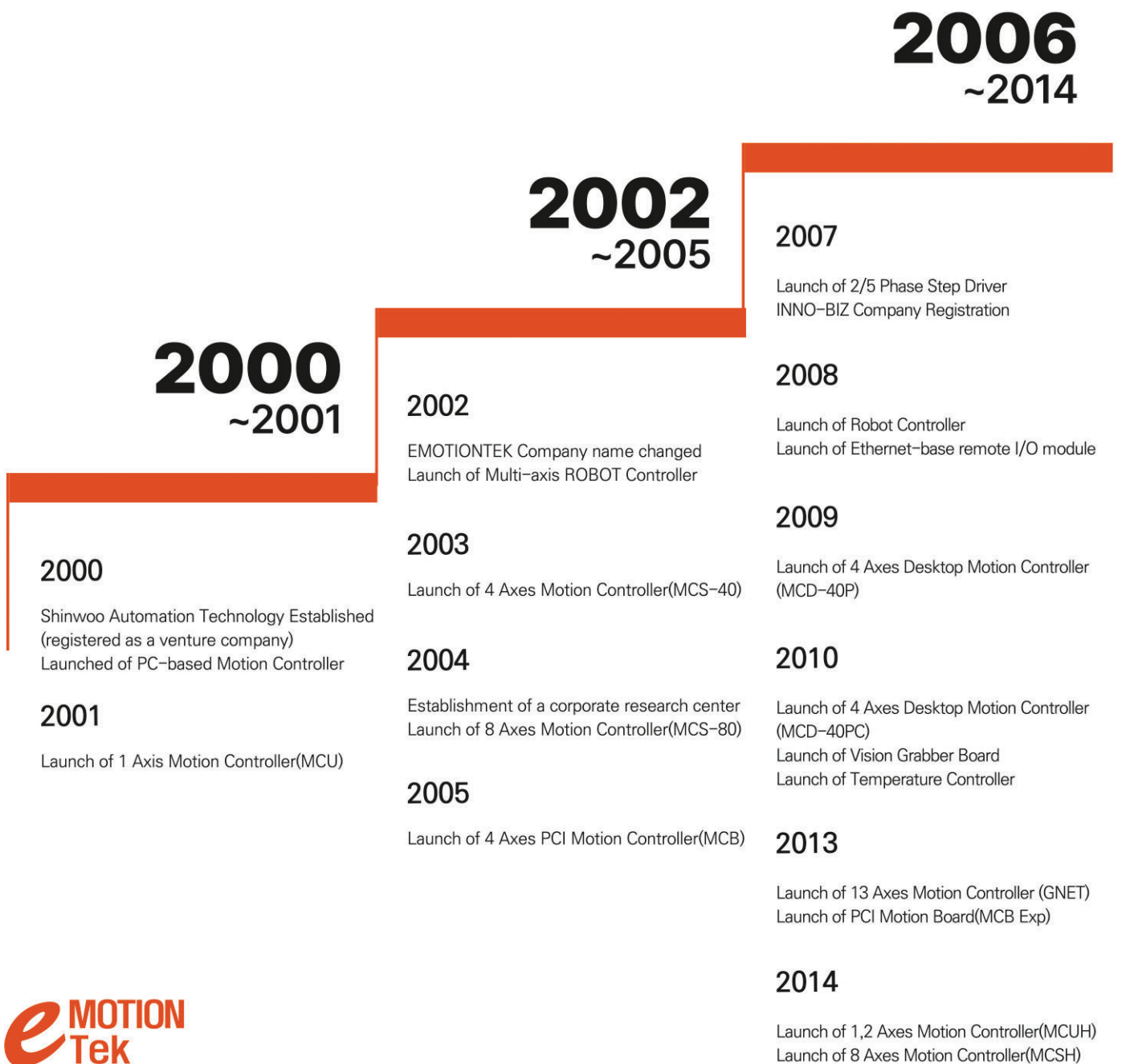


PRODUCT BROCHURE

MOTION CONTROLLER
I/O DEVICES
STEP SERVO DRIVER
STEP SERVO MOTOR

History



2020
~2025



2015
~2019

2020

Launch of Ethernet Step Driver(UNI-ENET)
Launch of EtherCAT Step Driver(UNI-ECAT)

2015

Launch of 16 Axes Motion Controller(MCSH)

2021

Launch of Ethernet Desktop Motion Controller
(EMD-ENET)

2016

Launch of 9 Axes Motion Controller(SNET)

2022

Launch of RTEX Desktop Motion Controller(UNI-RTEX)
Join CC-Link Association

2017

Launch of Motion Controller(MCST)

2023

Launch of EtherCAT Step Driver(Compact)
Launch of EtherCAT Step Driver(Torque Off)

2017

Development of Servo Driver for robots

2024

Launch of Ethernet Step Driver(Compact)
Launch of Pulse Step Driver(UNI-PUL)
Launch of EtherCAT Desktop Motion Controller

2018

Launch of RTEX Controller
(SNET-RTEX, SMCS-RTEX)

2025

Launch of EtherCAT Step Driver(4 Axes)
Launch of Absolute Step Driver & Motor

2019

Launch of EtherCAT Master
(SNET-ECAT, SMCS-ECAT)



Technology

Industrial Control Technology

FPGA-Based Various Industrial Field Bus Interfaces



SoC Implementation for Motion

- Pulse Generation
- Serial Encoder Interface
- Special Functions for Motion
(High-Speed Position Capture, Position Synchronization Signal Output, etc)

Motion Control Only OS

- Real Time Operating System
- Jerk-Based Motion Profiling
- Mechanism-Specific Vibration Suppression Function
- Multi-Machine(Max. 6ch)

PC-based Motion Control

Provide Sample Source Code Across Various Programming Platforms for PC-Based Control (C++, C#, VB, Linux, LabView, Pyhton, Delphi).

Stand-Alone Motion Control

- Standard G Code
- Motion Command-Based Table Operation
- PLC Function
- Supports Communication Protocols For External Devices Such as PLC and Touch Panels (Melsec)
- Machine Calibration (Backlash, Pitch Error Calibration, Z Axis Calibration for X, Y Planes)
- Machine tool compensation function

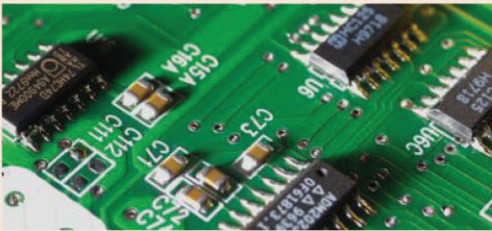
Power and Analog Circuit Design Technology

- Dual AC Servo Drive(100W~1kW)
- LED lighting controller for constant current (10A)
- Development of Power Unit and Control Unit for Driving 4kW Industrial Magnetron
- Development of PID Temperature Controller with Auto-tuning Function

Customization Service

Application

Semiconductor and Display



- Spinner
- Probe Station
- Dispenser
- LCD Pixel Inspection

FA Inspection



- LED Tester
- 3D In-Line SPI & AOI
- Drilling Machine
- Dental System

Automatic Warehouse



- EMS, AGV
- Gantry Robot
- Stacker Crane

etc



- Painting Machine
- Spring Forming Machine
- Packaging Machine
- Winding Machine
- Drying Machine

System Configuration



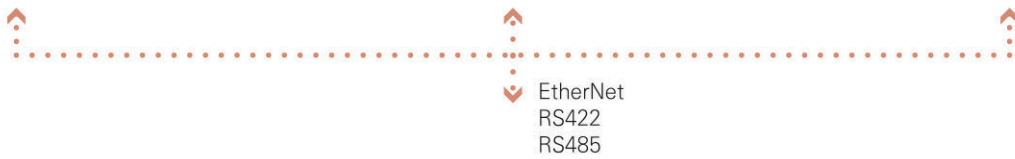
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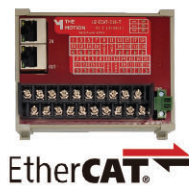
[PC]



[Touch Panel]



[RS485]



EtherCAT®



[I/O]



[MPG]



[Servo Motor & Driver]



[Servo Motor & Driver]

[Pulse]
[Analog]



[Servo Motor & Driver]

[Pulse]



[Stepping Motor & Driver]

Product Guide

PC-Based Controller

	Series	Control Axes	TYPE	Command	Interface	Command Method
	SNET-ECAT	8,16, 32	PC-Based	DLL	Ethernet RS232 RS485	EtherCAT
	SNET-RTEX	4, 8,16, 32	PC-Based	DLL	Ethernet RS232 RS485	RTEX
	SNET-P	4, 8	PC-Based	DLL	Ethernet RS232 RS485	Pulse
	SNET-E84		Semi-E84 Interface controller	DLL	Ethernet RS232	Semi E84

※ PC-based : A product that receives commands from a PC and operates

Product Guide

Stand-Alone Controller

	Series	Control Axes	TYPE	명령어	Interface	Command Method
	SMCS-ECAT	8, 16	Stand-alone	G Code PLC DLL	Ethernet RS232 RS485	EtherCAT
	SMCS-RTEX	8, 16	Stand-alone	G Code PLC DLL	Ethernet RS232 RS485	RTEX
	MCST	4,8,12,16	Stand-alone	G Code PLC DLL	Ethernet RS232 RS485	Pulse, Analog
	EMD-ENET	4,6,8	Stand-alone	Dispenser PLC DLL	Ethernet RS232 RS485	Pulse
	EMD(G)-ENET	4,6,8	Stand-alone	G Code PLC DLL	Ethernet RS232 RS485	Pulse
	EMD-ECAT	4,6,8	Stand-alone	Dispenser PLC DLL	Ethernet RS232 RS485	EtherCAT
	EMD(G)-ECAT	4,6,8	Stand-alone	G Code PLC DLL	Ethernet RS232 RS485	EtherCAT
	MCUH	1, 2	Stand-alone	Robot PLC DLL	RS232 RS485	Pulse, Analog

※ Stand-Alone : A product that can be operated independently without a PC with a built-in program

Product Guide

Network I/O Module

	Series	Input	Output	Command	Interface
	GN-9289	1Slots 8,16,32ch (Max 63 Slots)		DLL	MODBUS TCP Ethernet IP
	GN-9386	1Slots 8,16,32ch (Max 63 Slots)		-	EtherCAT
	GL-9089	1Slots 8,16,32ch (Max 16 Slots)		DLL	MODBUS TCP Ethernet IP
	GL-9086	1Slots 8,16,32ch (Max 16 Slots)		-	EtherCAT
	GL-9041	1Slots 8,16,32ch (Max 63 Slots)		-	RTEX

Product Guide

Network I/O Module

	Series	Input	Output	Command	Interface
	UZ-ENET-I16-E	16ch	-	DLL	Ethernet
	UZ-ENET-O16-E	-	16ch	DLL	Ethernet
	UZ-ECAT-I16-T	16ch	-	-	EtherCAT
	UZ-ECAT-O16-T	-	16ch	-	EtherCAT
	GNET-D	32ch	32ch	-	RS485
	GNET-R	32ch	16ch + Relay 16ch	-	RS485
	GNET-RE	32ch	20ch + Relay 12ch	-	RS485
	SNET-R	32ch	Relay 24ch	-	RS485
	MCUH-E,(EL)	20,(32)ch	14,(24)ch	-	SPI



CONTENTS

- PC Based Controller
- Stand – Alone Controller
- Network I/O Module





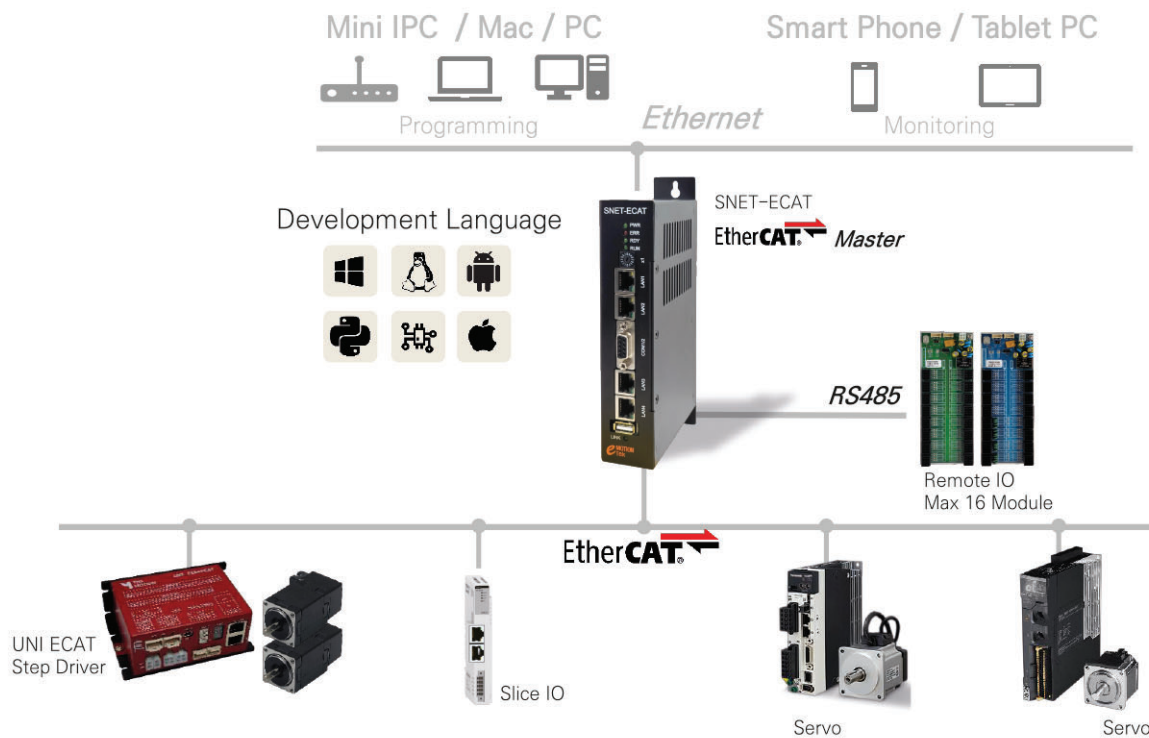
PC Based Controller

SNET-ECAT
SNET-RTEX
SNET-P
SNET-E84

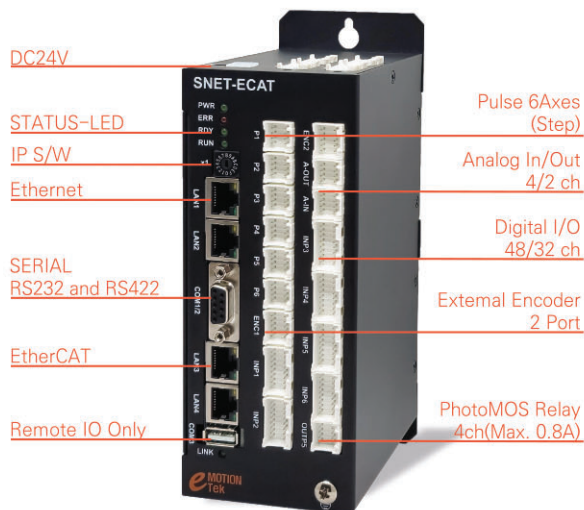
Comparison of PCI Card vs STAND-ALONE

	PCI TYPE	STAND-ALONE(SNET) TYPE
PC	· Industrial, High-Spec PC Required · Mounted on PCI, PCI Express Bus	· Can be Accessed and Operated on Low-end PCs Such as Desktops, Laptops, Tablets, and Panel PCs.
OS	· Requires OS-specific drivers such as Windows, Linux, VxWorks, etc. · PCI Driver Update Required When OS Version Changes	· Can be used on Windows, Linux, iOS, Android, Mac, Embedded, etc. without separate drivers · No need to update even if the OS version changes
Scalability	· When configuring the system, there are restrictions on hardware specifications (PCI slot).	· Multiple Controllers can be Connected to One Ethernet port · Pulse 6 Axes, Trigger, Digital I/O, Analog I/O, External Encoder 2Ports Provided · Multi-monitoring is possible on multiple PCs by connecting to HUB
Maintenance	· Unable to operate when PC breaks down · PC operation is affected when PCI B'D fails.	· In case of PC failure, emergency measures are possible by connecting to another PC. · There is no physical impact on the PC when the device breaks down. · Quick to determine if there is a fault and easy to replace · Average repair time is short
Reliability	· Dependent on PC	· Ensure consistent reliability by using a single power source · Resistant to noise
Etc	· Trigger signal 1msec output	· H/W trigger signal 1usec output · Can be connected to various items

EtherCAT Network type Controller SNET ECAT Series



SNET-ECAT
SNET-RTEX
SNET-P
SNET-F94
SNETS-ECAT
SNETS-RTEX
MCST
EMD
MUCH
Slice
UZ
Remote
MCU+H
RTEX
ECAT
ENET
PUL
ST
SV
SA
IP65
Cable



EtherCAT

SNET ECAT Controller Features

- It has similar control characteristics to PCI B'D MMC and MEI, but in terms of hardware, it is standalone.
- No restrictions on various PCs and operating systems
- Multiple Controllers can be Connected to One Ethernet port
- Quick to determine if there is a fault and easy to replace

INTERFACES

Power supply	24VDC/0.75A
Ethernet	1 x 10/100 Mbps(RJ45)
EtherCAT	1 x EtherCAT Master(RJ45) STP Cable(above CAT5e)
Serial	1 x RS232 1 x RS422
USB Type A	1 x RS485 Remote IO(Max 16module)

SPECIFICATIONS

Control Axes	8,16,32
Control Cycle	1ms
Max Node	64
Development Language	C, C++, C#, Python, Linux, VB...
Development Environment	Lan Communication support environment

I/O

Digital I/O	Input 48ch(5mA/24V) Output 32ch(Max. 80mA Sink Current)
Relay Output	4ch(Max. 800mA)
Analog I/O	Input 4ch(16bit), Output 2ch(16bit)

Environment conditions

Ambient temperature/ Humidity	0~+55°C/20~80% During operation -15~+60°C/10~90% During Storage
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Special Function

Motion Profile	Trapezoidal, S Curve, Override Velocity, Override Time
Interpolation	Line, Arc, Helical, Spline, Loop-back
Trigger	1us Trigger Output

Specifications



	SNET-ECAT-8(16)(32)-S	SNET-ECAT-8(16)(32)	SNET-ECAT-8(16)(32)-A
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INTERFACES

Power supply	24VDC/0.75A		
Ethernet	1 x 10/100 Mbps(RJ45) STP Cable(above CAT5e)		
EtherCAT	1 x EtherCAT Master(RJ45) STP Cable(above CAT5e)		
Serial	1 x RS232, 1 x RS422		
USB Type A	1 x RS485 Remote IO(Max 16module)		

SPECIFICATIONS

Control Axes	8, 16, 32 Axes		
Control Cycle	1ms		
Max Node	64		
Development Language	C, C++, C#, Python, Linux, VB...		
Development Environment	LAN communication support environment		
Pulse Output Type	-	Diff. Line Drive	
Pulse Output Mode	-	CW/CCW, Pulse/Direction	
Pulse Output frequency	-	1 ~ 5 Mpps	
External Encoder or MPG	-	2 Port, Inc A/B Phase , 5V Diff. Line Drive, Open Collector(High 3.8V, Low 1.2V)	
Encoder Input Frequency	-	Max. 5Mhz	

I/O

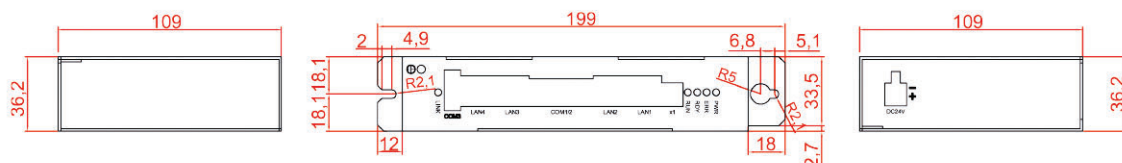
Digital Input	-	48ch(5mA/24V)	
Digital Output	-	32ch(Max. 80mA Sink Current)	
Relay Output	-	4ch(Max. 800mA)	
Analog Input	-	-	4ch(16bit)
Analog Output	-	-	2ch(16bit)
Trigger	1 msec	1msec + 1usec	

Environment conditions

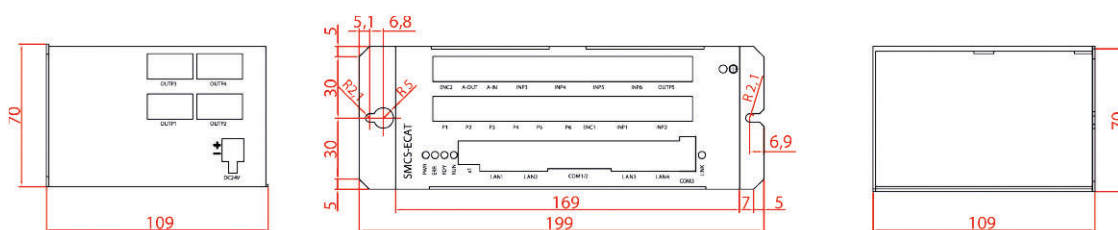
Ambient temperature / Humidity	0~+55°C/20~80% During operation / -15~+60°C/10~90% During Storage		
Vib. Resist	0.5g		
Size	199 x 36.2 x 109	199 x 70 x 109	199 x 70 x 109

Dimension

▶ SNET-ECAT-8(16)(32)-S



▶ SNET-ECAT-8(16)(32), SNET-ECAT-8(16)(32)-A



SNET-ECAT Series Construction

SNET-ECAT-8-S

① Product Name

SNET = PC-Based Controller
SMCS = Stand-Alone Controller

② Command Method

P = Pulse
ECAT= EtherCAT
RTEX = RTEX

③ Control Axes

8 = 8Axes
16 = 16Axes
32 = 32Axes

④ Option

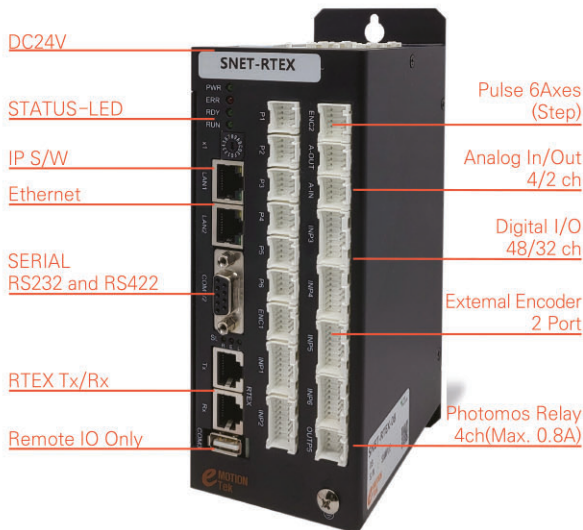
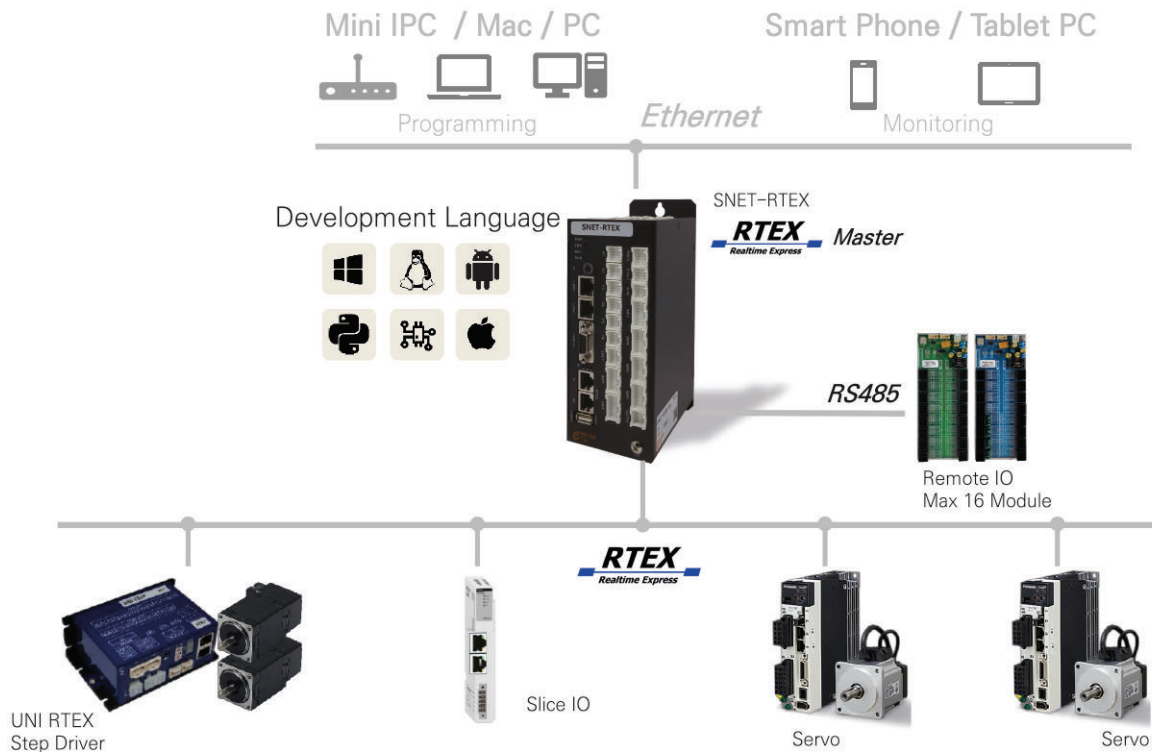
S = Single
A = Analog I/O (4ch/2ch)
None = Blank

SNET-ECAT Controller Product List

SNET-ECAT-8-S	ECAT, 8 Axes, Single
SNET-ECAT-8	ECAT, 8 Axes, I/O(48/36), High Speed Trigger OUT
SNET-ECAT-8-A	ECAT, 8 Axes, I/O(48/36), Analog I/O(4/2), High Speed Trigger OUT
SNET-ECAT-16-S	ECAT, 16 Axes, Single
SNET-ECAT-16	ECAT, 16 Axes, I/O(48/36), High Speed Trigger OUT
SNET-ECAT-16-A	ECAT, 16 Axes, I/O(48/36), Analog I/O(4/2), High Speed Trigger OUT
SNET-ECAT-32-S	ECAT, 32 Axes, Single
SNET-ECAT-32	ECAT, 32 Axes, I/O(48/36), High Speed Trigger OUT
SNET-ECAT-32-A	RTEX, 32 Axes, I/O(48/36), Analog I/O(4/2), High Speed Trigger OUT

SNET-ECAT	SNET-RTEX	SNET-P	SNET-8A	SMCS-ECAT	SMCS-RTEX	MCST	EMD	MUCH	Slave	UZ	Remote	MOU-E	RTEX	ECAT	ENET	PUL	ST	SV	SA	IP65	Cable
	CONTROLLER									I/O MODULE			STEP DRIVER			STEP MOTION					

Realtime Express(RTEX) Network type Controller SNET RTEX Series



SNET RTEX Controller Features

- It has similar control characteristics to PCI B'D MMC and MEI, but in terms of hardware, it is standalone.
- No restrictions on various PCs and operating systems
- Multiple Controllers can be Connected to One Ethernet port
- Quick to determine if there is a fault and easy to replace

INTERFACES

Power supply	24VDC/0.75A
Ethernet	Dual port Ethernet switch embedded(RJ45)
RTEX	RTEX(Realtime Express) Rx/Tx(RJ45), STP Cable(above CAT5e)
Serial	1 x RS232 1 x RS422
USB Type A	1 x RS485 Remote IO(Max 16module)

SPECIFICATIONS

Control Axes	4,8,16,32
Control Cycle	1ms
Development Language	C, C++, C#, Python, Linux, VB...
Development Environment	Lan Communication support environment
Pulse Out	6ch(1~4.3Mpps)
External Encoder	2Port(Inc A, A, B, B or 5V Diff. Line receive)

I/O

Digital I/O	Input 48ch(5mA/24V) Output 32ch(Max. 80mA Sink Current)
Relay Output	4ch(Max. 800mA)
Analog I/O	Input 4ch(16bit), Output 2ch(16bit)

Environment conditions

Ambient temperature/ Humidity	0~+55°C/20~80% During operation -15~+60°C/10~90% During Storage
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Special Function

Motion Profile	Trapezoidal, S Curve, Override Velocity, Override Time
Interpolation	Line, Arc, Helical, Spline, Loop-back
Trigger	1us Trigger Output

Specifications



	SNET-RTEX-4(8)(16)(32)-S	SNET-RTEX-4(8)-IO	SNET-RTEX-16(32)
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INTERFACES

Power supply	24VDC/0.75A		
Ethernet	Dual port Ethernet switch embedded(RJ45), STP Cable(above CAT5e)		
RTEX	RTEX(Realtime Express Rx/Tx(RJ45), STP Cable(above CAT5e)		
Serial	1 x RS232, 1 x RS422		
USB Type A	1 x RS485 Remote IO(Max 16module)		

SPECIFICATIONS

Control Axes	4, 8, 16, 32 Axes	4, 8 Axes	16, 32 Axes
Control Cycle	1 ms		
Development Language	C, C++, C#, Python, Linux, VB...		
Development Environment	LAN communication support environment		
Pulse Output Type	-	-	Diff. Line Drive
Pulse Output Mode	-	-	CW/CCW, Pulse/Direction
Pulse Output Frequency	-	-	1 ~ 5 Mpps
External Encoder or MPG	-	1 Port	2 Port
Encoder Input Frequency	-	Inc A/B Phase , 5V Diff. Line Drive, Open Collector(High 3.8V, Low 1.2V)	
	-	Max. 5Mhz	

I/O

Digital Input	-	32ch(5mA/24V)	48ch(5mA/24V)
Digital Output	-	16ch(Max. 80mA)	32ch(Max. 80mA)
Relay Output	-	4ch(Max. 800mA)	
Analog Input(Optional)	-	4ch(16bit)	4ch(16bit)
Analog Output(Optional)	-	2ch(16bit)	2ch(16bit)
Trigger	1 msec	1msec + 1usec	

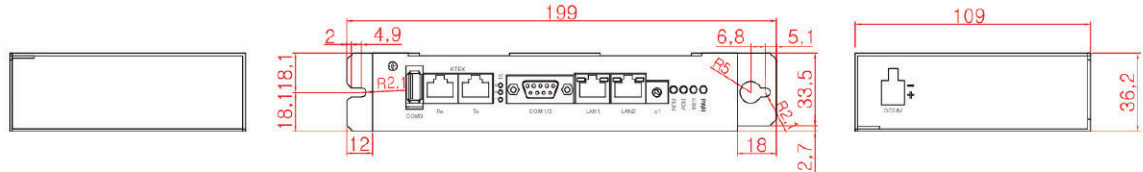
Environment conditions

Ambient temperature / Humidity	0~+55°C/20~80% During operation / -15~+60°C/10~90% During Storage		
Vib. Resist	0.5g		
Size	199 x 36.2 x 109	199 x 63.3 x 109	199 x 70 x 109

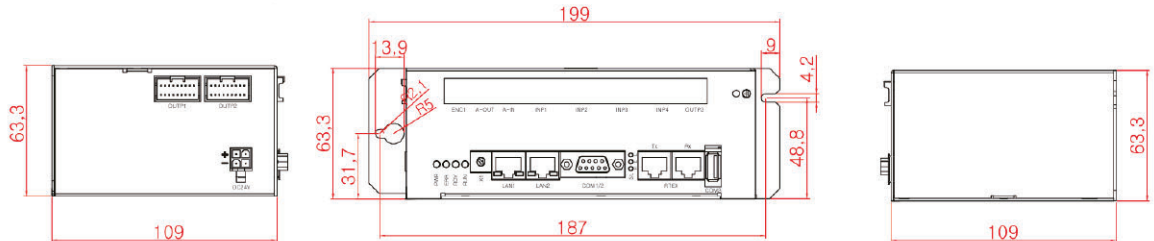
SNET-ECAT
SNET-RTEX
SNET-P
SNET-EG4
SMCS-ECAT
SMCS-RTEX
MCST
EMD
MAUCH
Shoe
UZ
Remote
MCU+H
RTEX
ECAT
ENET
PUL
ST
SV
SA
IP65
Cable

