

Confidential



No. 00-40930

DRAWING(S) FOR APPROVAL

To: APUTURE IMAGING INDUSTRIES CO., LTD.

D1225C12B5CP-B3

Issued : May 26,2020

Required date
for return : June 26,2020



Please return as soon as possible with your acceptance signature.

Please return by the required date,If no response or no return,
This spec is taken as the approved one by you.

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NIDEC SERVO CORPORATION

SAFETY Instructions

(Safety precautions)

We appreciate your purchase of our product.

Before using this product, please read the safety manual to insure safe and correct use of the product.

Although some items in this manual may not apply to your application, please read only the applicable items.

The specifications agreement will be given priority.

This instruction classifies the rank of safety precaution as [Warning] and [Caution].

[ Warning]

Handling the product without observing the instructions that accompany a [Warning] symbol may result in serious injury or death.

[ Caution]

Handling the product without observing the instructions that accompany a [Caution] symbol may result in injury or property damage.

Following the “Warning” and “Caution” instructions are very important for safety. In these instructions, the term “Motor” is used to reference - fan motor, pump motor, and gear head.

Warning

[General]

- Do not use the product in explosive or corrosive environments.–
- While power is being applied to the product, do not transport the product, do not handle the wiring of the product and do not conduct any maintenance on the product. Such work on the product can safely be done only after power have been disconnected for 10 minutes.
- Transportation, installation, piping, wiring, operation, maintenance, and inspection must be done only by the skilled and educated operators otherwise it may result in electric shock, injury and or fire.
- Do not touch the terminals of starting / phase advance condenser to prevent electric shock.

[Piping / Wiring]

- Wiring must be done correctly and securely to prevent electric shock, fire, and uncontrollable run.
- Do not bend, pull, or pinch the power supply cables and the lead wires to prevent electric shock.

[Installation / Setting]

- Ground terminal or ground wire must be set securely to prevent electrical shock.
- Use starting / phase advance condenser and electric components with the proper distance to prevent damage and fire.
- When installing the motor on a ceiling or a wall, the possibility of “accidental detachment” should be considered. The motor must be securely fastened to a stable and secure structure with adequate consideration to the motors weight and output.

[Operation]

- Do not operate the Motor in a condition where the electrical contacts are exposed.

- Do not touch the control circuit.
- Do not touch the rotating parts (shaft and propeller). Always maintain a safe distance from the motor.
- In case of power down, the motor must be turned completely off to prevent injury due to potential sudden restart condition.
- The motor may suddenly stop spinning. Provide safety measures to prevent damage to human life, body or property even if it cannot rotate.
- “Locked Rotor Condition” - In the case that the motor becomes “locked” or is unable to rotate, disconnect all power to the motor and wait 10 minutes before performing any maintenance.
- The motor control system does not have the function to hold the rotation against loads. In order to hold the rotation, install mechanical systems to hold.

Caution

[General]

- Do not operate the motor and the control device beyond its specifications to prevent electrical shock, injury, and damage.
- Do not put fingers or objects in the motor or the control device openings to prevent electric shock, injury, and fire.
- Do not operate if the motors and or control devices are damaged in any way.
- Do not remove the name plate of the motor.

[Transportation / Handling]

- Be careful while transporting the product not to drop and fall.
- Do not pull the lead wire when you take the product out from box as it may result in damage to the Product.

[Installation / Setting]

- Do not put any combustibles around or near the motor.
- Do not put any obstacles around the motor that might block ventilation.
- When coupling the motor to a load, be careful on centering between shaft and load, tensioning of belt and chain, and the parallelism with pulley. In case of direct coupling, pay attention to its precision. In case of using belt or chain, adjust the tension properly. Before operating, tighten the bolt of pulley and coupling firmly.
- Install a protection cover over the rotating part to prevent injury.
- Before coupling the motor to the equipment, confirm the rotating direction to prevent injury and equipment damage.
- Do not touch the keyway of the shaft edge with bare hands to prevent injury.

