THE MOTION

PRODUCT BROCHURE

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

www.emotiontek.co.kr

eMOTION Tek Since 2000

History

2000 ~2001

2000

Shinwoo Automation Technology Established
(registered as a venture company)
Launched of PC-based Motion Controller

2001

Launch of 1 Axis Motion Controller(MCU)

2002 ~2005

2002

EMOTIONTEK Company name changed
Launch of Multi-axis ROBOT Controller

2003

Launch of 4 Axes Motion Controller(MCS-40)

2004

Establishment of a corporate research center
Launch of 8 Axes Motion Controller(MCS-80)

2005

Launch of 4 Axes PCI Motion Controller(MCB)

2006 ~2014

2007

Launch of 2/5 Phase Step Driver
INNO-BIZ Company Registration

2008

Launch of Robot Controller
Launch of Ethernet-base remote I/O module

2009

Launch of 4 Axes Desktop Motion Controller
(MCD-40P)

2010

Launch of 4 Axes Desktop Motion Controller
(MCD-40PC)
Launch of Vision Grabber Board
Launch of Temperature Controller

2013

Launch of 13 Axes Motion Controller (GNET)
Launch of PCI Motion Board(MCB Exp)

2014

Launch of 1,2 Axes Motion Controller(MCUH)
Launch of 8 Axes Motion Controller(MCSH)

2015 ~2019

2016

Launch of 9 Axes Motion Controller(SNET)

2017

Launch of Motion Controller(MCST)

2017

Development of Servo Driver for robots

2018

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

2019

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

2020 ~2025

2020

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

2021

Launch of Ethernet Desktop Motion Controller
(EMD-ENET)

2022

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

2023

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

2024

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

2025

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



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).

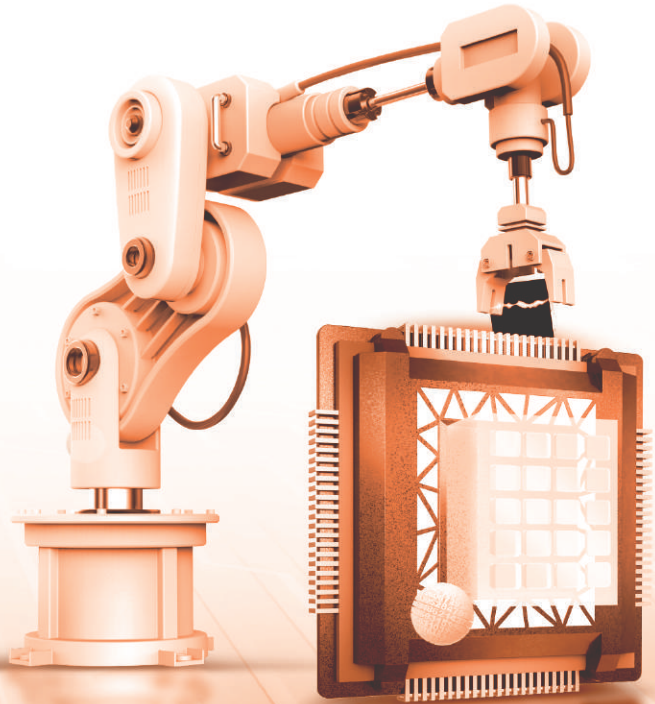
Stand-Alone Motion Control

- 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

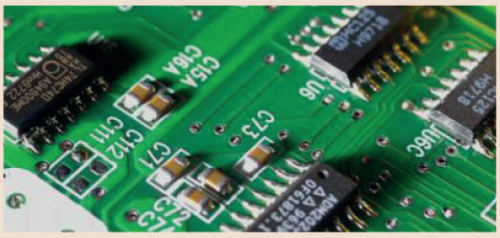
- Dual AC Servo Drive(100W~1kW)
- LED lighting controller for constant current (10A)
- Development of Power Unit and Control Unit for Driving 4kW Industrial Magnetron
- Development of PID Temperature Controller with Auto-tuning Function

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



[PLC]



[PC]

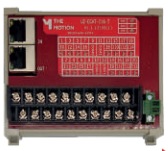


[Touch Panel]

EtherNet
RS422
RS485



[RS485]



EtherCAT





[I/O]



[MPG]

EtherCAT



[Servo Motor & Driver]

RTEX
Realtime Express



[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	4, 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 slot)	DLL	MODBUS TCP Ethernet IP
	GL -9086	1Slots 8,16,32ch (Max 16 slot)	-	EtherCAT
	GL -9041	1Slots 8,16,32ch (Max In480/Out480)	-	RTEX

