

Controllers

Reference Various cables G120 – G121



GSC-01	GSC-02	SHOT-702	GIP-101
			
 G108	 G109	 G110	 G111
Standard driver (full step/half step)			
0.75A/phase rated motor or lower			
Single axis	1 – 2 axes	1 – 2 axes	Single axis

OSMS-ZF OSMS-40/60YAW SGSP-ACT-B0 OSMS-40 series	
TAMM40/60 OSMS-60 HPS OSMS20/26 series	
OSMS33 OSMS-80/120/160YAW TAMM100 KLSS/KLSS series	
HST series	
OSMS(CS) series	
HST(GS) series	

Part Name		1 axis Stage Controller	2 axis Stage Controller	2 axis Stage Controller	Intelligent Positioning System
Part Number		GSC-01	GSC-02	SHOT-702	GIP-101
Primary Functions	Controller Function	○	○	○	○
	Number of Control Axes	1	2	2	1
	Stored Program Control	—	△	—	—
	Feedback Control	—	—	—	—
	Circular Interpolation Control	—	—	—	—
	Linear Interpolation Control	—	—	—	—
	Driver Function	Standard	Standard	Standard	Micro-step
General Specifications	Micro-step (Max. Division)	2	2 (half step only)	250	250
	Driving Current (A/phase)	0.8	0.8	1.1	0.75
	Power Voltage	DC24V 1.2A	DC24V 2A	AC100 – 240V 50/60Hz	AC100–240V 50/60Hz
	Power Consumption	30VA	48VA	50VA	100VA
	External Dimensions (W×H×Dmm)	47×90×125	180×40×125	260×70×280	145×205×81
Interface	Weight (kg)	0.4	0.7	2.8	2.0
	GP-IB	—	—	—	—
	RS232C	○	○	○	○
	USB	—	—	—	—
	Ethernet	—	—	—	—

HSC-103	SHOT-302GS	SHOT-304GS	HIT-M	HIT-S/HIT-SH	PGC-04-U
					
 G112	 G113	 G113	 G114	 G114	 G116
Micro-step driver					
0.75, 1.4A/phase rated motor or lower	1.4A/phase rated motor or lower	1.4A/phase rated motor or lower	1.4A/phase rated motor or lower	1.4A/phase rated motor or lower	1.4A/phase rated motor or lower
1 – 3 axes	1 – 2 axes	1 – 4 axes	1 – 8 axes	1 – 8 axes	4 axes
D15RP-CA cable (OSMS-40ZF SGSP-ACT-B0 Not compatible)	D15RP-CA cable	D15RP-CA cable	D15RP-CA cable (*HIT-SH:Not compatible)	Driver/ MINI-CA-SG cable	Driver/ MINI-CA-SG cable (OSMS20/26: DAC-SG cable)
D15RP-CA cable (OSMS20/26: D15D15A cable)	D15RP-CA cable (OSMS20/26: D15D15A cable)	D15RP-CA cable (OSMS20/26: D15D15A cable)	D15RP-CA cable (OSMS20/26: D15D15A cable) (*HIT-SH:Not compatible)	Driver/ MINI-CA-SG cable (OSMS20/26: DAC-SG cable)	Driver/ MINI-CA-SG cable (OSMS20/26: DAC-SG cable)
D15D15A cable	D15D15A cable	D15D15A cable	D15D15A cable (*HIT-SH:Not compatible)	Driver/DAC-SG cable	Driver/DAC-SG cable
D15D15A cable	D15D15A cable	D15D15A cable	D15D15A cable (*HIT-S:Not compatible)	Driver/DAC-SG cable	Driver/DAC-SG cable
Not compatible	D15D15A/GSEF cable	D15D15A/GSEF cable	D15D15A/GSEF cable (*HIT-SH:Not compatible)	Not compatible	Not compatible
Not compatible	D15D15A/GSEF cable	D15D15A/GSEF cable	D15D15A/GSEF cable (*HIT-S:Not compatible)	Not compatible	Not compatible