Dimension

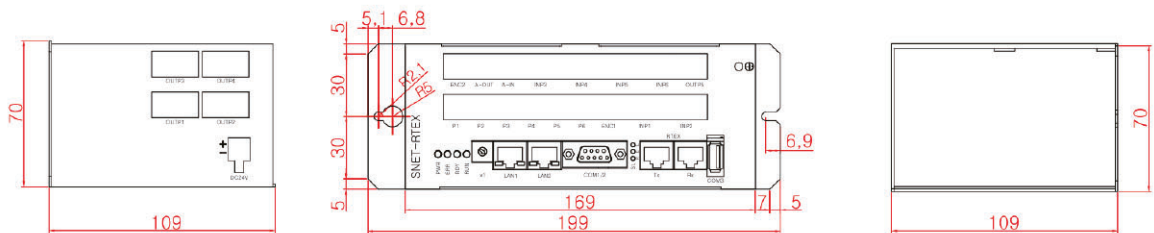
▶ SNET-RTEX-4(8)(16)(32)-S



▶ SNET-RTEX-4-IO, SNET-RTEX-8-IO



▶ SNET-RTEX-16(32), SNET-RTEX-16(32)-A



SNET-RTEX Series Construction

SNET-RTEX-4-S

① ② ③ ④

① Product Name

SNET = PC-Based Controller

SMCS = Stand-Alone Controller

② Command Method

P = Pulse

ECAT = EtherCAT

RTEX = RTEX

③ Control Axes

4 = 4Axes 8 = 8Axes

16 = 16Axes 32 = 32Axes

④ Option

S = Single A = Analog I/O (4ch/2ch)

IO = Digital I/O (32/20)

None = Blank

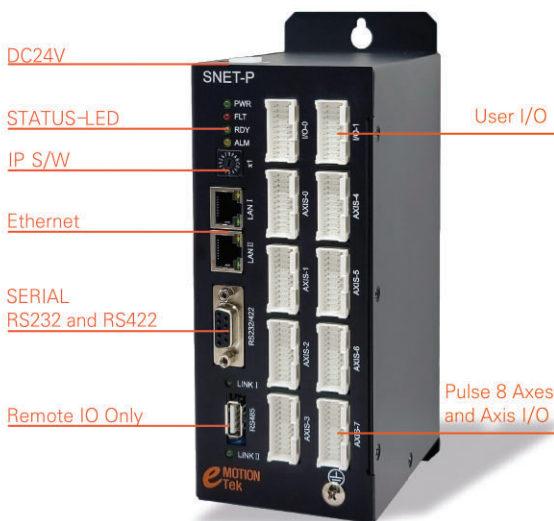
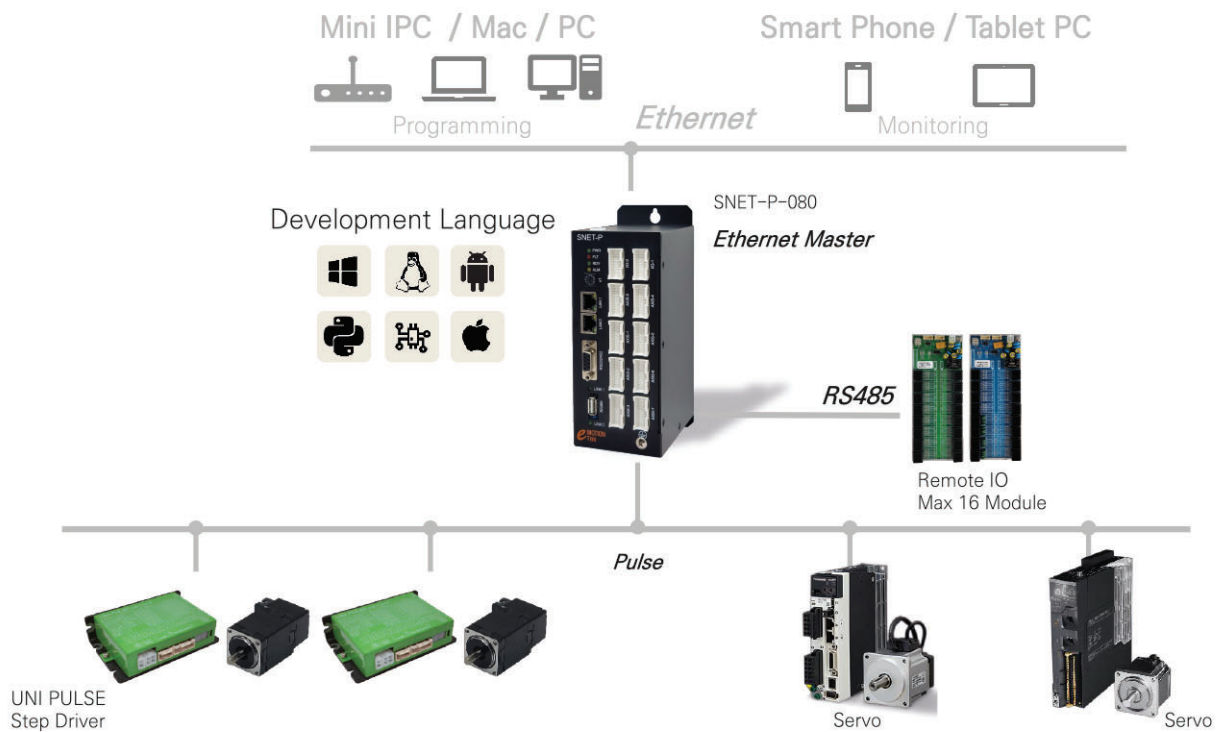
SNET-RTEX Controller Product List

SNET-RTEX-4-S	RTEX, 4 Axes Single
SNET-RTEX-4-IO	RTEX, 4 Axes, I/O(32/20)
SNET-RTEX-8-S	RTEX, 8 Axes Single
SNET-RTEX-8-IO	RTEX, 8 Axes, I/O(32/20)
SNET-RTEX-16-S	RTEX, 16 Axes Single

SNET-RTEX Controller Product List

SNET-RTEX-16	RTEX, 16 Axes, I/O(48/36), Pulse or High Speed Trigger OUT
SNET-RTEX-16-A	RTEX, 16 Axes, I/O(48/36), Analog I/O(4/2), Pulse or High Speed Trigger OUT
SNET-RTEX-32-S	RTEX, 32 Axes Single
SNET-RTEX-32	RTEX, 32 Axes, I/O(48/36), Pulse or High Speed Trigger OUT
SNET-RTEX-32-A	RTEX, 32 Axes, I/O(48/36), Analog I/O(4/2), Pulse or High Speed Trigger OUT

Pulse Network type Controller SNET Pulse Series



Pulse

SNET P Controller Features

- It has similar control characteristics to PCI B'D MMC and MEI, but in terms of hardware, it is standalone.
- No restrictions on various PCs and operating systems
- Multiple Controllers can be Connected to One Ethernet port
- 8Axes Simultaneous Interpolation Function
- Quick to determine if there is a fault and easy to replace

INTERFACES

Power supply	24VDC/0.75A
Ethernet	Dual port Ethernet switch embedded(RJ45)
Serial	1 x RS232 Max. 38,400 bps 1 x RS422
USB Type A	1 x RS485 Remote IO(Max 16module)
User I/O	Input 32ch, Output 4ch
Axis I/O	Input 24ch, Output 16ch(Axis x 3/2)

SPECIFICATIONS

Control Axes	4,8 Axes
Development Language	C, C++, C#, Python, Linux, VB...
Development Environment	Lan Communication support environment
Pulse Output Type	Differential Line Drive
Pulse Output Mode	CW / CCW Pulse / Direction A / B Phase
Pulse Output Frequency	1 ~ 4.3 Mpps
Encoder Input Type	Inc. A/B/C
Encoder Input Frequency	Max. 8 Mpps (if Driver is 4 multiplication 32Mpps)

Environment conditions

Ambient temperature/ Humidity	0~+55°C/20~80% During operation -15~+60°C/10~90% During Storage
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Special Function

Motion Profile	Trapezoidal, S Curve, Override Velocity, Override Time
Interpolation	Line, Arc, Helical, Spline, Loop-back
Trigger	1us Trigger Output

CONTROLLER	SNET-FCAT
	SNET-RTEX
	SNET-P
	SNET-F94
	SNET-FCAT
	SNET-RTEX
I/O MODULE	MCST
	END
	MLCH
	Shoe
	UZ
	Remote
STEP DRIVER	MCU+E
	RTEX
	FCAT
	ENET
	PUL
	ST
STEP MOTOR	SV
	SA
	IP65
	Cable

Specifications



	SNET-P-040	SNET-P-040-A	SNET-P-080
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INTERFACES

Power supply	24VDC/0.75A		
Ethernet	Dual port Ethernet switch embedded(RJ45), STP Cable(above CAT5e)		
Serial	1 x RS232, 1 x RS422		
USB Type A	1 x RS485 Remote IO(Max 16module)		

SPECIFICATIONS

Control Axes	4 Axes	4 Axes	8 Axes
Control Cycle	1 ms		
Development Language	C, C++, C#, Python, Linux, VB...		
Development Environment	LAN Communication Support Environment		
Pulse Output Type	Differential Line Drive		
Pulse Output Mode	CW/CCW, Pulse/Direction, A/B Phase		
Pulse Output Frequency	1 ~ 4.3 Mpps		
Encoder Input Type	Inc. A/B/C		
Encoder Input Frequency	Max. 8 Mpps (if Driver is 4 multiplication 32Mpps)		

I/O

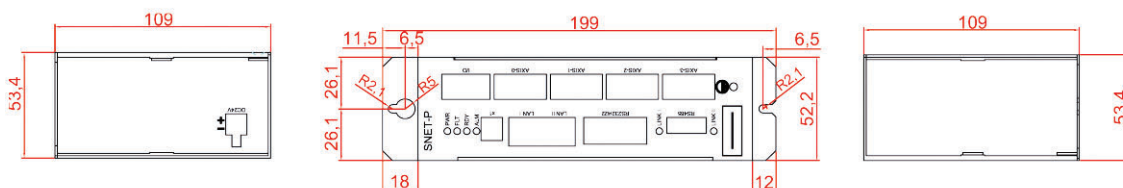
User Input	16ch	16ch	32ch
User Output	2ch	2ch	4ch
Axis Input	12ch(Axis x 3ch)	12ch(Axis x 3ch)	24ch(Axis x 3ch)
Axis Output	8ch(Axis x 2ch)	8ch(Axis x 2ch)	16ch(Axis x 2ch)
Digital Input	-	32ch	-
Digital Output	-	16ch	-
Relay Output	-	4ch(Max. 800mA)	-
Analog Input	-	4ch(16bit)	-
Analog Output	-	2ch(16bit)	-
Trigger	1 msec + 1usec		

Environment conditions

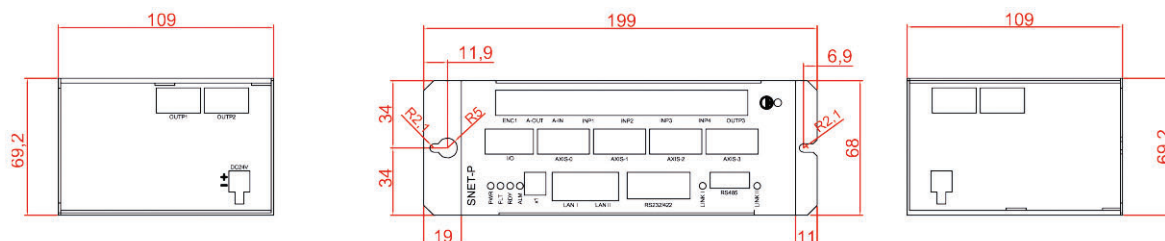
Ambient temperature / Humidity	0~+55°C/20~80% During operation / -15~+60°C/10~90% During Storage		
Vib. Resist	0.5g		
Size	199 x 53.4 x 109	199 x 69.2 x 109	199 x 71.8 x 109

Dimension

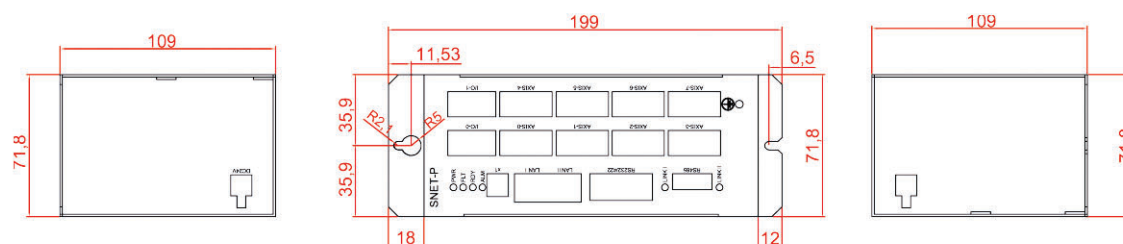
▶ SNET-P-040



▶ SNET-P-040-A



▶ SNET-P-080



SNET-P Series Number Construction

SNET-P-040-A

① ② ③ ④

① Product Name

SNET = PC-Based Controller
SMCS = Stand-Alone Controller

③ Control Axes

040 = 4Axes
080 = 8Axes

② Command Method

P = Pulse
ECAT = EtherCAT
RTEX = RTEX

④ Option

A = Analog I/O (4ch/2ch)
None = Blank

SNET-P Controller Product List

SNET-P-040	Pulse, 4 Axes
SNET-P-040-A	Pulse, 4 Axes , I/O(32/20), Analog I/O(4/2)
SNET-P-080	Pulse, 8 Axes

SNET-ECAT
SNET-RTEX
SNET-P
SNET-040
SMCS-ECAT
SMCS-RTEX
MCST
END
MUCH
Shoe
UZ
Remde
MOJH-E
RTEX
ECAT
ENET
PUL
ST
SV
SA
IP65
Cable

Semi-E84 Interface Controller

SNET-E84 Series

SNET-E84 Module Features

- Semi E84 Carrier Handoff Interface Controller
- Ethernet / Serial Communication Support Name
- Provides Windows DLL(API) for Communication
- Operating HMI Provide



Specifications

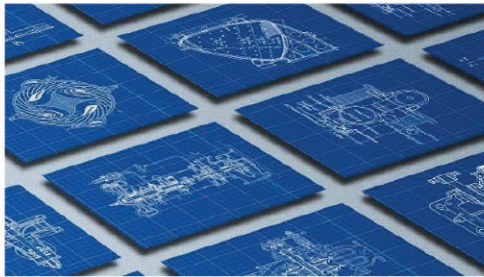
SNET-E84	
INTERFACES	
Power supply	24VDC/0.30A
Ethernet	2 x 10/100 Mbps(RJ45)
Serial	1 x RS232 Max. 38,400 bps
SPECIFICATIONS	
Input	6ch
Input Current/Voltage	5mA / 24V
Output	1ch
Output Current/Voltage	24V(Max. 50mA Sink Current)
SEMI E84 Signal	
Input	9ch
Input Current/Voltage	5mA / 24V
Output	9ch
Output Current/Voltage	24V(Max. 50mA Sink Current)
Environment conditions	
Ambient temperature / Humidity	0~+55°C/20~80% During operation / -15~+60°C/10~90% During Storage
Vib. Resist	0.5g
Size	155 x 121.59 x 44 mm



Stand-Alone Controller

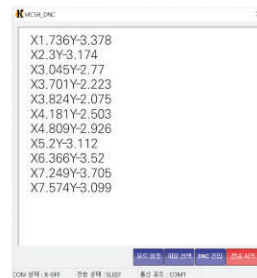
SMCS-ECAT
SMCS-RTEX
MCST
EMD-ENET
EMD-ECAT
MCUH

Stand-Alone Controller



CAD/CAM Software

Generate NC programs from CAD/CAM



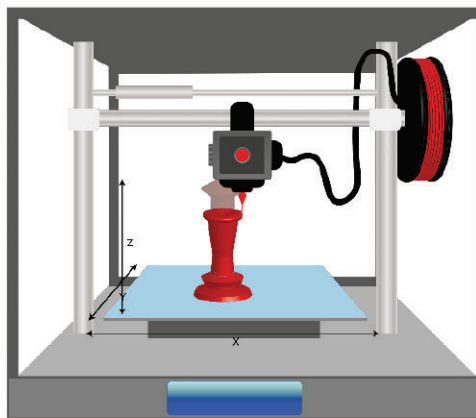
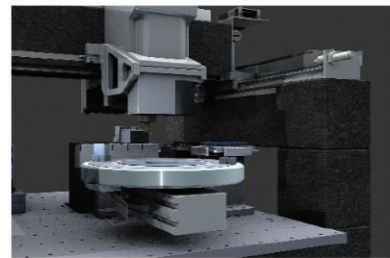
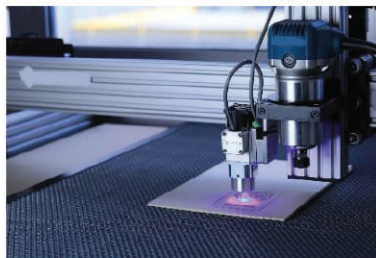
Transfer Software

Transfer the NC program to the controller

Ethernet
RS232

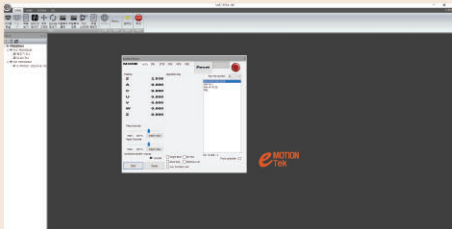


Controller



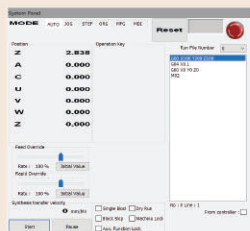
Software

HMI



- Controller diagnostics, commissioning and motion programming
- Provides features to make it easier for users to use the controller

Control panel



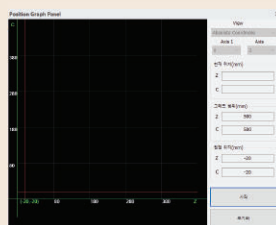
- View running programs and select programs
- Perform automatic, manual, origin, and DNC operations
- Axes and various features to choose from

Monitoring

Num	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0	HEX	DEC
X00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0000	0
X01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0000	0
X02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0000	0
X03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0000	0
X04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0000	0
X05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0000	0
Num	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0	HEX	DEC
Y00	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1	1	30C3	12483
Y01	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	000C	12
Y02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0000	0
Y03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0000	0

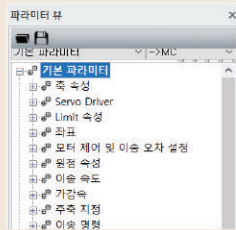
- Simultaneous display of all I/O channels and status
- Supports automatically configured and available I/O
- Output settings with a mouse click
- Forced ON/OFF

Show movement path



- Real-time monitoring of motion drive progress (2D)

Parameter



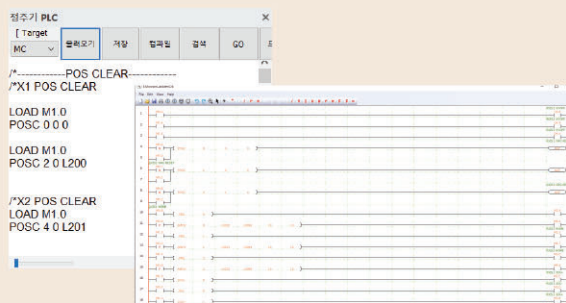
- Set axes properties
- Setting motor movement amount, speed, etc.
- Setting origin properties
- Add-on settings

MC Program(G code)



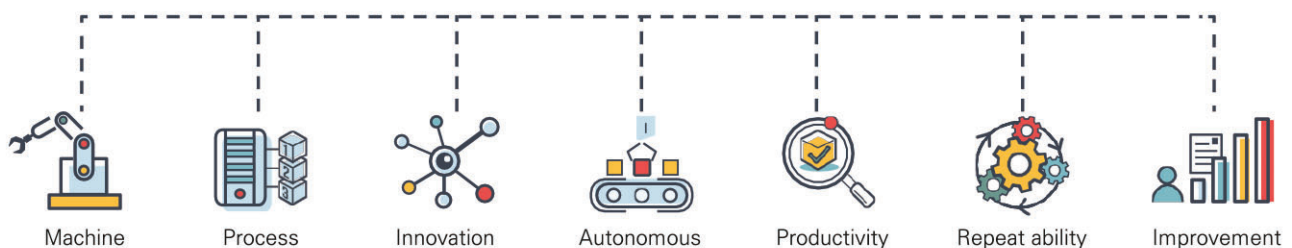
- Supports universal G Code program
- Edit multiple programs Simultaneously
- Find and Replace
- Go directly to any line number or program label
- Offline editing

PLC Program

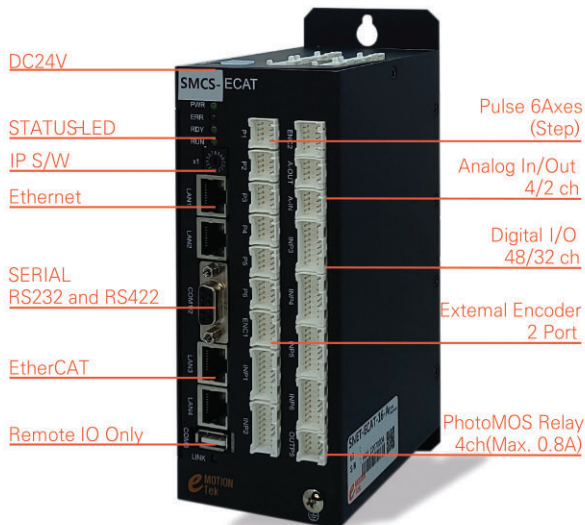
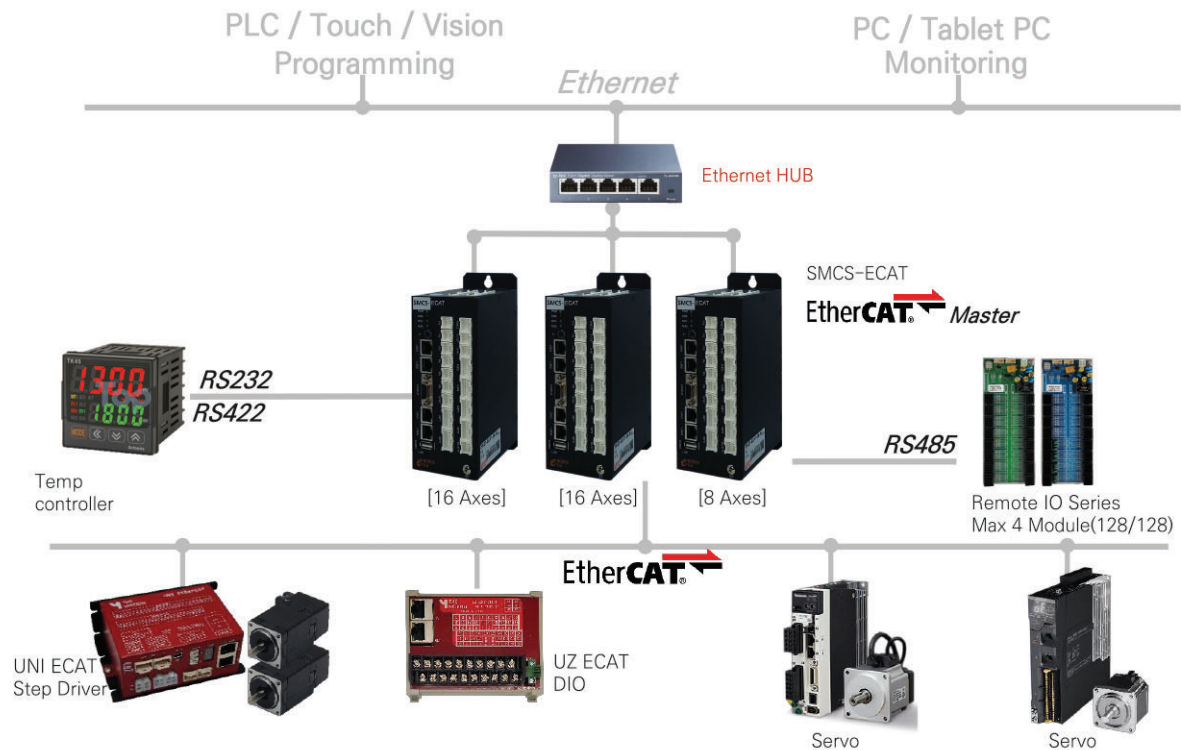


- Mnemonic-type program structure
- Ladder diagram monitoring support
- Find and Replace
- Go directly to any line number or program label
- Offline editing

eMOTIONTek



EtherCAT Network type Controller SMCS ECAT Series



EtherCAT

SMCS ECAT Controller Features

- > PLC, G Code Motion Command System
- > PLC, Touch Panel device communication Melsec Protocol Support
- > Easy Machining using the DNC function
- > No restrictions on various PCs and operating systems
- > 6Ch. Multi tasking multi program execution
- > Quick to determine if there is a fault and easy to replace

INTERFACES

Power supply	24VDC/0.75A
Ethernet	2 x 10/100 Mbps(RJ45)
EtherCAT	1 x EtherCAT Master(RJ45) STP Cable(above CAT5e)
Serial	1 x RS232, 1 x RS422
USB Type A	1 x RS485 Remote IO(Max 4 module)
Pulse Out(Step Driver)	6ch(5M pps)
External Encoder	2Port(Line receive)

SPECIFICATIONS

Control Axes	8, 16
Control Cycle	1ms
Development Language	PLC, G Code Motion Command System
Supported Protocols	Melsec
Multi Ch	6Ch

I/O

Digital I/O	Input 48ch(5mA/24V) Output 32ch(Max. 80mA Sink Current)
Relay Output	4ch(Max. 800mA)
Analog I/O	Input 4ch(16bit), Output 2ch(16bit)

Environment conditions

Ambient temperature/	0~+55°C/20~80% During operation
Humidity	-15~+60°C/10~90% During storage

Specifications



	SMCS-ECAT-8	SMCS-ECAT-8-A	SMCS-ECAT-16	SMCS-ECAT-16-A
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INTERFACES

Power supply	24VDC/0.75A			
Ethernet	2 x 10/100 Mbps(RJ45) STP Cable(above CAT5e)			
EtherCAT	1 x EtherCAT Master(RJ45) STP Cable(above CAT5e)			
Serial	1 x RS232, 1 x RS422			
USB Type A	1 x RS485 Remote IO(Max 4 module)			

SPECIFICATIONS

Control Axes	8 Axes	8 Axes	16 Axes	16 Axes
Control Cycle	1ms(EtherCAT)/10ms(PLC)			
Development Language	PLC, G Code Motion Command System			
Supported Protocols	Melsec			
Multi Ch	6ch			
Pulse Output Type	Diff. Line Drive			
Pulse Output Mode	CW/CCW, Pulse/Direction			
Pulse Output Frequency	1 ~ 5 Mpps			
External Encoder or MPG	2 Port, Inc A, /A, B, /B Phase, 5V Diff. Line Drive, Open Collector(High 3.8V, Low 1.2V)			
Encoder Input Frequency	Max. 5Mhz			

I/O

Digital Input	48ch(5mA/24V)			
Digital Output	32ch(Max. 80mA Sink Current)			
Relay Output	4ch(Max. 800mA)			
Analog Input	-	4ch(16bit)	-	4ch(16bit)
Analog Output	-	2ch(16bit)	-	2ch(16bit)

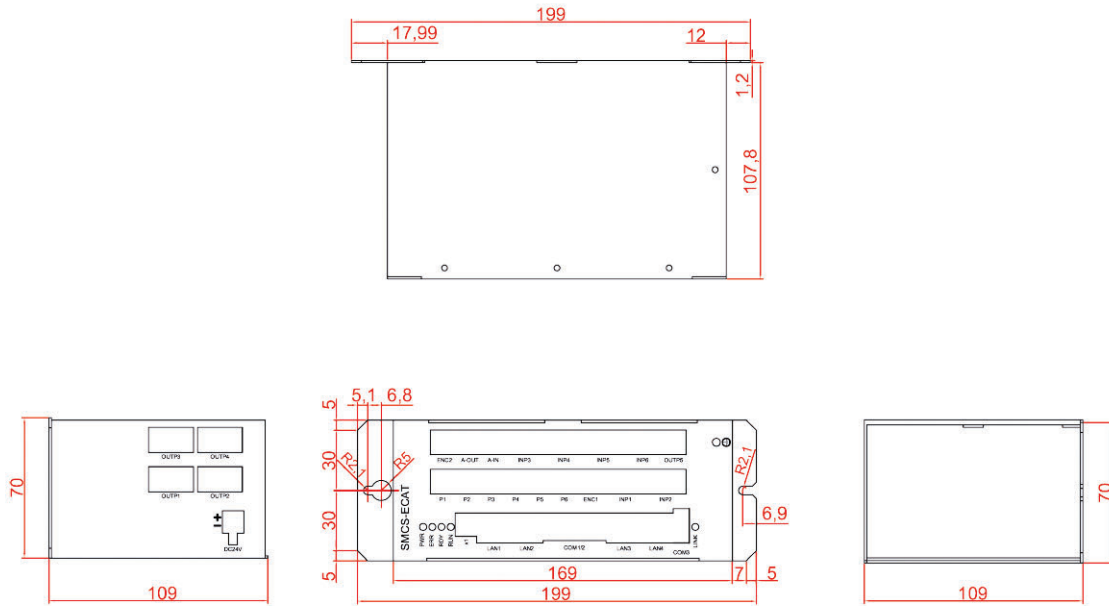
Environment conditions

Ambient temperature / Humidity	0~+55°C/20~80% During operation / -15~+60°C/10~90% During storage			
Vib. Resist	0.5g			
Size	199 x 70 x 109			

SNET-ECAT
SNET-RTEX
SNET-P
SNET-B94
SMCS-ECAT
SMCS-RTEX
MCST
END
MUCH
Shoe
UZ
Remote
MCJH-E
RTEX
ECAT
ENET
PUL
ST
SV
SA
IP65
Cable

Dimension

SMCS-ECAT-8, SMCS-ECAT-8-A, SMCS-ECAT-16, SMCS-ECAT-16-A



SMCS-ECAT Series Part Number Construction

SMCS-ECAT-8-A

① Product Name

SNET = PC-Based Controller

SMCS = Stand-Alone Controller

② Command Method

P = Pulse

ECAT = EtherCAT

RTEX = RTEX

③ Control Axes

8 = 8Axes

16 = 16Axes

④ Option

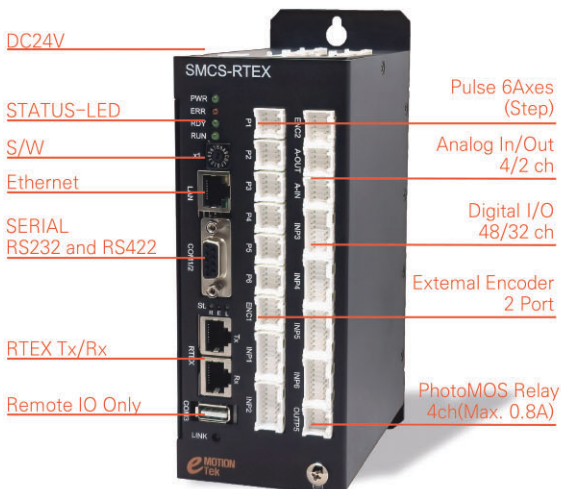
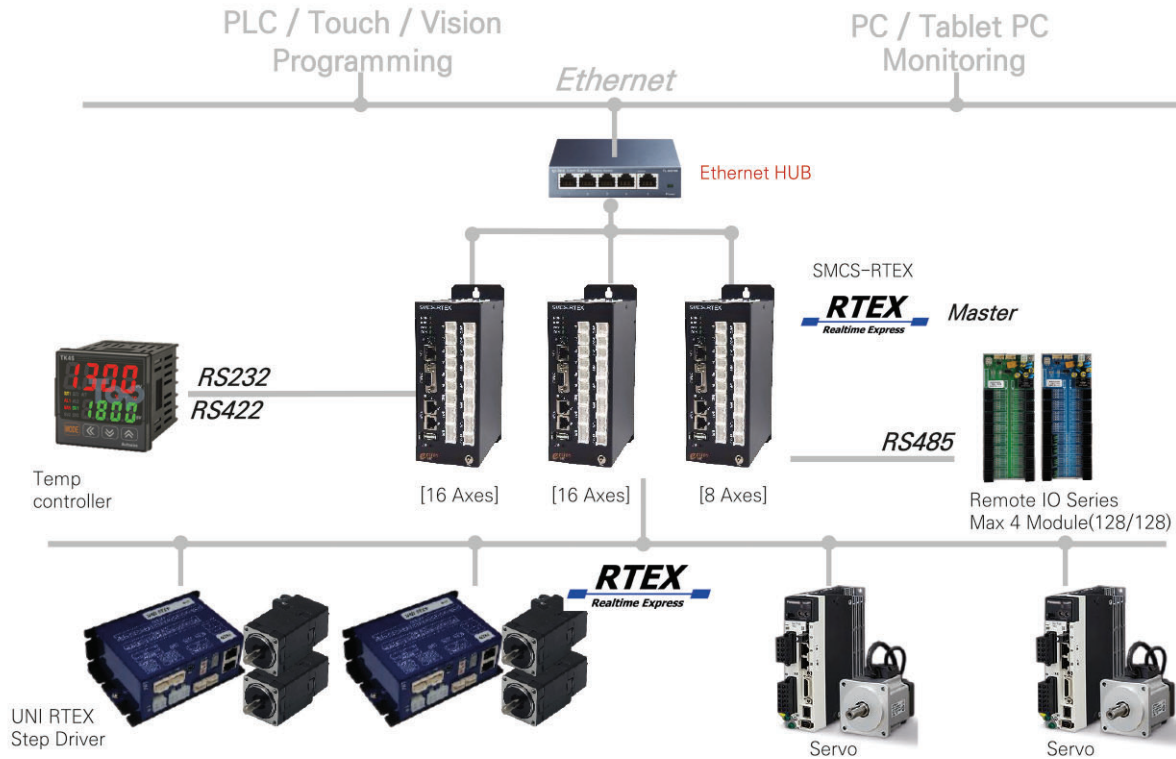
A = Analog I/O (4ch/2ch)