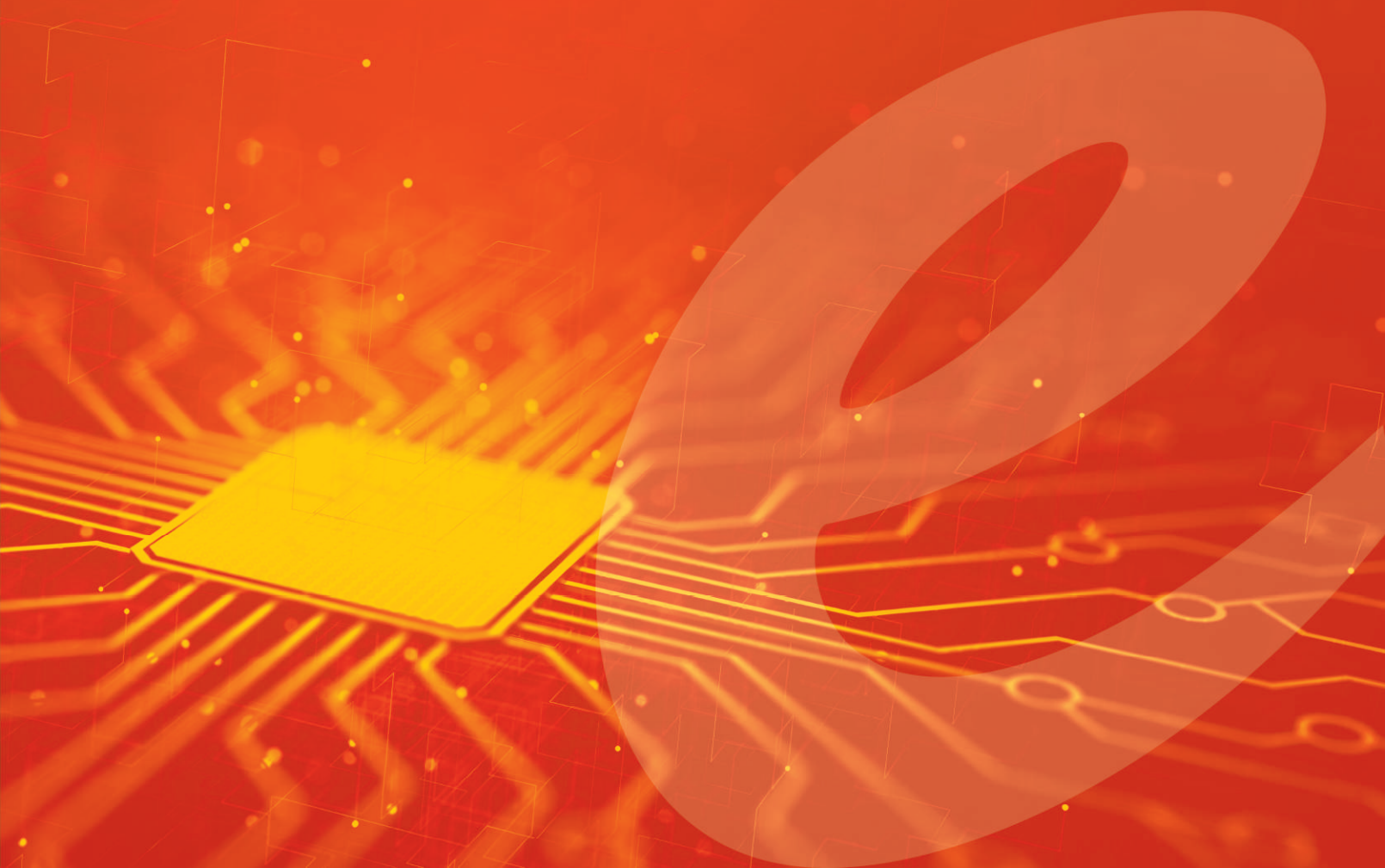
Product Guide
Network I/O Module

	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

eMOTION Tek

CONTENTS

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



eMOTION Tek

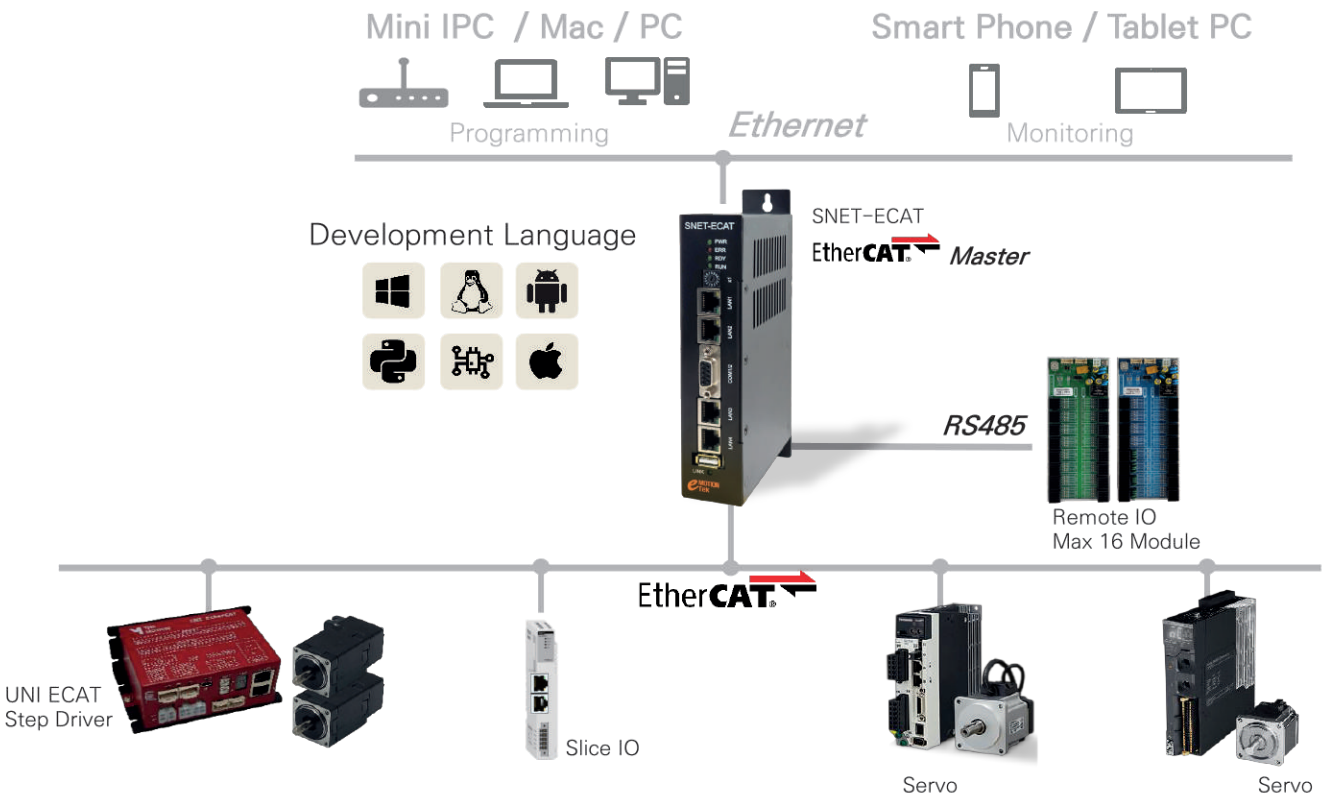
PC Based Controller

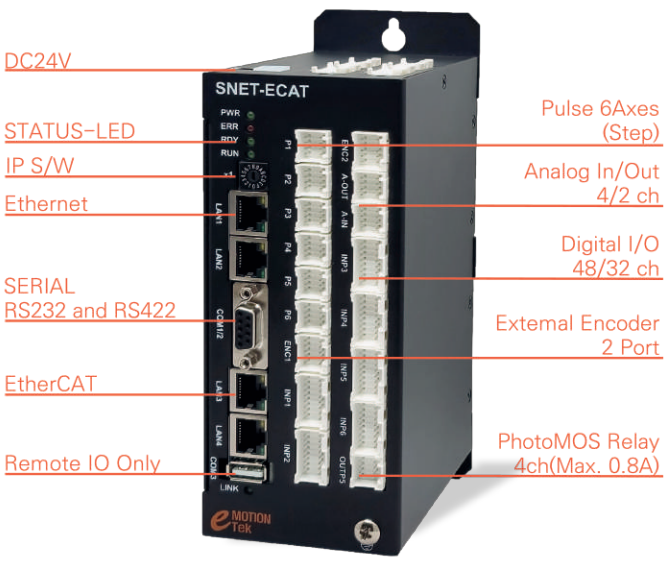
SNET-ECAT
SNET-RTEX
SNET-P
SNET-E84

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





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	4,8,16,32
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
Special Function	
Motion Profile	Trapezoidal,S Curve, Override Velocity,Override Time
Interpolation	Line, Arc, Helical, Spline, Loop-back
Trigger	1us Trigger Output

Specifications



