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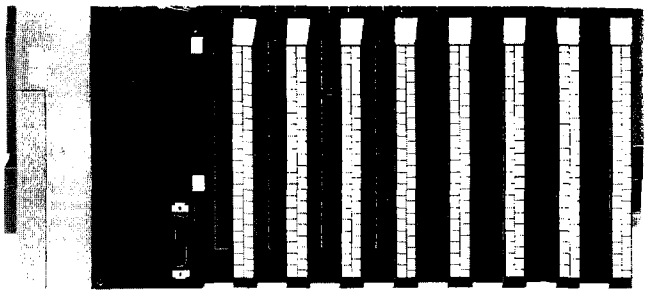
Find the *Oriental Motor UI215GA* at our website: *Click HERE*

Intelligent Stepping Motor Driver

UI 215GA

SUPER VEXTA®

The **UI 215GA "INTELLIGENT DRIVER"** takes a high performance step motor driver and adds microprocessor intelligence. Designed for programmable controller compatibility, it is easy-to-use, and yet flexible enough to meet a wide variety of motion control applications.



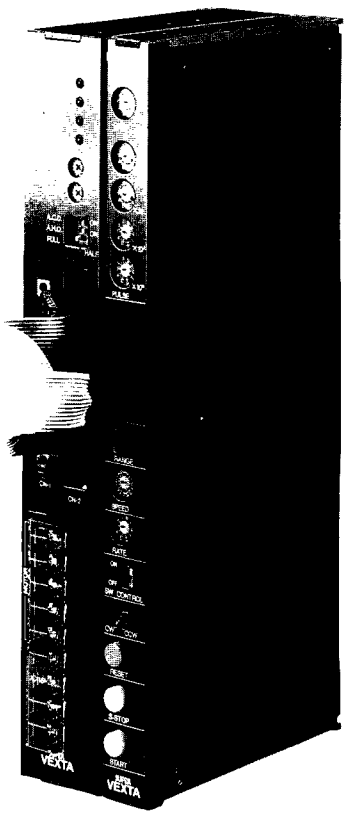
Hook up the motor to the UI 215GA.
Set the motion parameters, and press the start button.
It's that easy!

The **UI 215GA INTELLIGENT DRIVER** can be used with or without the **DP-01** Data Pack, giving it the flexibility to be used in a wide variety of motion control applications.

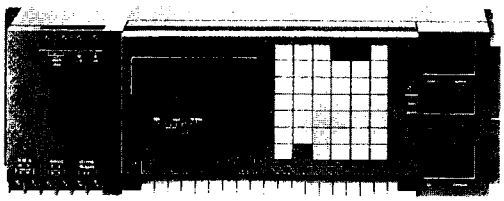
By adding the **DP-01** Data Pack, the **UI 215GA** becomes a preset- indexer, repeating exactly the same movement with each "start" signal. These "start" signals can be issued by a programmable controller or a switch, or the **UI 215GA/DP-01** pair can be used as a stand-alone unit.

NOTE: The **UI215GA INTELLIGENT DRIVER** itself (without the **DP-01**) can be controlled by an external source such as a Programmable Controller, binary coded decimal (BCD) thumbwheel switches, other dry contact switches or open-collector transistor switches. All of the motion data; starting speed, running speed, accel/decel rate, direction, length of travel and the operating mode can be set by simply turning "ON" one or any combination of the inputs to perform the desired motion.

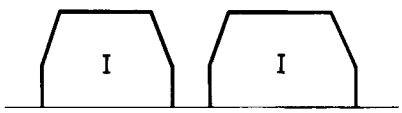
Intelligent Driver
UI 215GA



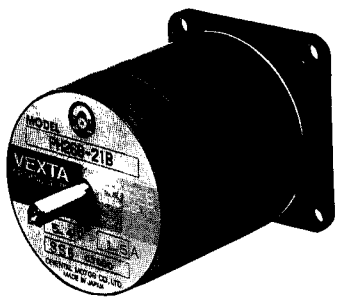
Programmable Controller



Start Signal



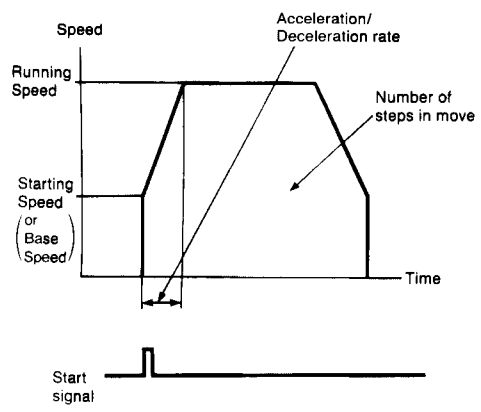
Each "Start" signal triggers the repeat of the index motion set by the **DP-01**.



Data Pack
DP-01
(Available separately)

Setting up the **UI 215GA** is practically effortless because everything has been built-in: a microprocessor for pulse generation, the phase logic and power amplifier to run the step motor, and the power supplies for the motor and logic.

