tension is too weak.	Adjust the tension of the pulley.
	Load point is far from the motor.	Adjust the load point closer to the motor.
	The shaft center of motor and driven machine is misaligned when directly connected.	Align the center of motor and the driven machine.
	Motor is too frequently started.	Reduce the frequency of starting.
Noise and vibration	External vibration and shock	Remove external vibration.
	Weak foundation	Fortify the foundation.
	The shaft center of motor and driven machine is misaligned when directly connected.	Align the center of motor and the driven machine.
	Coupling ends are unbalanced.	Balance the coupling ends.
	The centers of the pulleys are misaligned.	Align the centers.
	Foreign particles on the rotating parts	Check and clean the rotating parts for dust or foreign particles
	Single phase operation	Check the connection circuit for proper three phase operation.
	Unbalanced voltage	Check with the grid operator or power supplier.
	Vibration from load	Check the load (driven machine) for the cause of vibration.
	Unbalanced load	Check the load (driven machine) for proper balancing.
	Bearing failure	Check according to the instruction manual 7.6 and if the noise continues, contact Hyosung Customer Support Center.
	Belt tension is too weak.	Adjust the tension of the pulley.
	Switch contact failure	Check and repair contact parts of the switch.
	Overload	Reduce the load to rated level.
	Stator coil failure	Contact Hyosung Customer Support Center.
	Entry of foreign particles	Remove the foreign matters

Problem	Cause	Countermeasures
Motor overheat	High ambient temperature	Facilitate ventilation.
	Obstacle is close to the motor.	Remove any obstacles within 20cm from the motor.
	Voltage drop	Adjust the thickness and length of the cables and consult with the grid operator or power supplier.
	Single phase operation	Check the connection circuit for proper three phase operation.
	Overload	Reduce the load to rated level.
	Motor is too frequently started.	Reduce the frequency of starting.
	Moment of inertia of the load is too big.	Contact Hyosung Customer Support Center.
	Cooling fan is damaged.	Replace the cooling fan
	Ventilation inlet or outlet is blocked.	Clean any blocked vents.
	Unbalanced voltage	Check with the grid operator or power supplier.
	Inappropriate relay capacity	Replace with a compatible relay.
	Y-D start was applied to a motor that does not support such.	Use a three-contactor method.
Bearing overheat	Belt tension is too weak.	Adjust the tension of the pulley.
	Bearing failure	Replace the bearing.
	Grease has been deteriorated from heat or has been polluted.	Replace the grease.
	High ambient temperature	Facilitate ventilation.
	Environment is high in humidity and very oily.	Protect the motor from moisture and oil.
	Obstacle is close to the motor.	Remove any obstacles within 20cm from the motor.
	External vibration and shock	Remove external vibration.
	The shaft center of motor and driven machine is misaligned when directly connected.	Align the center of motor and the driven machine.
	Belt connection angle is too small.	Adjust the diameter of the pulley.
	Load point is far from the motor.	Adjust the load point closer to the motor.
	Foreign particles on the rotating parts	Check and clean the rotating parts for dust or foreign particles
	Thrust is too big.	Reduce the thrust.
	Unbalanced load	Check the load (driven machine) for proper balancing.
	Cooling fan is damaged.	Replace the cooling fan.
	Ventilation inlet or outlet is blocked.	Clean any blocked vents.

Problem	Cause	Countermeasures
Irregular rotation	The centers of the pulleys are misaligned.	Align the centers.
	Voltage drop	Adjust the thickness and length of the cables and and consult with the grid operator or power supplier.
Activation of protective relay	Voltage drop	Adjust the thickness and length of the cables and and consult with the grid operator or power supplier.
	Single phase operation	Check the connection circuit for proper three phase operation.
	Inappropriate relay capacity	Replace with a compatible relay.
	Stator coil failure	Contact Hyosung Customer Support Center.
	High ambient temperature	Facilitate ventilation.
	Obstacle is close to the motor.	Remove any obstacles within 20cm from the motor.
	Pulley interrupts cooling motor	Apply vent to pulley
	Cables have been disconnected.	Re-connect.
	Switch contact failure	Check and repair contact parts of the switch.
	Improper grounding	Check and fix grounding.
	Unbalanced voltage	Check with the grid operator or power supplier.
	Overload	Reduce the load to rated level.
	Motor is too frequently started.	Reduce the frequency of starting.
	Moment of inertia of the load is too big.	Reduce the load inertia.
	Bearing failure	Replace the bearing..
Short circuit	Improper grounding	Check and fix grounding.
	Stator coil failure	Contact Hyosung Customer Support Center.
	High humidity	Lower the humidity..
	Environment is high in humidity and very oily.	Protect the motor from moisture and oil.
Low insulation resistance	High humidity	Lower the humidity..
	Environment is high in humidity and very oily.	Protect the motor from moisture and oil.
	Stator coil failure	Contact Hyosung Customer Support Center.
	External vibration and shock	Remove external vibration.
	Y-D start was applied to a motor that does not support such.	Use a three-contactor method.