3 axis Stage Controller	2 axis Stage Controller	4 axis Stage Controller	Extensible Stage Controller (Master)	Extensible Stage Controller (Slave)	Pulsus Generating Controller
HSC-103	SHOT-302GS	SHOT-304GS	HIT-M	HIT-S/HIT-SH	PGC-04-U
○	○	○	○	—	○
3	2	4	1 – 8	—	4
○	○	○	○	—	○
—	Glass scale	—	*Glass scale	—	—
○	○	○	○	—	○
3 axes	2 axes	3 axes	—	3 axes	3 axes
Standard	Micro-step	—	Micro-step	—	—
40	250	—	250	—	—
0.75/1.4	1.4	—	1.1/1.4	—	—
AC100–240V 50/60Hz	AC100–240V 50/60Hz	—	DC24V 1A (HIT-SH: 2A)	—	DC24V 1.4A
200VA	160VA	300VA	24VA	—	34VA
260×90×280	270×118×302	—	130×120×50 (HIT-SH: 130×120×65)	—	180×140×60
3.3	5.5	6.5	0.62	0.63/0.72	1.0
—	○	○	—	—	—
—	○	○	○	—	—
○	○	○	○	—	○
—	—	—	○	—	○

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40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm

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40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm

Others

Drivers



Part Name	
Part Number	
Primary Functions	Driving Motor
	Drive System
	Driving Current (A/phase)
	Excitation System
	Number of Divisions
	Input Signal
	Input Logic
	Max. Response Frequency
	Auto Current Down OFF Input
	Motor Excitation OFF Input
General Specifications	Micro-step Selection Input
	Origin Excitation Timing Output
	Input Voltage
	Operating Temperature Range
	External Dimensions (W×H×Dmm)
Weight (kg)	

Stage	Motor Used	Basic Step Angle [°]	Phase Current [A/phase]	External Dimension [W×H×Dmm] (excluding shaft)
OSMS40-5ZF-0B SGSP-ACT series	  PK513PA-C21 PK513PB-C9	0.72	0.35	20×20×72
OSMS20-35 OSMS20-85 HDS-60 series	  TS3664N4E10		24×24×31	
OSMS-40/60YAW series	 TS3664N4E10		24×24×31	
OSMS26 OSMS60-ZF SGSP-60A/B TAMM OSMS-40/60 OSMS-80/120/160YAW HPS HDS-80/120 series	 PK523HPB-C12 PK525HPB-C4		0.75 28×28×32 28×28×51.5	
OSMS80-20ZF-0B	 A7177-90215KTG	0.036	1.4	28×28×61.3
OSMS33 series	 TS3667N43E967			42×42×47
HST-120/160YAW series	 PKP546N18B	0.72		60×60×56.5
HST-50 / HST(GS)-50 HST-100 / HST(GS)-100 HST-200 / HST(GS)-200 series	 PKP544N18B PKP546N18B			60×60×46.5 60×60×57.5 60×60×87



Compact Driver	Compact Driver	Compact Micro-step Driver	Micro-step Driver	Micro-step Driver
SG-5MA	SG-5M	MC-S0514ZU	SG-514MSC	MC-7514PCL
5-phase stepping motor				
Bipolar constant current pentagon drive				
0.25 – 0.85	0.5 – 1.4	0.35 – 1.4	0.3 – 1.4	0.5 – 1.4
Full/Half step		Micro-step		Micro-step
Two types 1, 2		16 types*1 1, 2, 4, 5, 8, 10, 16, 20, 25, 40, 50, 80, 100, 125, 200, 250		16 types 1, 2, 4, 5, 8, 10, 16, 20, 25, 40, 50, 80, 100, 125, 200, 250
1 clock input method 2 clock input method		1 clock input method 2 clock input method		1 clock input method 2 clock input method
Photocoupler input		Photocoupler input	C-MOS equivalent negative logic input*2	Photocoupler input
50kpps		500kpps	500kpps	500kpps
None		None	None	Equipped
Equipped		Equipped	Equipped	Equipped
None		Switching by the number of division setting switch	4 bit signal input	Switching by the number of division setting switch
None		Equipped	Equipped	Equipped
DC20 – 40V 1.5A Max		DC20 – 40V 3A Max	For motor drive: DC24 – 36V ±10% 2A or lower For logic: DC5V ±5% 0.1A or lower	AC100 – 230V±10% 50/60Hz 3.5A Max
0 – 40°C 77×32×45		0 – 40°C 99×28×47	0 – 40°C 91×36×70	0–40°C 170×130×39
0.1		0.1	0.2	0.75

*1: Dip switch can be used for switching 2 series/3 series
*2: PGC-14-U; Not compatible

○	×	○	○	×
○	○	○	○	○
○	○	○	○	○
○*	○	○	○	○
○*	○	○	○	○
○*	○	○	○	○
○*	○	○	○	○
○*	○	○	○	○
×	○	○	○	○
×	○	○	○	○

* Can be used with 0.75A/phase.

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