Typical Motor Motion Profile



Note: The starting speed is internally fixed and cannot be changed.

Use the **UI 215GA** with the **DP-01** as a preset indexer·····

Intelligent Driver
UI 215GA

Data Pack DP-01
(Available separately)

Programmable Controller



Start

Number of steps, running speed and acceleration/ deceleration rate are preset by the user.

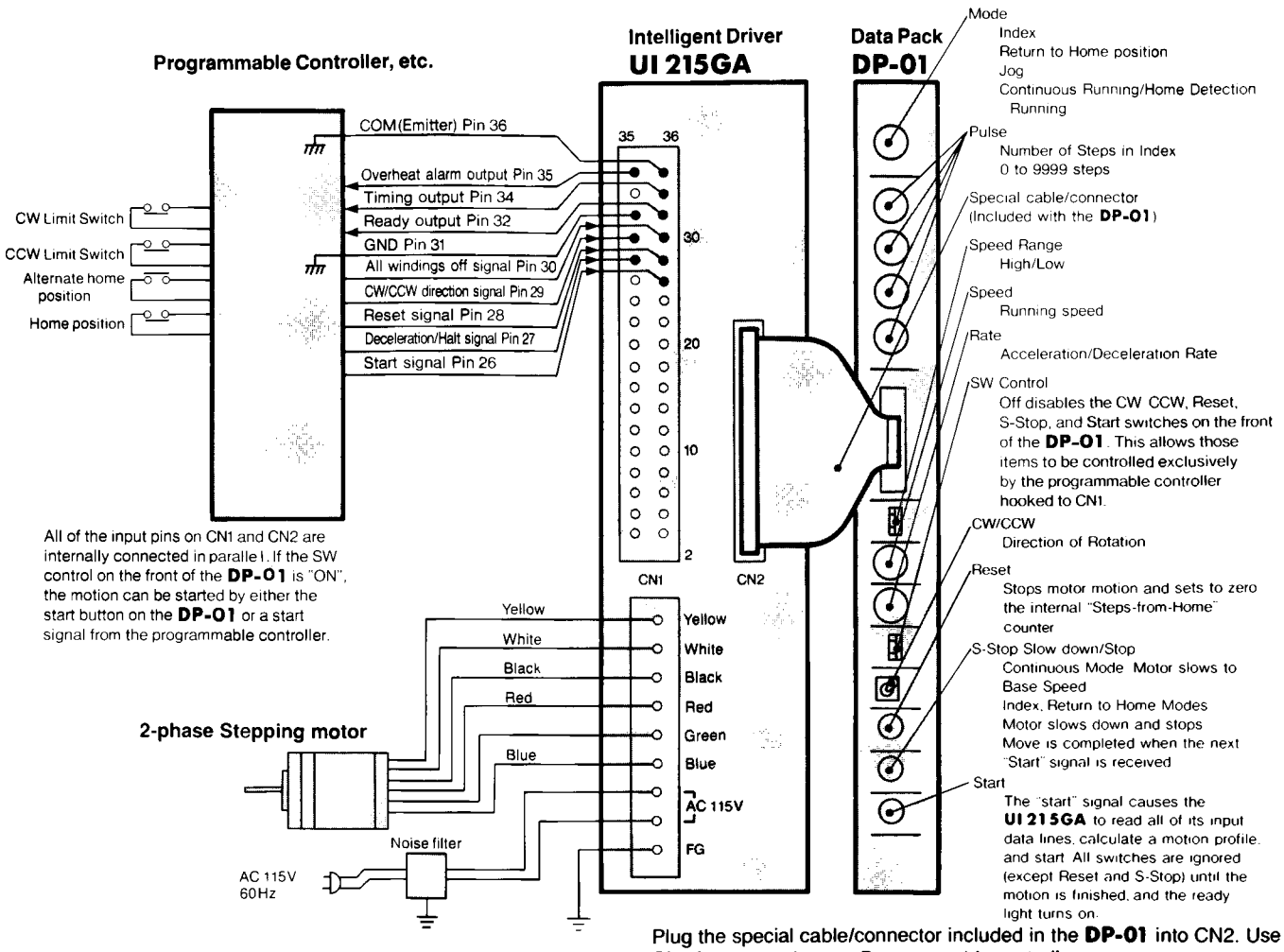


Stepping Motor

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Wiring Diagrams

1. When Data Pack **DP-01** is used



All of the input pins on CN1 and CN2 are internally connected in parallel. If the SW control on the front of the **DP-01** is "ON", the motion can be started by either the start button on the **DP-01** or a start signal from the programmable controller.