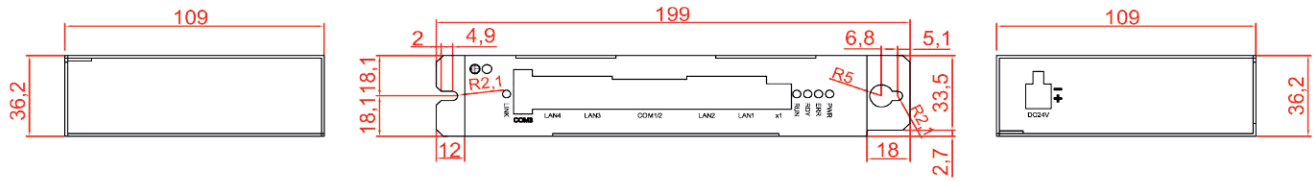




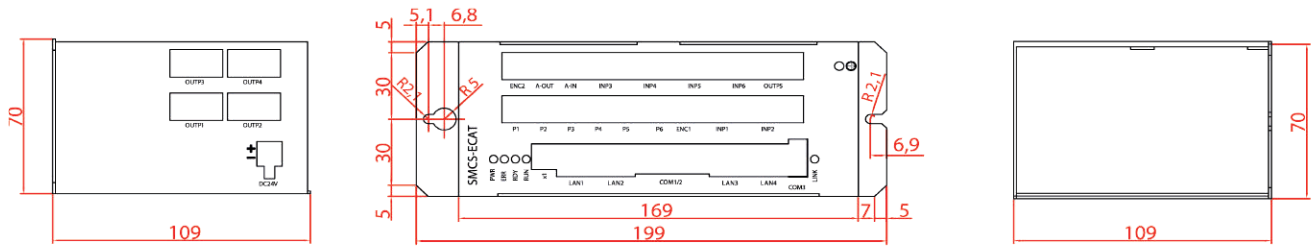
	SNET-ECAT-4(8)(16)(32)-S	SNET-ECAT-4(8)(16)(32)	SNET-ECAT-4(8)(16)(32)-A
INTERFACES			
Power supply	24VDC/0.75A		
Ethernet	1 x 10/100 Mbps(RJ45) STP Cable(above CAT5e)		
EtherCAT	1 x EtherCAT Master(RJ45) STP Cable(above CAT5e)		
Serial	1 x RS232, 1 x RS422		
USB Type A	1 x RS485 Remote IO(Max 16module)		
SPECIFICATIONS			
Control Axes	4, 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	
Extemal 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 ② ③ ④

① Product Name
SNET = PC-Based Controller
SMCS = Stand-Alone Controller

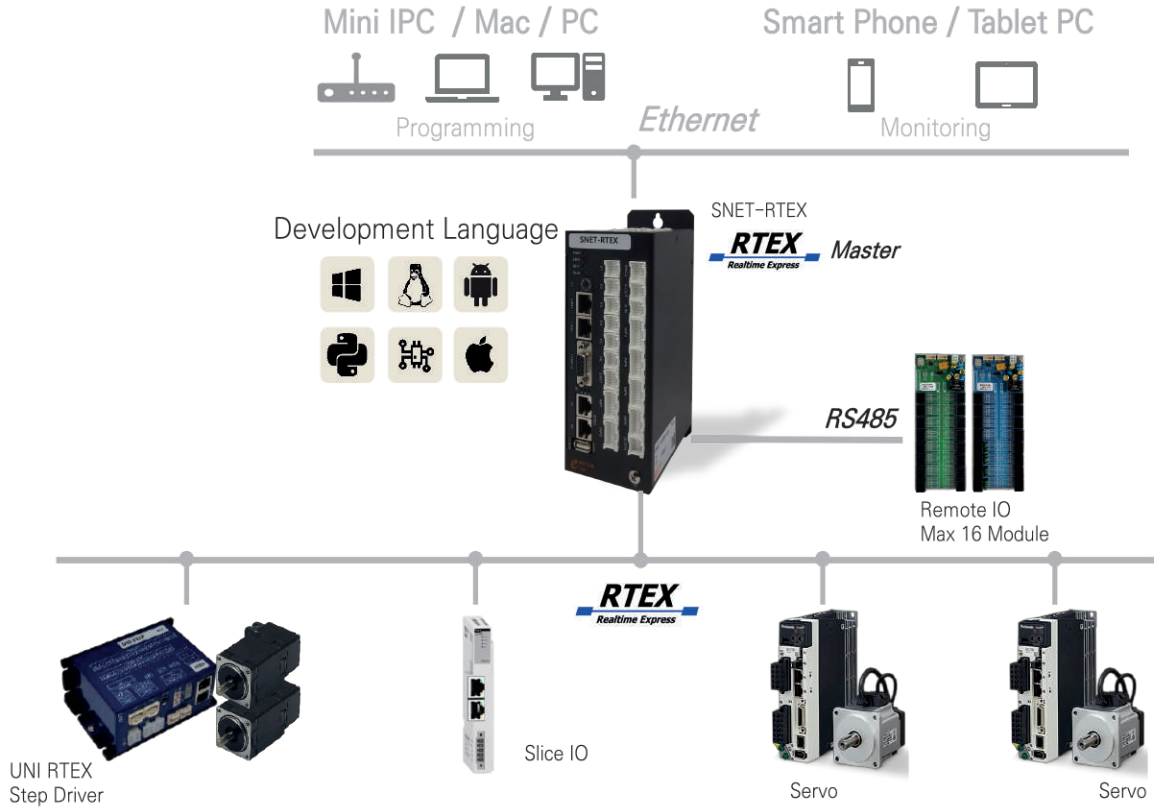
② Command Method
P = Pulse
ECAT= EtherCAT
RTEX = RTEX