None = Blank

SMCS-EtherCAT Controller product list

SMCS-ECAT-8	EtherCAT, 8 Axes, I/O(48/36), Pulse or High Speed Trigger OUT
SMCS-ECAT-8-A	EtherCAT, 8 Axes, I/O(48/36), Analog I/O(4/2), Pulse or High Speed Trigger OUT
SMCS-ECAT-16	EtherCAT, 16 Axes, I/O(48/36), Pulse or High Speed Trigger OUT
SMCS-ECAT-16-A	EtherCAT, 16 Axes, I/O(48/36), Analog I/O(4/2), Pulse or High Speed Trigger OUT

Realtime Express(RTEX) Network type Controller SMCS RTEX Series



SMCS RTEX Controller Features

- PLC, G Code Motion Command System
- PLC, Touch Panel device communication Melsec Protocol Support
- Easy Machining using the DNC function
- No restrictions on various PCs and operating systems
- 6Ch. Multi tasking multi program execution
- Quick to determine if there is a fault and easy to replace

INTERFACES

Power supply	24VDC/0.75A
Ethernet	1 x 10/100 Mbps(RJ45)
RTEX	RTEX(Realtime Express) Rx/Tx(RJ45), STP Cable(above CAT5e)
Serial	1 x RS232, 1 x RS422
USB Type A	1 x RS485 Remote IO(Max 4 module)
Pulse Out(Step Driver)	6ch(5M pps)
External Encoder	2Port(Line receive)

SPECIFICATIONS

Control Axes	8, 16
Control Cycle	1ms
Development Language	PLC, G Code Motion Command System
Supported Protocols	Melsec
Multi Ch	6Ch
I/O	
Digital I/O	Input 48ch(5mA/24V) Output 32ch(Max. 80mA Sink Current)
Relay Output	4ch(Max. 800mA)
Analog I/O	Input 4ch(16bit), Output 2ch(16bit)

Environment conditions

Ambient temperature/ Humidity	0~+55°C/20~80% During operation -15~+60°C/10~90% During storage
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SNET-ECAT	SNET-RTEX	SNET-P	SNET-B94	SMCS-ECAT	SMCS-RTEX	MCST	END	MLCH	SLCH	UZ	Remote	MCU+E	RTEX	ECAT	ENET	PUL	ST	SV	SA	IP65	Cable
CONTROLLER												I/O MODULE		STEP DRIVER			STEP MOTOR				

Specifications



	SMCS-RTEX-8	SMCS-RTEX-8-A	SMCS-RTEX-16	SMCS-RTEX-16-A
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INTERFACES

Power supply	24VDC/0.75A			
Ethernet	1 x 10/100 Mbps(RJ45) STP Cable(above CAT5e)			
RTEX	RTEX(Realtime Express Rx/Tx(RJ45), STP Cable(above CAT5e)			
Serial	1 x RS232, 1 x RS422			
USB Type A	1 x RS485 Remote IO(Max 4 module)			

SPECIFICATIONS

Control Axes	8 Axes	8 Axes	16 Axes	16 Axes
Control Cycle	1 ms / 10 ms(PLC)			
Development Language	PLC, G Code Motion Command System			
Supported Protocols	Melsec			
Multi Ch	6ch			
Pulse Output Type	Diff. Line Drive			
Pulse Output Mode	CW/CCW, Pulse/Direction			
Pulse Output Frequency	1 ~ 5 Mpps			
External Encoder or MPG	2 Port, Inc A, /A, B, /B Phase, 5V Diff. Line Drive, Open Collector(High 3.8V, Low 1.2V)			
Encoder Input Frequency	Max. 5Mhz			

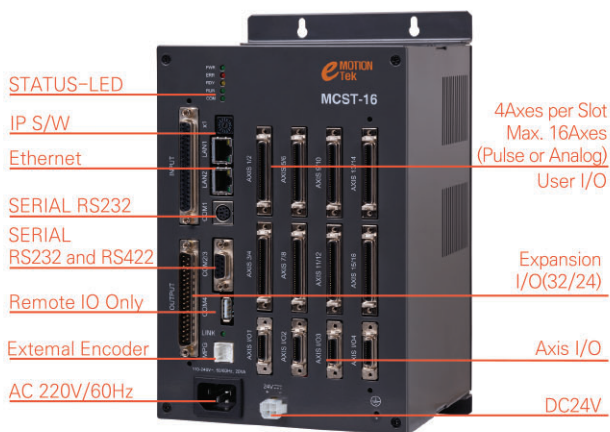
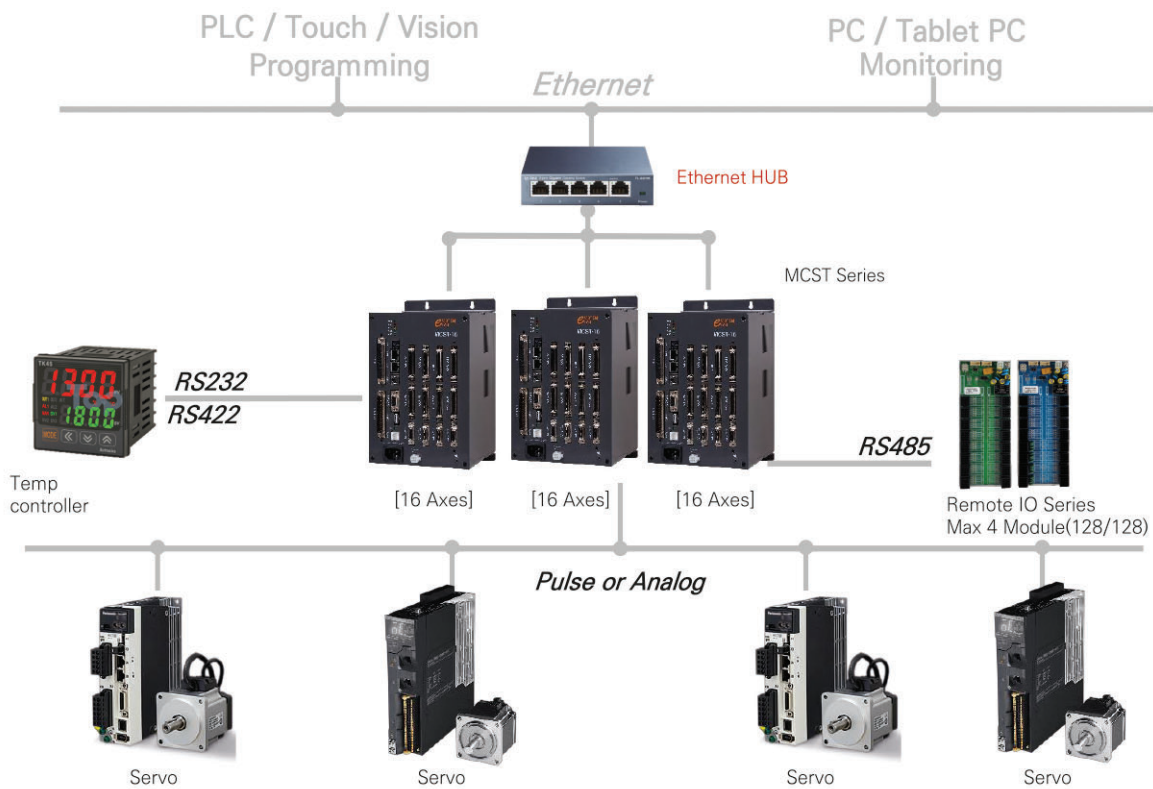
I/O

Digital Input	48ch(5mA/24V)			
Digital Output	32ch(Max. 80mA Sink Current)			
Relay Output	4ch(Max. 800mA)			
Analog Input	-	4ch(16bit)	-	4ch(16bit)
Analog Output	-	2ch(16bit)	-	2ch(16bit)

Environment conditions

Ambient temperature / Humidity	0~+55°C/20~80% During operation / -15~+60°C/10~90% During storage			
Vib. Resist	0.5g			
Size	199 x 70 x 109			

Pulse or Analog Network type Controller MCST Series



Pulse or Analog

MCST Controller Features

- PLC, G Code Motion Command System
- PLC, Touch Panel device communication Melsec Protocol Support
- Easy Machining using the DNC function
- No restrictions on various PCs and operating systems
- 6Ch. Multi tasking multi program execution
- Quick to determine if there is a fault and easy to replace

INTERFACES

Power supply	220V 60Hz, 20VA, 24VDC
Ethernet	2 x 10/100 Mbps(RJ45)
Serial	2 x RS232, 1 x RS422
USB Type A	1 x RS485 or Remote IO(Max 4 module)
External Encoder or MPG	1 ch(Line receive)

SPECIFICATIONS

Control Axes	4, 8, 12, 16
Control Output	Pulse : Diff. Line Drive, CW/CCW, Pulse/Dir, 1~6.25MHz Analog : $\pm 10V(16bits)$, $\pm 20mA$
Encoder	Diff. Line Receive Phase A/B/C, Max. 5MHz
Development Language	PLC, G Code motion command system
Supported Protocols	Melsec
Multi Ch	6Ch
User I/O	Input 5ch x Axes(5mA/24V) +32ch Output 3ch x Axes(Max. 80mA Sink Current)
Axis I/O	Input 3ch(+, -Limit, Origin) x Axes(5mA/24V) + 24ch Output 1ch(Brake) x Axes(Max. 80mA Sink Current)

Option

Analog Input	Port x 1ch($\pm 10V$) ex)4Axes = 2ch
Expansion I/O	Input 32ch(5mA/24V) Output 24ch 24V(Max. 80mA Sink Current)

Environment conditions

Ambient temperature/ Humidity	0~+55°C/20~80% During operation -15~+60°C/10~90% During storage
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e MCST series Part Number Construction

MCST-16P 16 IO-ES2

① ② ③ ④ ⑤

① Product Name

MCST = Stand-Alone Controller

④ Option 1

IO = I/O (32ch/24ch) Added
None = Blank

② Command Method

16P = Pulse
16A = Analog

⑤ Option 2

E = I/O Expansion(SPI)
S1 = analog Input(2ch)
S2 = analog Input(4ch)
ES1 = I/O Expansion(SPI)
+ analog Input(2ch)
ES2 = I/O Expansion(SPI)
+ analog Input(4ch)
None = Blank

③ Axes

4 = 4Axes
8 = 8Axes
12 = 12Axes
16 = 16Axes

MCST Pulse Controller Product List

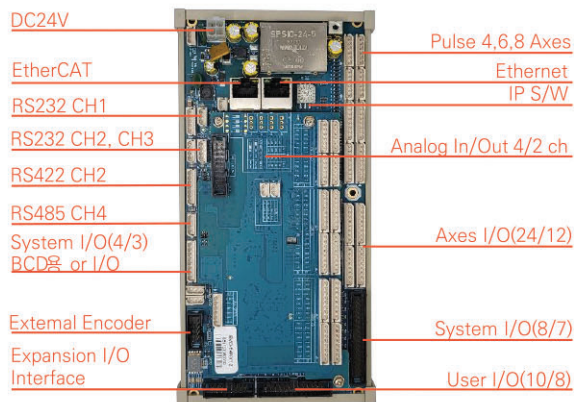
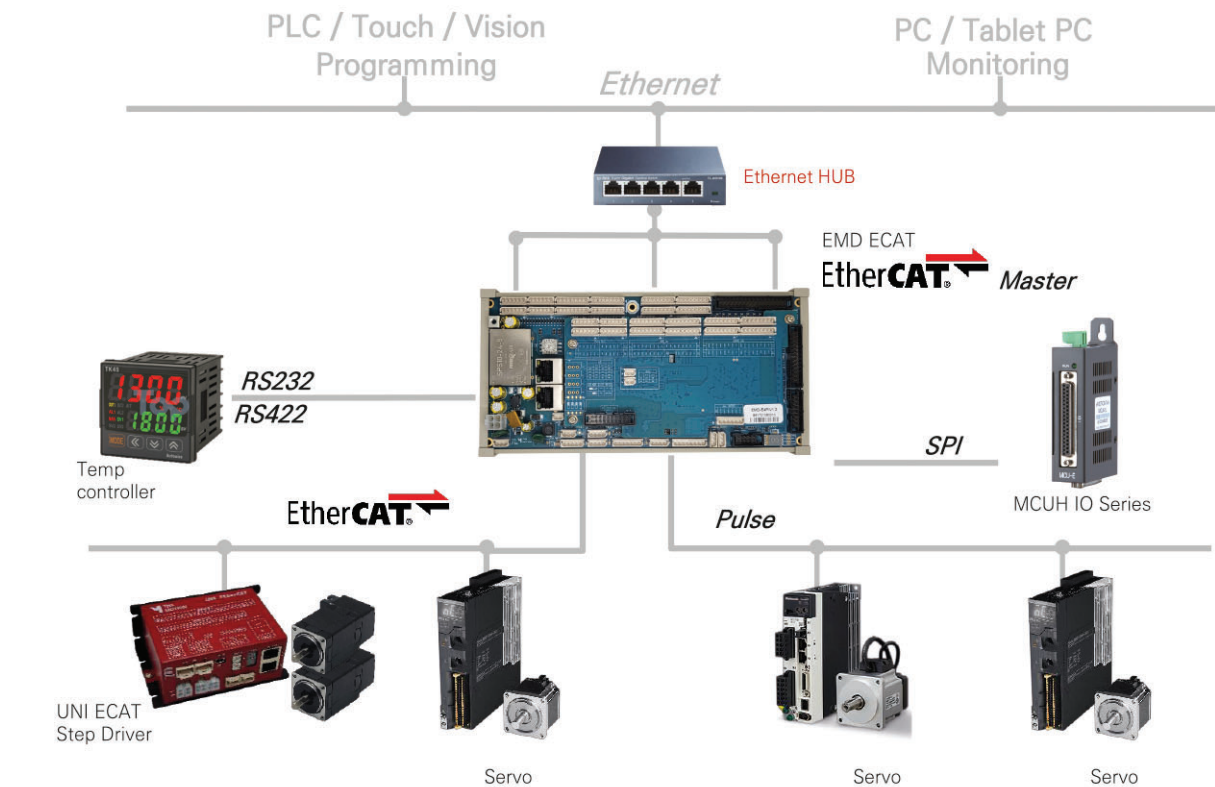
MCST-16P4
MCST-16P4IO
MCST-16P4IO-E
MCST-16P4IO-S1
MCST-16P4IO-ES1
MCST-16P8
MCST-16P8IO
MCST-16P8IO-E
MCST-16P8IO-S1
MCST-16P8IO-S2
MCST-16P8IO-ES1
MCST-16P8IO-ES2
MCST-16P12
MCST-16P12IO
MCST-16P12IO-E
MCST-16P12IO-S1
MCST-16P12IO-S2
MCST-16P12IO-ES1
MCST-16P12IO-ES2
MCST-16P16
MCST-16P16IO
MCST-16P16IO-E
MCST-16P16IO-S1
MCST-16P16IO-S2
MCST-16P16IO-ES1
MCST-16P16IO-ES2

MCST Analog Controller Product List

MCST-16A4
MCST-16A4IO
MCST-16A4IO-E
MCST-16A4IO-S1
MCST-16A4IO-ES1
MCST-16A8
MCST-16A8IO
MCST-16A8IO-E
MCST-16A8IO-S1
MCST-16A8IO-S2
MCST-16A8IO-ES1
MCST-16A8IO-ES2
MCST-16A12
MCST-16A12IO
MCST-16A12IO-E
MCST-16A12IO-S1
MCST-16A12IO-S2
MCST-16A12IO-ES1
MCST-16A12IO-ES2
MCST-16A16
MCST-16A16IO
MCST-16A16IO-E
MCST-16A16IO-S1
MCST-16A16IO-S2
MCST-16A16IO-ES1
MCST-16A16IO-ES2

SNET-ECAT
SNET-RTEX
SNET-P
SNET-ES4
SNCS-ECAT
SNCS-RTEX
MCST
END
MLCH
Shee
IZ
Random
MOJH-E
RTEX
ECAT
ENET
PUL
ST
SV
SA
IP65
Cable

EtherCAT + Pulse Network type Controller EMD ECAT Series



EtherCAT + Pulse

EMD ECAT Controller Features

- PLC(Programmable Logic Controller) Level Stability and Reliability
- Equipped with G Code, dispenser-specific commands, and PLC functions
- Edit/Operate Programs on T-Box and PC
- PLC, Touch Panel device communication Melsec Protocol Support
- 8Axes Pulse, EtherCAT Output Motion Board

INTERFACES

Power supply	24VDC/1A (2A on TBOX Connection)
Ethernet	1 x 10/100 Mbps(RJ45)
EtherCAT	1 x EtherCAT Master(RJ45) STP Cable(above CAT5e)
Serial	2 x RS232, 1 x RS422(or RS232), 1 x RS485

SPECIFICATIONS

Control Axes	4, 6, 8
Control Cycle	1ms
Control Outputs	Diff. Line Drive CW/CCW, Dir/Pulse, Phase A/B 1~5 Mpps
Encoder	Inc.Diff, Phase A/B, 5V Open Collector(H:3.8V,L:1.2V)
Development Language	PLC, G Code or Dispenser Commands
Supported Protocols	Melsec
Multi Ch	6Ch
Axis I/O or User I/O	Input 6ch(RDY,ALM,INP,ORG,±LM) x Axes(5mA/24V) Output 3ch(ON,RST,CLR) x Axes(Max. 50mA Sink Current)
System I/O or User I/O	Input 8ch(5mA/24V) Output 7ch(Max. 50mA Sink Current)
User I/O	Input 14ch(5mA/24V) Output 12ch(Max. 50mA Sink Current)
External Encoder or MPG	1 ch(MPG, Line receive)

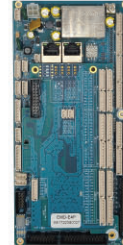
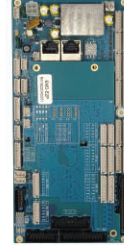
Option

Analog I/O	Input 4ch(16bit), Output 2ch(16bit)
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Environment conditions

Ambient temperature/ Humidity	0~+55°C/20~80% During operation -15~+60°C/10~90% During storage
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Specifications



SNET-ECAT
SNET-RTEX
SNET-P
SNET-894
SMCS-ECAT
SMCS-RTEX
MCST
EMD
MLCH
Slce
UZ
Randa
MCJH-E
RTEX
ECAT
ENET
PUL
ST
SV
SA
IP65
Cable

CONTROLLER

I/O MODULE

STEP DRIVER

STEP MOTOR

	EMD-ENET(ECAT)-4P	EMD-ENET(ECAT)-6P	EMD-ENET(ECAT)-8P
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INTERFACES

Power supply	24VDC/1A(TBOX 연결시 2A)		
Ethernet	1 x 10/100 Mbps(RJ45) STP Cable(above CAT5e)		
EtherCAT	1 x EtherCAT Master(RJ45) STP Cable(above CAT5e)		
Serial	2 x RS232, 1 x RS422(or RS232), 1 x RS485		

SPECIFICATIONS

Control Axes	4 Axes	6 Axes	8 Axes
Control Cycle	1 ms / 10 ms(PLC)		
Development Language	PLC, G Code or Dispenser-Specific Commands		
Supported Protocols	Melsec		
Multi Ch	6ch		
Pulse Output Type	Diff. Line Drive		
Pulse Output Mode	CW/CCW, Pulse/Direction, A/B Phase		
Pulse Output Frequency	1 ~ 5 Mpps		
External Encoder or MPG	Inc. Diff Phase A/B, 5V Open Collector(High 3.8V, Low 1.2V)		
Encoder Input Frequency	Max. 2.5 Mpps		

I/O

Axis(User) Input	24ch	36ch	48ch
Axis(User) Output	12ch	18ch	24ch
System(User) Input	8ch	8ch	8ch
System(User) Output	7ch	7ch	7ch
User Input	10ch	14ch	14ch
User Output	8ch	12ch	12ch
Total I/O	42ch / 27ch	58ch / 37ch	70ch / 43ch

Option

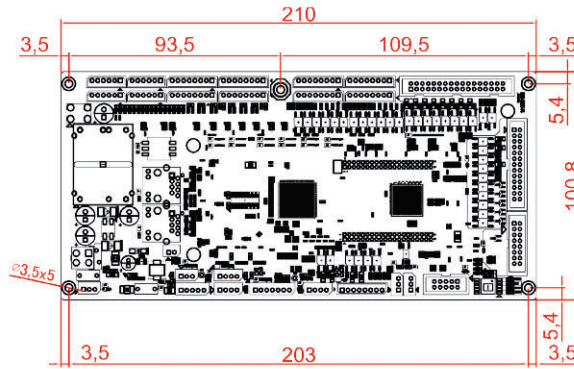
Analog Input	4ch(16bit)
Analog Output	2ch(16bit)

Environment conditions

Ambient temperature / Humidity	0~+55°C/20~80% During operation / -15~+60°C/10~90% During storage		
Vib. Resist	0.5g		
Size	210 x 100.8 x 20	210 x 100.8 x 20	210 x 100.8 x 20

Dimension

▶ EMD-ECAT-4P, EMD-ECAT-6P, EMD-ECAT-8P



EMD ECAT Series Part Number Construction

EMD-ECAT-4P-A

① ② ③ ④

① Product Name

EMD = Dispenser-Specific Commands
EMD(G) = G Code(Stand-Alone)

④ Option

A = Analog I/O (4ch/2ch)
None = Blank

② Command Method

ECAT = EtherCAT

③ Axes Control Axes

4 = 4Axes
6 = 6Axes
8 = 8Axes

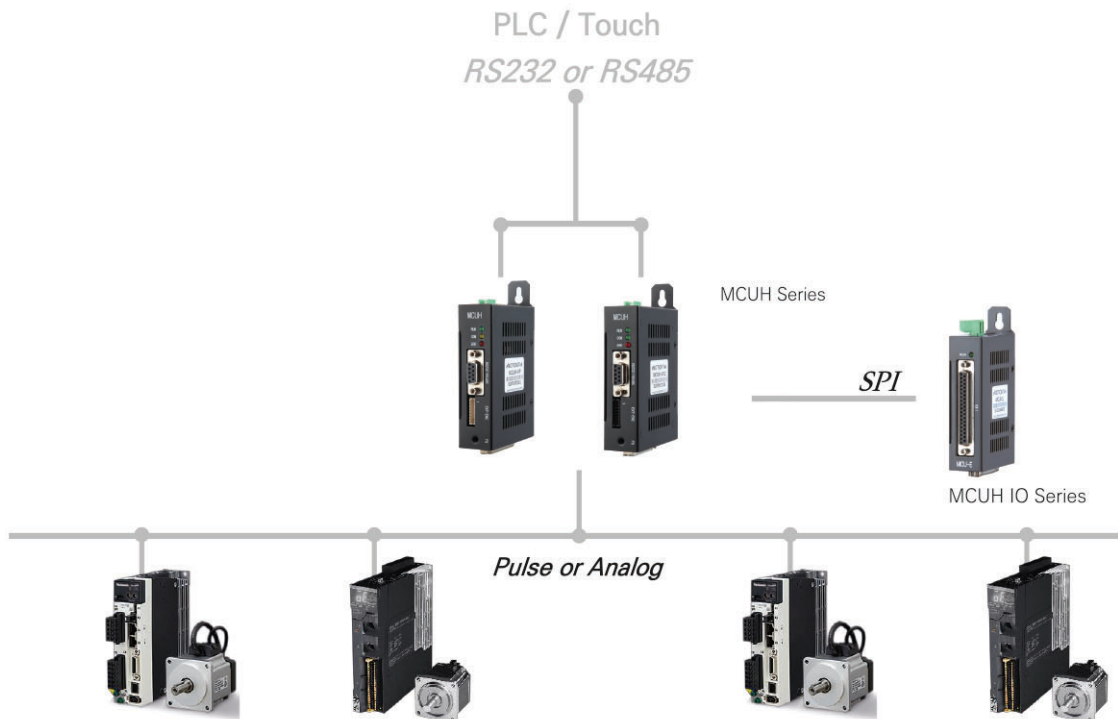
EMD Controller Product List

EMD-ENET-4P	Pulse, 4Axes
EMD-ENET-6P	Pulse, 6Axes
EMD-ENET-6P-A	Pulse, 6Axes, Analog I/O
EMD-ENET-8P	Pulse, 8Axes
EMD-ENET-8P-A	Pulse, 8Axes, Analog I/O
EMD-ECAT-4P	EtherCAT, 4Axes
EMD-ECAT-6P	EtherCAT, 6Axes
EMD-ECAT-6P-A	EtherCAT, 6Axes, Analog I/O
EMD-ECAT-8P	EtherCAT, 8Axes
EMD-ECAT-8P-A	EtherCAT, 8Axes, Analog I/O

EMD(G) Controller Product List

EMD(G)-ENET-4P	Pulse, 4Axes
EMD(G)-ENET-6P	Pulse, 6Axes
EMD(G)-ENET-6P-A	Pulse, 6Axes, Analog I/O
EMD(G)-ENET-8P	Pulse, 8Axes
EMD(G)-ENET-8P-A	Pulse, 8Axes, Analog I/O
EMD(G)-ECAT-4P	EtherCAT, 4Axes
EMD(G)-ECAT-6P	EtherCAT, 6Axes
EMD(G)-ECAT-6P-A	EtherCAT, 6Axes, Analog I/O
EMD(G)-ECAT-8P	EtherCAT, 8Axes
EMD(G)-ECAT-8P-A	EtherCAT, 8Axes, Analog I/O

Pulse or Analog type Controller MCUH Series



Pulse or Analog

MCUH Controller Features

- PLC(Programmable Logic Controller)-Level Stability and Reliability
- High-Performance Compact Motion Controller
- External encoder pulse synchronization function
- Synchronous signal output while moving
- Supports Communication Protocols with PLC and Touch Panel Devices (Melsec)

INTERFACES

Power supply	24VDC/0.2A
Serial	1 x RS232, 1 x RS485

SPECIFICATIONS

Control Axes	1, 2
Control Cycle	Pulse : Diff. Line Drive, CW/CCW, Dir/Pulse, 2.5MHz Analog : -10V~10V/ 16bits
Control Method	Open Loop / Closed Loop
Encoder	Inc. Dirr. Line Receive Phase A/B/C, Max. 2.5MHz
Development Language	PLC, Robot command system
Supported Protocols	Melsec
I/O	Input 14ch(5mA/24V) Output 8ch(Max. 80mA Sink Current)
External Encoder	1 ch(Line receive)

Environment conditions

Ambient temperature/ Humidity	0~+55°C/20~80% During operation -15~+60°C/10~90% During storage
-------------------------------	--

CONTROLLER	SNET-FCAT
	SNET-RTEX
	SNET-P
	SNET-EG4
	SNCS-FCAT
I/O MODULE	SNCS-RTEX
	MCST
	EMD
	MCUH
	Slave
STEP DRIVER	UZ
	Randa
	MCUH-E
	RTEX
	FCAT
STEP MOTOR	ENET
	PUL
	ST
	SV
	SA
	IP65
	Cable

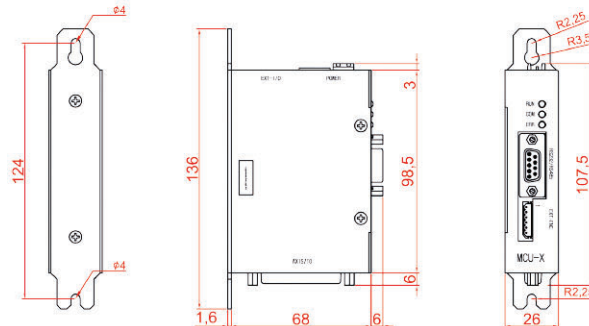
Specifications



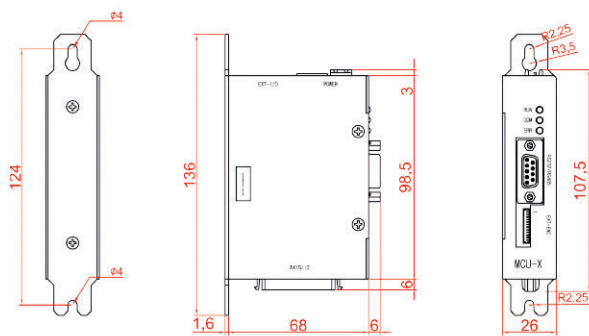
	MCUH-XP	MCUH-XP2	MCUH-XA	MCU-XA2
INTERFACES				
Power supply	24VDC/0.2A			
Serial	1 x RS232(Max. 38400Bps) 1 x RS485(Max. 38400Bps, 64 Nodes)			
SPECIFICATIONS				
Control Axes	1 Axis	2 Axes	1 Axis	2 Axes
Control Output	Diff. Line Drive CW/CCW, Pulse/Direction		Analog(−10~+10V,12Bit)	
Control Target	Servo & Step		Servo & Linear	
Supported Protocols	General-Purpose Touch Panel and Melsec			
Encoder Input type	-		Inc. Diff. Line Receive Phase A/B/C	
Encoder Input Frequency	-		Max. 2.5MHz	
External Encoder Channel	1ch	2ch	1ch	1ch
External Encoder Input Type	Inc. Diff. Line Receive Phase A/B/C			
External Encoder Frequency	Max. 2.5MHz			
I/O				
Input	14ch	24ch	10ch	16ch
Output	8ch	15ch	8ch	11ch
Environment conditions				
Ambient temperature / Humidity	0~+55°C/20~80% During operation / -15~+60°C/10~90% During storage			
Vib. Resist	0.5g			
Size	26 x 136 x 75.6 mm			

Dimension

▶ MCUH-XP, MCUH-XA



▶ MCUH-XP2, MCUH-XA2



MCUH Part Number Construction

MCUH-X P 2
① ② ③

① Product Name

MCUH-X = Stand-Alone Controller

② Command Method

P = Pulse

A = Analog

③ Axes Control Axes

None = 1Axis

2 = 2Axes

MCUH Controller Product

MCUH-XP	Pulse, 1Axis
MCUH-XP2	Pulse, 2Axes
MCUH-XA	Analog, 1Axis
MCUH-XA2	Analog, 2Axes

CONTROLLER	SNET-ECAT
	SNET-RTEX
	SNET-P
	SNET-EP4
	SMCS-ECAT
	SMCS-RTEX
	MCST
I/O MODULE	END
	MCUH
	Slave
	UZ
	Remote
	MCUH-E
	RTEX
STEP DRIVER	ECAT
	ENET
	PUL
STEP MOTOR	ST
	SV
	SA
	IP65
	Cable



Network I/O Module

Slice IO
UZ I/O
Remote I/O
MCUH-E/EL

Network I/O Module Slice I/O Series

Slice IO Module Features

- Provides various industrial protocols – Configuration and provision of over 90 types of various IO modules
- Efficient use of space with compact size and slice module expansion method
- Removable Terminal Block method considering user convenience provides an easy and convenient working environment for workers when wiring and installing electrical equipment.