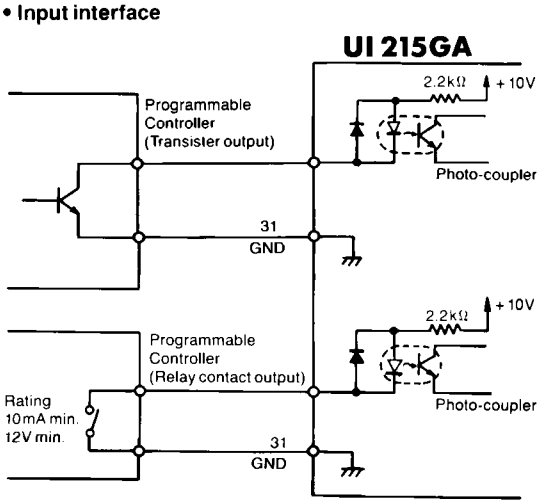
Plug the special cable/connector included in the **DP-01** into CN2. Use CN1 for connecting to a Programmable controller.

■ Interfacing Programmable Controllers to the **UI 215GA**

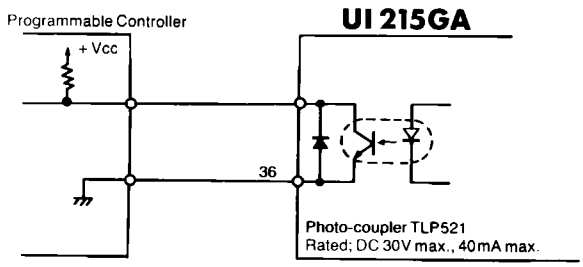
All of the input circuits are isolated by photo-couplers.

Direct control through switches or open collectors is possible because of the **UI 215GA**'s internal DC power supply.

• **Input interface**



• **Output interface**

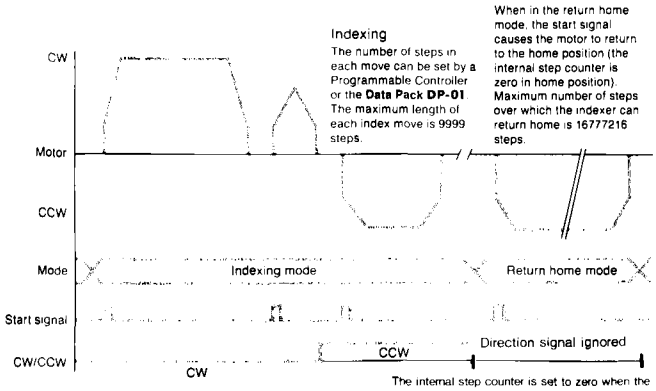


Specifications

The UI 215GA can operate in four different modes. The mode is controlled by the two mode lines from a programmable controller, or the mode switch on the DP-01. The modes are:

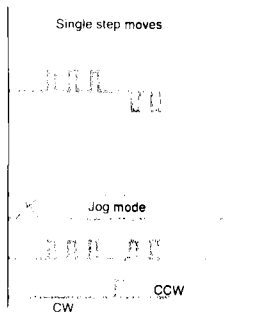
Mode 0: Index Motion

Mode 1: Return to Home Position



If Deceleration/Halt signal is received while the motor is in motion, the driver automatically decelerates and comes to a controlled halt. When the Start signal is received, running resumes for the remaining number of steps.

Mode 2: Jog

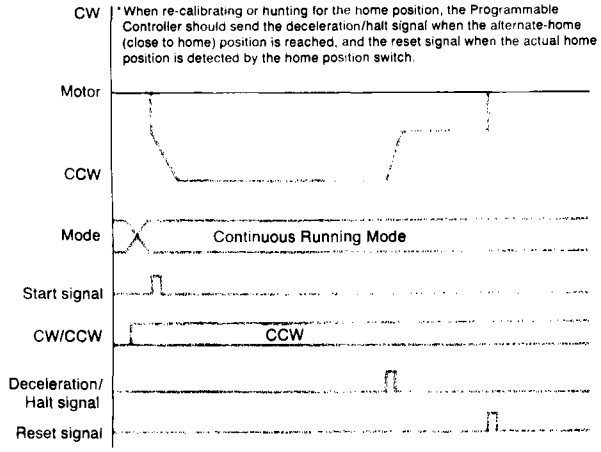


Motor moves one step for each "start" signal, or moves at 5pps if the Start signal "ON" continuously.

Mode 3: Continuous Running/Home Detection Running

*The motion is started by the start signal. When the Deceleration/Halt signal is received, the motor decelerates to the base speed (the internally fixed starting speed) and continues at that speed. The motion is halted when the Reset signal is received.

*When re-calibrating or hunting for the home position, the Programmable Controller should send the deceleration/halt signal when the alternate-home (close to home) position is reached, and the reset signal when the actual home position is detected by the home position switch.