③ Control Axes
4 = 4Axes
8 = 8Axes
16 = 16Axes
32 = 16Axes

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

Realtime Express(RTEX) Network type Controller SNET RTEX Series





RTEX Realtime Express

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

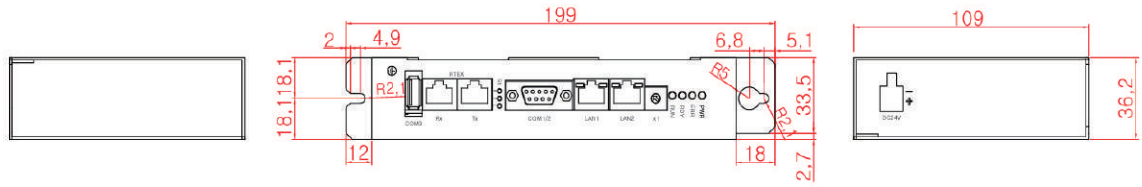
Specifications



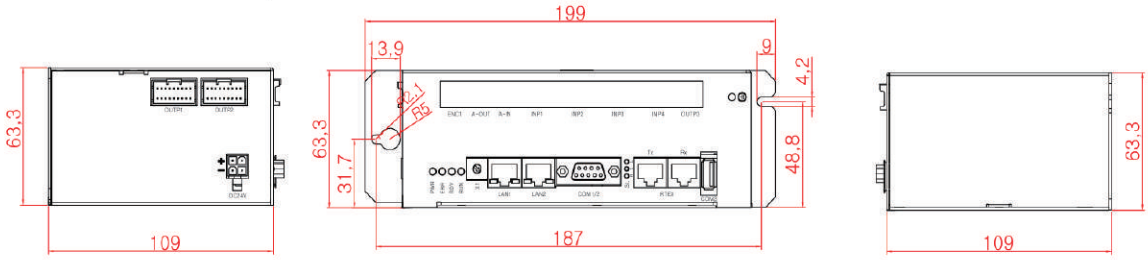
	SNET-RTEX-4(8)(16)(32)-S	SNET-RTEX-4(8)-IO	SNET-RTEX-16(32)
INTERFACES			
Power supply	24VDC/0.75A		
Ethernet	Dual port Ethernet switch embedded(RJ45), STP Cable(above CAT5e)		
RTEX	RTEX(Realtime Express Rx/Tx(RJ45), STP Cable(above CAT5e)		
Serial	1 x RS232, 1 x RS422		
USB Type A	1 x RS485 Remote IO(Max 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
Extemal Encoder or MPG	-	1 Port	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	-	32ch(5mA/24V)	48ch(5mA/24V)
Digital Output	-	16ch(Max. 80mA)	32ch(Max. 80mA)
Relay Output	-	4ch(Max. 800mA)	
Analog Input(Option)	-	4ch(16bit)	4ch(16bit)
Analog Output(Option)	-	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

Dimension

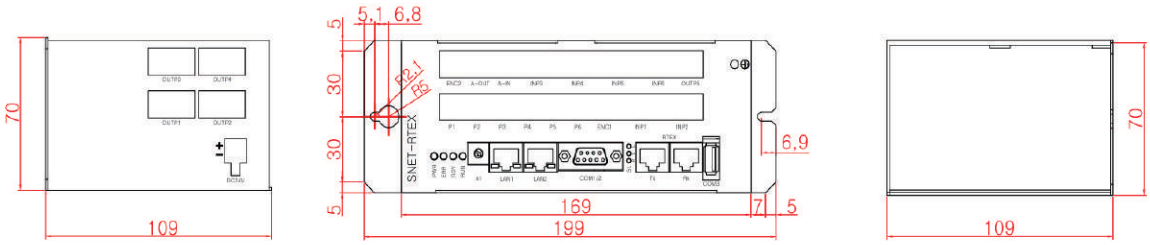
SNET-RTEX-4(8)(16)(32)-S



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

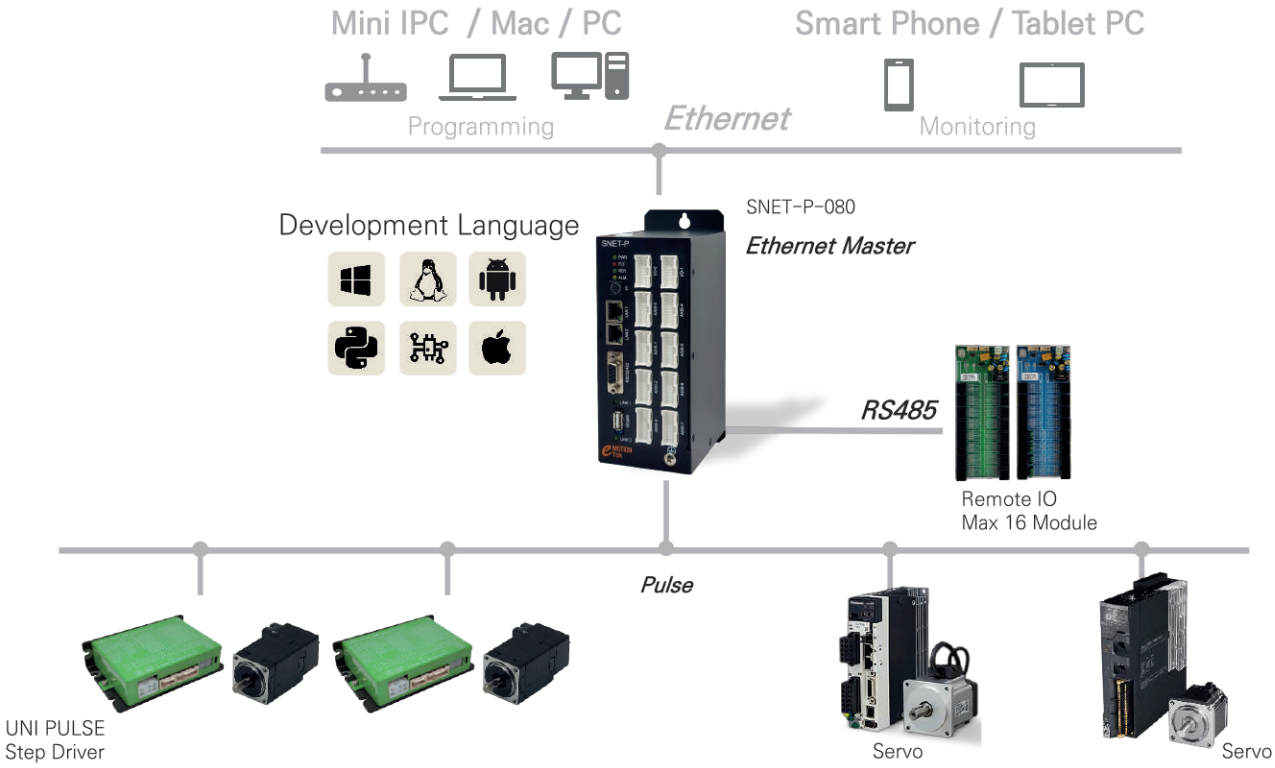
③ Control Axes
4 = 4Axes 8 = 8Axes
16 = 16Axes 32 = 32Axes