Specifications

Network Adapter



Network Adapter	GN-9289	GN-9386	GL-9089	GL-9086	GL9041
Protocol	MODBUS TCP, Ethernet IP	EtherCAT	MODBUS TCP, Ethernet IP	EtherCAT	RTEX
Max. Node	Limited by Ethernet Spec.	65,535 Nodes	MODBUS TCP, Ethernet IP	65,535 Nodes	–
Max. I/O Expansion	63 Slots		16 Slots		480ch / 480ch
I/O Data Size	Max 128 bytes each slot		Max 256 bytes		–
Baud Rate	10/100 Mbps, Full duplex	100 Mbps	10/100 Mbps, Full duplex	10/100Mbps	10/100Mbps
Connector Type	2 x RJ-45				
Power Dissipation	70mA @ 24Vdc		75mA typical @ 24Vdc	40mA typical @ 24Vdc	40mA typical @ 24Vdc
Protection	Min. 1.5A		Reverse polarity protection		
Current for I/O Module	1.5A @ 5Vdc		1A @ 5Vdc		
System/ Field Power	24Vdc nominal (15~30Vdc) / 24Vdc typical (Max. 30Vdc)		24Vdc nominal (15~28.8Vdc) / 24Vdc typical (Max. 28.8Vdc)		
Dimensions	54mm x 99mm x 70mm		22mm x 109mm x 70mm		

CONTROLLER	SNET-ECAT
	SNET-RTEX
	SNET-P
	SNET-B94
	SNICS-ECAT
	SNICS-RTEX
	MCST
I/O MODULE	EMD
	MLCH
	Slice
	UZ
	Remote
	MODU-E
	MODU-F
STEP DRIVER	RTEX
	ECAT
	ENET
	PUL
	ST
	SV
	SA
STEP MOTOR	IP65
	Cable

▶ Slice IO

Digital Input

Model	Channel	Type	Voltage	Signal Delay (OFF to ON/ON)	Power Dissipation	Connector
GT-1238	8	Universal (Sink or Source)	24 Vdc	0.3ms / 0.3ms	35 mA	10 RTB
GT-12DF	16			0.3ms / 0.3ms	50 mA	18 RTB
GT-12FA	32			0.2ms / 0.2ms	55 mA	40P Connector

Digital Output

Model	Channel	Type	Voltage	Signal Delay (OFF to ON/ON)	Power Dissipation	Connector
GT-2318	8	Sink	24 Vdc	0.3ms / 0.3ms	45 mA	10 RTB
GT-225F	16			0.3ms / 0.5ms	50 mA	18 RTB
GT-223F	16			0.2ms / 0.4ms	50 mA	20P Connector
GT-22BA	32			0.3ms / 0.5ms	65 mA	40P Connector
GT-22DA	32			0.2ms / 0.4ms	65 mA	40P Connector
GT-2328	8	Source		0.3ms / 0.3ms	40 mA	10 RTB
GT-226F	16			0.3ms / 0.3ms	50 mA	18 RTB
GT-22CA	32			0.3ms / 0.5ms	65 mA	40P Connector
GT-2744	4	Relay Output (Form A, SPST)	0~32 Vdc/48 Vdc/ 110 Vdc/240 Vac	5 ms / 8 ~ 15ms	35 mA	10 RTB
GT-2784	4	MOS Relay (Solid State)	110 Vac/ 110 Vdc	1 ~ 1.5ms / 3ms	80 mA	10 RTB

Analog Input

Model	Channel	Type	Range	Resolution	Power	Connector
GT-3114	4	Current	0~20, 4~20 mA	12 Bits	25 mA	10 RTB
GT-3424	4	Voltage	0~10, 0~5, 1~5Vdc	12 Bits	25 mA	10 RTB
GT-3428	8			12 Bits	30 mA	10 RTB

Analog Input(Temp. Control)

Model	Channel	Type	Sensor Type	Accuracy	Power	Connector
GT-3704	4	RTD / 3-wire	PT50, PT100, PT200, PT500, PT1000, JPT50, JPT100, JPT200, JPT500, JPT1000, NI100, NI120, NI200, NI500, NI1000, NI1000LG	±0.1% @25℃ ±0.3% @-	130 mA	10 RTB
GT-3804	4	T.C. (Thermocouple)	Type 10uV/1uV/2uV	±0.1% @25℃ ±0.3% @-	120 mA	10 RTB

Analog Output

Model	Channel	Type	Range	Resolution	Power	Connector
GT-4114	4	Current	0~20 mA	12 Bits	30 mA	10 RTB
GT-4424	4	Voltage	0~10 Vdc	12 Bits	30 mA	10 RTB
GT-4428	8			12 Bits	30 mA	10 RTB

Special Module(Counter)

Model	Channel	Type	Voltage	Frequency	Power	Connector
GT-5112	2	High Speed	24 Vdc	0~ 750kHz	70 mA	10 RTB

Special Module(Serial Interface)

Model	Channel	Type	Range	Resolution	Power	Connector
GT-5212	2	RS-232	-18 ~ 18 V	TxD, RxD, Full	85 mA	10 RTB
GT-5232	2	RS-485	-	TxD, RxD, Half	85 mA	10 RTB

Power Module

Model	Type	Voltage	Power Dissipation	Connector
GT-7511	Expansion	24 Vdc	20 mA	10 RTB

Dimension

▶ Network Adapter MODEL : GN-9289, GN-9386



▶ Network Adapter MODEL : GL-9089, GL-9086, GL-9041



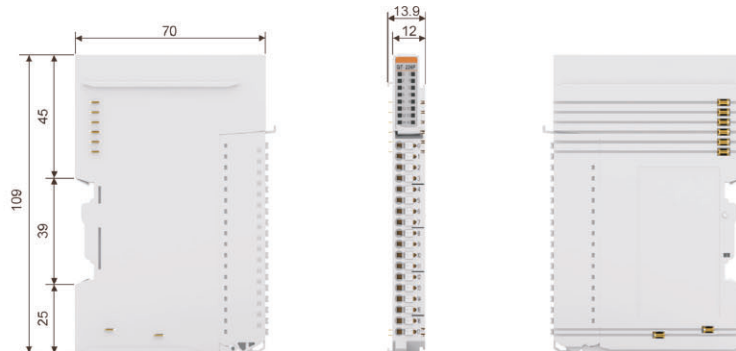
CONTROLLER	SNET-ECAT
	SNET-RTEX
	SNET-P
	SNET-ES4
	SMCS-ECAT
	SMCS-RTEX
I/O MODULE	MCST
	END
	MLCH
	Sho
	UZ
	Randa
STEP DRIVER	MOJH-E
	RTEX
	ECAT
	ENET
	PUL
	ST
STEP MOTOR	SV
	SA
	IP65
	Cable

Dimension

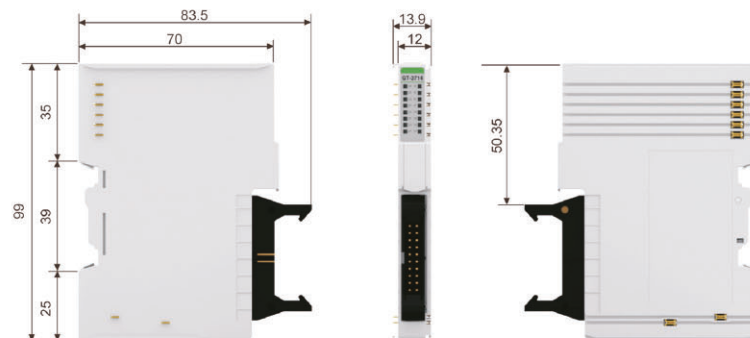
▶ Slice IO(10 RTB)



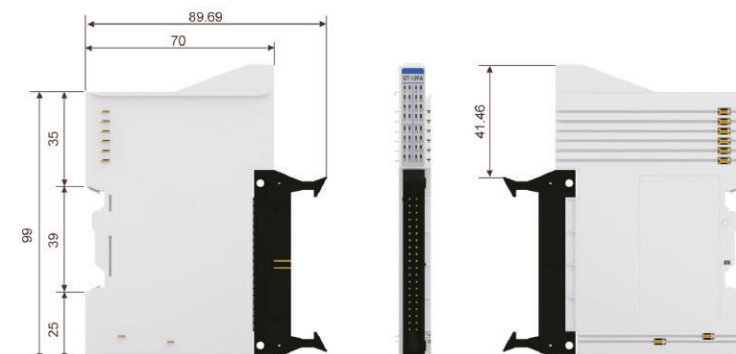
▶ Slice IO(18 RTB)



▶ Slice IO(20P Connector)



▶ Slice IO(40P Connector)



Network I/O Module UZ ENET, ECAT I/O Series

UZ I/O Module Features

- Ethernet, EtherCAT Communication I/O Module
- Status LEDs are Attached to All Contact Points, Making it Easy to Check the Wiring Status.
- Equipped with Overvoltage and Overcurrent Protection Circuit

Specifications

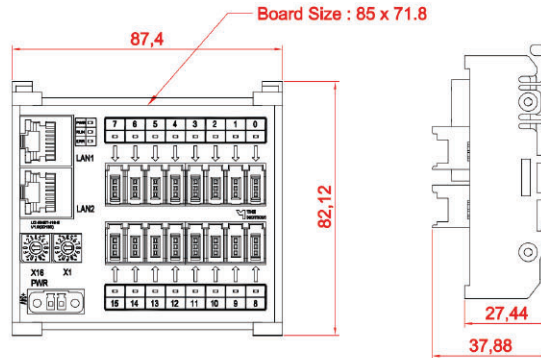


	UZ-ENET-IN16-E	UZ-ENET-OUT16-E	UZ-ECAT-IN16-T	UZ-ECAT-OUT16-T
INTERFACES				
Power supply	24VDC			
Communication	Ethernet	Ethernet	EtherCAT	EtherCAT
Communication Speed	10/100Base-TX			
I/O				
Input	16ch	-	16ch	-
Input Current/Voltage	5mA / 24V			
Output	-	16ch	-	16ch
Output Current/Voltage	500mA / 24V, Total 1.5A Below			
Connector Type	E-CON		Terminal Block	
Circuit protection	Short protection(Over Current/Voltage)			
Environment conditions				
Ambient temperature / Humidity	0~+55°C/20~80% During operation / -15~+60°C/10~90% During storage			
Vib. Resist	0.5g			
Size	87.4 x 82.12 x37.88mm		102.4 x 82.12 x 48.22mm	

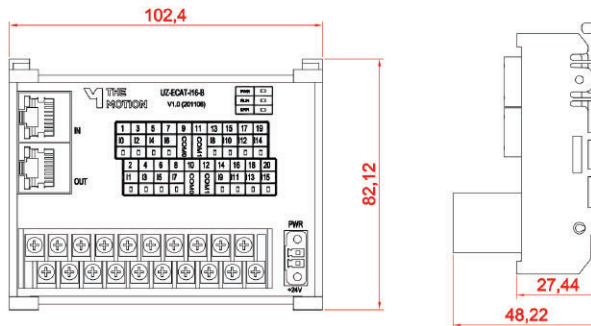
CONTROLLER	SNET-ECAT
	SNET-RTX
	SNET-P
	SNET-B24
	SNCS-ECAT
	SNCS-RTX
	MCST
I/O MODULE	END
	MUCH
	Slave
	UZ
	Remote
	MODU-E
	RTX
STEP DRIVER	ECAT
	ENET
	PUL
	ST
	SV
	SA
	IP65
STEP MOTOR	Cable

Dimension

▶ UZ-ENET-IN16-E, UZ-ENET-OUT16-E



▶ UZ-ECAT-IN16-T, UZ-ECAT-OUT16-T



UZ I/O Part Number Construction

UZ-ECAT-IN16-T

① Product Name

UZ=Network I/O Module

② Communication Method

ECAT= EtherCAT

ENET = Ethernet

③ Number of Channel

IN16 = Input 16ch

OUT16 = Output 16ch

④ Connector Type

E= E-CON

T = Terminal Block

UZ-ENET I/O Product

UZ-ENET-IN16-E Ethernet In16, Terminal Block

UZ-ENET-OUT16-E Ethernet, Out16, Terminal Block

UZ-ECAT I/O Product

UZ-ECAT-IN16-T EtherCAT, In16, Terminal Block

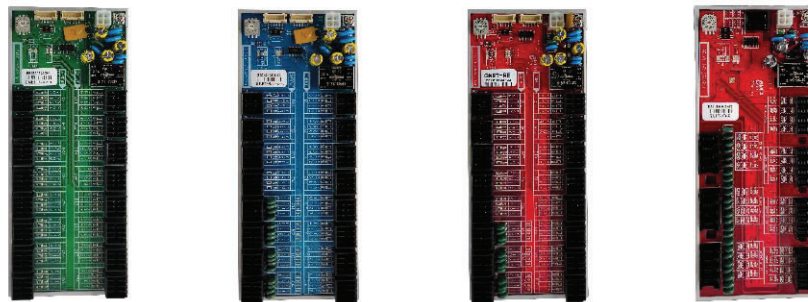
UZ-ECAT-OUT16-T EtherCAT, Out16, Terminal Block

Network I/O Module Remote I/O Series

Remote I/O Module Features

- RS485 Communication I/O Module
- 600kbps communication speed and 0.6ms scan time
- Max. 16 I/O Modules can be Connected(Total 1024ch)
- Status LEDs are Attached to All Contact Points, Making it Easy to Check the Wiring Status.
- DC24V, Max. by applying PhotoMOS relay. Capable of outputting 0.8A

Specifications



	GNET-D	GNET-R	GNET-RE	SNET-R
--	--------	--------	---------	--------

INTERFACES

Power supply	24VDC			
Serial	RS485			
Communication Speed	Max. 600k bps			
Applicable products	SMCS Series, SNET Series, MCST Series			

I/O

Input	32ch	32ch	32ch	32ch
Input Current/Voltage	2.5mA / 24V			
Output	32ch	16ch	20ch	-
Output Current/Voltage	200mA / 24V			
Relay Output	-	16ch	12ch	24ch
Output Current/Voltage	-	0.8A / 24V		

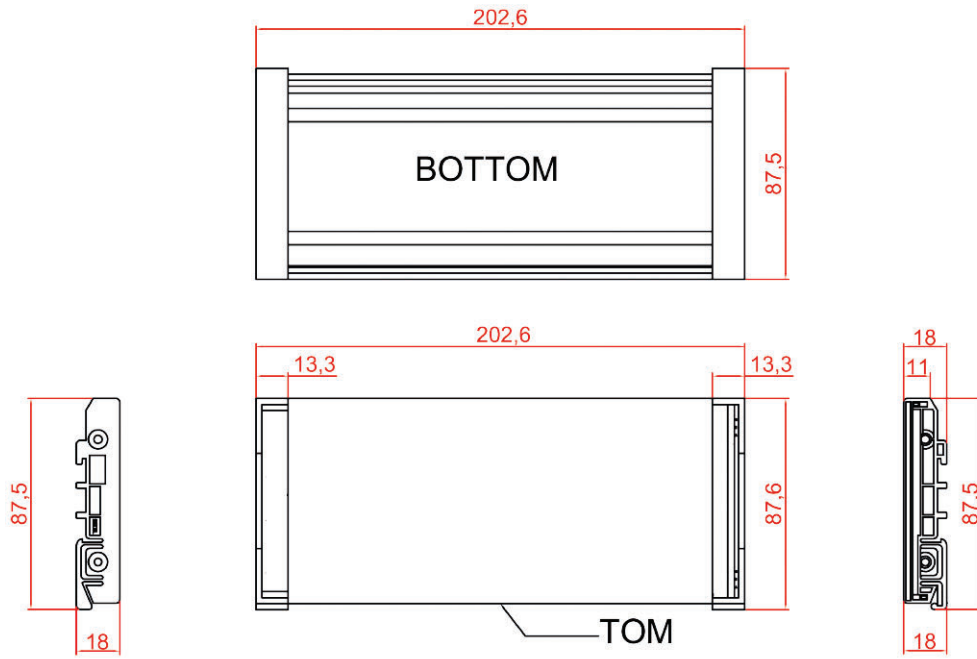
Environment conditions

Ambient temperature / Humidity	0~+55°C/20~80% During operation / -15~+60°C/10~90% During storage			
Vib. Resist	0.5g			
Size	202.6 x 87.5 x 30mm			

CONTROLLER	SNET-FCAT
	SNET-RTEX
	SNET-P
	SNET-EG4
	SMCS-FCAT
	SMCS-RTEX
I/O MODULE	MCST
	EMD
	MLCH
	Shoe
	UZ
	Remote
STEP DRIVER	MCJH-E
	RTEX
	FCAT
	ENET
	PUL
	ST
STEP MOTOR	SV
	SA
	IP65
	Cable

Dimension

▶ GNET-D, GNET-R, GNET-RE, SNET-R



Remote I/O Part Number Construction

GNET-D

① ②

① Product Name

GNET, SNET = RS485 I/O Module

② Number of Channel

D = Digital Input 32ch / Digital Output 32ch

R = Digital Input 32ch / Digital Output 16ch + Relay Output 16ch

RE = Digital Input 32ch / Digital Output 20ch Relay Output 12ch

SNET-R = Digital Input 32ch / Relay Output 24ch

Remote I/O Product	
GNET-D	RS485, I32/O32
GNET-R	RS485, I32/O16+Relay Output 16
GNET-RE	RS485, I32/O20+Relay Output 12
SNET-R	RS485, I32+Relay Output 24

Network I/O Module MCUH I/O Series

MCUH I/O Module Features

- Max Input 64ch, Output 48ch expandable(2 Module)
- Expandable to MCUH, MCST, EMD Series
- Input NPN, PNP available

Specifications

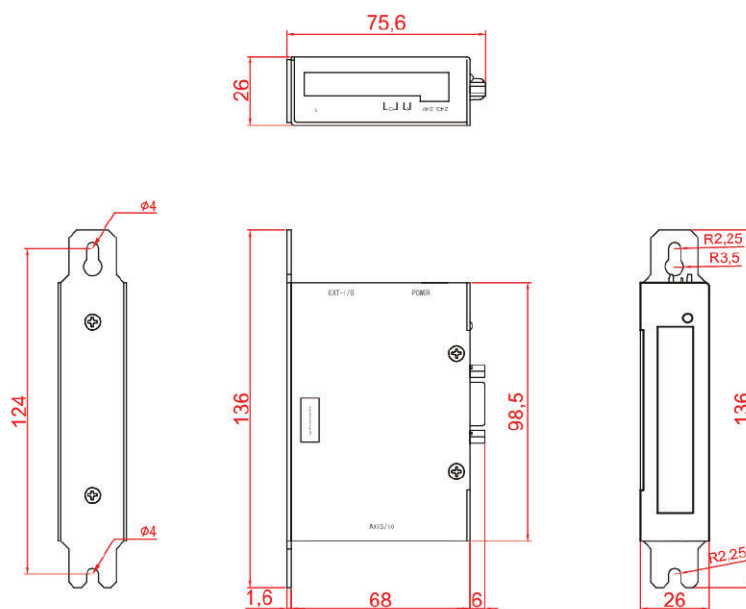


	MCUH-E	MCUH-EL
INTERFACES		
Power supply	24VDC	
Serial	Max. 10m 16pin Flat Cable	
Communication Speed	1.5Mbps	
Applicable products	MCUH Series, MCST Series, EMD Series	
I/O		
Input	20ch	32ch
Input Current/Voltage	5mA / 24V	
Output	14ch	24ch
Output Current/Voltage	24V(Max. 50mA Sink Current)	
Environment conditions		
Ambient temperature / Humidity	0~+55°C/20~80% During operation / -15~+60°C/10~90% During storage	
Vib. Resist	0.5g	
Size	26 x 136 x 75.6 mm	26 x 136 x 75.6 mm

CONTROLLER	SNET-FCAT
	SNET-RTEX
	SNET-P
	SNET-B94
	SMCS-FCAT
	SMCS-RTEX
	MCST
	EMD
I/O MODULE	MAUCH
	Slave
	IZ
	Remote
STEP DRIVER	MCUH-E
	RTEX
	FCAT
	ENET
	PUL
STEP MOTOR	ST
	SV
	SA
	IP65 Cable

Dimension

▶ MCUH-E, MCUH-EL



MCUH I/O Part Number Construction

MCUH-EL

① ②

① Product Name

MCUH = SPI I/O Module

② Number of Channel

E = I/O(20ch/14ch)

EL = I/O(32ch/24ch)

MCUH I/O Product

MCUH-E	Input 20ch, Output 14ch
MCUH-EL	Input 32ch, Output 24ch



CONTENTS

- Step Driver
- Motor





Step Driver

UNI RTEX

UNI ECAT

UNI ECAT Torque Off

UNI ECAT Compact

UNI ECAT ABS

UNI ECAT 4X

UNI ENET

UNI ENET Compact

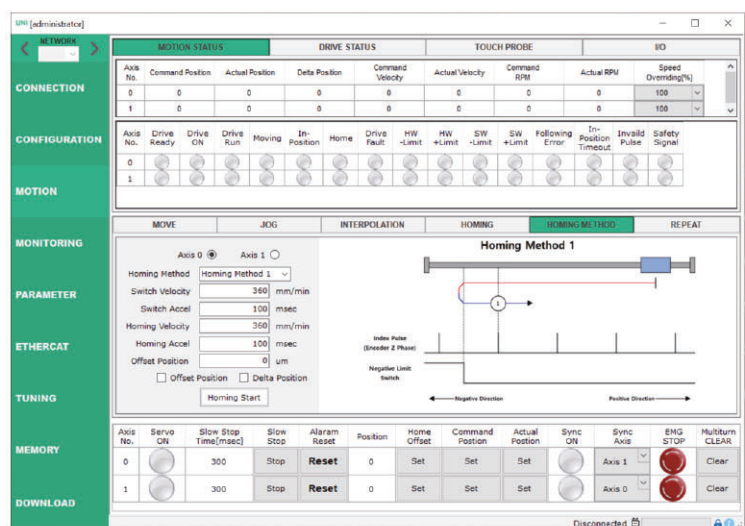
UNI PUL

HMI Software

▶ Easy manufacturer-specific motor setup

Manufacturer	Motor Size	Part
None	ETC(etc size)	UNIM-42M(STP-43D2085)
eMOTIONtek	20mm(0.78inch)	UNIM-42L(STP-43D3091)
Shinano Kenshi	28mm(1.10inch)	UNIM-42XL(STP-43D4009)
Autonics	35mm(1.37inch)	UNIM-42M-A(STP-43D2206)
Nidec	42mm(1.65inch)	UNIM-42L-A(STP-43D3113)
Oriental	56mm(2.20inch)	UNIM-42XL-A(STP-43D4014)
Dings	60mm(2.36inch)	
Moons	66mm(2.59inch)	
Sanyo denki		
Fastech		
Saehan electronics		
ERAETECH		
Denso		
Takasago Fluidic System		
Cosum		
Leadshine		
MINEBEA MITSUMI		
Nanotec		
ETC		

▶ Easy Operating



Product Guide

Open Loop Step Driver

	Series	Number of Motor Axes	Control Method	Output Current	Interface	Control Motor
	UNI RTEX	1, 2	Open Loop	Max. 4A x Axis (86mm Max. 6A)	RTEX , USB	2 Phase Bipolar Step Motor
	UNI ECAT	1, 2	Open Loop	Max. 4A x Axis (86mm Max. 6A)	EtherCAT , USB	2 Phase Bipolar Step Motor
	UNI ECAT Torque OFF	1, 2	Open Loop	Max. 4A x Axis	EtherCAT , USB	2 Phase Bipolar Step Motor
	UNI ECAT Compact	1	Open Loop	Max. 4A	EtherCAT , USB	2 Phase Bipolar Step Motor
	UNI ECAT ABS	1, 2	Open Loop	Max. 4A x Axis	EtherCAT , USB	2 Phase Bipolar Step Motor
	UNI ECAT 4X	4	Open Loop	Max. 4A x Axis	EtherCAT , USB	2 Phase Bipolar Step Motor
	UNI ENET	1, 2	Open Loop	Max. 4A x Axis (86mm Max. 6A)	Ethernet , USB	2 Phase Bipolar Step Motor
	UNI ENET Compact	1	Open Loop	Max. 4A	Ethernet , USB	2 Phase Bipolar Step Motor
	UNI PUL	1	Open Loop	Max. 4A	Pulse , RS232	2 Phase Bipolar Step Motor

Product Guide

Closed Loop Step Driver

	Series	Number of Motor Axes	Control Method	Output Current	Interface	Control Motor
	UNI RTEX	1, 2	Closed Loop	Max. 4A x Axis (86mm Max. 6A)	RTEX , USB	2 Phase Bipolar Step Motor
	UNI ECAT	1, 2	Closed Loop	Max. 4A x Axis (86mm Max. 6A)	EtherCAT , USB	2 Phase Bipolar Step Motor
	UNI ECAT Torque OFF	1, 2	Closed Loop	Max. 4A x Axis	EtherCAT , USB	2 Phase Bipolar Step Motor
	UNI ECAT Compact	1	Closed Loop	Max. 4A	EtherCAT , USB	2 Phase Bipolar Step Motor
	UNI ECAT ABS	1, 2	Closed Loop	Max. 4A x Axis	EtherCAT , USB	2 Phase Bipolar Step Motor
	UNI ECAT 4X	4	Closed Loop	Max. 4A x Axis	EtherCAT , USB	2 Phase Bipolar Step Motor
	UNI ENET	1, 2	Closed Loop	Max. 4A x Axis (86mm Max. 6A)	Ethernet , USB	2 Phase Bipolar Step Motor
	UNI ENET Compact	1	Closed Loop	Max. 4A	Ethernet , USB	2 Phase Bipolar Step Motor
	UNI PUL	1	Closed Loop	Max. 4A	Pulse , RS232	2 Phase Bipolar Step Motor

Product Guide

Step Motor

	Series	Type	Control Method	Size	ENCODER
	UNIM-ST	2 Phases Bi-polar	Open Loop	20 ~ 86mm	-
	UNIM-SV	2 Phases Bi-polar	Closed Loop	20 ~ 86mm	10,000ppr (20,35mm 8,000ppr) (86mm 4,000ppr)
	UNIM-SA	2 Phases Bi-polar	Closed Loop	42 ~ 60mm	10,000ppr(17Bit)
	UNIM-SV	2 Phases Bi-polar IP 65	Closed Loop	56 ~ 86mm	4,000ppr

④ Driver Part Number Constriction

UST B-ECAT-ST-2X-28M/42L

① ② ③ ④ ⑤ ⑥ ⑦

① Control Method

UST = Open Loop
USV = Closed Loop
USA = Absolute

⑤ Number of Motor Axis

1X = 1 Axis
2X = 2 Axes
4X = 4 Axes

② Input Voltage

Blank = 24 VDC
B = 24VDC(Built-in Booster Converter)

⑥ 1st AXIS MOTOR

28S = 28mm S Size
28M = 28mm M Size

③ Communication Method

RTEX = RTEX
ECAT = EtherCAT
ENET = Ethernet
PUL = Pulse

86L = 86mm L Size

⑦ 2nd, 3rd, 4th Axis Motor

Same as number 6

④ Feature

Mi = Compact
ST = Disconnect Power(Torque OFF)
Blank = Standard

UNI Driver Product	
UST-PUL-1X-28M	Open Loop, PULSE, 1 Axis, 28M
UST-RTEX-2X-28M/42L	Open Loop, RTEX, 2 Axes, 28M, 42L
USTB-ECAT-2X-56M/60L	Open Loop, Booster, ECAT, 2 Axes, 56M, 60L
UST-ECAT-Mi-1X-28M	Open Loop, ECAT, 1 Axis, Compact, 28M
USTB-ECAT-ST-2X-56M/60L	Open Loop, Booster, ECAT, Torque OFF, 2 Axes, 56M, 60L
UST-ECAT-4X-28M/42M/42L/42L	Open Loop, ECAT, 4 Axes, 28M, 42M, 42L, 42L
USV-PUL-1X-28M	Closed Loop, PULSE, 1 Axis, 28M
USV-RTEX-2X-28M/42L	Closed Loop, RTEX, 2 Axes, 28M, 42L
USVB-ECAT-2X-56M/60L	Closed Loop, Booster, ECAT, 2 Axes, 56M, 60L
USV-ECAT-Mi-1X-28M	Closed Loop, ECAT, 1 Axis, Compact, 28M
USVB-ECAT-ST-2X-56M/60L	Closed Loop, Booster, ECAT, Torque OFF, 2 Axes, 56M, 60L
USV-ECAT-4X-28M/42M/42L/42L	Closed Loop, ECAT, 4 Axes, 28M, 42M, 42L, 42L
USAB-ECAT-ST-1X-60M	Absolute, Booster, ECAT, Torque OFF, 1 Axis, 60M
USAB-ECAT-ST-2X-56M/60L	Absolute, Booster, ECAT, Torque OFF, 2 Axes, 56M, 60L

⋮

Motor Part Number Construction

UNIM-SV-42 L (BK)-A-S-□-R□-□

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Product Name

2 Phase Bipolar STEP MOTOR

② Control Method

ST = Open Loop

SV = Closed Loop

SA = Batter-Less Absolute Encoder

③ SIZE

Size[mm]	20	28	35	42	56	60	86
NEMA	8	11	14	17	23	24	34

④ LENGTH

S = Small

M = Medium

L = Large

XL = Extra Large

⑤ BRAKE

Blank = Non

⑥ ENCODER

A = 10,000 ppr

F = 4,000 ppr

G = 8,000 ppr

S = Absolute

Blank = Non

⑦ Manufacturer

S = Shinano Kenshi

P = Prostepper

⑧ IP Rate

Blank = Non

IP65 = IP65

⑨ REDUCER

Blank = Non

R03 = 1:3

R05 = 1:5

R07 = 1:7

R10 = 1:10

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.