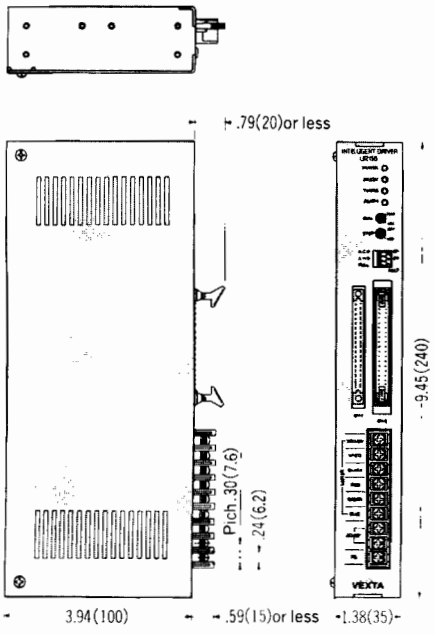
Specifications
Intelligent driver UI 215GA

Model		Driver with built-in indexer
Input power		115V 60Hz
Power consumption		130VA or less
Driver Section	Drive type Drive Output Power Excitation mode	Unipolar constant-current chopper (PWM) Total of both phases 1A ~ 3A 2-phase on (Full step) or 1-2 phase on (Half step) Switch selectable
Pulse generator section	Running modes	Index motion / Continuous running / Home detection running / Jog / Return to home position
	Step speed	Speed range: Low speed: 50 pps (fixed) / 50—1000 pps (16 rates); High speed: 300 pps (fixed) / 1200—5000 pps (16 rates); Acceleration/deceleration rate: 3 rates / 3 rates
	Number of index steps	Decimal; 4-digit; 0 ~ 9999 steps
	Maximum number of steps from home	16777216 steps
	Method of setting home	Static method
Input/Output signal characteristics		(Input) Opto-isolated input (Photo-coupler) DC 24V, 10mA maximum Input resistance 2.2K ohms Common GND input (Output) Opto-isolated output (Photo-coupler) Open-collector output; Emitter common DC 30V, 40mA maximum
Functions	Auto current cutback at standstill [ACD-Auto current down]	After the motor has been stopped for approximately 0.1 seconds, the motor current is automatically reduced to between 30% and 80% of the selected running current. (Switch selectable override)
	Auto thermal cutout [AHO-Auto heat off]	When the temperature of the driver's internal heat sink reaches approximately 175°F (80°C), the alarm indicator on the front panel lights up and motor current is shut off. The overheat alarm signal is also sent to the connector(CN1). (The output current shut-off function has a switch selectable override)
	Timing signal Phase 0 excitation indicator	The step motor phase excitation sequence is repeated every four full steps. When the step motor is in the "step 0" position, the Timing indicator on the front panel lights. For full step (2 phase on) operation, the timing indicator lights every 4 steps. When in the half step (1-2 phase on) mode, the indicator lights every 8 steps. The timing signal is also sent to the connector (CN1) for external use.
Ambient working temperature		32° ~ 104°F (0° ~ 40°C)
Outer dimensions		Approximately 1.4"(W) × 9.5"(H) × 4"(D) [35 (W) × 240 (H) × 100 (D) mm]
Weight		Approximately 1.8lbs (800g)
Dielectric Strength		Sufficient to withstand AC 1KV applied for one minute, between the input power terminal and the case.
Insulation resistance		Greater than 100M ohms when measured between the power source input terminal and the case by a DC 500V megger.

Dimensions unit = inch (mm)