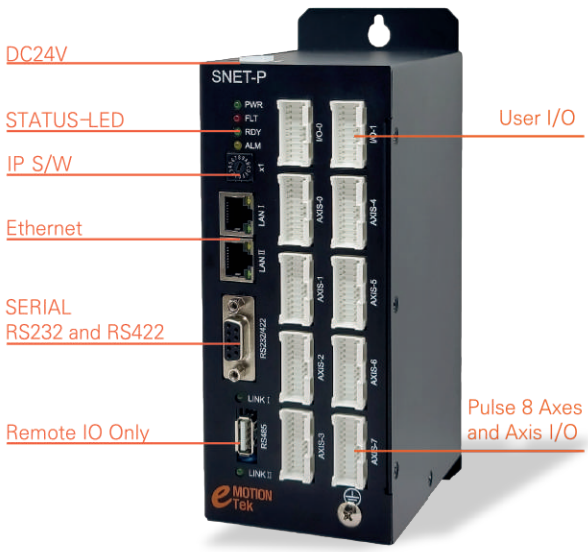
④ Option
S = Single A = Analog I/O (4ch/2ch)
IO = Digital I/O (32/20)
None = Blank

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

Specifications



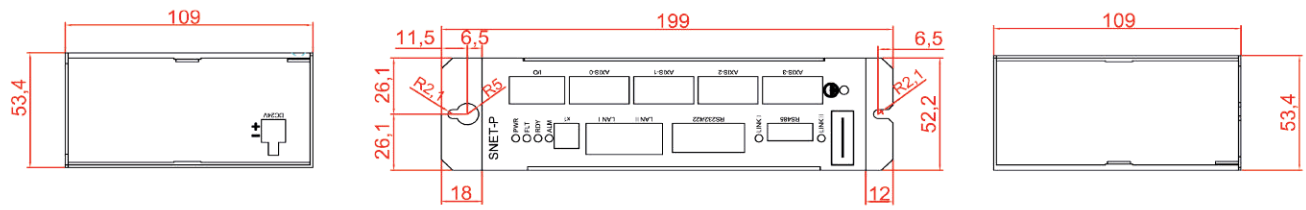




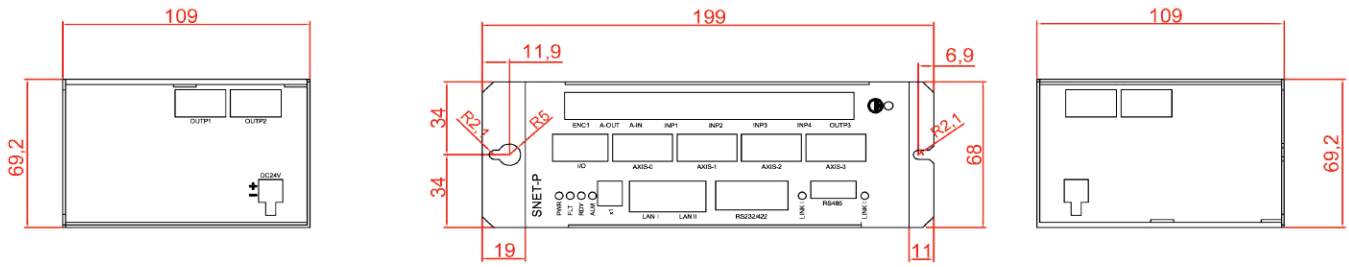
	SNET-P-040	SNET-P-040-A	SNET-P-080
INTERFACES			
Power supply	24VDC/0.75A		
Ethernet	Dual port Ethernet switch embedded(RJ45), STP Cable(above CAT5e)		
Serial	1 x RS232, 1 x RS422		
USB Type A	1 x RS485 Remote IO(Max 16module)		
SPECIFICATIONS			
Control Axes	4 Axes	4 Axes	8 Axes
Control Cycle	1 ms		
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