R50 = 1:50

⑩ REDUCER Manufacturer

Blank = Non

A = APEX

H = HEUNGJIN AT

L = LS

G = G PLUS

UNI Motor Product

Open Loop	Closed Loop	Absolute
UNIM-ST-20L-P	UNIM-SV-20L-G-P	UNIM-SA-42S-S-S
UNIM-ST-28S-S	UNIM-SV-28S-A-S	UNIM-SA-42M-S-S
UNIM-ST-28M-S	UNIM-SV-28M-A-S	UNIM-SA-42L-S-S
UNIM-ST-28L-S	UNIM-SV-28L-A-S	UNIM-SA-56S-S-S
UNIM-ST-35M-P	UNIM-SV-35M-G-P	UNIM-SA-56M-S-S
UNIM-ST-35L-P	UNIM-SV-35L-G-P	UNIM-SA-56L-S-S
UNIM-ST-42S-S	UNIM-SV-42S-A-S	UNIM-SA-60S-S-S
UNIM-ST-42M-S	UNIM-SV-42M-A-S	UNIM-SA-60M-S-S
UNIM-ST-42L-S	UNIM-SV-42L-A-S	UNIM-SA-60L-S-S
UNIM-ST-56S-S	UNIM-SV-56S-A-S	
UNIM-ST-56M-S	UNIM-SV-56M-A-S	
UNIM-ST-56L-S	UNIM-SV-56L-A-S	
UNIM-ST-60S-S	UNIM-SV-60S-A-S	
UNIM-ST-60M-S	UNIM-SV-60M-A-S	
UNIM-ST-60L-S	UNIM-SV-60L-A-S	
UNIM-ST-86M-S	UNIM-SV-86M-F-S	
UNIM-ST-86L-S	UNIM-SV-86L-F-S	

:

④ Driver + Motor Set Part Number Construction

UNI B-SV-EC-Mi-2X-42L (BK) 42XL

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Product Name

② Input Voltage

Blank = 24 VDC

B = 24VDC

(Built-in Booster Converter)

③ Control Method

ST = Open Loop

SV = Closed Loop

SA = Battery-Less Absolute Encoder

④ Communication Protocol

RT = RTEK

EC = EtherCAT

EN = Ethernet

PL = Pulse

⑤ Structure

Mi = Compact

ST = Disconnect Power
(Torque OFF)

Blank = Standard

⑥ Number of Motor Axis

1X = 1 Axis

2X = 2 Axes

4X = 4 Axes

⑦ 1st Axis Motor

42L = 42mm L Size

⑧ BRAKE

Blank = Non

⑨ 2nd,3rd,4th Axis Motor

42XL = 42mm XL Size Large

Blank = Non

UNI Driver+Motor Set Product

Set Product	Driver Product	Motor1 Product	Motor2 Product	Motor3	Motor4
UNI-ST-RT-1X-28M	UST-RTEX-1X	UINM-ST-28M-S			
UNIB-ST-EC-2X-56L/60L	USTB-ECAT-2X	UNIM-ST-56L-S	UNIM-ST-60L-S		
UNI-ST-EC-Mi-1X-42L	UST-ECAT-Mi-1X	UNIM-ST-42L-S			
UNI-ST-EC-ST-2X-42L/42L	UST-ECAT-4X	UNIM-ST-42L-S	UNIM-ST-42L-S		
UNI-ST-EC-4X-42L/42L/42L/42L	UST-ECAT-4X	UNIM-ST-42L-S	UNIM-ST-42L-S	ST-42L	ST-42L
UNI-ST-PL-1X-42L	UST-PUL-1X	UNIM-ST-42L-S			
UNI-SV-RT-1X-28M	USV-RTEX-1X	UINM-SV-28M-A-S			
UNIB-SV-EC-2X-56L/60L	USVB-ECAT-2X	UNIM-SV-56L-A-S	UNIM-SV-60L-A-S		
UNI-SV-EC-Mi-1X-42L	USV-ECAT-Mi-1X	UNIM-SV-42L-A-S			
UNI-SV-EC-4X-42L/42L/42L/42L	USV-ECAT-4X	UNIM-SV-42L-A-S	UNIM-SV-42L-A-S	SV-42L-A	SV-42L-A
UNI-SV-PL-1X-42L	USV-PUL-1X	UNIM-SV-42L-A-S			
UNI-SA-EC-ST-1X-42L	USA-ECAT-ST-1X	UNIM-SA-42L-S-S			
UNIB-SA-EC-ST-1X-60L	USAB-ECAT-ST-1X	UNIM-SA-60L-S-S			
UNI-SA-EC-ST-2X-42L/42L	USA-ECAT-ST-2X	UNIM-SA-42L-S-S	UNIM-SA-42L-S-S		
UNIB-SA-EC-ST-2X-60L/60L	USAB-ECAT-ST-2X	UNIM-SA-60L-S-S	UNIM-SA-60L-S-S		

:

Realtime Express(RTEX) Network Type UNI RTEX Series

▶ HMI Software

- Real-time Temperature and Voltage etc. Monitoring
- Easy Operating Software
- HMI Quick Start YouTube QR



RTEX
Realtime Express



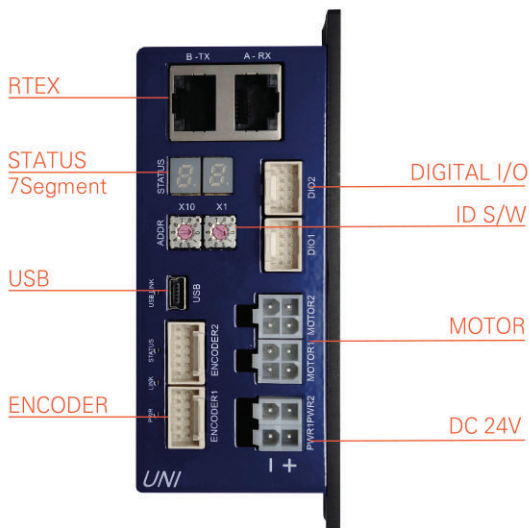
Master
SNET-RTEX



UNI STEP Driver

Panasonic

Open or Closed Loop Stepping System



Input Voltage	24VDC $\pm 10\%$ (86mm 48VDC)
Current Consumption	Max. 500mA (Except motor current)
Communication Cycle Time	0.5, 1ms
Control Method	Open Loop, Closed Loop
Control Motor	2 Phase Bipolar Step Motor
Supported Mode	CP
RTEX	2 x RTEX Slave(RJ45) STP Cable(above CAT5e)
USB	USB2.0 Set Motor parameter and Monitoring
Number of Motor Axes	1, 2
Motor Size	20 ~ 86mm
Digital I/O	Input 4ch(10mA/24V) x Axis Output 2ch(500mA/24V) x Axis
Encoder Resolution	1,600 ~ 32,000 [ppr]
Speed	0~3000 [rpm]
Size	118 * 76.5 * 46.2 [mm]



RTEX STEP Driver Features

- ▶ Panasonic RTEX Network Driver
- ▶ No Gain Tuning / No Hunting
- ▶ Fast Response
- ▶ Open Loop or Closed Loop System
- ▶ Applicable to motors from various manufacturers

▶ Product model name

UST(V)-RTEX-1X	1 Axis, 20~60mm
UST(V)B-RTEX-1X	1 Axis, 20~60mm, Booster
UST(V)B-RTEX-1X-86	1 Axis, 86mm, Booster
UST(V)-RTEX-2X	2 Axes, 20~60mm
UST(V)B-RTEX-2X	2 Axes, 20~60mm, Booster

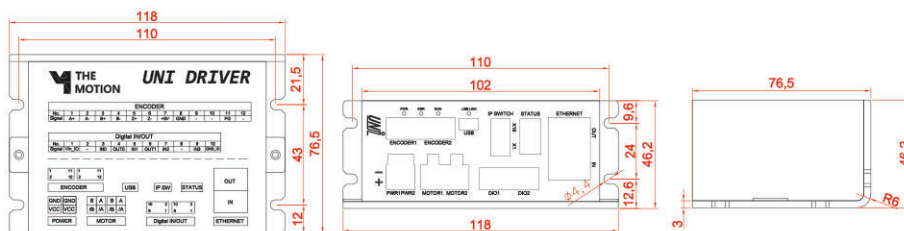
Specifications



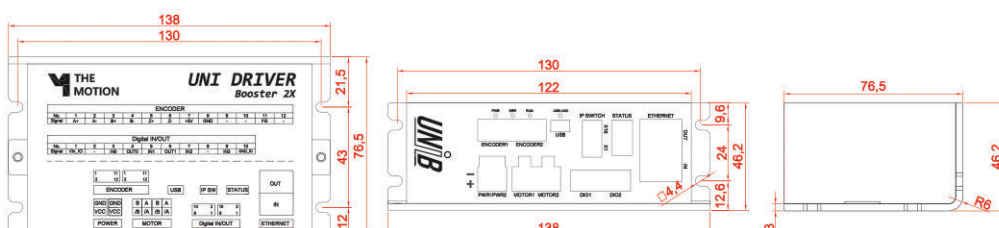
		USV(T)B RTEX-1X	USV(T)B RTEX-1X-86	USV(T) RTEX-2X	USV(T)B RTEX-2X
Features		Realtime Express(RTEX) STEP Driver			
Power	Input Voltage	24VDC(±10%)	48VDC(±10%)	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)			
Control Method		Open Loop, Closed Loop			
Control Motor		2 Phase Bipolar STEP MOTOR			
Communication Cycle		0.5, 1 ms			
Operation Mode		Cyclic Position Mode(CP)			
Resolution[ppr]		1,600 ~ 32,000			
Communication	USB	●	●	●	●
	RTEX	●	●	●	●
Number of Motor Axes		1	1	2	2
Input	Number of Channels	4ea	4ea	4ea x Axis	4ea x Axis
	Voltage	24VDC			
	Current	10mA			
Output	Number of Channels	2ea	2ea	2ea x Axis	2ea x Axis
	Voltage	24VDC			
	Current	500mA			
Motor Size		20 ~ 60mm	86mm	20 ~ 60mm	20 ~ 60mm
Max Speed[rpm]		3000			
Size[mm]		118*76.5*46.2			138*76.5*46.2

Dimension

USV(T)B-RTEX-1X & USV(T)B-RTEX-1X-86 & USV(T)-RTEX-2X



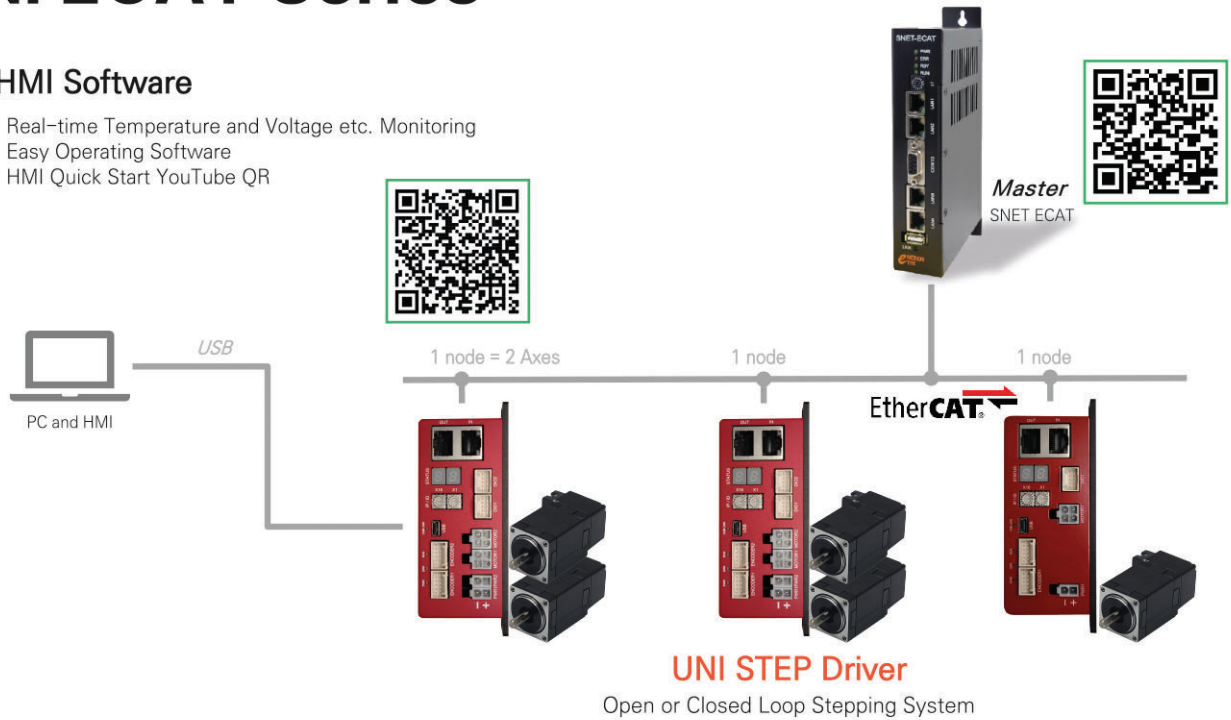
USV(T)B-RTEX-2X



EtherCAT Network Type UNI ECAT Series

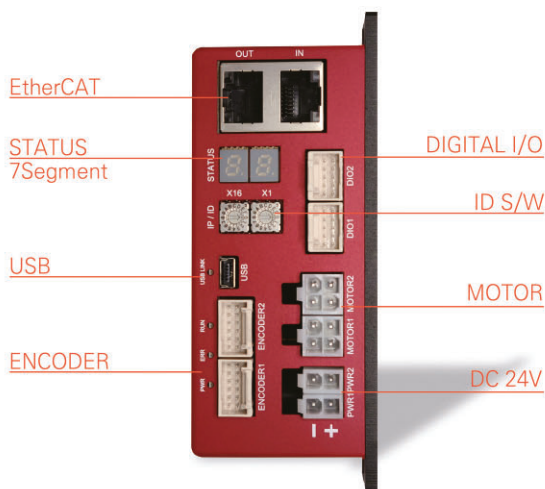
▶ HMI Software

- Real-time Temperature and Voltage etc. Monitoring
- Easy Operating Software
- HMI Quick Start YouTube QR



UNI STEP Driver

Open or Closed Loop Stepping System



Input Voltage	24Vdc $\pm 10\%$ (86mm 48VDC)
Current Consumption	Max. 500mA (Except motor current)
Communication Cycle Time	0.125 ~ 1ms
Control Method	Open Loop, Closed Loop
Control Motor	2 Phase Bipolar Step Motor
Supported Mode	CSP, PP, HM
EtherCAT	2 x EtherCAT Slave(RJ45) STP Cable(above CAT5e)
USB	USB2.0 Set Motor parameter and Monitoring
Number of Motor Axes	1, 2
Motor Size	20 ~ 86mm
Digital I/O	Input 4ch(10mA/24V) x Axis Output 2ch(500mA/24V) x Axis
Encoder Resolution	1,600 ~ 32,000 [ppr]
Speed	0~3000 [rpm]
Size	118 * 76.5 * 46.2 [mm]



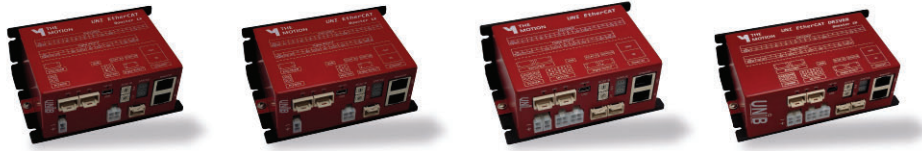
EtherCAT STEP Driver Features

- ▶ EtherCAT Network Driver
- ▶ CSP, PP, HM MODE Supported
- ▶ No Gain Tuning / No Hunting
- ▶ Fast Response
- ▶ Open Loop or Closed Loop System
- ▶ Applicable to motors from various manufacturers

▶ Product model name

UST(V)-ECAT-1X	1 Axis, 20~60mm
UST(V)B-ECAT-1X	1 Axis, 20~60mm, Booster
UST(V)B-ECAT-1X-86	1 Axis, 86mm, Booster
UST(V)-ECAT-2X	2 Axes, 20~60mm
UST(V)B-ECAT-2X	2 Axes, 20~60mm, Booster

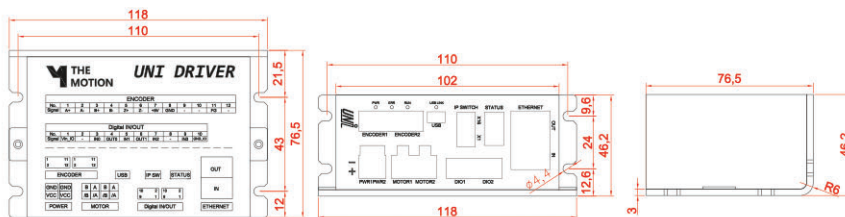
Specifications



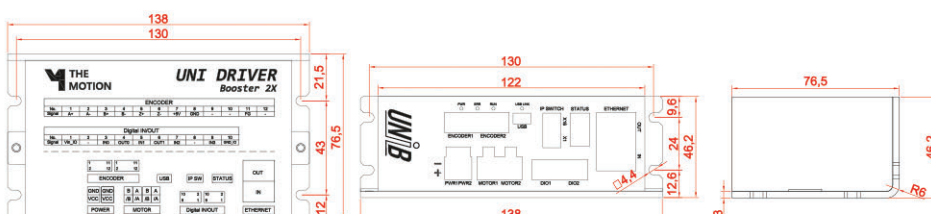
		USV(T)B ECAT-1X	USV(T)B ECAT-1X-86	USV(T) ECAT-2X	USV(T)B ECAT-2X
Features		EtherCAT STEP Driver			
Power	Input Voltage	24VDC(±10%)	48VDC(±10%)	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)			
Control Method		Open Loop, Closed Loop			
Control Motor		2 Phase Bipolar STEP MOTOR			
EtherCAT	Protocol	CoE (CiA402 Drive Profile)			
	Cycle Time	0.125 ~ 1 ms			
	Supported Mode	Profile Position Mode, Profile Velocity Mode, Cyclic Synchronous Position Mode, Homing Mode			
	Synchronization	Cyclic Position Mode(CP), Free Run, DC Mode			
Resolution[ppr]		1,600 ~ 32,000			
Communication	USB	●	●	●	●
	EtherCAT	●	●	●	●
Number of Motor Axes		1	1	2	2
Input	Number of Channels	4ea	4ea	4ea x Axis	4ea x Axis
	Voltage	24VDC			
	Current	10mA			
Output	Number of Channels	2ea	2ea	2ea x Axis	2ea x Axis
	Voltage	24VDC			
	Current	500mA			
Motor Size		20 ~ 60mm	86mm	20 ~ 60mm	20 ~ 60mm
Max Speed[rpm]		3000			
Size[mm]		118*76.5*46.2			138*76.5*46.2

Dimension

▶ USV(T)B-ECAT-1X & USV(T)B-ECAT-1X-86 & USV(T)-ECAT-2X



▶ USV(T)B-ECAT-2X



EtherCAT Network Type UNI ECAT STO Series

▶ HMI Software

- Real-time Temperature and Voltage etc. Monitoring
- Easy Operating Software
- HMI Quick Start YouTube QR



USB



1 node = 2 Axes

1 node

1 node

EtherCAT

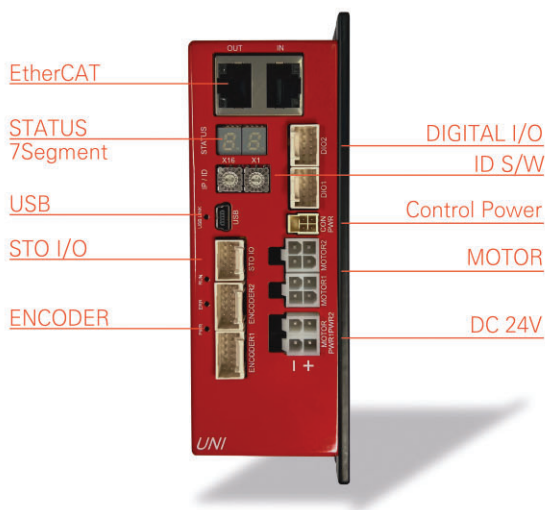


Master
SNET ECAT



UNI STEP Driver

Open or Closed Loop Stepping System



Input Voltage	24Vdc $\pm 10\%$ (86mm 48VDC)
Current Consumption	Max. 500mA (Except motor current)
Communication Cycle Time	0.125 ~ 1ms
Control Method	Open Loop, Closed Loop
Control Motor	2 Phase Bipolar Step Motor
Supported Mode	CSP, PP, HM
EtherCAT	2 x EtherCAT Slave(RJ45) STP Cable(above CAT5e)
USB	USB2.0 Set Motor parameter and Monitoring
Number of Motor Axes	1, 2
Motor Size	20 ~ 86mm
Digital I/O	Input 4ch(10mA/24V) x Axis Output 2ch(500mA/24V) x Axis
Encoder Resolution	1,600 ~ 32,000 [ppr]
Speed	0~3000 [rpm]
Size	138 * 76.5 * 46.2 [mm]

UNI-ECAT *STO*

EtherCAT STEP Driver Features

- EtherCAT Network Driver
- CSP, PP, HM MODE Supported
- No Gain Tuning / No Hunting
- Fast Response
- Open Loop or Closed Loop System
- **Torque Off Function Supported**
- Applicable to motors from various manufacturers

▶ Product model name

UST(V)-ECAT-ST-1X	1 Axis, 20~60mm
UST(V)B-ECAT-ST-1X	1 Axis, 20~60mm, Booster
UST(V)B-ECAT-ST-1X-86	1 Axis, 86mm, Booster
UST(V)-ECAT-ST-2X	2 Axes, 20~60mm
UST(V)B-ECAT-ST-2X	2 Axes, 20~60mm, Booster

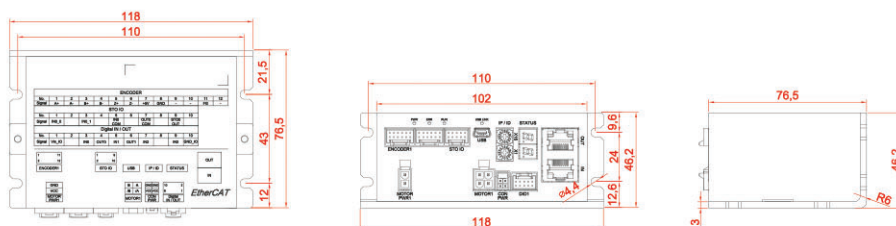
Specifications



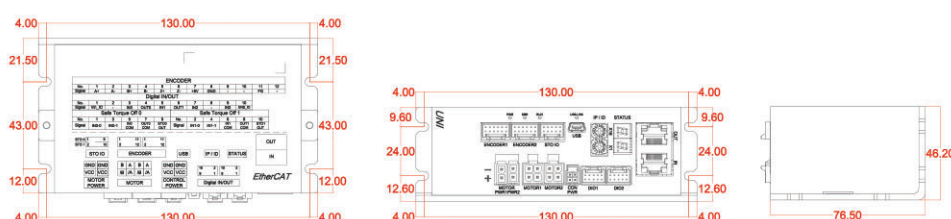
		USV(T)B ECAT-ST-1X	USV(T)B ECAT-ST-1X-86	USV(T) ECAT-ST-2X	USV(T)B ECAT-ST-2X
Features		EtherCAT STEP Driver			
Power	Input Voltage	24VDC(±10%)	48VDC(±10%)	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)			
Control Method		Open Loop, Closed Loop			
Control Motor		2 Phase Bipolar STEP MOTOR			
EtherCAT	Protocol	CoE (CiA402 Drive Profile)			
	Cycle Time	0.125 ~ 1 ms			
	Supported Mode	Profile Position Mode, Profile Velocity Mode, Cyclic Synchronous Position Mode, Homing Mode			
	Synchronization	Free Run, DC Mode			
Resolution[ppr]		1,600 ~ 32,000			
Communication	USB	●	●	●	●
	EtherCAT	●	●	●	●
Number of Motor Axes		1	1	2	2
Input	Signals	4ea	4ea	4ea x Axis	4ea x Axis
	Signals (STO)	2ea	2ea	2ea	2ea
	Voltage	24VDC			
	Current	10mA			
Output	Signals	2ea	2ea	2ea x Axis	2ea x Axis
	Signals (STO)	1ea	1ea	1ea	1ea
	Voltage	24VDC			
	Current	500mA			
Motor Size		20 ~ 60mm	86mm	20 ~ 60mm	20 ~ 60mm
Max Speed[rpm]		3000			
Size[mm]		118*76.5*46.2			138*76.5*46.2

Dimension

▶ USV(T)B-ECAT-ST-1X & USV(T)B-ECAT-ST-1X-86 & USV(T)-ECAT-ST-2X



▶ USV(T)B-ECAT-ST-2X



EtherCAT Network Type UNI ECAT Compact Series

▶ HMI Software

- Real-time Temperature and Voltage etc. Monitoring
- Easy Operating Software
- HMI Quick Start YouTube QR



USB



Master
SNET ECAT



UNI STEP Driver

Open or Closed Loop Stepping System



Input Voltage	24Vdc $\pm 10\%$
Current Consumption	Max. 500mA(Except motor current)
Communication Cycle Time	0.125 ~ 1ms
Control Method	Open Loop, Closed Loop
Control Motor	2 Phase Bipolar Step Motor
Supported Mode	CSP, PP, HM
EtherCAT	2 x EtherCAT Slave STP Cable(above CAT5e)
USB	USB2.0 Set Motor parameter and Monitoring
Number of Motor Axis	1
Motor Size	20 ~ 60mm
Digital I/O	Input 4ch(10mA/24V) Output 2ch(500mA/24V)
Encoder Resolution	1,600 ~ 32,000 [ppr]
Speed	0~3000 [rpm]
Size	85 * 55 * 20.2 [mm]

UNI-ECAT *Compact*

EtherCAT STEP Driver Features

- ▶ EtherCAT Network Driver
- ▶ CSP, PP, HM MODE Supported
- ▶ No Gain Tuning / No Hunting
- ▶ Fast Response
- ▶ Open Loop or Closed Loop System
- ▶ Applicable to motors from various manufacturers

▶ Product model name

UST-ECAT-Mi-1X	Open Loop, 1-Axis, 20~60mm, Compact
USV-ECAT-Mi-1X	Closed Loop, 1-Axis, 20~60mm, Compact

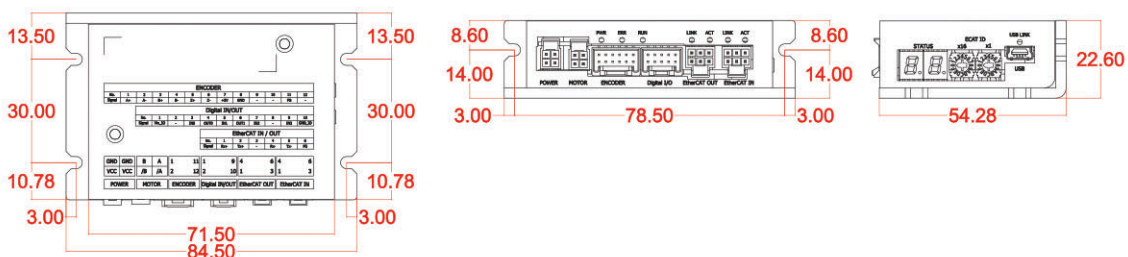
Specifications



	UST ECAT-Mi-1X	USV ECAT-Mi-1X
Features	EtherCAT STEP Driver	
Power	Input Voltage	24VDC(±10%)
	Current Consumption	Max. 500mA(Except motor current)
Control Method	Open Loop	Closed Loop
Control Motor	2 Phase Bipolar STEP MOTOR	
Ether CAT	Protocol	CoE (CiA402 Drive Profile)
	Cycle Time	0.125 ~ 1 ms
	Supported Mode	Profile Position Mode, Profile Velocity Mode, Cyclic Synchronous Position Mode, Homing Mode
Resolution[ppr]	1,600 ~ 32,000	
Communi- cation	USB	●
	EtherCAT	●
Number of Motor Axis	1	1
Input	Number of Channels	4ea
	Voltage	24VDC
	Current	10mA
Output	Number of Channels	2ea
	Voltage	24VDC
	Current	500mA
Motor Size	20 ~ 60mm	20 ~ 60mm
Max Speed[rpm]	3000	
Size[mm]	84.5*54.28*22.6	84.5*54.28*22.6

Dimension

▶ USV(T)-ECAT-Mi-1X



EtherCAT Network Type UNI ECAT ABS Series

▶ HMI Software

- Real-time Temperature and Voltage etc. Monitoring
- Easy Operating Software
- HMI Quick Start YouTube QR



USB



1 node = 2 Axes

1 node

1 node

EtherCAT



UNI STEP Driver

Open or Closed Loop Stepping System

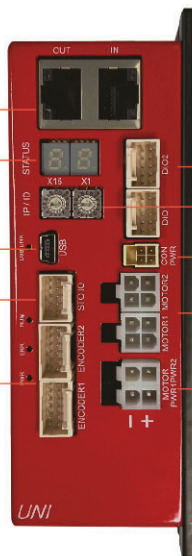
EtherCAT

STATUS
7Segment

USB

STO I/O

ENCODER



DIGITAL I/O

ID S/W

Control Power

MOTOR

DC 24V

EtherCAT **ABS**
Technology Group

EtherCAT STEP Driver Features

- ▶ EtherCAT Network Driver
- ▶ CSP, PP, HM Supported
- ▶ No Gain Tuning / No Hunting
- ▶ Fast Response
- ▶ Open Loop or Closed Loop System
- ▶ Torque Off Function Supported
- ▶ Applicable to motors from various manufacturers

Input Voltage	24VDC $\pm 10\%$
Output Current	Max. 500mA (Except motor current)
Cycle Time	0.125 ~ 1ms
Control Method	Open Loop, Closed Loop
Control Motor	2 Phase Bipolar Step Motor
Supported Mode	CSP, PP, HM
EtherCAT	2 x EtherCAT Slave (RJ45) STP Cable (above CAT5e)
USB	USB2.0 Set Motor parameter and Monitoring
Number of Motor Axes	1, 2
Motor Size	42 ~ 60mm
Digital I/O	Input 4ch (10mA/24V) x Axis Output 2ch (500mA/24V) x Axis
STO I/O	Input 2ch (10mA/24V) Output 1ch (500mA/24V)
Encoder Resolution	10,000 [ppr] [17BIT]
Speed	0 ~ 3000 [rpm]
Size	118 * 76.5 * 46.2 [mm]

▶ Product model name

USAB-ECAT-1X	1 Axis, 42~60mm, Booster
USAB-ECAT-2X	2 Axes, 42~60mm, Booster

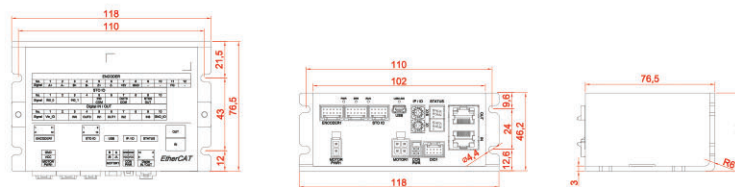
Specifications



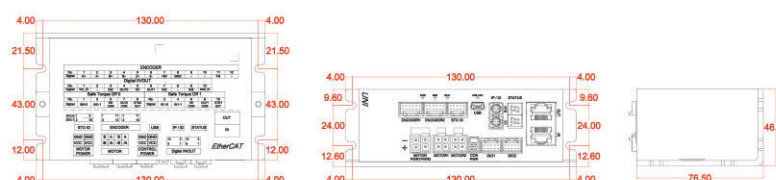
		USAB ECAT-ST-1X	USAB ECAT-ST-2X
Features		EtherCAT STEP Driver	
Power	Input Voltage	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)	
Control Method		Closed Loop	
ControlrMotor		2 Phase Bipolar STEP MOTOR	
Ether CAT	Protocol	CoE (CiA402 Drive Profile)	
	Cycle Time	0.125 ~1 ms	
	Supported Mode	Profile Position Mode, Profile Velocity Mode, Cyclic Synchronous Position Mode, Homing Mode	
	Synchronization	Free Run, DC Mode	
Resolution[ppr]		10,000[ppr]	
Communi- cation	USB	●	●
	EtherCAT	●	●
Number of Motor Axes		1	2
Input	Signals	4ea	4ea x Axis
	Signals (STO)	2ea	2ea
	Voltage	24VDC	
	Current	10mA	
Output	Signals	2ea	2ea x Axis
	Signals (STO)	1ea	1ea
	Voltage	24VDC	
	Current	500mA	
Motor Size		42 ~ 60mm	42 ~ 60mm
Max Speed[rpm]		3000	
Size[mm]		118*76.5*46.2	138*76.5*46.2

Dimension

▶ USAB-ECAT-ST-1X



▶ USAB-ECAT-ST-2X



EtherCAT Network Type UNI ECAT 4X Series

▶ HMI Software

- Real-time Temperature and Voltage etc. Monitoring
- Easy Operating Software
- HMI Quick Start YouTube QR



USB



2 node = 4 Axes

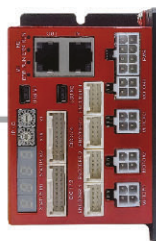
1 node = 2 Axes

1 node



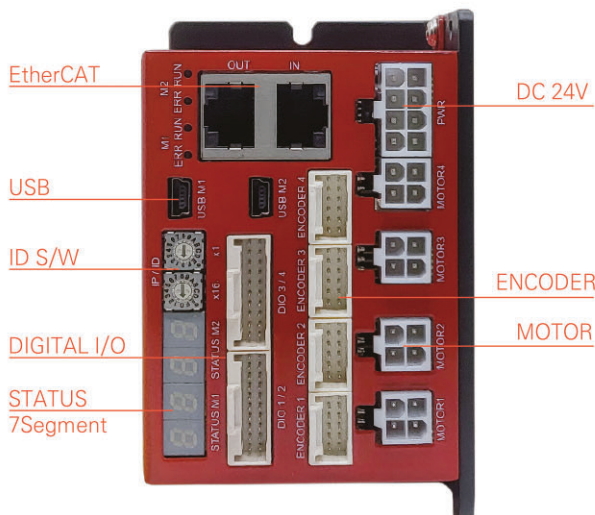
Master
SNET ECAT

EtherCAT



UNI STEP Driver

Open or Closed Loop Stepping System



Input Voltage	24VDC $\pm 10\%$
Output Current	Max. 500mA (Except motor current)
Cycle Time	0.125 ~ 1ms
Control Method	Open Loop, Closed Loop
Control Motor	2 Phase Bipolar Step Motor
Supported Mode	CSP, PP, HM
EtherCAT	2 x EtherCAT Slave (RJ45) STP Cable (above CAT5e)
USB	USB2.0 Set Motor parameter and Monitoring
Number of Motor Axes	4
Motor Size	20 ~ 60mm
Digital I/O	Input 4ch (10mA/24V) x Axis Output 2ch (500mA/24V) x Axis
STO I/O	Input 2ch (10mA/24V) Output 1ch (500mA/24V)
Encoder Resolution	1,600 ~ 32,000 [ppr]
Speed	0 ~ 3000 [rpm]
Size	101*65*65 [mm]



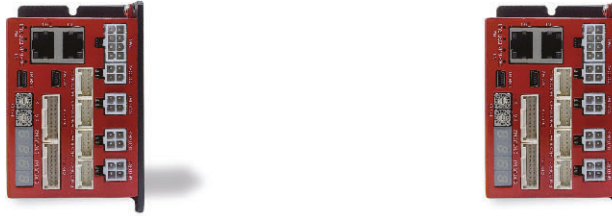
EtherCAT STEP Driver Features

- ▶ EtherCAT Network Driver
- ▶ CSP, PP, HM Supported
- ▶ No Gain Tuning / No Hunting
- ▶ Fast Response
- ▶ Open Loop or Closed Loop System
- ▶ Torque Off Function Supported
- ▶ Applicable to motors from various manufacturers