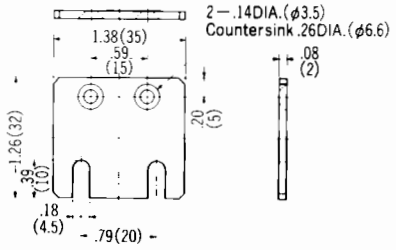
Intelligent Driver UI 215GA

• UI 215GA Scale 1:4

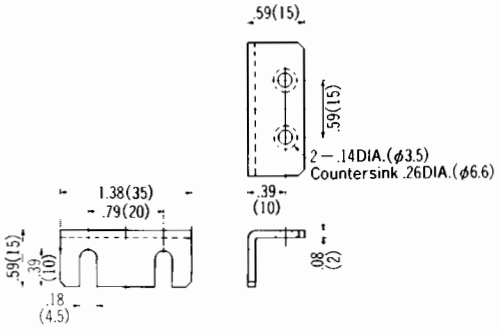


Accessories (included) Scale 1:2

• Mounting tab A

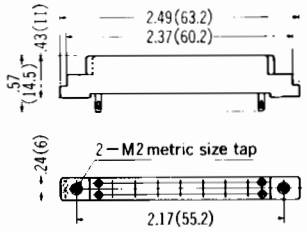


• Mounting tab B



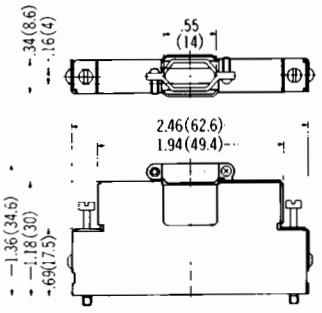
• Female Connector for CN1

PCA-36FES (Honda Tsushin Kogyo Co., Ltd.)
Solder type



• Case of Female Connector for CN1

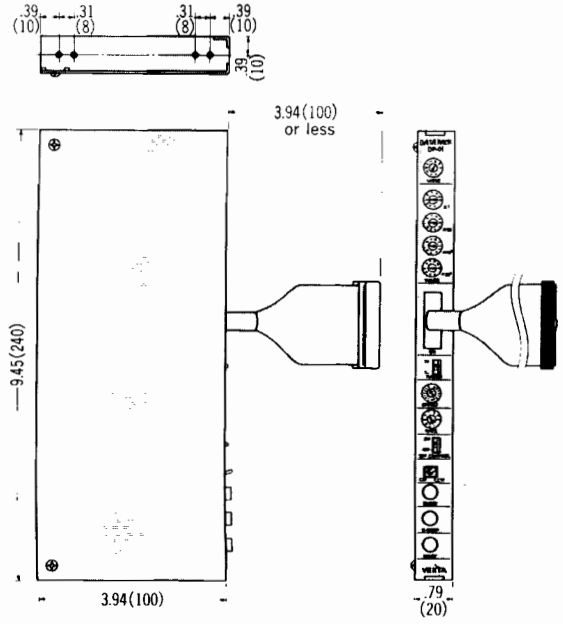
PCA-36LSM (Honda Tsushin Kogyo Co., Ltd.)



Mounting tabs A and B, mounting screws, connector and connector cover are all included with the **UI 215GA**.

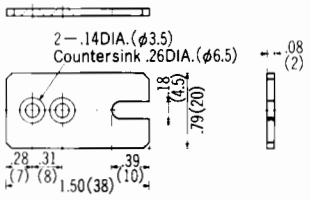
Data Pack DP-01

• DP-01 Scale 1:4

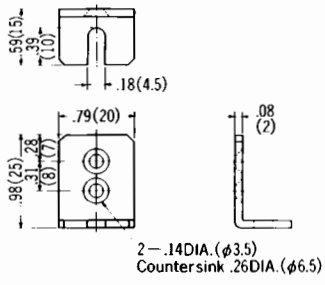


Accessories (included) Scale 1:2

• Mounting tab A



• Mounting tab B

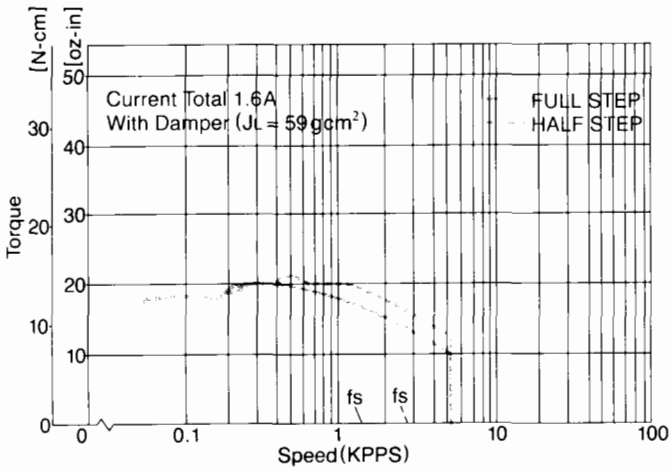


Speed vs. Torque Characteristics

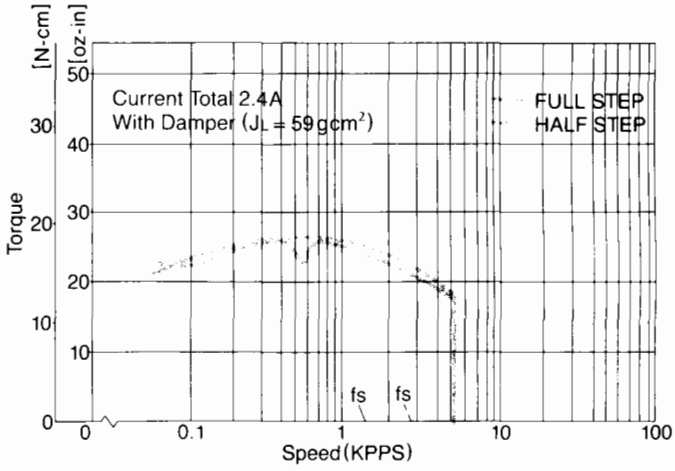
1.8°/step type

Note: Holding torque is reduced during motor stops by automatic current cutback function.
fs: No load self starting frequency.