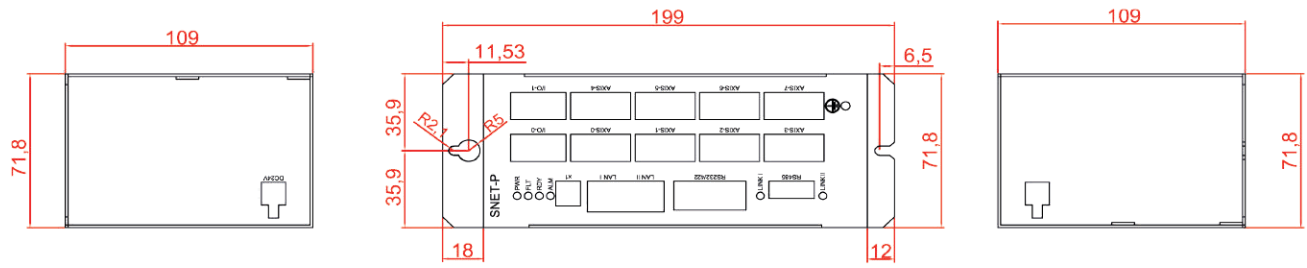
SNET-P-040



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

② Command Method
P = Pulse
ECAT = EtherCAT
RTEX = RTEX

③ Control Axes
040 = 4Axes
080 = 8Axes

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

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

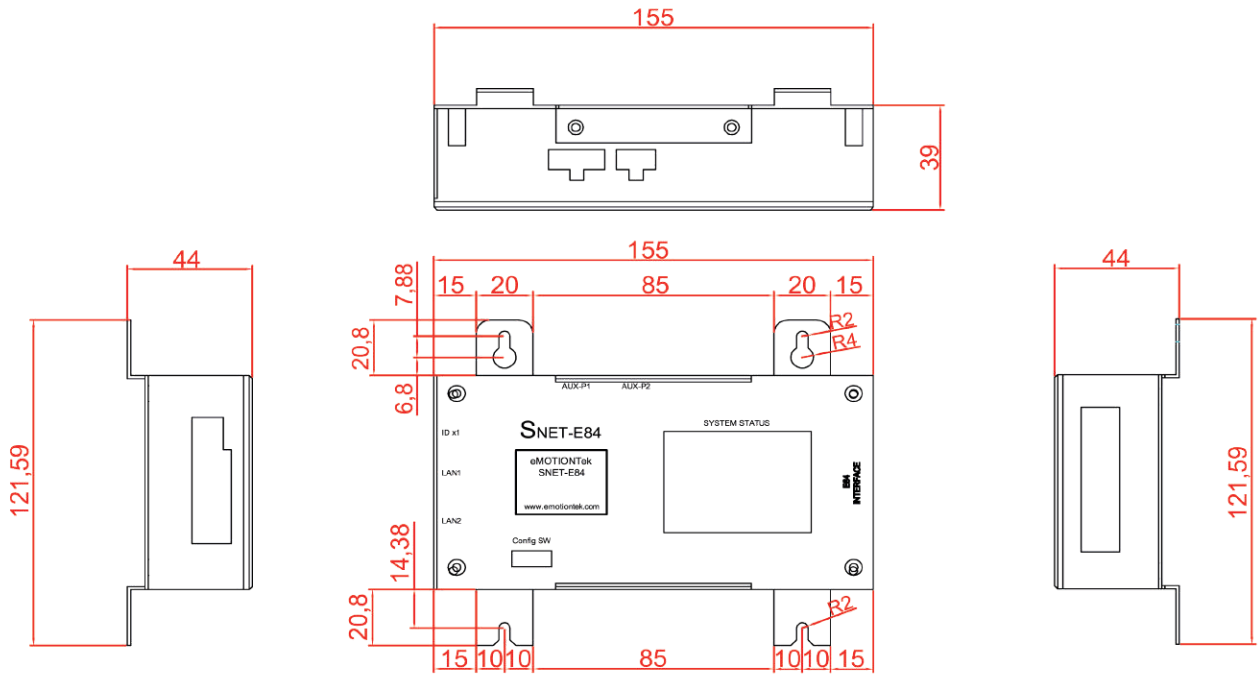


Specifications

	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

Dimension

SNET-E84



SNET-E84 Series Part Number Construction

SNET-E84

① **Product Name**

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

② **Command Method**

E84 = Semi E84 Interface Controller

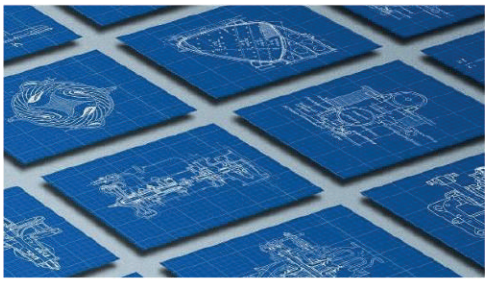
SNET-E84 Interface Controller Product List	
SNET-E84	Semi-E84 Interface Controller

eMOTION Tek

Stand-Alone Controller

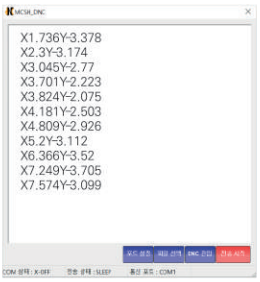
SMCS-ECAT
SMCS-RTEX
MCST
EMD-ENET
EMD-ECAT
MCUH

Stand-Alone Controller



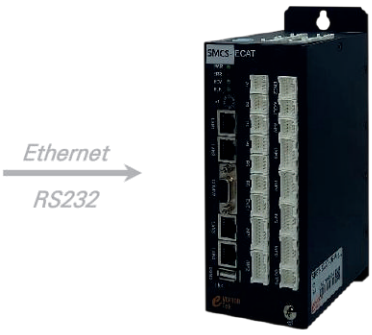
CAD/CAM Software

Generate NC programs from CAD/CAM

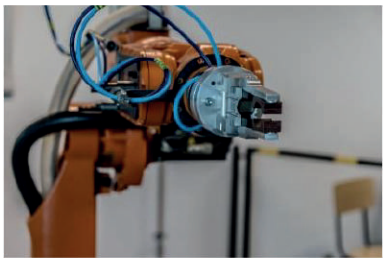


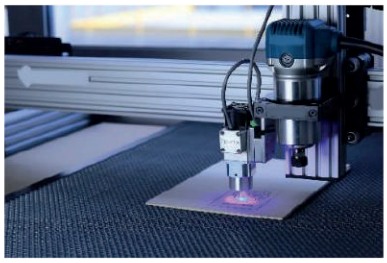
Transfer Software

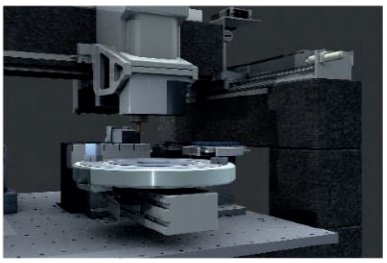
Transfer the NC program to the controller