▶ Product model name

UST-ECAT-4X	4 Axes, 20~60mm
USV-ECAT-4X	4 Axes, 20~60mm

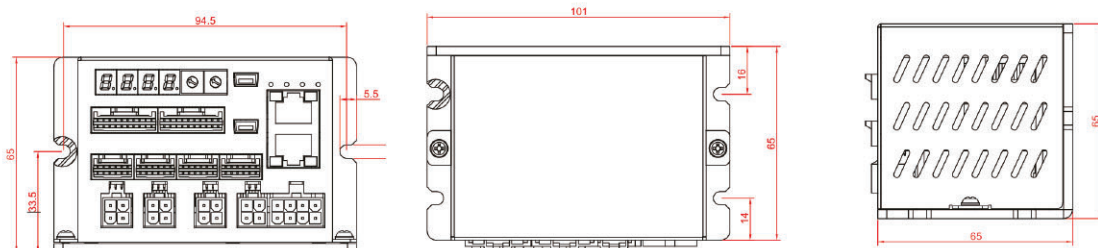
Specifications



	UST ECAT-4X	USV ECAT-4X
Features	EtherCAT STEP Driver	
Power	Input Voltage	24VDC(±10%)
	Current Consumption	Max. 500mA(Except motor current)
Control Method	Open Loop	Closed Loop
Control Motor	2 Phase Bipolar STEP MOTOR	
Ether CAT	Protocol	CoE (CiA402 Drive Profile)
	Cycle Time	0.125 ~ 1 ms
	Supported Mode	Profile Position Mode, Profile Velocity Mode, Cyclic Synchronous Position Mode, Homing Mode
	Synchronization	Free Run, DC Mode
Resolution[ppr]	1,600 ~ 32,000	
Communi- cation	USB	●
	EtherCAT	●
Number of Motor Axes	4	4
Input	Signals	4ea x Axis
	Voltage	24VDC
	Current	10mA
Output	Signals	2ea x Axis
	Voltage	24VDC
	Current	500mA
Motor Size	20 ~ 60mm	20 ~ 60mm
Max Speed[rpm]	3000	
Size[mm]	101 * 65 * 65	

Dimension

▶ USV(T)-ECAT-4X



CONTROLLER	SNET-ECAT
	SNET-RTEX
	SNET-P
	SNET-B94
	SNCS-ECAT
I/O MODULE	SNCS-RTEX
	MCST
	END
	MAUCH
	Shee
STEP DRIVER	IZ
	Randle
	MOJH-E
	RTEX
	ECAT
STEP MOTOR	ENET
	PUL
	ST
	SV
	SA
	IP65
	Cable

Ethernet Network Type UNI ENET Series

▶ HMI Software

- Real-time Temperature and Voltage etc. Monitoring
- Easy Operating Software
- HMI Quick Start YouTube QR



USB

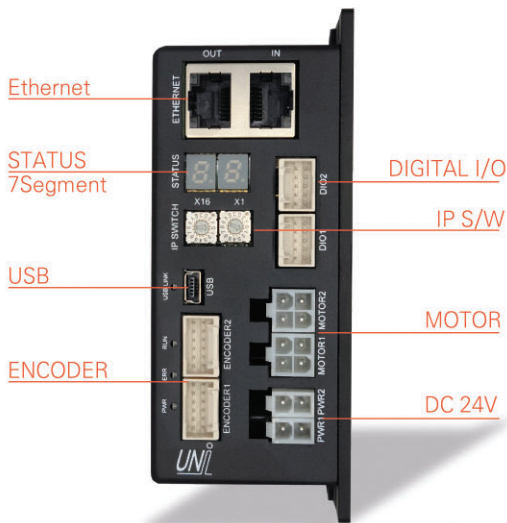


Ethernet



UNI STEP Driver

Open or Closed Loop Stepping System



YouTube
Demo

Input Voltage	24VDC $\pm 10\%$ (86mm 48VDC)
Current Consumption	Max. 500mA (Except motor current)
Control Method	Open Loop, Closed Loop
Control Motor	2 Phase Bipolar Step Motor
Ethernet	Dual port Ethernet switch embedded(RJ45) STP Cable(above CAT5e)
USB	USB2.0 Set Motor parameter and Monitoring
Number of Motor Axes	1, 2
Motor Size	20 ~ 86mm
Digital I/O	Input 4ch(10mA/24V) x Axis Output 2ch(500mA/24V) x Axis
Encoder Resolution	1,600 ~ 32,000 [ppr]
Speed	0~3000 [rpm]
Size	118 * 76.5 * 46.2 [mm]

Ethernet UNI STEP Drive Features

- Ethernet 1,2 Axes Driver&Controller All-In-One
- Ethernet Communication DLL, Protocol, Function Block Provided
- P to P, Interpolation, Semi Helical, Sync
- No Gain Tuning / No Hunting
- Fast Response
- Open Loop or Closed Loop System
- Applicable to motors from various manufacturers

▶ Product model name

UST(V)-ENET-1X	1 Axis, 20~60mm
UST(V)B-ENET-1X	1 Axis, 20~60mm, Booster
UST(V)B-ENET-1X-86	1 Axis, 86mm, Booster
UST(V)-ENET-2X	2 Axes, 20~60mm
UST(V)B-ENET-2X	2 Axes, 20~60mm, Booster

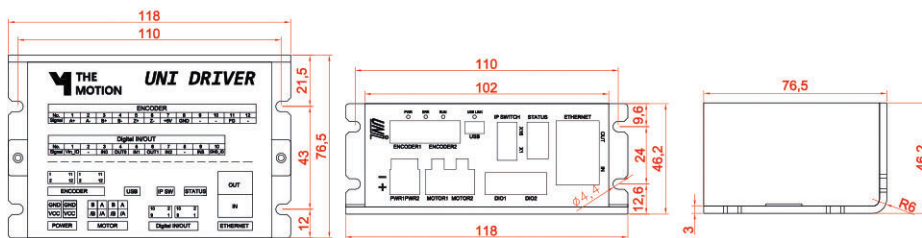
Specifications



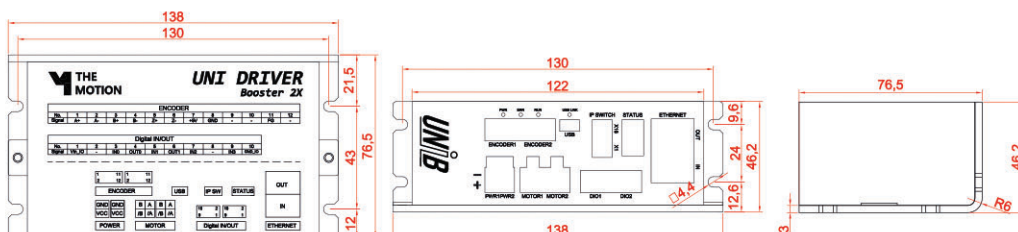
		USV(T)B ENET-1X	USV(T)B ENET-1X-86	USV(T) ENET-2X	USV(T)B ENET-2X
Features		Ethernet STEP Controller & Driver All-In-One			
Power	Input Voltage	24VDC(±10%)	48VDC(±10%)	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)			
Control Method		Open Loop, Closed Loop			
Control Motor		2 Phase Bipolar STEP MOTOR			
Connection Method		Ethernet(Daisy Chain Device Max. 253 IP Control)			
OS		Window 7 More Than Library(DLL) or PLC System Memory Flag			
Resolution[ppr]		1,600 ~ 32,000			
Communi- cation	USB	●	●	●	●
	EtherNET	●	●	●	●
Number of Motor Axes		1	1	2	2
Input	Number of Channels	4ea	4ea	4ea x Axis	4ea x Axis
	Voltage	24VDC			
	Current	10mA			
Output	Number of Channels	2ea	2ea	2ea x Axis	2ea x Axis
	Voltage	24VDC			
	Current	500mA			
Motor Size		20 ~ 60mm	86mm	20 ~ 60mm	20 ~ 60mm
Max Speed[rpm]		3000			
Size[mm]		118*76.5*46.2			138*76.5*46.2

Dimension

USV(T)B-ENET-1X & USV(T)B-ENET-1X-86 & USV(T)-ENET-2X



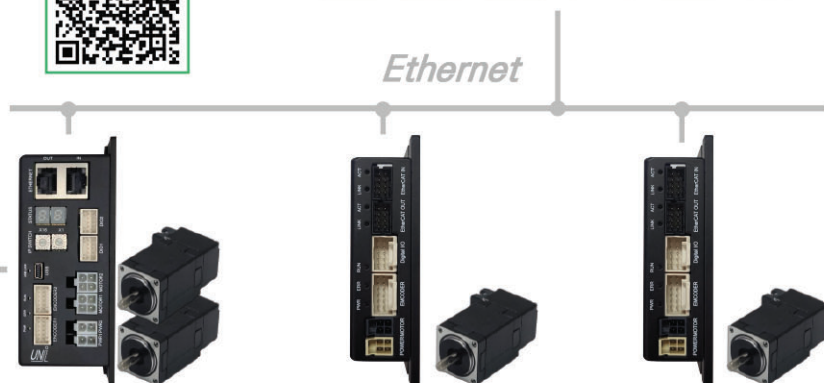
USV(T)B-ENET-2X



Ethernet Network Type UNI ENET Compact Series

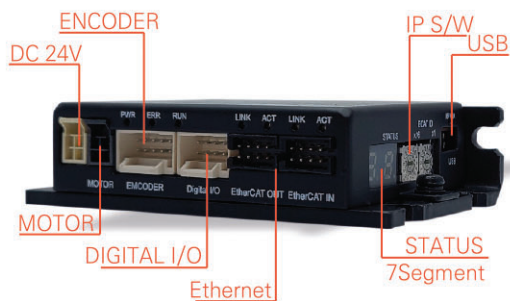
▶ HMI Software

- Real-time Temperature and Voltage etc. Monitoring
- Easy Operating Software
- HMI Quick Start YouTube QR



UNI STEP Driver

Open or Closed Loop Stepping System



Input Voltage	24Vdc ±10%
Current Consumption	Max. 500mA (Except motor current)
Control Method	Open Loop, Closed Loop
Control Motor	2 Phase Bipolar Step Motor
Ethernet	Dual port Ethernet switch embedded
	STP Cable(above CAT5e)
USB	USB2.0
	Set Motor parameter and Monitoring
Number of Motor Axis	1
Motor Size	20 ~ 60mm
Digital I/O	Input 4ch(10mA/24V)
	Output 2ch(500mA/24V)
Encoder Resolution	1,600 ~ 32,000 [ppr]
Speed	0~3000 [rpm]
Size	85 * 55 * 20.2 [mm]

UNI-ENET *Compact*

Ethernet STEP Driver Features

- ▶ Ethernet Communication DLL, Protocol, Function Block Provided
- ▶ P to P, Interpolation, Semi Helical, Sync
- ▶ No Gain Tuning / No Hunting
- ▶ Fast Response
- ▶ Open Loop or Closed Loop System
- ▶ Applicable to motors from various manufacturers

▶ Product model name

UST-ECAT-Mi-1X	Open Loop, 1 Axis , 20~60mm, Compact
USV-ECAT-Mi-1X	Closed Loop, 1 Axis , 20~60mm, Compact

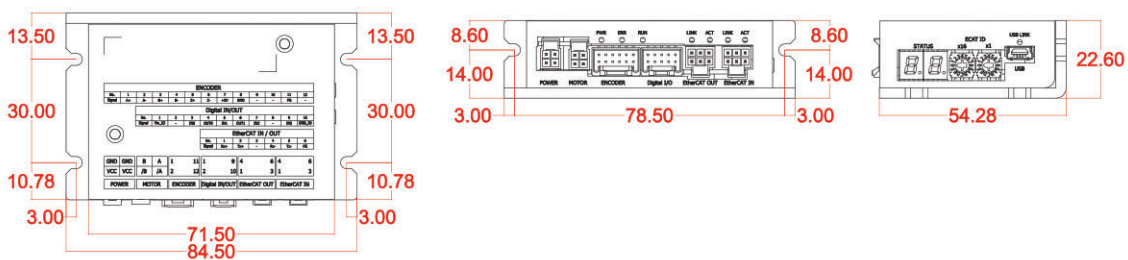
Specifications

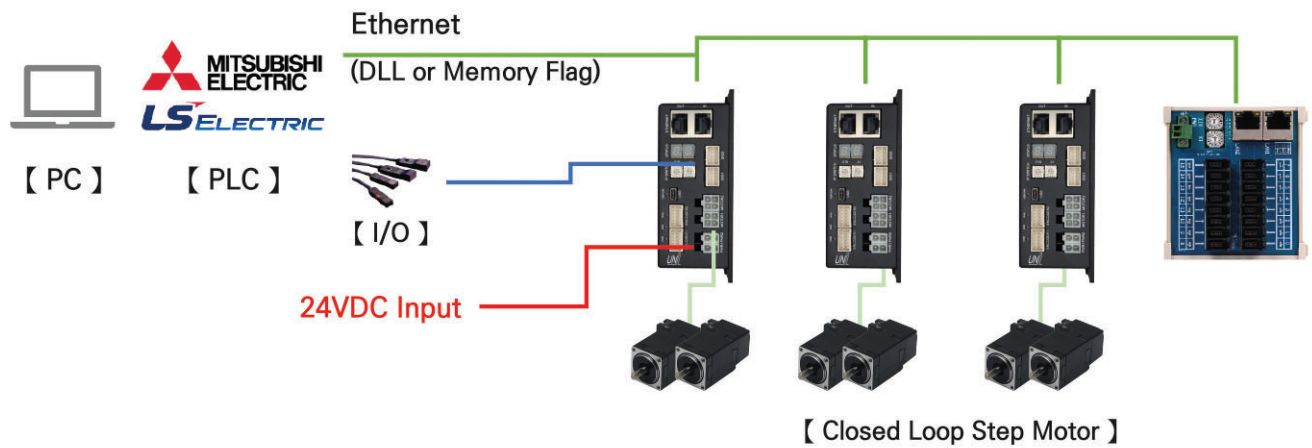


	UST ENET-Mi-1X	USV ENET-Mi-1X
Features	Ethernet STEP Controller & Driver All-In-One	
Power	Input Voltage	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)
Control Method	Open Loop	Closed Loop
Control Motor	2 Phase Bipolar STEP MOTOR	
Connection Method	Ethernet(Daisy Chain Device Max. 253 IP Control)	
OS	Window 7 More Than Library(DLL) or PLC System Memory Flag	
Resolution[ppr]	1,600 ~ 32,000	
Communi- cation	USB	●
	EtherCAT	●
Number of Motor Axis	1	1
Input	Number of Channels	4ea
	Voltage	24VDC
	Current	10mA
Output	Number of Channels	2ea
	Voltage	24VDC
	Current	500mA
Motor Size	20 ~ 60mm	20 ~ 60mm
Max Speed[rpm]	3000	
Size[mm]	84.5*54.28*22.6	84.5*54.28*22.6

Dimension

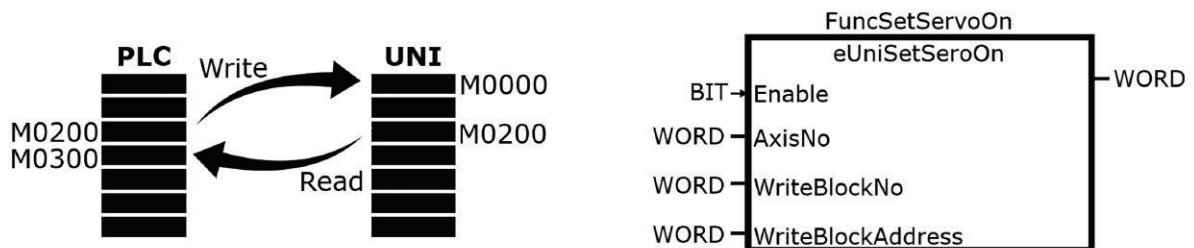
▶ USV(T)-ENET-Mi-1X





▶ PLC(Mitsubishi, LS) Ethernet Interface(Demo video)

- Operate on the PLC using Ethernet UDP communications
- PLC Function Block Provided (System Memory Flag)



▶ Semi Helical Function (Demo video)

- Interworking of 3 to 4 axes driving time
(functions specialized for medical devices such as nucleic acid extraction)



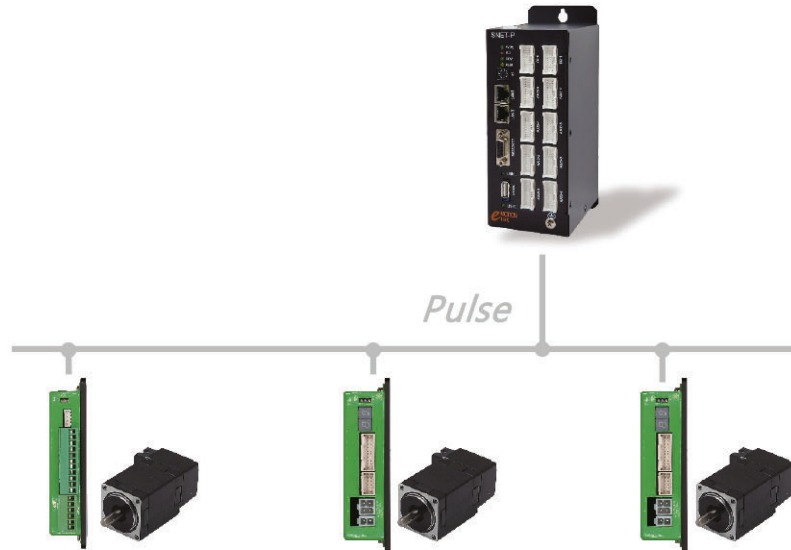
▶ Various Motion Controls

- RTOS S/W Self-Implementation
- User Motion Features Customizing

▶ PC-based Motion Control

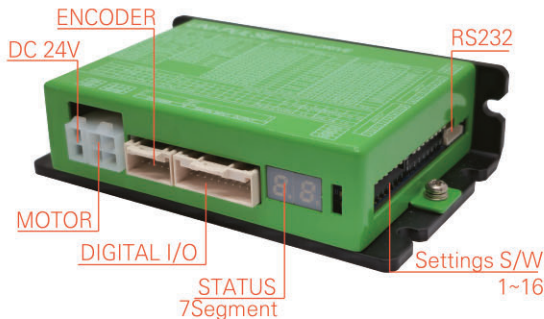
- Motion Commands Using Ethernet (Windows DLL)
- Max. 253 IP Controllable

Standard Type UNI PUL Series



UNI STEP Driver

Open or Closed Loop Stepping System
Max. 500mA (Except motor current)



Input Voltage	24Vdc $\pm 10\%$
Current Consumption	Max. 500mA(Except motor current)
Control Method	Open Loop, Closed Loop
Control Motor	2 Phase Bipolar Step Motor
Max. input Frequency	Differential 1[Mhz] Single Ended 300[Khz]
Serial	RS232
Number of Motor Axis	1
Motor Size	20 ~ 60mm
Pulse Input Mode	1 Pulse(Pulse / Direction) 2 Pulse(CW / CCW)
Input Signals	Enable(Alarm Reset), Single Ended
Output Signals	Alarm, Brake
Encoder Resolution	8000,10,000 [ppr]
Speed	0~3000 [rpm]
Size	113*68*27 [mm]

UNI-PULSE

Pulse STEP Driver Features

- > No Gain Tuning / No Hunting
- > Fast Response
- > Open Loop or Closed Loop System
- > Applicable to motors from various manufacturers (20 ~ 60mm)

Product model name

UST-PUL-1X	Open Loop, 1 Axis, 20~60mm
USV-PUL-1X	Closed Loop, 1 Axis, 20~60mm
USVB-PUL-1X	Closed Loop, 1 Axis, 20~60mm, Booster

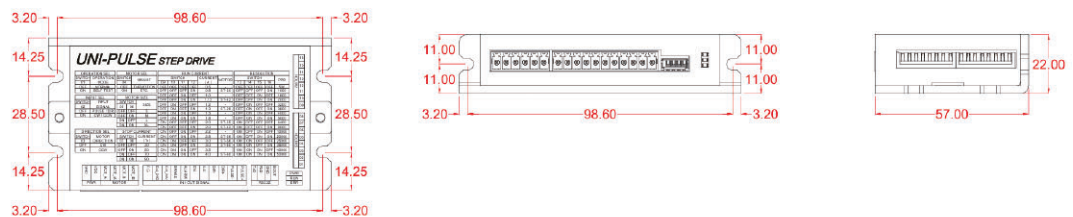
CONTROLLER	SNET-FCAT
	SNET-RTEX
	SNET-P
	SNET-EG4
	SMCS-FCAT
	SMCS-RTEX
	MCST
I/O MODULE	END
	MAUCH
	Shoe
	UZ
	Randle
	MOJH-E
	RTEX
STEP DRIVER	FCAT
	ENET
	PUL
	ST
	SV
	SA
	IP65
STEP MOTOR	Cable

Specifications

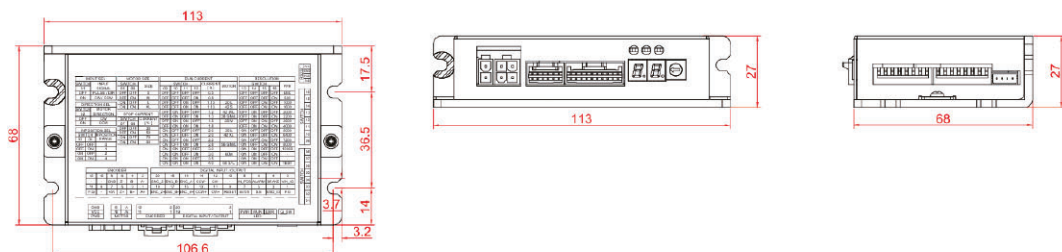


		UST PUL-1X	USV PUL-1X	USVB PUL-1X
Series		Pulse STEP Driver		
Features		24VDC(±10%)		
Power	Input Voltage	Max. 500mA (Except motor current)		
	Current Consumption	Open Loop	Closed Loop	Closed Loop
Control Method		2 Phase Bipolar STEP MOTOR		
Control Motor		Ethernet(Daisy Chain Device Max. 253 IP Control)		
Control Current	RUN	0.5 ~ 4A (16 Step)		
	STOP	30 ~ 90%		
Max Response Frequency		Differential	1[Mhz]	
		Single Ended	300[KHz]	
Motor Resolution [ppr]		500 ~ 50,000		
Pulse Input Method	1 Pulse	Pulse / Direction		
	2 Pulse	CW / CCW		
RS232		●		
Number of Motor Axis		1		
Input Signal		Enable(Alarm Reset), Single Ended		
Output Signal		Alarm, Brake		
Motor Size		20 ~ 60mm		
Max Speed[rpm]		3000		
Size[mm]		105*57*22	113*68*27	

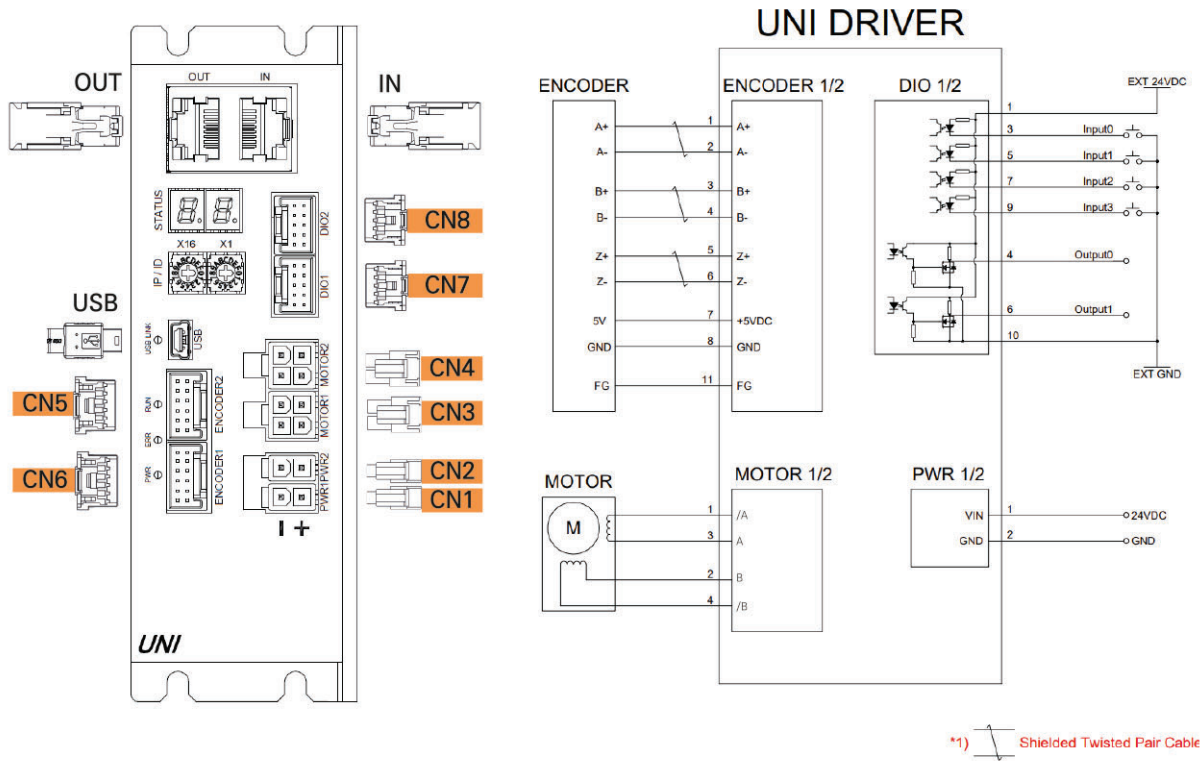
UST-PUL-1X



USV-PUL-1X & USVB-PUL-1X

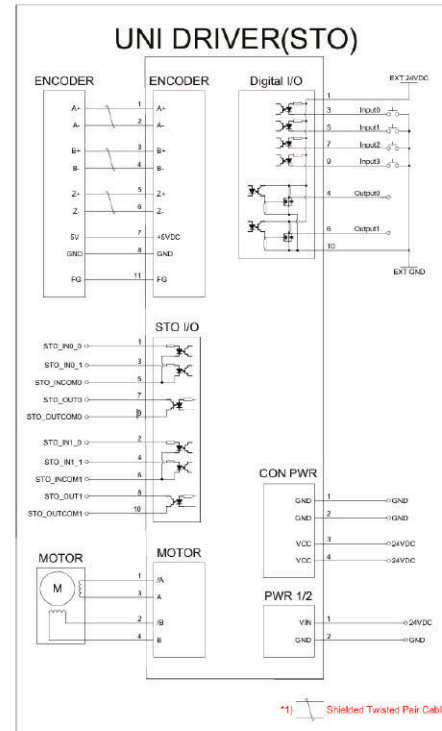
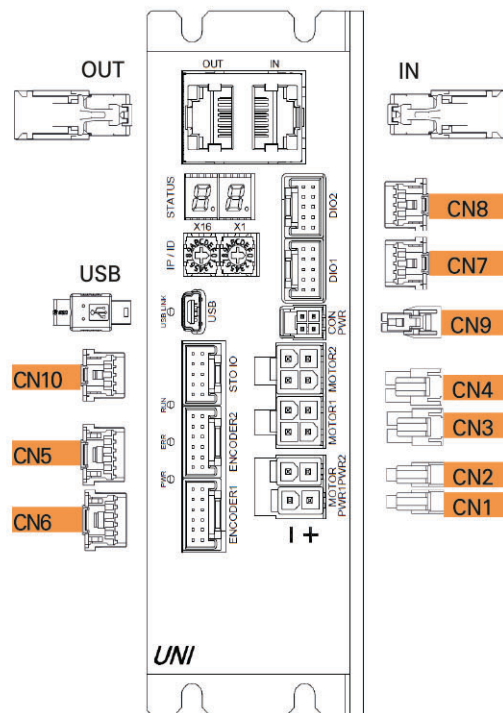


Cable wiring diagram (UNI RTEX, ECAT, ENET Series)



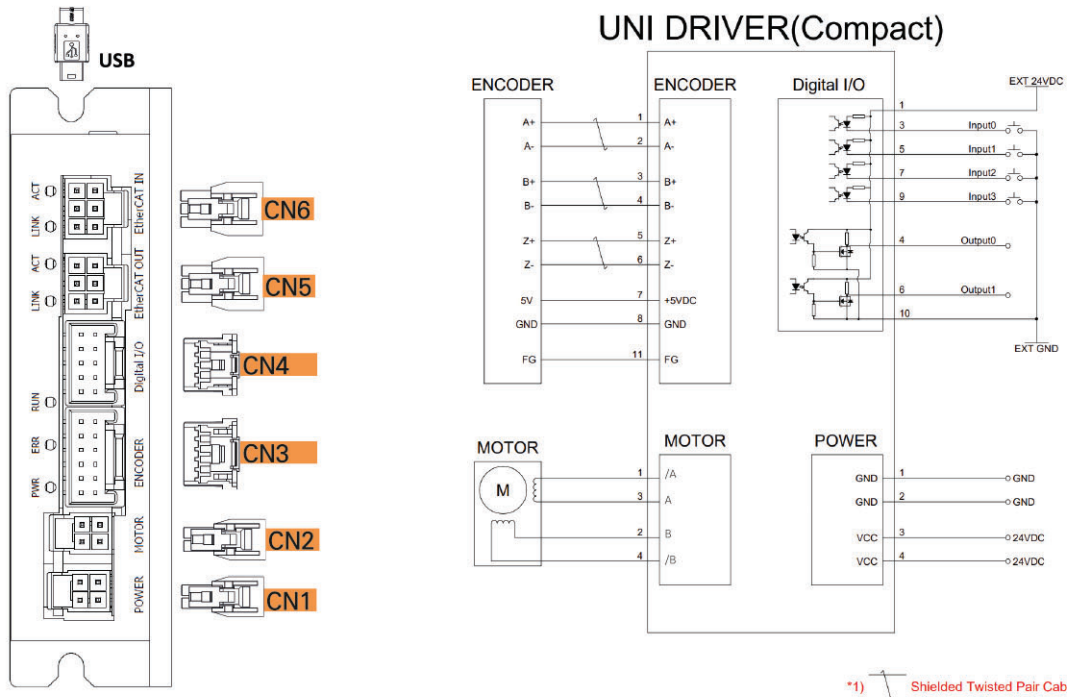
Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	PWR1, 2	Header	LAD1140-02	18-24 AWG	HANLIM Electronics Or Molex
	CN1, 2	Housing	CHD1140-02		
		Crimp Terminal	CTD1140		
Motor	MOTOR1, 2	Header	LAD1140-04	18-24 AWG	HANLIM Electronics Or Molex
	CN3, 4	Housing	CHD1140-04		
		Crimp Terminal	CTD1140		
Encoder (Closed Loop)	ENCODER1, 2	Header	5018761240	22-24 AWG	Molex
	CN5, 6	Housing	5016461200		
		Crimp Terminal	5016471000		
I/O	DIO1, 2	Header	5018761040	22-26 AWG	Molex
	CN7, 8	Housing	5016461000		
		Crimp Terminal	5016471000		
USB	USB	Commercial USB cable (driver side is mini-B).			
EtherCAT	IN, OUT	RJ45 Lan cable			
	※ Use twisted -pair cables that satisfy at least “Category 5e” to connect the cable				

Cable wiring diagram (UNI ECAT STO Series)



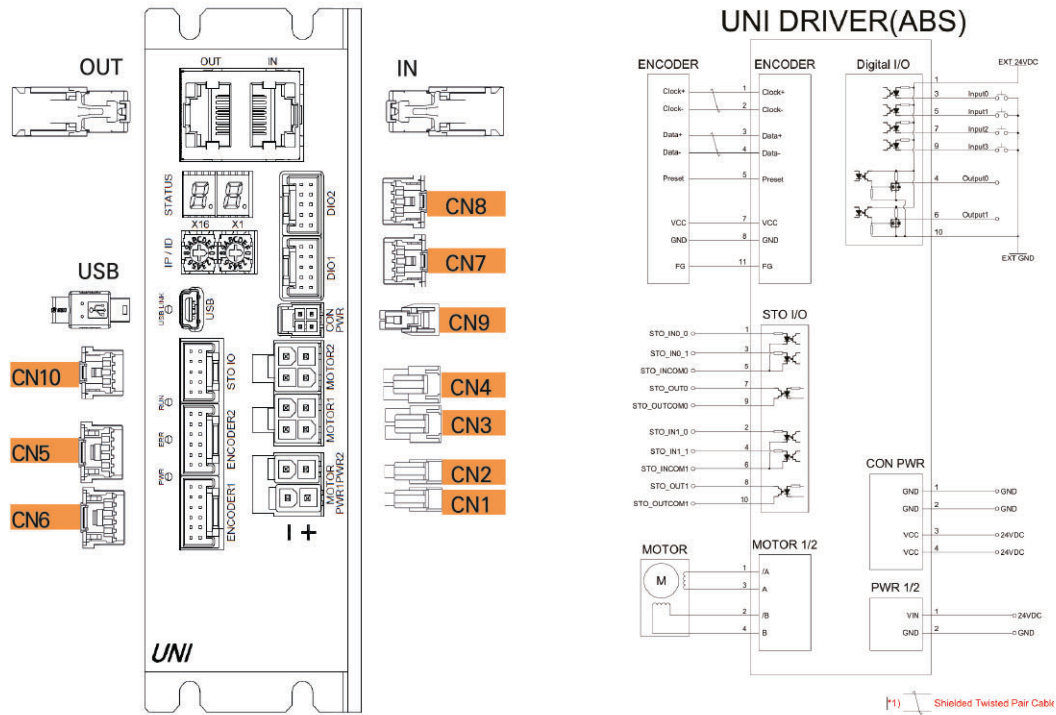
Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	PWR1, 2	Header	LAD1140-02	18-24 AWG	HANLIM Electronics Or Molex
	CN1, 2	Housing	CHD1140-02		
		Crimp Terminal	CTD1140		
Motor	MOTOR1, 2	Header	LAD1140-04	18-24 AWG	HANLIM Electronics Or Molex
	CN3, 4	Housing	CHD1140-04		
		Crimp Terminal	CTD1140		
Encoder (Closed Loop)	ENCODER1, 2	Header	5018761240	22-24 AWG	Molex
	CN5, 6	Housing	5016461200		
		Crimp Terminal	5016471000		
I/O	DIO1, 2	Header	5018761040	22-26 AWG	Molex
	CN7, 8	Housing	5016461000		
		Crimp Terminal	5016471000		
Control Power	CON PWR	Header	1053141104	20-24 AWG	Molex
	CN 9	Housing	1053082204		
		Crimp Terminal	1053002400		
STO I/O	STO I/O	Header	5018761040	22-26 AWG	Molex
	CN 10	Housing	5016461000		
		Crimp Terminal	501671000		
USB	USB	Commercial USB cable (driver side is mini-B).			
EtherCAT	IN, OUT	RJ45 Lan cable			
※ Use twisted -pair cables that satisfy at least "Category 5e" to connect the cable					

Cable wiring diagram (UNI ECAT, ENET Compact Series)



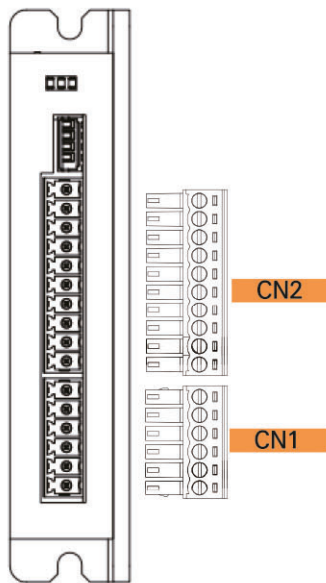
Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	PWR	Header	1053142104	20~22 AWG	Molex
	CN1	Housing	1053082204		
		Crimp Terminal	1053002400		
Motor	MOTOR	Header	1053141104	20~22 AWG	Molex
	CN2	Housing	1053081204		
		Crimp Terminal	1053002400		
ENCODER (Closed Loop)	ENCODER	Header	5018761240	22~24 AWG	Molex
	CN3	Housing	5016461200		
		Crimp Terminal	5016471000		
I/O	DIO	Header	5018761040	22~26 AWG	Molex
	CN4	Housing	5016461000		
		Crimp Terminal	5016471000		
EtherCAT	IN, OUT	Header	1053141106	20~26 AWG	Molex
	CN5, 6	Housing	1053081206		
		Crimp Terminal	1053001200	24~26 AWG	
		Crimp Terminal	1053002400	20~22 AWG	
	※ Use twisted -pair cables that satisfy at least "Category 5e" to connect the cable				
USB	USB	Commercial USB cable (driver side is mini-B).			