[Piping / Wiring]

- During insulation test, do not touch the terminals to prevent electric shock.

- The installation of another protection device (such as earth leakage breaker) beside overload protection is required to prevent burnout damage and fire.

[Operation]

- During operation, the motor and the control device are at high temperature. Be careful not to let your hands and body to touch them to prevent skin burn.
- Do not operate near corrosive environment, flammable gas environment and combustibles to prevent fire and damage.
- When abnormal operation occurrences, stop operation immediately to prevent electrical shock, injury, and fire.

[Maintenance / Inspection]

- During insulation test, do not touch the terminals to prevent electric shock.
- The frame of motor and control device is at high temperature. Be careful not to touch by your hands to prevent skin burn.

[Storage]

- Do not storage the product at locations where it can be exposed to - rain, water, corrosive gas / liquid, high temperature or high humidity to prevent electric leakage and damage.

[Repair / Disassembly / Modification]

- Do not repair, disassemble, or modify the product.
- Any repairs, disassembles or modifications to the product by customer immediately void the product warranty.

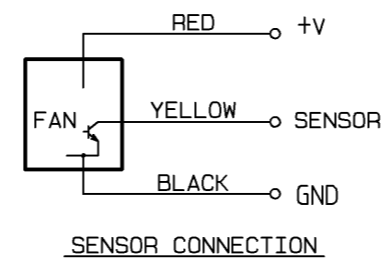
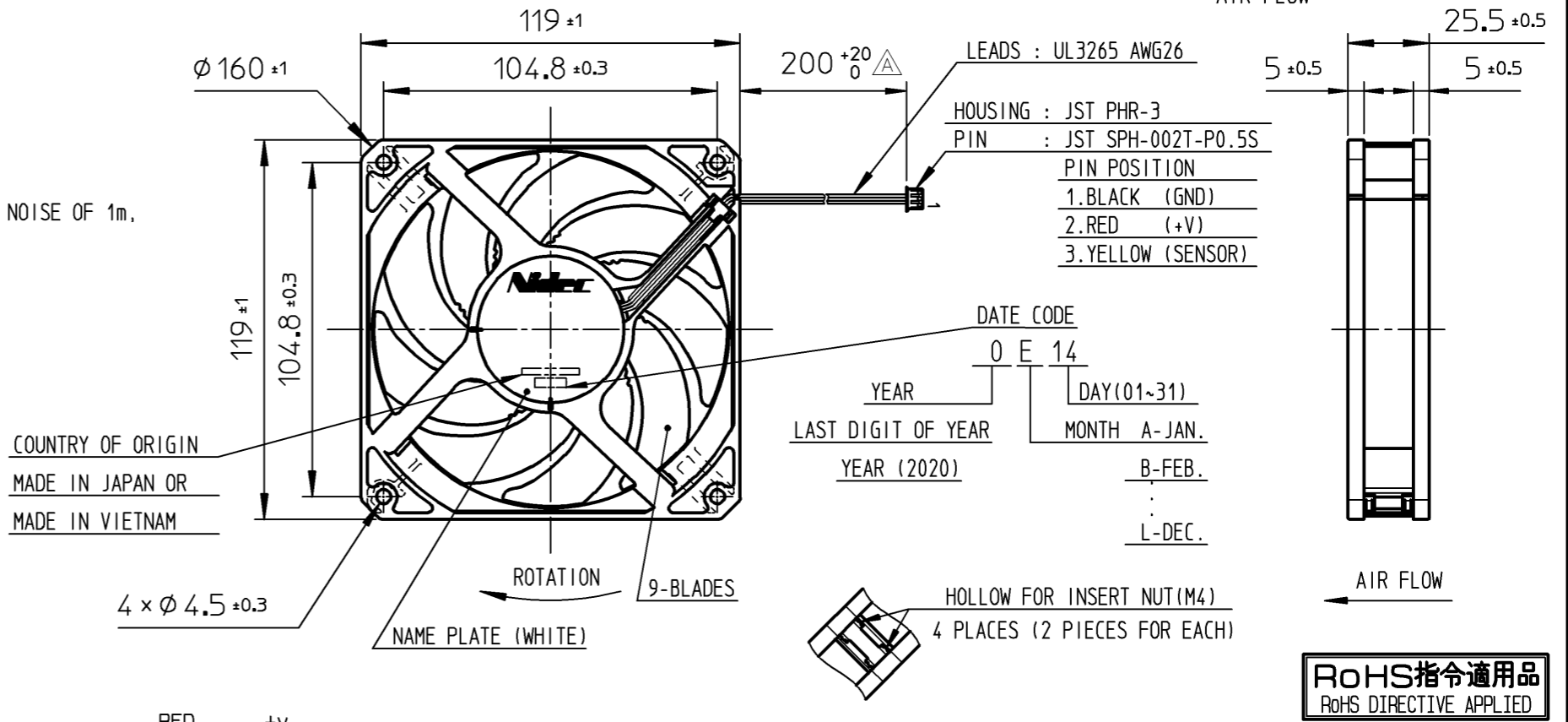
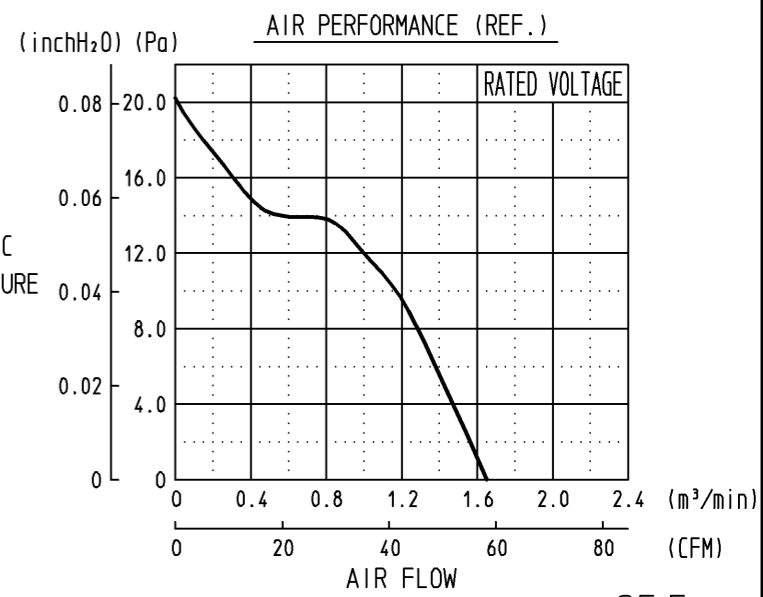
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1. MODEL D1225C12B5CP-B3
2. RATING
- 2.1 VOLTS 12VDC
 - 2.2 CURRENT 0.083A
 - 2.3 PHASE 1
 - 2.4 POLES 4
 - 2.5 DUTY CYCLE CONT.
3. AIR PERFORMANCE (DOUBLE CHAMBER METHOD)
- 3.1 MAX. STATIC PRESSURE 16Pa(0.064inchH₂O) MIN. (AT RATED VOL.,FREE AIR MAX. ROTATION)
(20Pa(0.08inchH₂O) AV.)
 - 3.2 MAX. AIR FLOW 1.47m³/min (51.9CFM) MIN.(AT RATED VOL.,FREE AIR MAX. ROTATION)
(1.65m³/min (58.3CFM) AV.)
4. ELECTRICAL PERFORMANCE
- 4.1 ROTATION SPEED 1630min⁻¹ MIN. (AT RATED VOL.,FREE AIR MAX. ROTATION)
(1850min⁻¹ AV.)
 - 4.2 CURRENT 0.1A MAX. (AT RATED VOL.,FREE AIR MAX. ROTATION)
(0.083A AV.)
 - 4.3 LOCKED CURRENT 0.44A PEAK MAX. (AT RATED VOL.)
(0.36A PEAK AV.)
 - 4.4 STARTUP CURRENT 0.44A PEAK MAX. (AT RATED VOL.)
(0.36A PEAK AV.)
 - 4.5 INSULATION CLASS A: IN CASE OF UL CLASS
 - 4.6 INSULATION RESISTANCE 10MΩ MIN. (AT 500VDC)
 - 4.7 DIELECTRIC STRENGTH 500VAC FOR ONE MINUTE
OR 600VAC FOR ONE SECOND
(BETWEEN LEADS AND FLAME CUT OFF CURRENT 5mA)
5. THE OTHERS