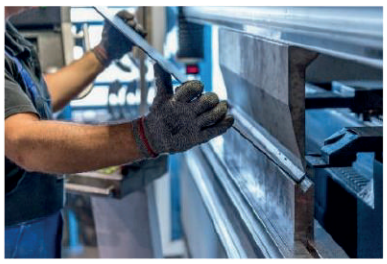


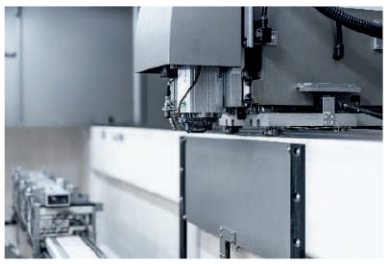
Controller

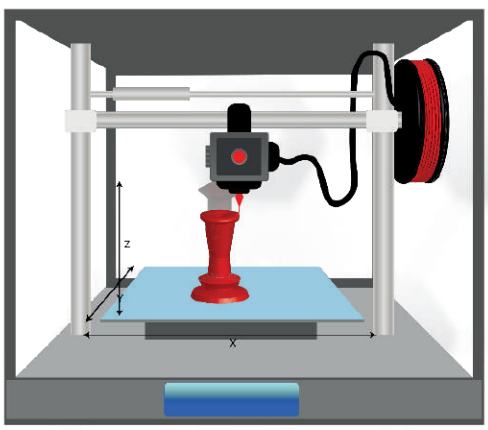










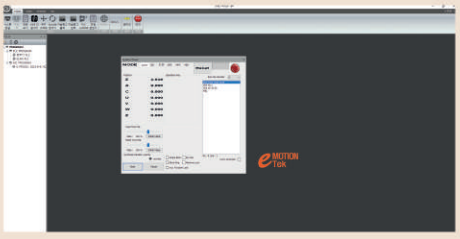






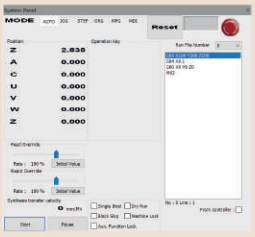
Software

HMI



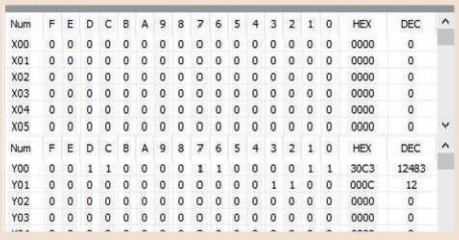
·Controller diagnostics, commissioning and motion programming
·Provides features to make it easier for users to use the controller

Control panel



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

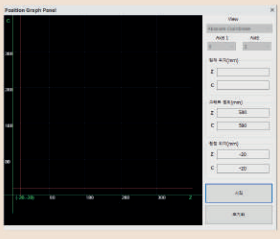
Monitoring



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	1	1	0	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

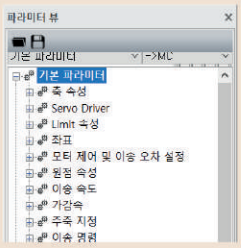
·Simultaneous display of all I/O channels and status
·Supports automatically configured and available I/O
·Output settings with a mouse click
·Forced ON/OFF

Show movement path



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

Parameter



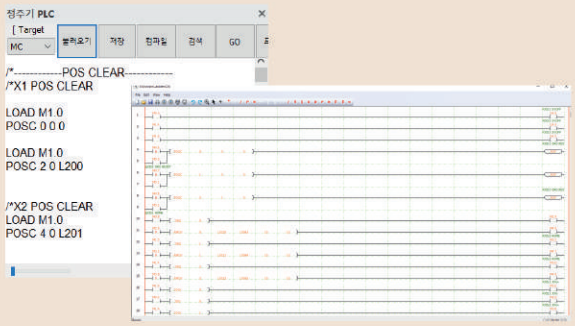
- Set axes properties
- Setting motor movement amount, speed, etc.
- Setting origin properties
- Add-on settings

MC Program(G code)



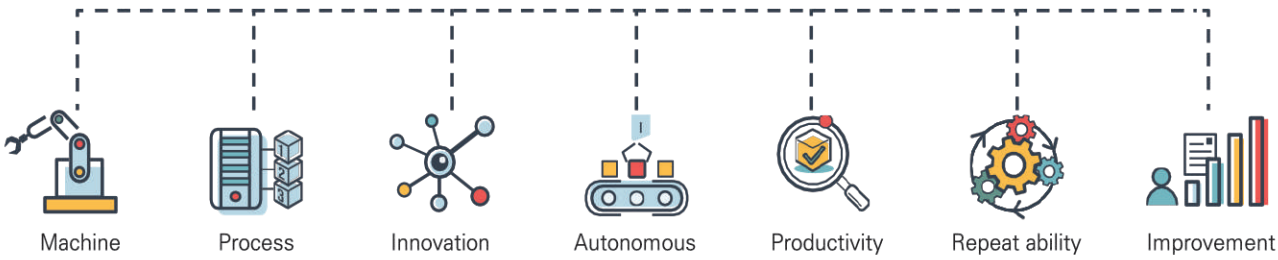
- Supports universal G Code program
- Edit multiple programs Simultaneously
- Find and Replace
- Go directly to any line number or program label
- Offline editing