Cable wiring diagram (UNI ECAT ABS Series)

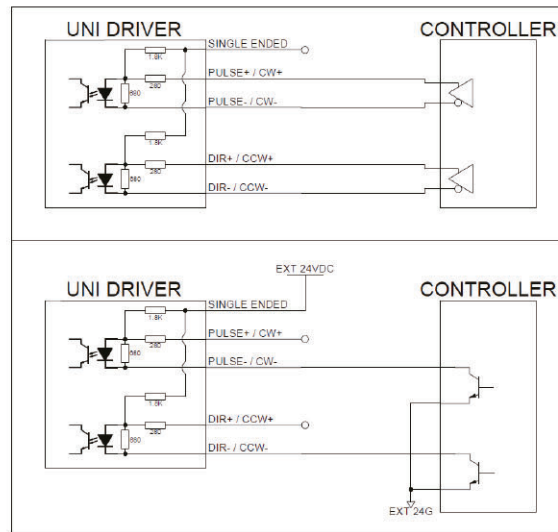
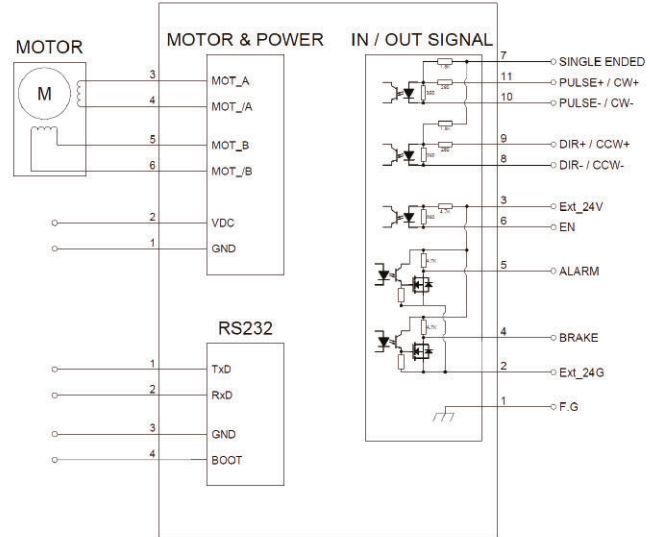


Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	PWR1, 2	Header	LAD1140-02	18-24 AWG	HANLIM Electronics Or Molex
	CN1, 2	Housing	CHD1140-02		
		Crimp Terminal	CTD1140		
Motor	MOTOR1, 2	Header	LAD1140-04	18-24 AWG	HANLIM Electronics Or Molex
	CN3, 4	Housing	CHD1140-04		
		Crimp Terminal	CTD1140		
Encoder (Closed Loop)	ENCODER1, 2	Header	5018761240	22-24 AWG	Molex
	CN5, 6	Housing	5016461200		
		Crimp Terminal	5016471000		
I/O	DIO1, 2	Header	5018761040	22-26 AWG	Molex
	CN7, 8	Housing	5016461000		
		Crimp Terminal	5016471000		
Control Power	CON PWR	Header	1053141104	20-24 AWG	Molex
	CN 9	Housing	1053082204		
		Crimp Terminal	1053002400		
STO I/O	STO I/O	Header	5018761040	22-26 AWG	Molex
	CN 10	Housing	5016461000		
		Crimp Terminal	501671000		
USB	USB	Commercial USB cable (driver side is mini-B).			
EtherCAT	IN, OUT	RJ45 Lan cable			
	※ Use twisted -pair cables that satisfy at least “Category 5e” to connect the cable				

Cable wiring diagram (UNI PULSE Open Loop Series)



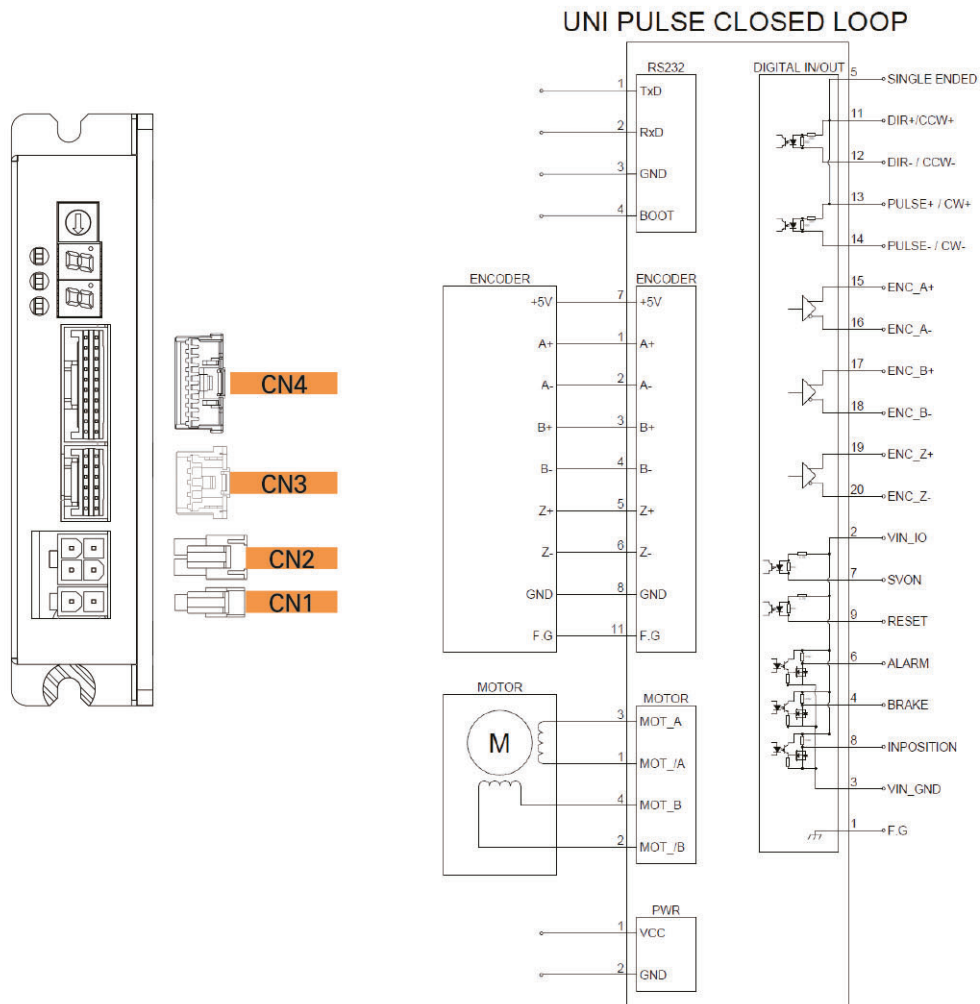
UNI PULSE OPEN LOOP



Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	POWER	Header	15EDGRC-3.5-06P	16-28 AWG	Degson
	CN1	Housing	15EDGK-3.5-06P		
Motor	MOTOR	Header	15EDGRC-3.5-06P	16-28 AWG	Degson
	CN1	Housing	15EDGK-3.5-06P		
I/O	Digital I/O	Header	15EDGRC-3.5-11P	16-28 AWG	Degson
	CN2	Housing	15EDGK-3.5-11P		

CONTROLLER	SNET-FCAT
	SNET-RTEX
	SNET-P
	SNET-F94
	SNCS-FCAT
	SNCS-RTEX
	MCST
	END
	MUCH
	Shoe
I/O MODULE	UZ
	Randle
	MOJH-E
	MOJH-E
STEP DRIVER	RTEX
	FCAT
	ENET
	PUL
STEP MOTOR	ST
	SV
	SA
	IP65
	Cable

Cable wiring diagram (UNI PULSE Closed Loop Series)



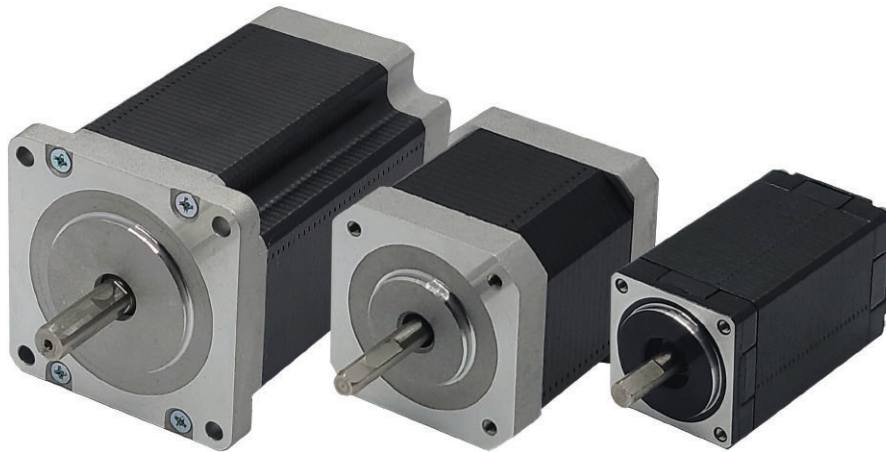
Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	PWR	Header	LAD1140-02	18-24 AWG	HANLIM Electronics Or Molex
	CN1	Housing	CHD1140-02		
		Crimp Terminal	CTD1140		
Motor	MOTOR	Header	LAD1140-04	18-24 AWG	HANLIM Electronics Or Molex
	CN2	Housing	CHD1140-04		
		Crimp Terminal	CTD1140		
Encoder (Closed Loop)	ENCODER	Header	5018761240	22-24 AWG	Molex
	CN3	Housing	5016461200		
		Crimp Terminal	5016471000		
I/O	DIO	Header	5018762040	22-26 AWG	Molex
	CN4	Housing	5016462000		
		Crimp Terminal	5016471000		



STEP MOTOR

UNIM-ST(OPEN LOOP)
UNIM-SV(CLOSE LOOP)
UNIM-SA(ABSOLUTE)
UNIM-SV IP65(CLOSE LOOP)
ETC

Step Motor(Open Loop) UNIM-ST Series



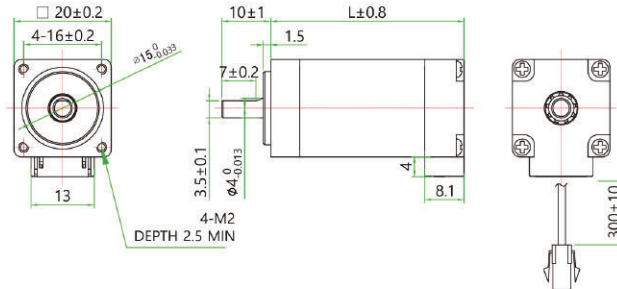
UNIM-ST Series											
Model		20L	28S	28M	28L	35M	35L	42S	42M	42L	42XL
Drive Method	-	BI-POLAR									
Number of Phases	-	2	2	2	2	2	2	2	2	2	2
Step Angle	-	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Current	[A]	0.8	1.3	1.3	1.3	1.5	2	1.13	1.13	2	2
Resistance	[Ω]	6.5	1.45	1.7	2.25	1.65	1.65	3.2	3.45	1.4	2
Inductance	[mH]	2.5	1.25	1.2	1.7	2.1	2.4	4.9	7.1	3.1	4.2
Holding Torque	[N.m]	0.036	0.092	0.105	0.156	0.2	0.4	0.312	0.35	0.48	0.72
Rotor Inertia	[g-cm ²]	2.9	8	12	17	20	35	33	56	72	89
Mass	[g]	60	110	145	195	210	250	230	290	430	470
Length	[mm]	39.75	32	40	51.5	37.25	54.75	34	40	47.5	53.5

UNIM-ST Series									
Model		56S	56M	56L	60S	60M	60L	86M	86L
Drive Method	-	BI-POLAR							
Number of Phases	-	2	2	2	2	2	2	2	2
Step Angle	-	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Current	[A]	2.8	2.8	2.8	4.2	3	4.2	6	6
Resistance	[Ω]	0.65	0.85	1.25	0.39	0.47	0.8	0.36	0.55
Inductance	[mH]	2	3	4.9	1.1	1.8	3.7	3.5	6.5
Holding Torque	[N.m]	0.765	1.23	2.65	1	1.31	2.92	4.5	8.5
Rotor Inertia	[g-cm ²]	145	245	470	280	245	920	1700	2900
Mass	[g]	510	710	1110	620	880	1400	2000	3300
Length	[mm]	42	54.5	77.5	46.3	55.8	87.8	76.15	115.35

Dimension – UNIM-ST Series

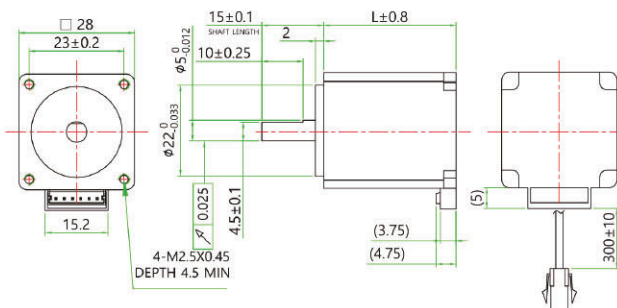
▶ UNIM-ST-20mm

MODEL	LENGTH(mm)
UNIM-ST-20L	39



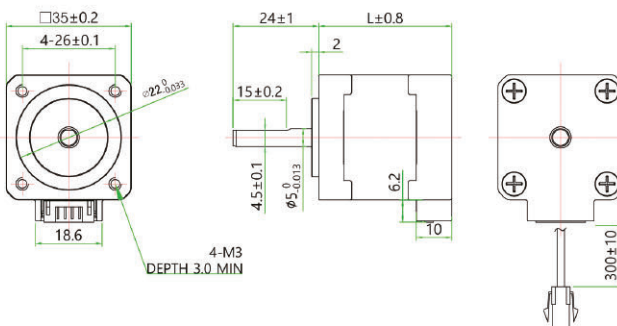
▶ UNIM-ST 28mm

MODEL	LENGTH(mm)
UNIM-ST-28S	32
UNIM-ST-28M	40
UNIM-ST-28L	51.5



▶ UNIM-ST 35mm

MODEL	LENGTH(mm)
UNIM-ST-35M	37.25
UNIM-ST-35L	54.75

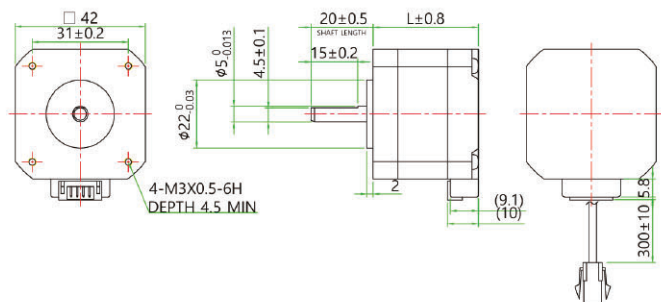


SNET-FCAT	SNET-RTEX	SNET-P	SNET-894	SNCS-FCAT	SNCS-RTEX	MCST	END	MAUCH	Shee	UZ	Remote	MOJH-E	RTEX	FCAT	ENET	PUL	ST	SV	SA	IP65	Cable
CONTROLLER									I/O MODULE				STEP DRIVER				STEP MOTOR				

Dimension – UNIM-ST Series

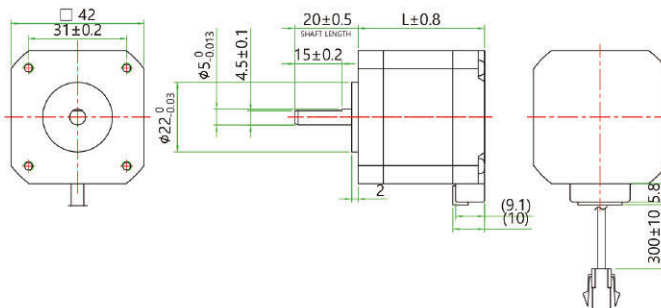
▶ UNIM-ST 42mm

MODEL	LENGTH(mm)
UNIM-ST-42S	34
UNIM-ST-42M	40



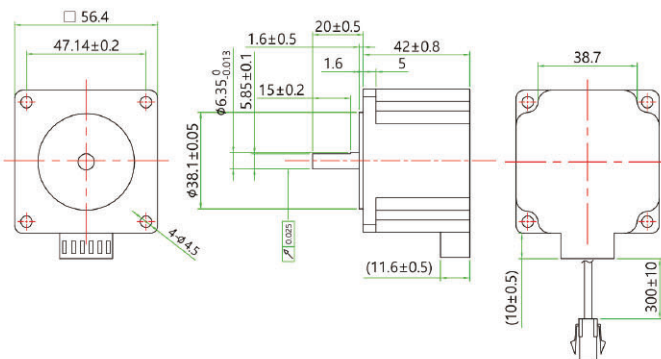
▶ UNIM-ST 42mm

MODEL	LENGTH(mm)
UNIM-ST-42L	47.5
UNIM-ST-42XL	53.5



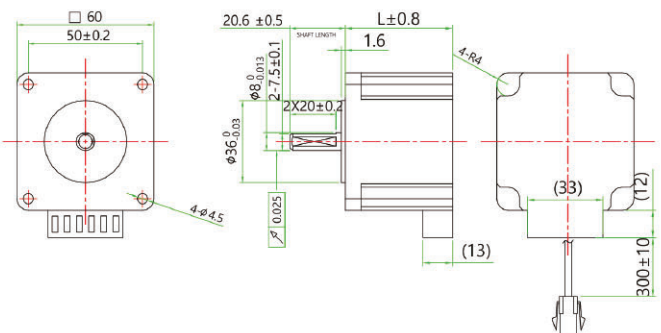
▶ UNIM-ST 56mm

MODEL	LENGTH(mm)
UNIM-ST-56S	42
UNIM-ST-56M	54.5
UNIM-ST-56L	77.5



▶ UNIM-ST 60mm

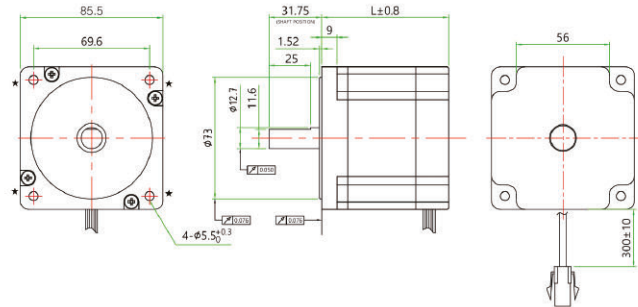
MODEL	LENGTH(mm)
UNIM-ST-60S	46.3
UNIM-ST-60M	55.8
UNIM-ST-60L	87.8



Dimension – UNIM-ST Series

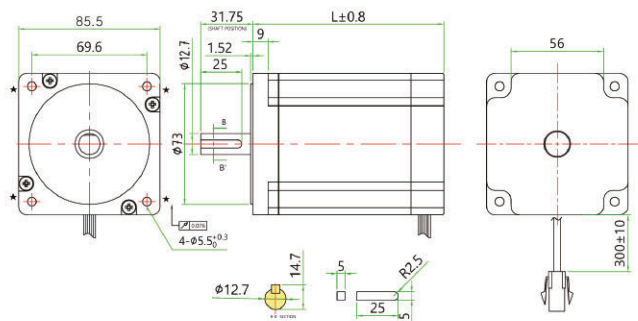
▶ UNIM-ST 86mm

MODEL	LENGTH(mm)
UNIM-ST-86M	76.15



▶ UNIM-ST 86mm

MODEL	LENGTH(mm)
UNIM-ST-86L	115.35

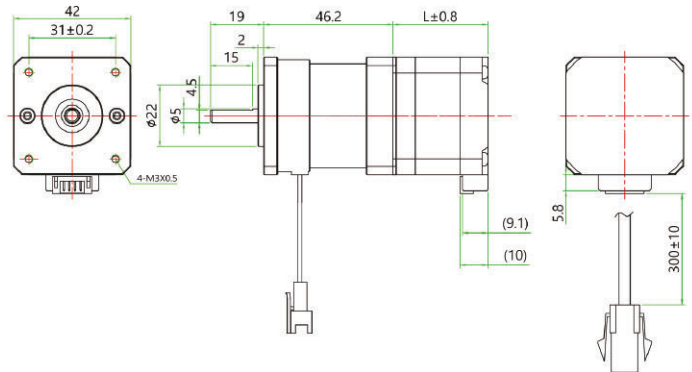


SNET-FCAT	SNET-RTEX	SNET-P	SNET-F84	SNICS-FCAT	SNICS-RTEX	MCST	END	MUCH	Shoe	UZ	Remote	MCJH-E	RTEX	FCAT	ENET	PUL	ST	SV	SA	IP65	Cable		
CONTROLLER									I/O MODULE				STEP DRIVER							STEP MOTOR			

Dimension – UNIM-ST Series + Brake

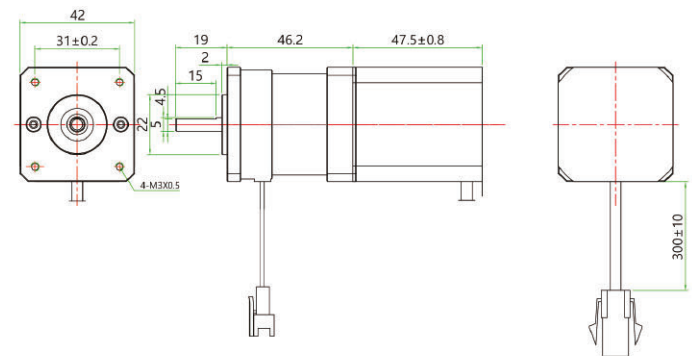
▶ UNIM-ST 42mm

MODEL	LENGTH(mm)
UNIM-ST-42S (BK)	34
UNIM-ST-42M (BK)	40



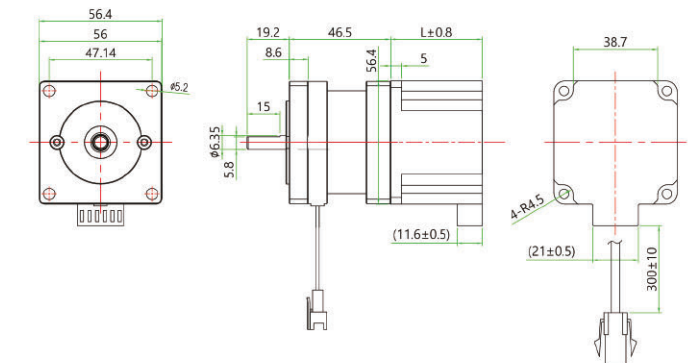
▶ UNIM-ST 42mm

MODEL	LENGTH(mm)
UNIM-ST-42L (BK)	47.5
UNIM-ST-42XL (BK)	53.5



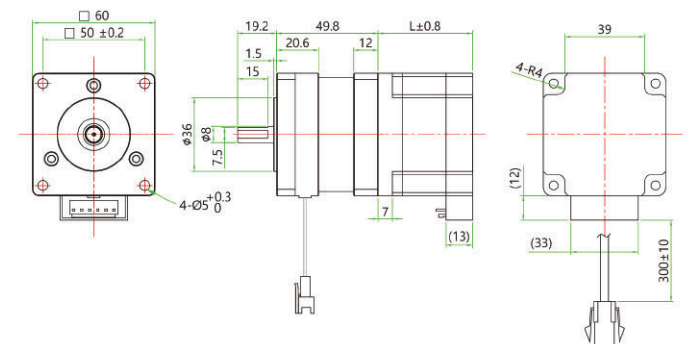
▶ UNIM-ST 56mm

MODEL	LENGTH(mm)
UNIM-ST-56S (BK)	42
UNIM-ST-56M (BK)	54.5
UNIM-ST-56L (BK)	77.5



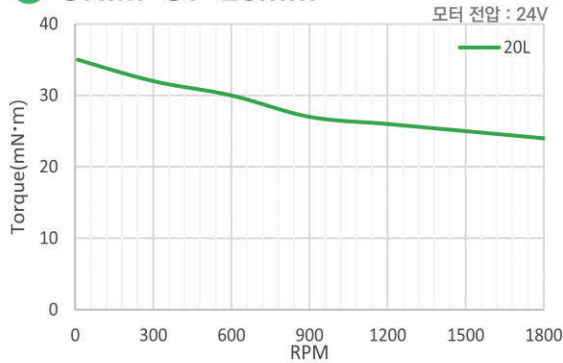
▶ UNIM-ST 60mm

MODEL	LENGTH(mm)
UNIM-ST-60S (BK)	46.3
UNIM-ST-60M (BK)	55.8
UNIM-ST-60L (BK)	87.8

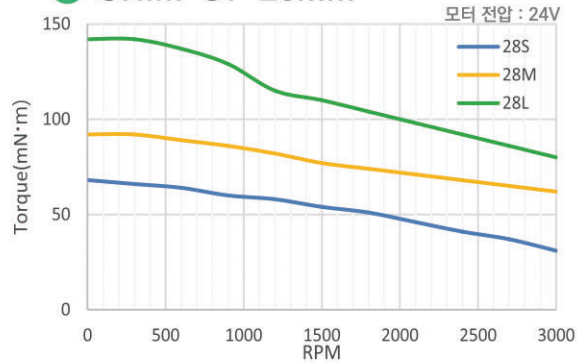


Torque Performance Curves

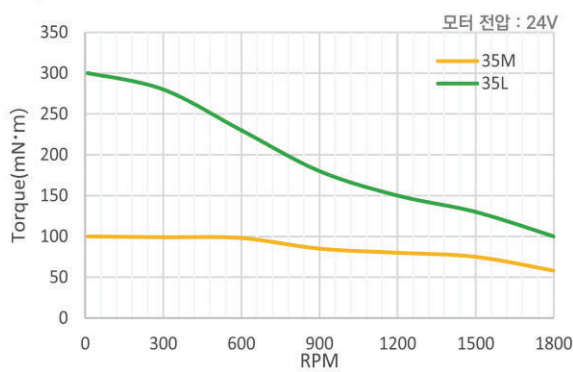
▶ UNIM-ST-20mm



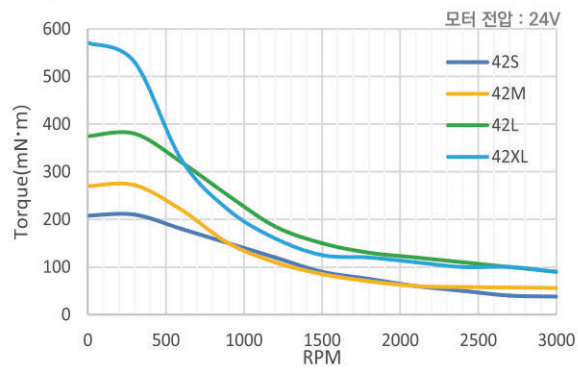
▶ UNIM-ST-28mm



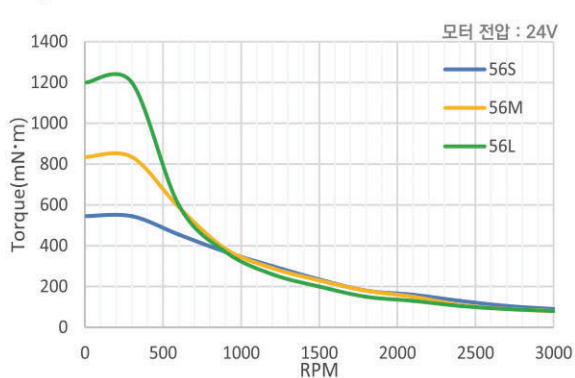
▶ UNIM-ST-35mm



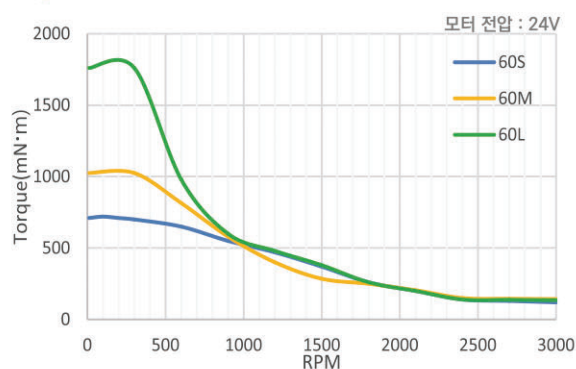
▶ UNIM-ST-42mm



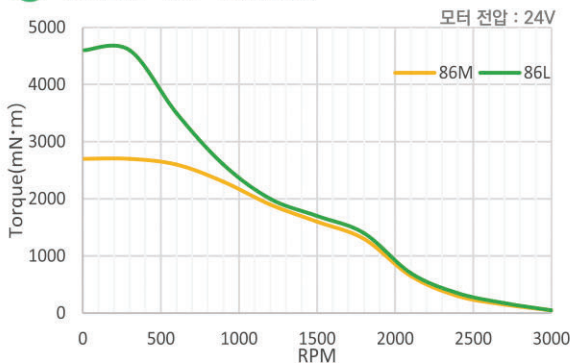
▶ UNIM-ST-56mm



▶ UNIM-ST-60mm

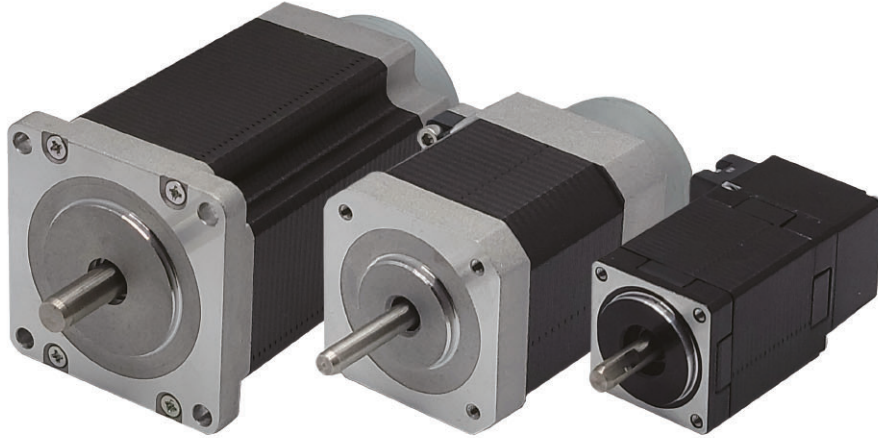


▶ UNIM-ST-86mm



CONTROLLER	SNET-FCAT
	SNET-RTEX
	SNET-P
	SNET-EG4
	SNCS-FCAT
	SNCS-RTEX
I/O MODULE	MCST
	EMD
	MAUCH
	Slave
	UZ
	Remote
STEP DRIVER	MOJH-E
	RTEX
	FCAT
	ENET
	PUL
	ST
STEP MOTOR	SV
	SA
	IP65
	Cable