- 5.1 APPLICABLE VOLTAGE RANGE 5~13.2VDC (NOMINAL VOLTAGE:12VDC)
 - 5.2 OPERATING ENVIRONMENT RANGE -10~+60℃
(90% RELATIVE HUMIDITY MAX. NON CONDENSATION)
 - 5.3 STORAGE TEMPERATURE RANGE -20~+60℃
(90% RELATIVE HUMIDITY MAX. NON CONDENSATION)
 - 5.4 NOISE LEVEL 30dB MAX. (AT RATED VOL.,FREE AIR,
CONVERTED MEASUREMENTS OF 25cm FROM THE FRONT INTO THE NOISE OF 1m,
THE MEDIAN VALUE OF NOISE RANGE) (26dB AV.)
 - 5.5 APPEARANCE VENTURI :ABS/PBT GF30 RESIN(BLACK)
PROPELLER :ABS/PBT GF30 RESIN(GRAY)
 - 5.6 BEARING BALL BEARING
 - 5.7 EXPECTED LIFE 100,000 HOURS (AT RATED VOL. +35℃ L₁₀ LIFE)
55,000 HOURS (AT RATED VOL. +60℃ L₁₀ LIFE)
 - 5.8 TEMPERATURE RISE 40K MAX. (AT RATED VOL.,FREE AIR)
(BY THERMO-COUPLE METHOD)
 - 5.9 PROTECTION CURRENT SHUT DOWN BY LOCKED ROTOR DETECTION
(AUTO RESET)
THE FAN SHALL NOT BE DAMAGED WHEN THE FAN LOCKED
AT RATED VOLTAGE UNDER 24HOURS CONDITION.
 - 5.10 REVERSE PLARITY PROTECTION THE FAN SHALL NOT BE DAMAGED WHEN THE LEAD WIRES
CONNECTED IN REVERSE POLARITY.
 - 5.11 MOUNTING SCREW FORCE 0.98N·m MAX. WITH M4 SCREWS
 - 5.12 SAFETY STANDARD UL (File No.E48889)
TUV (File No.R-50004410)
 - 5.13 MASS 200g(REF.)
6. SENSOR PULSE OUTPUT TYPE(DWG.BB08801)
7. NOTE BLOWING AIR OF INDOOR USE.