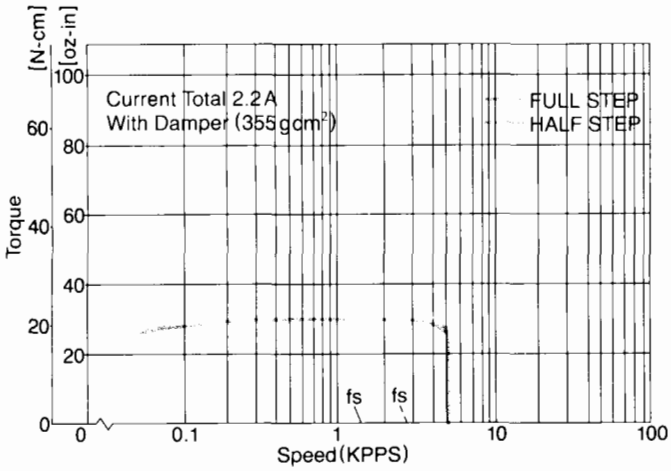
(Single shaft)
(Double shaft)



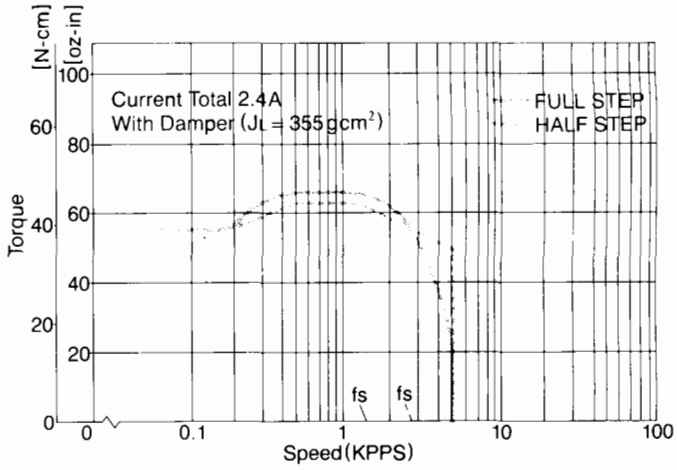
(Single shaft)
(Double shaft)



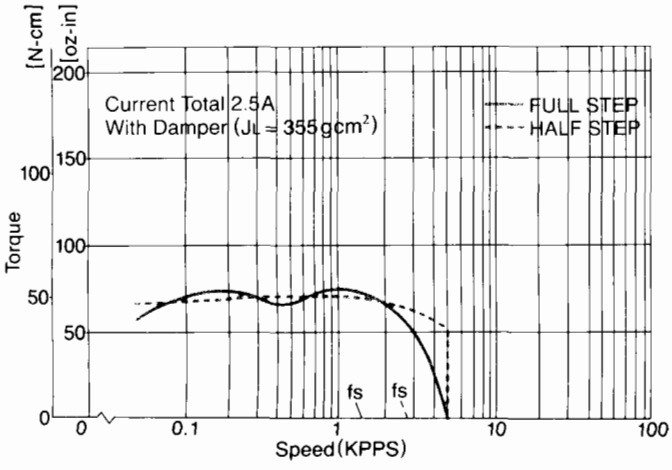
(Single shaft)
(Double shaft)



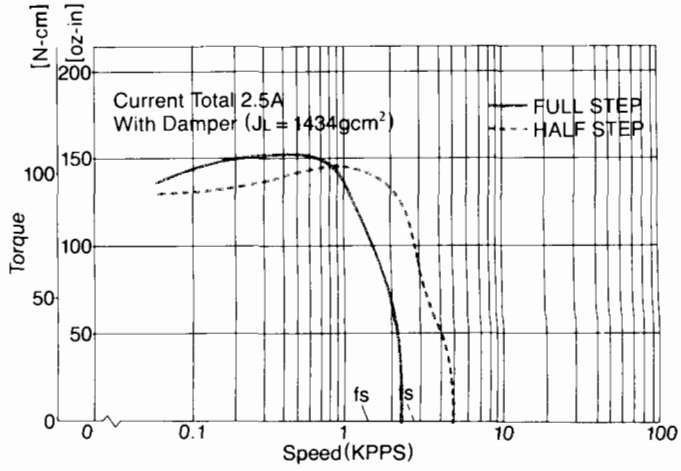
PH266-01 (Single shaft)
PH266-01R (Double shaft)

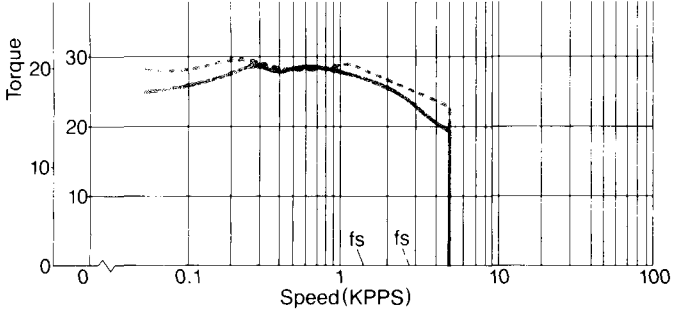


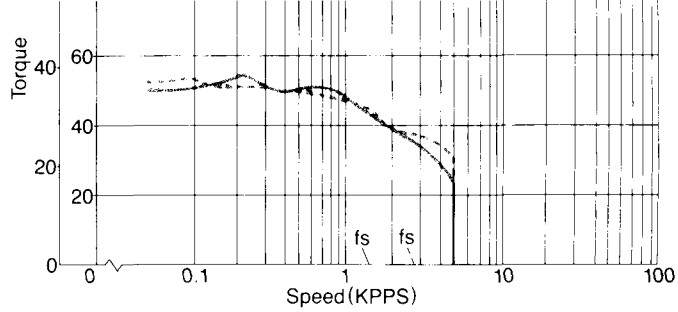
(Single shaft)
(Double shaft)