STEP Motor(Closed Loop) UNIM-SV Series



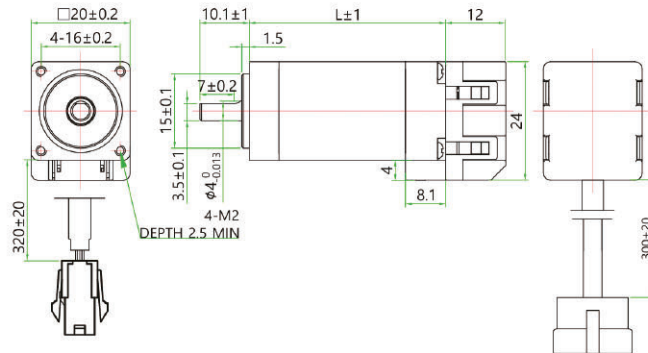
UNIM-SV Series											
Model		20L-G	28S-A	28M-A	28L-A	35M-G	35L	42S-A	42M-A	42L-A	42XL-A
Drive Method	-	BI-POLAR									
Number of Phases	-	2	2	2	2	2	2	2	2	2	2
Encoder	[PPR]	8,000	10,000	10,000	10,000	8,000	8,000	10,000	10,000	10,000	10,000
Step Angle	-	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Current	[A]	0.8	1.3	1.3	1.3	1.5	2	1.13	1.2	1.2	2
Resistance	[Ω]	6.5	1.45	1.7	3.5	1.65	1.65	3.2	1.7	3.5	2
Inductance	[mH]	2.5	1.25	1.2	3.2	2.1	2.4	4.9	3.4	7.4	4.2
Holding Torque	[N.m]	0.036	0.078	0.105	0.162	0.2	0.4	0.257	0.267	0.48	0.72
Rotor Inertia	[g-cm ²]	2.9	8	8	17	20	35	33	56	72	89
Mass	[g]	60	110	176	195	210	250	250	310	430	470
Length	[mm]	39.65	32	40	51.5	37.25	54.75	38.5	45	52	58
Encoder Length	[mm]	12.2	16	16	16	12.2	12.2	18	18	18	18

UNIM-SV Series									
Model		56S-A	56M-A	56L-A	60S-A	60M-A	60L-A	86M-F	86L-F
Drive Method	-	BI-POLAR							
Number of Phases	-	2	2	2	2	2	2	2	2
Encoder	[PPR]	10,000	10,000	10,000	10,000	10,000	10,000	4,000	4,000
Step Angle	-	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Current	[A]	2.8	2.8	2.8	4	3	4	5	6
Resistance	[Ω]	0.65	0.85	1.25	0.39	0.47	0.8	0.32	0.46
Inductance	[mH]	2	3	4.9	1.1	1.8	3.7	2.5	4.4
Holding Torque	[N.m]	0.765	1.23	2.2	1.008	1.14	2.92	3.33	8
Rotor Inertia	[g-cm ²]	145	245	470	280	245	920	2750	4150
Mass	[g]	510	700	1130	640	840	1400	2100	3500
Length	[mm]	41.8	54.6	77.5	46.3	55.8	87.8	76.1	115.35
Encoder Length	[mm]	18	18	18	18	18	18	21	20.25

Dimension – UNIM-SV Series

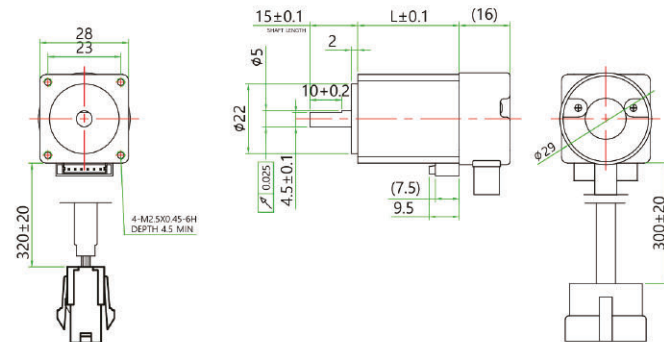
▶ UNIM-SV 20mm

MODEL	LENGTH(mm)
UNIM-SV-20L	39.65



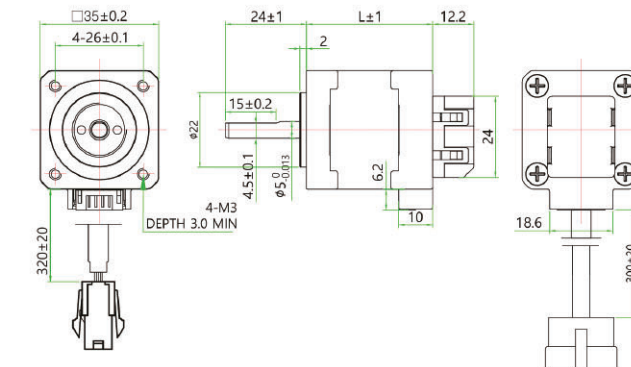
▶ UNIM-SV 28mm

MODEL	LENGTH(mm)
UNIM-SV-28S	32
UNIM-SV-28M	40
UNIM-SV-28L	51.5



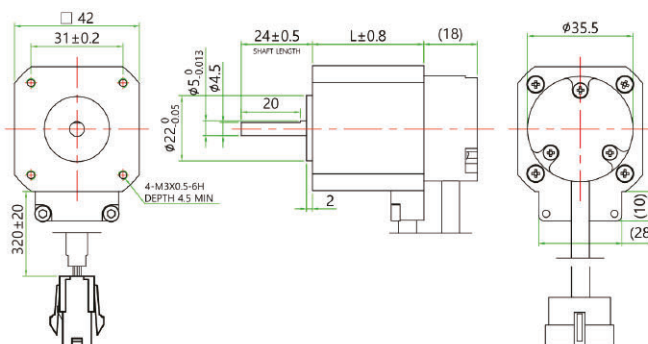
▶ UNIM-SV 35mm

MODEL	LENGTH(mm)
UNIM-SV-35M	37.25
UNIM-SV-35L	54.75



▶ UNIM-SV 42mm

MODEL	LENGTH(mm)
UNIM-SV-42S	38.5
UNIM-SV-42M	45
UNIM-SV-42L	52
UNIM-SV-42XL	58

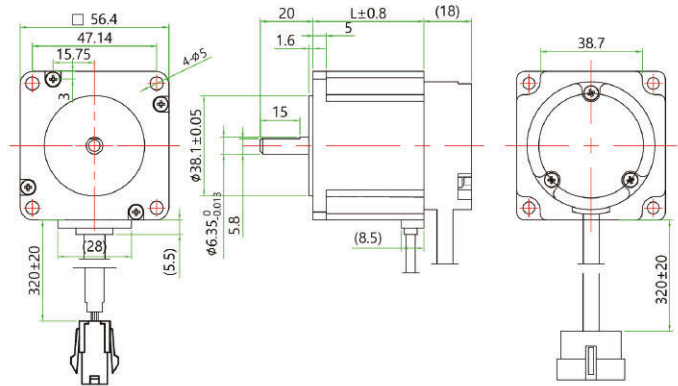


SNET-FCAT	SNET-RTEX	SNET-P	SNET-B94	SNCS-FCAT	SNCS-RTEX	MCST	END	MUCH	Slave	UZ	Remote	MOU+E	RTEX	FCAT	ENET	PUL	ST	SV	SA	IP65	Cable
CONTROLLER									I/O MODULE				STEP DRIVER					STEP MOTOR			

Dimension – UNIM-SV Series

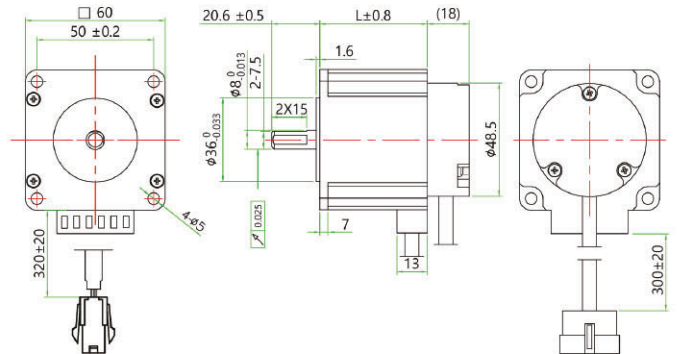
▶ UNIM-SV 56mm

MODEL	LENGTH(mm)
UNIM-SV-56S	41.8
UNIM-SV-56M	54.5
UNIM-SV-56L	77.5



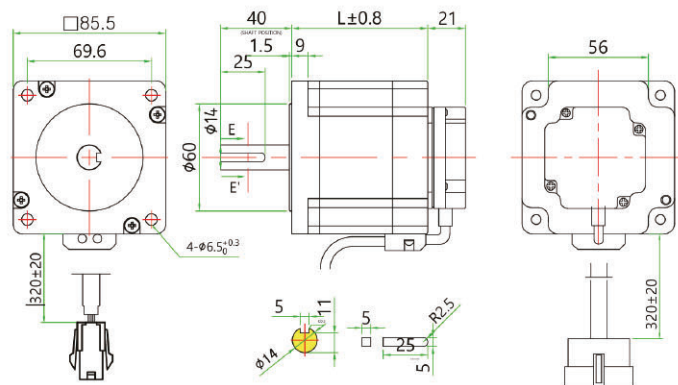
▶ UNIM-SV 60mm

MODEL	LENGTH(mm)
UNIM-SV-60S	46.3
UNIM-SV-60M	55.8
UNIM-SV-60L	87.8



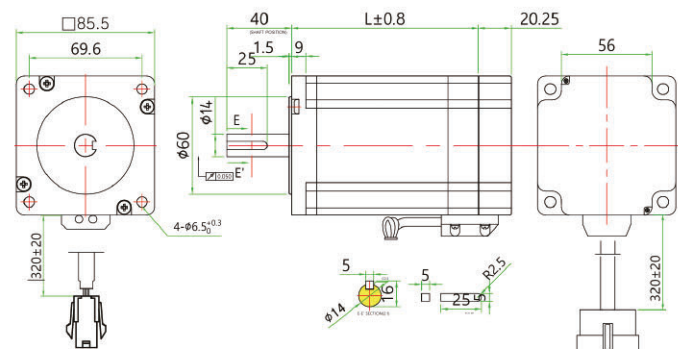
▶ UNIM-SV 86mm

MODEL	LENGTH(mm)
UNIM-SV-86M	76.1



▶ UNIM-SV 86mm

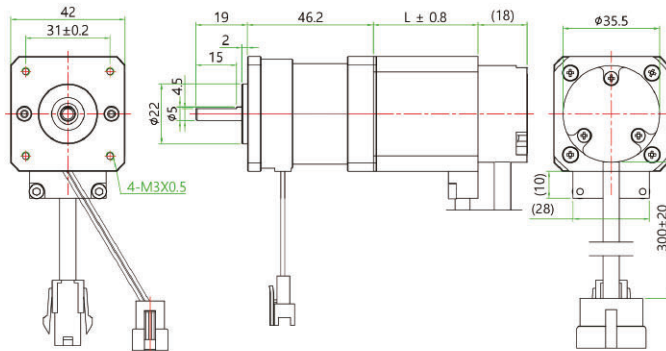
MODEL	LENGTH(mm)
UNIM-SV-86L	115.35



Dimension – UNIM-SV Series + Brake

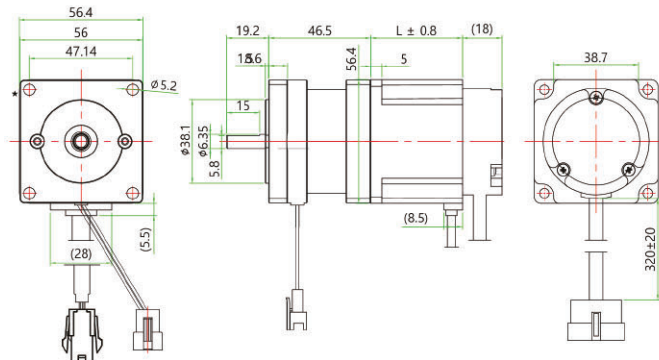
▶ UNIM-SV 42mm

MODEL	LENGTH(mm)
UNIM-SV-42S(BK)	38.5
UNIM-SV-42M(BK)	45
UNIM-SV-42L(BK)	52
UNIM-SV-42XL(BK)	58



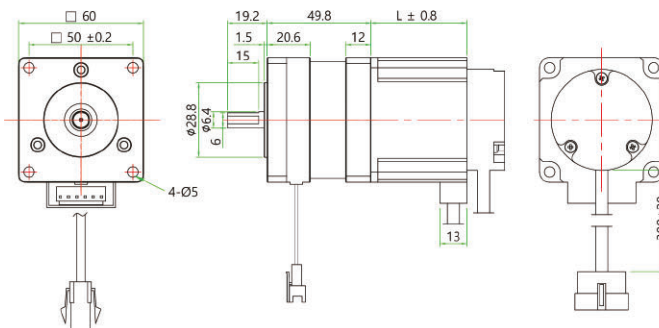
▶ UNIM-SV 56mm

MODEL	LENGTH(mm)
UNIM-SV-56S(BK)	41.8
UNIM-SV-56M(BK)	54.5
UNIM-SV-56L(BK)	77.5



▶ UNIM-SV 60mm

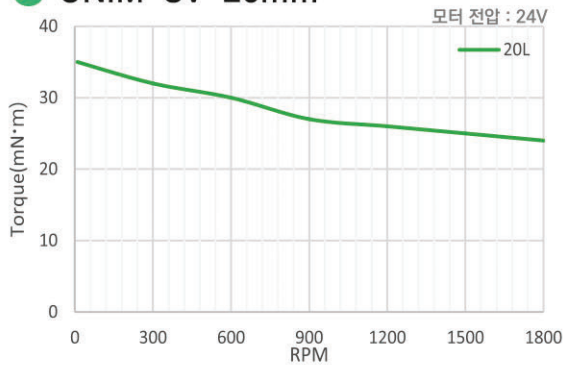
MODEL	LENGTH(mm)
UNIM-SV-60S(BK)	46.3
UNIM-SV-60M(BK)	55.8
UNIM-SV-60L(BK)	87.8



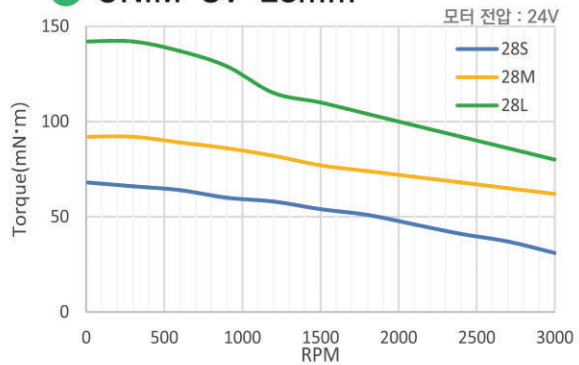
SNET-FCAT	SNET-RTEX	SNET-P	SNET-F84	SNICS-FCAT	SNICS-RTEX	MCST	EMD	MUCH	Slave	UZ	Remote	MOJH-E	RTEX	FCAT	ENET	PUL	ST	SV	SA	IP65	Cable	
CONTROLLER									I/O MODULE				STEP DRIVER						STEP MOTOR			

Torque Performance Curves

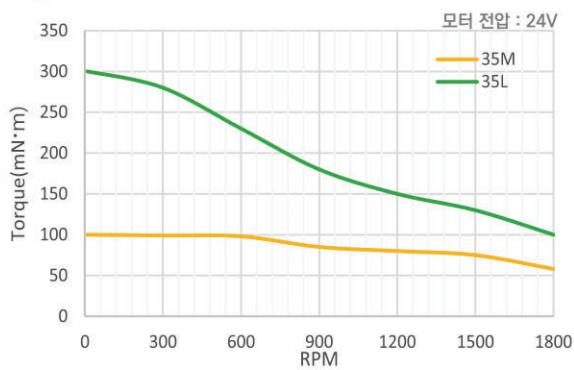
▶ UNIM-SV-20mm



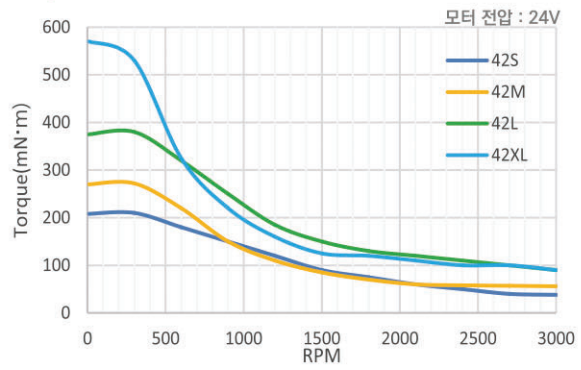
▶ UNIM-SV-28mm



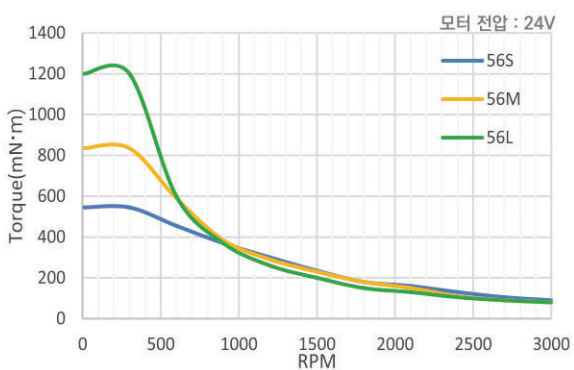
▶ UNIM-SV-35mm



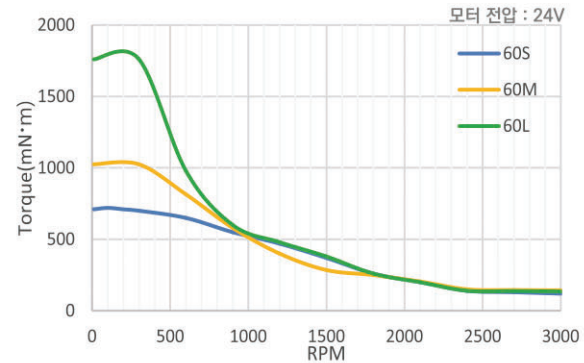
▶ UNIM-SV-42mm



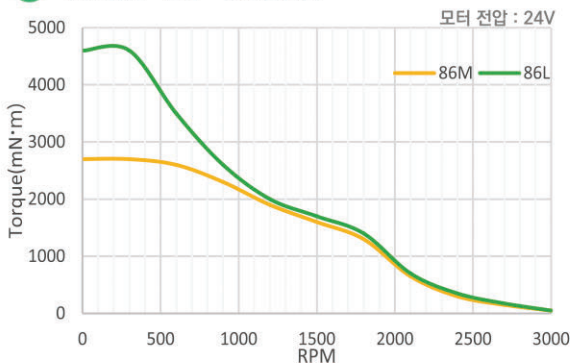
▶ UNIM-SV-56mm



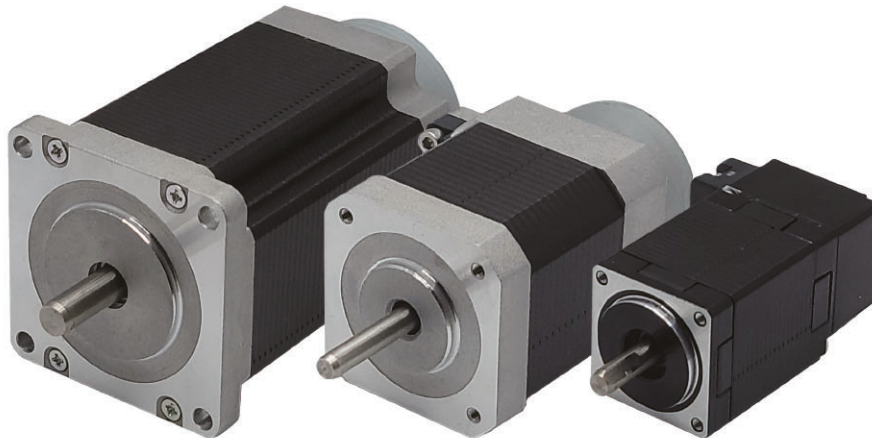
▶ UNIM-SV-60mm



▶ UNIM-SV-86mm



Step Motor(Absolute, Battery-Less) UNIM-SA Series



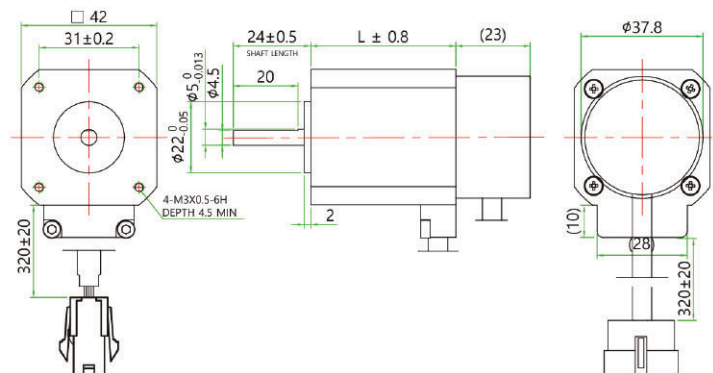
UNIM-SA Series								
Model		42M-S	42L-S	42XL-S	56M-S	56L-S	60M-S	60L-S
Drive Method	-	BI-POLAR						
Number of Phases	-	2	2	2	2	2	2	2
Encoder	[PPR]	10,000(17bit)						
Multi-turn		16bit						
Step Angle	-	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Current	[A]	1.2	1.2	2	2.8	2.8	3	4
Resistance	[Ω]	1.7	3.5	2	0.85	1.25	0.47	0.8
Inductance	[mH]	3.4	7.4	432	3	4.9	1.8	3.7
Holding Torque	[N.m]	0.267	0.48	0.72	1.23	2.2	1.14	2.92
Rotor Inertia	[g-cm ²]	56	72	89	245	470	245	920
Mass	[g]	310	430	470	700	1130	840	1400
Length	[mm]	45	52	58	54.6	77.5	55.8	87.8
Encoder Length	[mm]	23	23	23	28.4	28.4	28.4	28.4

CONTROLLER	SNET-FCAT
	SNET-RTEX
	SNET-P
	SNET-F94
	SNCS-FCAT
	SNCS-RTEX
I/O MODULE	MCST
	END
	MUCH
	Shee
	UZ
	Randa
STEP DRIVER	MCU+H
	RTEX
	FCAT
	ENET
	PUL
	ST
STEP MOTOR	SV
	SA
	IP65
	Cable

Dimension – UNIM-SA Series

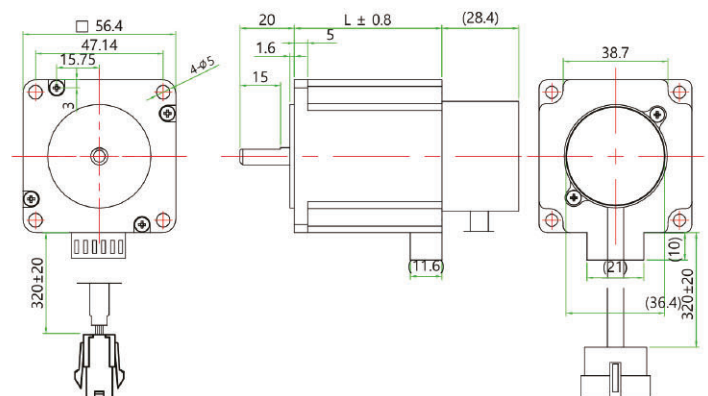
▶ UNIM-SA 42mm

MODEL	LENGTH(mm)
UNIM-SA-42M	45
UNIM-SA-42L	52
UNIM-SA-42XL	58



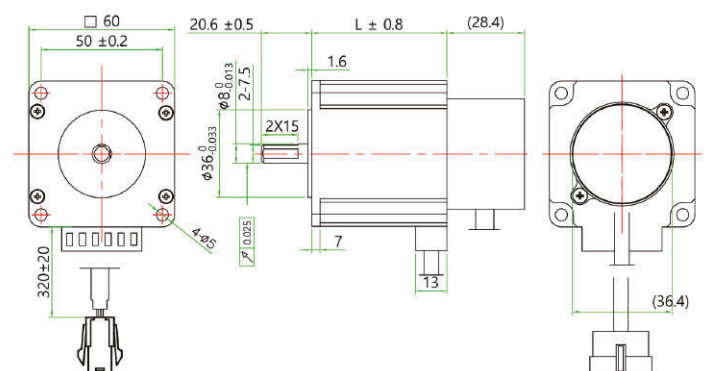
▶ UNIM-SA 56mm

MODEL	LENGTH(mm)
UNIM-SA-56M	54.5
UNIM-SA-56L	77.5

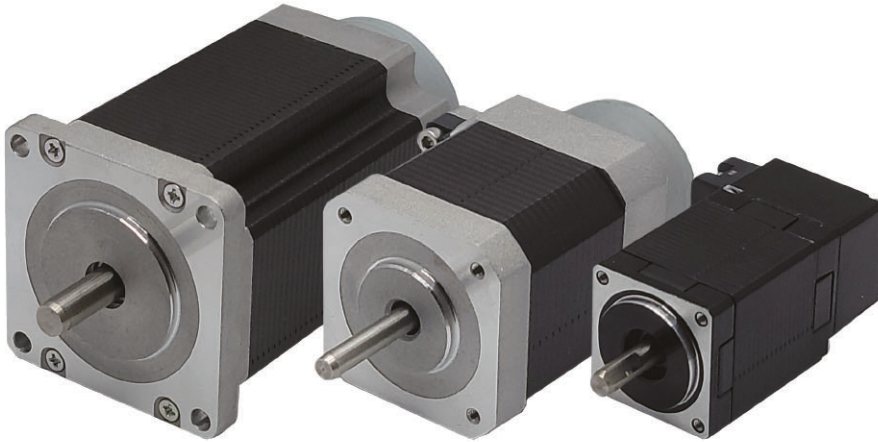


▶ UNIM-SA 60mm

MODEL	LENGTH(mm)
UNIM-SA-60M	55.8
UNIM-SA-60L	87.8



Step Motor(IP65) UNIM-SV Series



UNIM-SV Series								
Model		56M-F-IP65	56L-F-IP65	60M-F-IP65	60L-F-IP65	86S-F-IP65	86M-F-IP65	86L-F-IP65
Drive Method	-	BI-POLAR						
Number of Phases	-	2	2	2	2	2	2	2
Encoder	[PPR]	4,000	4,000	4,000	4,000	4,000	4,000	4,000
IP Rate		IP65						
Step Angle	-	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Current	[A]	4	5	5	5	6	6	6
Resistance	[Ω]	0.44	0.4	0.35	0.43	0.35	0.52	0.74
Inductance	[mH]	1.4	1.8	1.2	1.8	2.6	5.3	7.8
Holding Torque	[N.m]	1.2	2	2.1	3	4.5	8.2	12
Rotor Inertia	[g-cm ²]	280	280	490	690	1800	3600	5400
Mass	[g]	800	800	1100	1300	2100	3600	5000
Length	[mm]	65	86	80.5	97.5	88	126.5	164.5
Encoder Length	[mm]	25	25	30	30	30	30	30

Please contact head office for drawings.

CONTROLLER	SNET-FCAT
	SNET-RTEX
	SNET-P
	SNET-F84
	SNCS-FCAT
	SNCS-RTEX
I/O MODULE	MCST
	END
	MUCH
	Shee
	UZ
	Randa
STEP DRIVER	MOJH-E
	RTEX
	FCAT
	ENET
	PUL
	ST
STEP MOTOR	SV
	SA
	IP65
	Cable

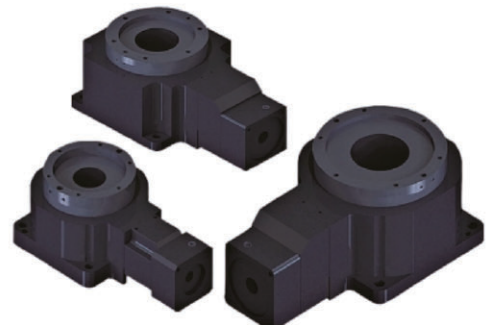
ETC

- ▶ Direct connection Type of motor screw rod
Through shaft type screw stepper motor
(Ball screw / Sliding screw / Lead Screw)



- ▶ Hollow Rotary Actuator

- Large Diameter Hollow Rotary Actuator
- High Torque
- Absolute encoder adoption(Optional)
- No Sensor No Homing



This product is custom made, so please contact us
본 제품은 주문 제작형이므로 자세한 사항은 문의해 주시기 바랍니다.

Extention Cable

▶ Motor Cable (Open Loop + Closed Loop)

UNI ECAT,ENET,RTEX,STO,ABS,PUL(Closed Loop) Series

Housing : 5557-04(MOLEX) or CHD1140-04(HANLIM electronics)

Terminal : 5556T or CHD1140

UNI Driver	
1	/A
2	/B
3	A
4	B



Motor	
1	/A
2	/B
3	A
4	B

UNI Compact Series

Housing : 1053081204(MOLEX)

Terminal : 1053002400

UNI Driver	
3	/A
4	/B
1	A
2	B



Motor	
1	/A
2	/B
3	A
4	B

▶ Encoder Cable (Closed Loop)

Driver ALL

Housing : 501646-1200(MOLEX)

Terminal : 501647

UNI Driver	
1	A+
2	A-
3	B+
4	B-
5	Z+
6	Z-
7	5V
8	5V GND
9	-
10	-
11	FG
12	-



MOTOR ALL

Housing : SMP-09V-NC(JST)

Terminal : SHF-001T-0.8BS

Motor	
1	A+
2	A-
3	B+
4	B-
5	Z+
6	Z-
7	5V
8	5V GND
9	

CONTROLLER	SNET-ECAT
	SNET-RTEX
	SNET-P
	SNET-F84
	SINCS-ECAT
	SINCS-RTEX
	MCST
	EMD
	MUCH
	Shee
I/O MODULE	UZ
	Randle
	MOJH-E
	RTEX
STEP DRIVER	ECAT
	ENET
	PUL
	ST
STEP MOTOR	SV
	SA
	IP65
	Cable

- Please read the manual carefully before operating the product.
We are not responsible for any modifications to the product that users make on their own,
as this is outside the scope of our warranty.
The contents of this catalogue are subject to change without prior notice.

이모션텍(주) MOTION CONTROLLER

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E. sales@emotiontek.com H. www.emotiontek.com

더모션(주) STEP DRIVER & MOTOR

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