7.2 APPLICATION ENVIRONMENT
PLEASE KEEP THE FAN BODY PORTION FREE FROM OIL,
GREASE,CHEMICALS AND POISONOUS GAS.
THIS PRODUCT IS TREATED WITH MOISTURE PROOF COATING ON
THE ELECTRONIC PARTS MOUNTING SURFACE OF PCB.
(COAT WITH PARAXYLENE COATING)
THIS FAN IS NOT PROVIDED ANY WATER-PROOF NOR DUST-PROOF
DEVICE,PLEASE AVOID APPLYING IN THE VAPOR CONDENSATION
OR DUSTY ENVIRONMENT.

7.3 OTHERS
PLEASE HANDLE CAREFULLY, AND DO NOT APPLY MORE THAN
19.6N TO THE LEAD CONNECTION POINTS.
WHEN ANY OF NEW ITEMS OTHER THAN SHOWN HERE ARE REQUIRED,
PLEASE LET US KNOW BEFOREHAND.
DC FAN HAS POSSIBILITY TO GENERATE SURGE VOLTAGE EVEN AT
POWER SUPPLY IS OFF. WHEN CONTROLLING DC FAN OPERATION BY
POWER ON/OFF,POSITIVE SIDE SHOULD BE CHOSEN TO DO SO.
IF NEGATIVE SIDE IS SWITCHED ON OR OFF,THERE IS A CHANCE OF
GENERATING HIGHER VOLTAGE SPIKES THAT MAY DAMAGE THE CIRCUIT
BUILT IN,WHEN POWER SUPPLY IS TURNED ON/OFF (MECHANICAL,ELECTRONICAL),
OR WHEN DC FAN IS INSTALLED IN A SENSITIVE AND HIGHLY RELIABLE
EQUIPMENT,INSERT A DIODE IN PARALLEL TO POWER SUPPLY.
THE POWER SUPPLY MUST BE A PURE DC. IF THE SUPPLY CONTAINS ANY RIPPLE,
THE CHARACTERISTICS AND THE RELIABILITY CAN NOT BE GURANTEED.
THE CHARACTERISTIC VALUES EXCEPT FOR LIFE EXPECTANCY ARE NORMAL
TEMPERATURE AND NORMAL HUMIDITY.

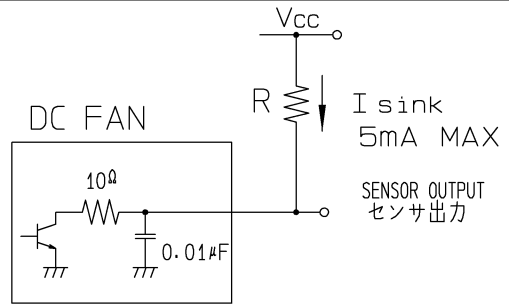
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入庫 REGISTERED	設計 DESIGNED	V. Hoan	Mar-14-20	尺度 SCALE	外形図 OUTLINE	3角法 THIRD ANGLE PROJECTION
製図 DRAWN	V. Hoan	May-21-20	N. T. S			
審査 CHECKED	N. Nguyen	May-25-20	DWG.SIZE	A3	D1225C12B5CP-B3	図番 DWG.NO. AS81792
承認 APPROVED	M. Mimura	May-25-20				
単位 DIMENSIONS	日本電産サーボ株式会社 NIDEC SERVO CORPORATION			A		

記事 REMARK PULSE SENSOR SPECIFICATION
パルスセンサ仕様書
(PULSE OUTPUT TYPE:MODEL CODE:P)