PH296-02 (Single shaft)
PH296-02R (Double shaft)





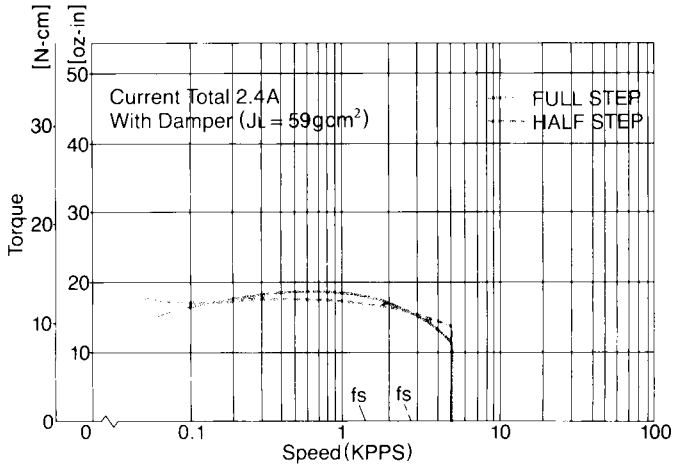


MOTOR INFORMATION

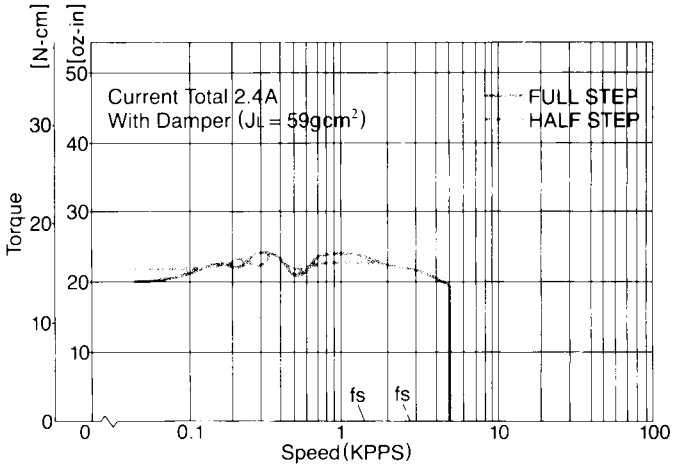
Motor	Total current (Both phases) (A)	Phase current (A/phase)	Holding Torque (oz-in)	Step Angle (deg)	Motor Size Dia. x Length
PX244-02AA (BA)	1.6	0.8	22.2	1.8°	1.65" x 1.54"
PX245-01AA (BA)	2.4	1.2	31.9	1.8°	1.65" x 1.85"
PH264-01 (B)	2.2	1.1	40.3	1.8°	2.22"ϕ x 1.54"
PH266-01 (B)	2.4	1.2	83.3	1.8°	2.22"ϕ x 2.13"
PH268-21 (B)	2.5	1.25	125	1.8°	2.22"ϕ x 2.99"
PH296-02 (B)	2.5	1.25	174	1.8°	3.27"ϕ x 2.44"
PX244M-01AA(BA)	2.4	1.2	16.6	0.9°	1.65" x 1.54"
PX245M-01AA(BA)	2.4	1.2	23.6	0.9°	1.65" x 1.85"
PH264M-31 (B)	1.7	0.85	25	0.9°	2.22"ϕ x 1.54"
PH265M-31 (B)	2.2	1.1	52.8	0.9°	2.22"ϕ x 2.01"

0.9°/step type

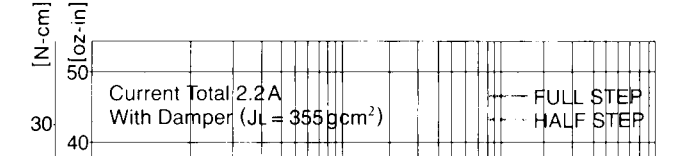
PX244M-01AA (Single shaft)
PX244M-01BA (Double shaft)



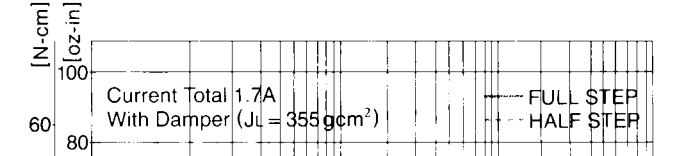
PX265M-01AA (Single shaft)
PX265M-01BA (Double shaft)



