Peripherals for Motorized Stages

Spec.Change Printed in Purple

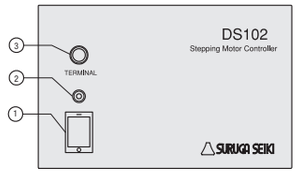
Features: Compact and lower priced controller incorporating the 2-Axis driver for driving the 5-Phase Stepping Motor (0.75A/Phase).

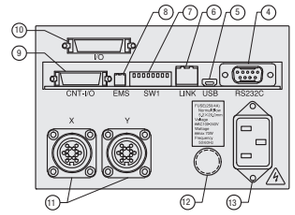
MSCTL102

MSCTL112

RoHS10

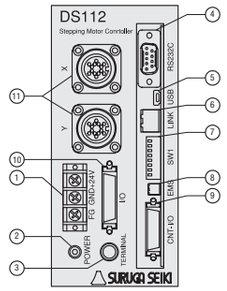
MSCTL102





(1) Power Switch
(2) POWERLED
(3) TERMINAL*1
(4) RS232C*2
(5) USB Connector *3
(6) LINK Connector
(7) DIP Switch *4
(8) EMS Connector *5
(9) I/O Connector for Controller *6
(10) General Purpose I/O Connector *7
(11) Stage Connector *8
(12) Fuse Holder
(13) AC Plug

MSCTL112



(1) Terminal Block for Power Supply
(2) POWERLED
(3) TERMINAL*1
(4) RS232C Connector *2
(5) USB Connector *3
(6) LINK Connector
(7) DIP Switch *4
(8) EMS Connector *5
(9) I/O Connector for Controller *6
(10) General Purpose I/O Connector *7
(11) Stage Connector *8

Specifications
*1. Connector for HDT100 (Handset Terminal)
*2. Dsub 9 Male
*3. Mini B Type
*4. Make settings for RS232C baud rate (2bit), Link No. (2bit), USB ID (2bit) and Command Response (1bit).
*5. Part Number S02B-PASK-2 (LF) (SN) (Manufactured by JST Mfg. Co.,Ltd.)
*6. Part Number 10226-52A2PL (Manufactured by 3M Company)
*7. Part Number 10236-0200 (Manufactured by 3M Company) (This is provided only with products whose part number has the "-IO" text is inserted therein.)
*8. Part Number 09-0054-00-14 (Manufactured by Binder GmbH)

Part Number Type	Part Number No.	External Dimensions W	D	H	Input Power Supply	Max. Power Consumption	Driver Type	Driver Rated Current	General I/O Connector	Weight
MSCTL	102	140	300	90	AC100~240V±10% 50/60Hz	70W or less	Normal (Full/Half)	0.75A/Phase	-	2.2kg
	102-IO								Provided	
	102-MS						Micro Step (16 steps)		-	
	102-IO-MS								Provided	
	112	70	165	155	DC24V±10%	2.5A or less	Normal (Full/Half)		-	1.2kg
	112-IO								Provided	
	112-MS						Micro Step (16 steps)		-	
	112-IO-MS								Provided	

* For XMSG, XYMSG, ZMSG, if the 24V option is selected for the sensor voltage, the MSCTL102/112 controller is not compatible. If you purchase any of these Series, select the 5V Sensor Voltage option.

Controller Performance Specifications

Number of Control Axes	2
Coordinate Setting Range	±99,999,999pls
Speed Setting Range	1~999,999pps
Pulse Rate Rise Setting Range	1~9,999pps
Acceleration/Deceleration Time Range	1~9,999ms
Mechanical Limit	2 for Each Axis: CW/CCW Direction (Input logic reversal is possible)
Near Home Detection	1 for Each Axis (Input logic reversal is possible)
Home Detection	1 for Each Axis (Input logic reversal is possible)
Home Detection Method	12 Routine Types
Home Position	1 Point/Axis (Configurable freely within effective range)
External Communication I/F	RS232C: 4,800~38,400bps [D-SUB9 Pin Male] USB2.0: Compatible with Full/Low Speed only [USB Mini B Terminal] Control I/O: 9 Inputs (24VDC Opto-coupler Inputs), 12 Outputs (Open Collector Outputs)
Link	RS485 (It can externally control up to 3 stages and up to 6 axes in daisy chain.)
Programming	8 Programs (100 Steps/Program; Starts and stops by control I/O signals)
Teaching	64 Points (positioning is commendable from signal I/O)
Interpolation	6-Axis Linear Interpolation (however, linear semi-interpolation between the linked stages is possible)
General Purpose I/O	(When a product with the "-IO" No. assigned is selected) Control I/O: 16 Inputs: 24VDC Opto-coupler Inputs, 12 Outputs: Open Collector Outputs

To facilitate the settings for Programming/Teaching for MSCTL102/112 Series, use of HDT100 Handset Terminal or of the dedicated software, "MSSOFT," separately sold, is recommended.