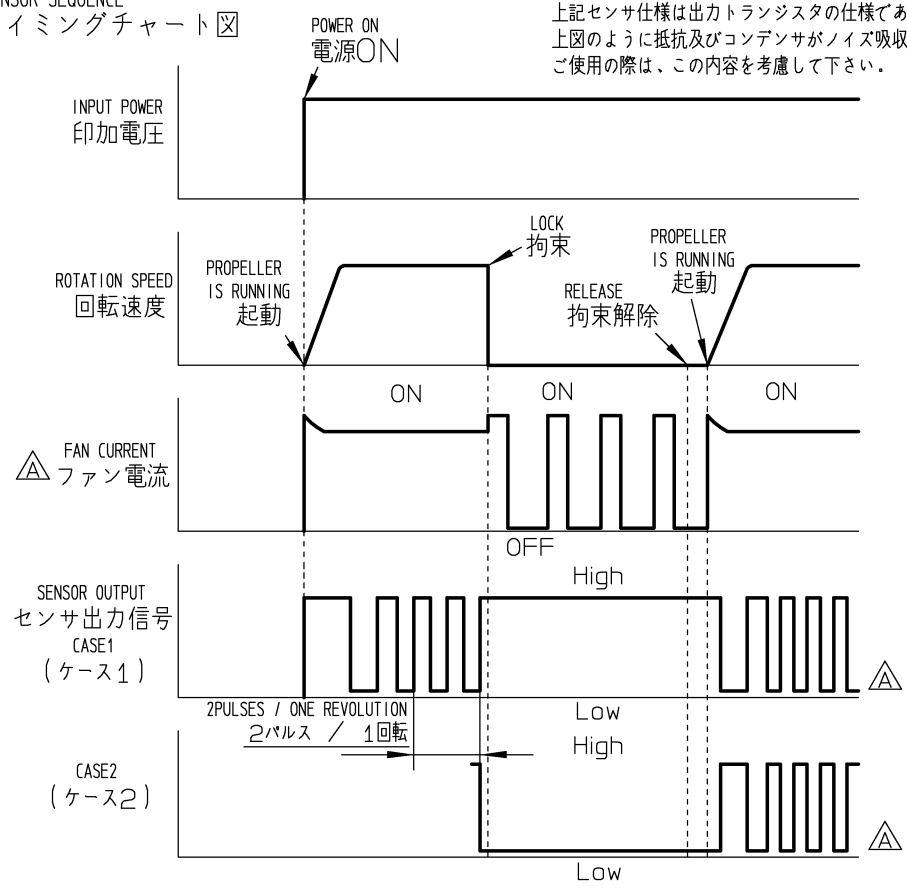
- 1. センサタイプ PULSE OUTPUT TYPE
パルスセンサ
- 2. 出力方式 OPEN COLLECTOR
オープンコレクタ
- 3. 仕様 SPECIFICATION
MAXIMUM PULL UP VOLTAGE FAN MAXIMUM INPUT VOLTAGE
 - 最大プルアップ電圧 V_{CC} : ファン使用最大電圧
 ROOM TEMPERATURE (常温・常湿時)
 SATURATION VOLTAGE
 飽和電圧 $V_{CE(sat)}$ 0.5V MAX
 OUTPUT CURRENT
 出力電流 I_{sink} 5mA MAX



NOTE
OUTPUT SENSOR CIRCUIT INCLUDE RESISTOR AND CAPACITOR FOR REDUCE THE NOISE AS DIAGRAM.
PLEASE TAKE NOTICE OF THE CONDITION FOR USE.

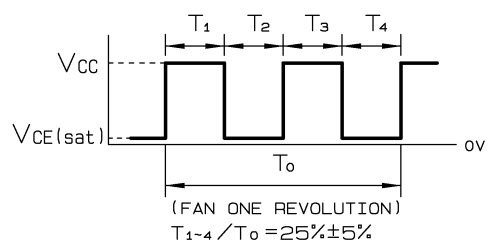
注記
上記センサ仕様は出カトランジスタの仕様であり、ファン内部にはトランジスタの他に
上図のように抵抗及びコンデンサがノイズ吸収の為に付加されています。従いまして
ご使用の際は、この内容を考慮して下さい。

4. タイミングチャート



NOTE
SENSOR OUTPUT PATTERN WITH LOCKED PROPELLER IS EITHER CASE1 OR CASE2
DEPENDING ON POSITION TO LOCK.

注記
モータ停止時および拘束時のセンサ出力信号はモータの停止位置に応じて
ケース1または、ケース2の波形を出力します。



改訂 記号	承認	審査	作成者	改訂 年月日	設計変更 通知票番号	対象範囲		改訂内容
						項番	頁	
—	タンノ	シライシ	マツハシ	2009.01.30				新規作成
A	マツハシ	マツハシ	オカバ	2011.02.09	11-0256	01	01	4項 電-FAN電、センサ出力のタイミングチャート修正



日本電産サーボ株式会社
NIDEC SERVO CORPORATION

図番 DWG.NO.
BB08801A01

单击下面可查看定价，库存，交付和生命周期等信息

[>>Nidec\(尼得科\)](#)