PH264M-31 (Single shaft)
PH264M-31B (Double shaft)

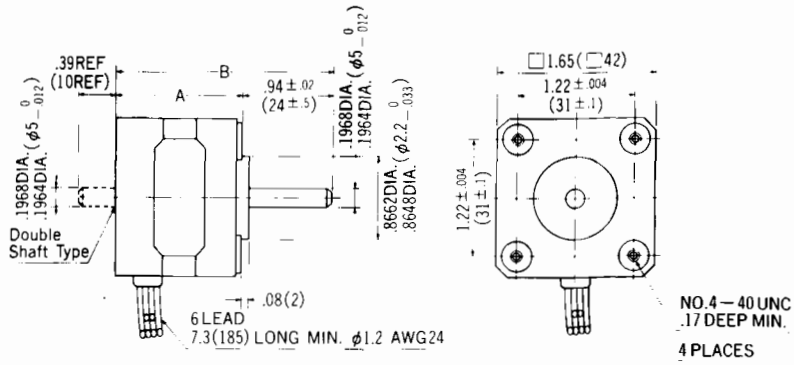


PH265M-31 (Single shaft)
PH265M-31B (Double shaft)



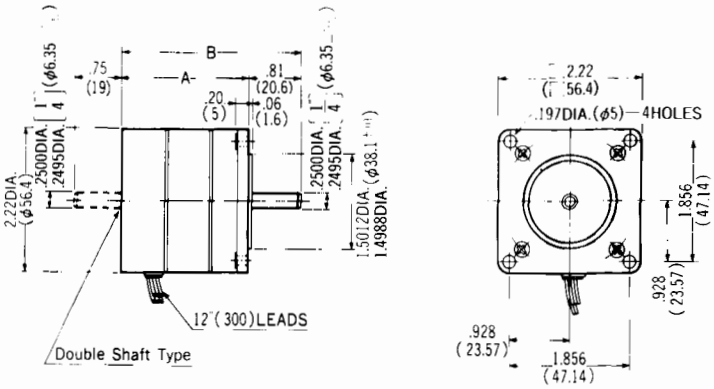
2-phase Stepping Motors
(Available separately)

PX24□ Type Scale 1:2, Unit = inch (mm)



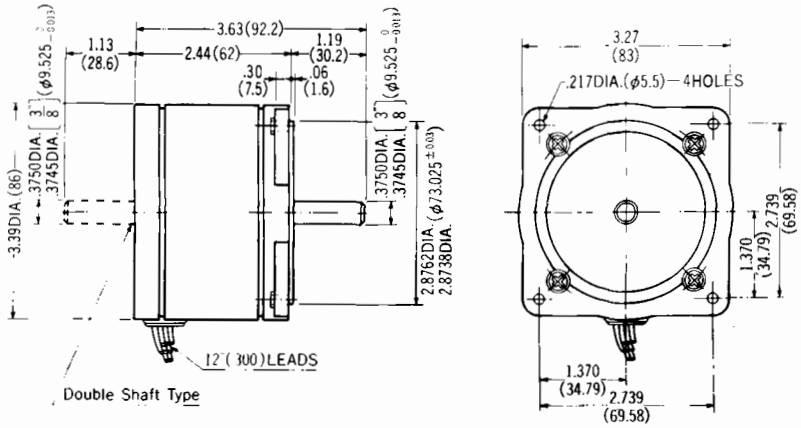
Model		A	B
Single Shaft	Double Shaft		
PX244-02AA	PX244-02BA	1.54 (39)	2.48 (63)
PX244M-01AA	PX244M-01BA		
PX245-01AA	PX245-01BA	1.85 (47)	2.80 (71)
PX245M-01AA	PX245M-01BA		

PH26□ Type Scale 1:3, Unit = inch (mm)



Model		A	B
Single Shaft	Double Shaft		
PH264-01	PH264-01B	1.54 (39)	2.35 (59.6)
PH264M-01	PH264M-01B		
PH265M-01	PH265M-01B	2.01 (51)	2.82 (71.6)
PH266-01	PH266-01B	2.13 (54)	2.94 (74.6)
PH268-21	PH268-21B	2.99 (76)	3.80 (96.6)

(Single shaft)
(Double shaft) Scale 1:3, Unit = inch(mm)



Oriental Motor reserves the right to make engineering refinements without notice.

XSVU-13

SUPER VEXTA®

BY: ORIENTAL MOTOR U.S.A. CORP.

Head and Los Angeles Office:
2580 West 237th Street
Torrance, California 90505-5217
Tel: (310) 515-2264
FAX: (310) 515-2879

San Jose Office:
1600 Wyatt Dr., Suite 2
Santa Clara, California 95054
Tel: (408) 988-2655
FAX: (408) 988-4983

Chicago Office:
5420 Newport Dr., Suite 51
Rolling Meadows, Illinois 60008
Tel: (708) 577-0310
FAX: (708) 577-0334

New York Office:
369 Passaic Avenue
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