◆Standard type

MDS1751-24H, **MDS1451-24H**, **MDS1451-48H**,
MDS1225-12H, **MDS1225-24H**, **MD1225-12H**,
MD1225-24H, **MD925A-12H**, **MD925A-24H**,
MD825B-12H, **MD825B-24H**, **MD625B-12H**,
MD625B-24H, **MDS510-12H**, **MDS510-24H**,
MDS510M-5H, **MDS410-12H** **MDS410-24H**,
MDS410M-5H

Installation

■Location for installation

The fan is designed and manufactured for installation in equipment. Install it in a well-ventilated location that provides easy access for inspection. The location must also satisfy the following conditions:

- Inside an enclosure that is installed indoors (provide vent holes)
- Operating ambient temperature
  −10 to +60 °C (+14 to +140 °F) (non-freezing)
- Operating ambient humidity 85%, maximum (non-condensing)
- Area that is free of explosive atmosphere or toxic gas (such as sulfuric gas) or liquid
- Area not exposed to direct sun
- Area free of excessive amount of dust, iron particles or the like
- Area not subject to splashing water (rains, water droplets), oil (oil droplets) or other liquids
- Area not subject to continuous vibration or excessive shocks
- Area free of radioactive materials, magnetic fields or vacuum
- Area free of excessive electromagnetic noise (from welders, power machinery, etc.)
  When using near a switching circuit or high-frequency power supply, the induced current may flow inside the fan due to electromagnetic noise (conductive noise, radiative noise). If the induced current flows, the electric corrosion is caused in the bearings of the fan. As a result, it may generate the noise or shorten the service life of the products. Use the fan in the environment that the electromagnetic noise does not cause.

■How to install the fan

Install the fan onto an appropriate flat metal plate having excellent vibration resistance and heat conductivity. Drill holes on the mounting plate and fix the fun on the plate using screws (not supplied). For air orientation and rotational direction, see the indications shown on the fan's side frame.

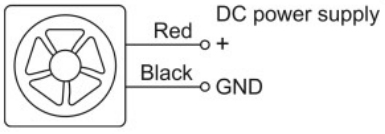
Model	Screw size	Tightening torque
MDS1751, **MDS1451**, **MDS1225**, **MD1225**, **MD925A**, **MD825B**	M4	0.6 N·m (5.3 lb-in)
MD625B, **MDS510**, **MDS410**	M3	0.4 N·m (3.5 lb-in)

■Connector housings/Contacts

Manufacturer: J.S.T. Mfg Co., Ltd.
Housings model: SMR-03V-N (3 poles), SMR-04V-N (4 poles)
Contacts model: SYM-001T-P0.6

Connecting the power supply

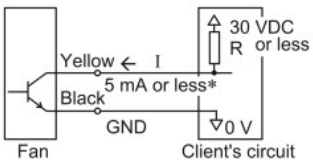
Check the voltage specification on the product identification plate and input the correct voltage.



Connection and specifications of the alarm/sensor

■Pulse sensor type

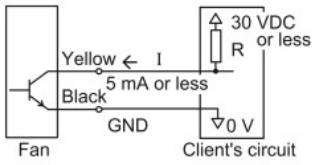
The yellow wire is lead wire for the pulse output. GND is common to the sensor and power supply. Connect these wires to the client's circuit as shown in the figure below. Two cycles of rectangular waves are output per rotation.



* **MDS1751-24SH** = 10 mA or less

■Stall alarm, electronic alarm type

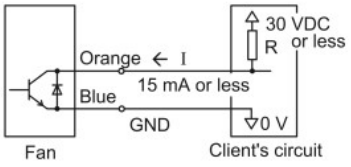
The yellow wire is lead wire for the alarm circuit. GND is common to the sensor and power supply. Connect these wires to the client's circuit as shown in the figure below. If the fan stalls while the power is on, an alarm signal (H level) is output.



Note
The stall alarm type of fan is not equipped with a delayed trip-point alarm circuit. Therefore, an external delay function is necessary to avoid the detection of fan start. The set time of the delay function should be at least one second.

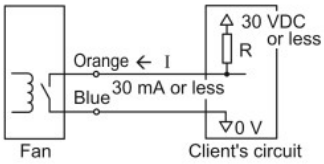
■Low-speed alarm, electronic alarm type

The orange and blue wires are lead wires for the alarm circuit. Connect these wires to the client's as shown in the figure below. An alarm (H level) signal is output when the fan's rotation speed falls below 2100 ± 400 r/min.



■Low-speed alarm, contact alarm type

The orange and blue wires are lead wires for the alarm circuit. Connect these wires to the client's circuit as shown in the figure. An alarm (H level) signal is output when the fan's rotation speed falls below 1800 ± 400 r/min.



Note
The low-speed alarm type of fan is equipped with an internal delayed-start alarm circuit. The alarm function becomes effective within 10 seconds of the fan start.

Overheat protection

The fan is equipped with an internal protective circuit against overheating. In the event a lock-up condition is detected, this function automatically controls the current flow to the fan motor's windings, thus preventing the fan blades from locking and burning out.
The fan resumes operation automatically as soon as it is released from the locked condition. Be sure to shut off the power to the fan before performing an inspection

• Please contact your nearest Oriental Motor office for further information.

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