Controller Software

Part Number
MSSOFT

Microsoft®Windows®This is the software intended to set up or control the motor controller MSCTL102/112 plugged to the USB or RS232C port on Microsoft® Windows®. This software has capability of controlling up to 6 axes. Supported OS: Microsoft® Windows® 2000 / XP / 7 / 8 (* For®Windows®)

Main Functions
- Manual Manipulation (Continuous Jog, Step Move, Absolute Value-based Move, Homing)
- Teaching
- Edition/Uploading/Downloading of Stored Program
- Monitoring / Forced Outage of General Purpose I/O Port

Ordering Example — Part Number: MSCTL102, MSSOFT

Days to Ship — Configure Online

Handset Terminal

RoHS10

Part Number Type	Part Number No.
HDT	100

Basic Specifications

Indicator	LCD(16bit× 2 tiers)
Input Power Supply	DC24V (supplied from the main body)
Number of Keys	12
Cable Length	1.5m
External Dim.	73(W)×130(D)×27(H)mm
Weight	280g

HDT100

Enables the operator to, in a handheld way, control various functions such as continuous jogging, step moves, home, and program executions by connecting with the controller (MSCTL102/112).
* A PC dedicated for programming will be required.

DC24V Input Driver

RoHS10

Part Number	Input Power Supply	Rated Current	Resolution	Operating Temparature Range	External Dimensions	Weight	Signal Input
MSDR24-MS	DC24V±10%	0.75A/Phase	1~1/250	0~50°C	65(W)x45(D) x17(H)mm	0.02kg	Opto-coupler Input

For inquiry about the Instruction Manual and Drawing, please contact MISUMI.

Cable for DC24V Input Driver

A 600 mm cable is already crimped onto the connector included with the driver.

Part Number	Applicable Driver	Length
MSDR24-CB	MSDR24-MS	600mm

Sample Program of Stage Ciontroller (http://jpn.surugaost.jp/sampleprogram.php)

If you want to control a stage and its peripherals on PC, you are required to create the specific program. The applicable sample program is downloadable from the Web site for the OST Business Div. in Suruga Seiki Co., Ltd.

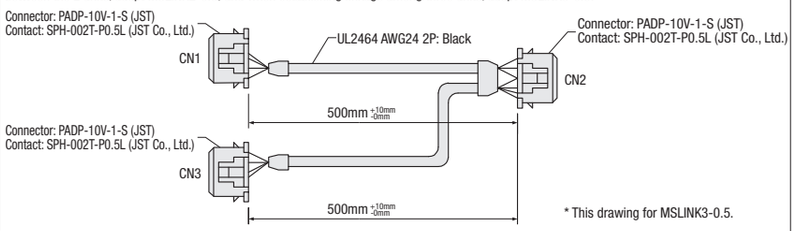
This sample program is offered for the referential purpose and you do not necessarily need to follow the logic on the sample program.
Creating the final version of the control program is customers' responsiblity.

MSCTL-dedicated Cable

The photo is for MSLINK2-0.5.

•Link Cable MSLINK_-0.5

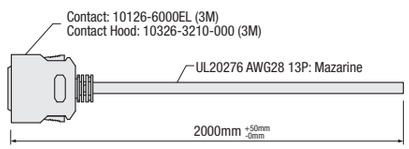
Use this cable to control 4 or 6 axes by establishing linkage among multiple units of MSCTL102/112 (controller). When establishing linkage between the 2 units, adopt MSLINK2-0.5; and when establishing linkage among three units, adopt MSLINK3-0.5.



* This drawing for MSLINK3-0.5.

•I/O Control Cable MSCNT2

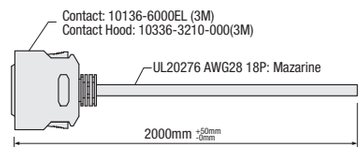
When desiring to control MSCTL102/112 (controller) by manipulating the Upstream controller, use this cable. The one end is the loose wire.



•General Purpose I/O MSGP2

When desiring to control an external deice by wiring it to MSCTL102/112 (controller), use this cable. The one end is the loose wire.

* Can be used when "-IO" is selected.



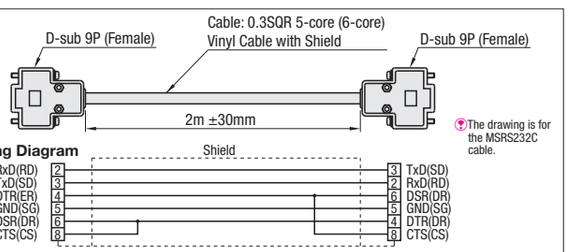
Part Number		Cable Length
MSLINK2-0.5	For linkage between 2 controllers	0.5m
MSLINK3-0.5	For linkage among 3 controllers	
MSCNT2	For Upstream Controller-based I/O Control	2.0m
MSGP2	For General Purpose I/O from/to External Device	The one end is the loose wire.

External Control Cable

The photo is for the MSRS232C cable.

RoHS10

MSUSB1.8 MSRS232C



The drawing is for the MSRS232C cable.

Part Number	Interface	Compatible Controller	Connector for the PC side	Cable Length
MSUSB1.8	USB	MSCTL102/112	USB A Terminal Socket	1.8m
MSRS232C	RS232C		D-sub 9P	2m

Days to Ship — Configure Online

Ordering Example — Part Number: HDT100, MSDR24-MS, MSCNT2