PLC Program

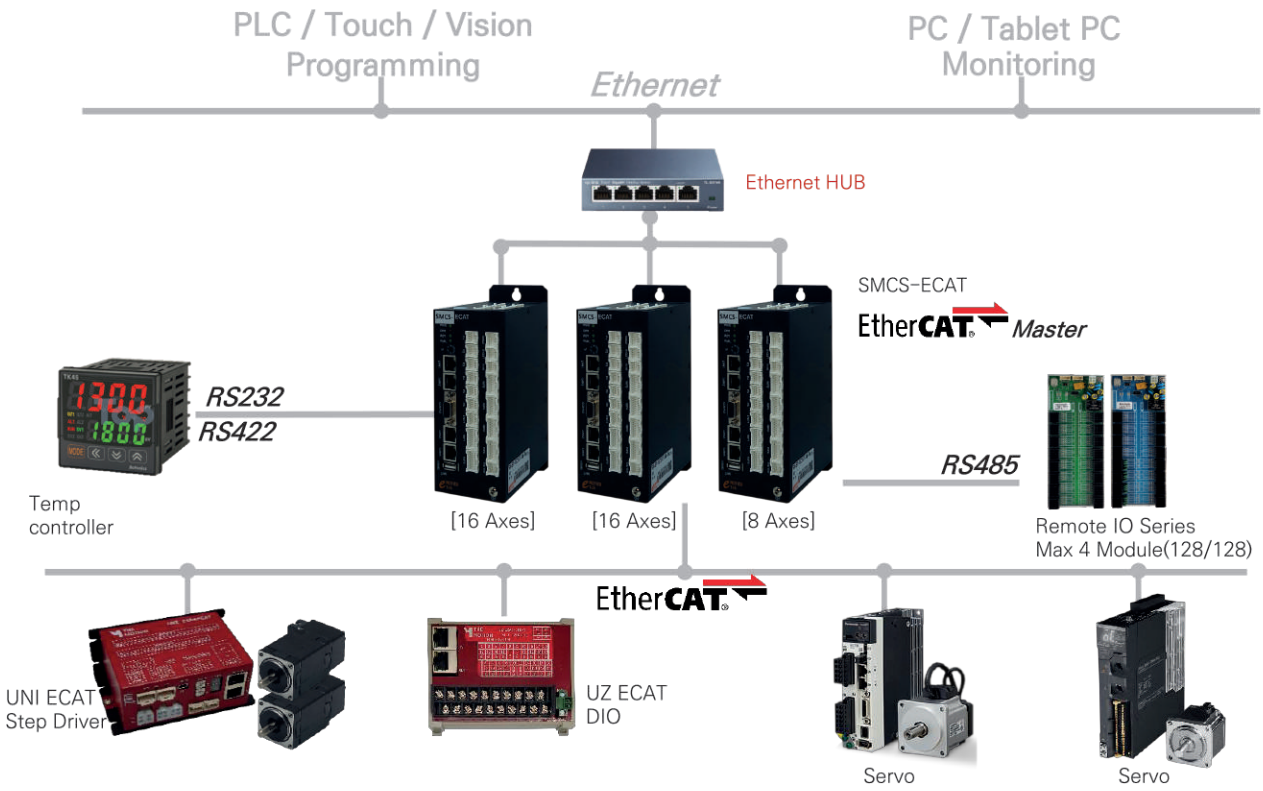


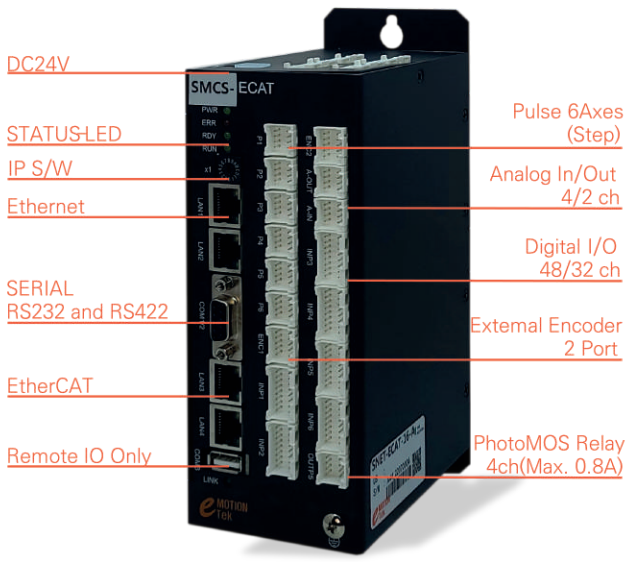
- Mnemonic-type program structure
- Ladder diagram monitoring support
- Find and Replace
- Go directly to any line number or program label
- Offline editing

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 restructions 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)
Extemal 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

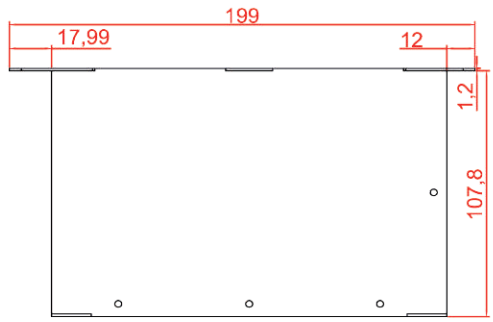
Specifications

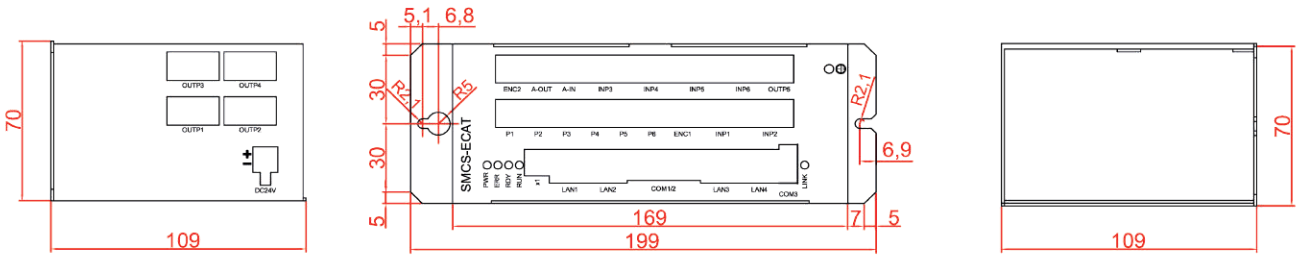


	SMCS-ECAT-8	SMCS-ECAT-8-A	SMCS-ECAT-16	SMCS-ECAT-16-A
INTERFACES				
Power supply	24VDC/0.75A			
Ethernet	2 x 10/100 Mbps(RJ45) STP Cable(above CAT5e)			
EtherCAT	1 x EtherCAT Master(RJ45) STP Cable(above CAT5e)			
Serial	1 x RS232, 1 x RS422			
USB Type A	1 x RS485 Remote IO(Max 4 module)			
SPECIFICATIONS				
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			
Extemal 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			

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 ② ③ ④

① Product Name
SNET = PC-Based Controller
SMCS = Stand-Alone Controller

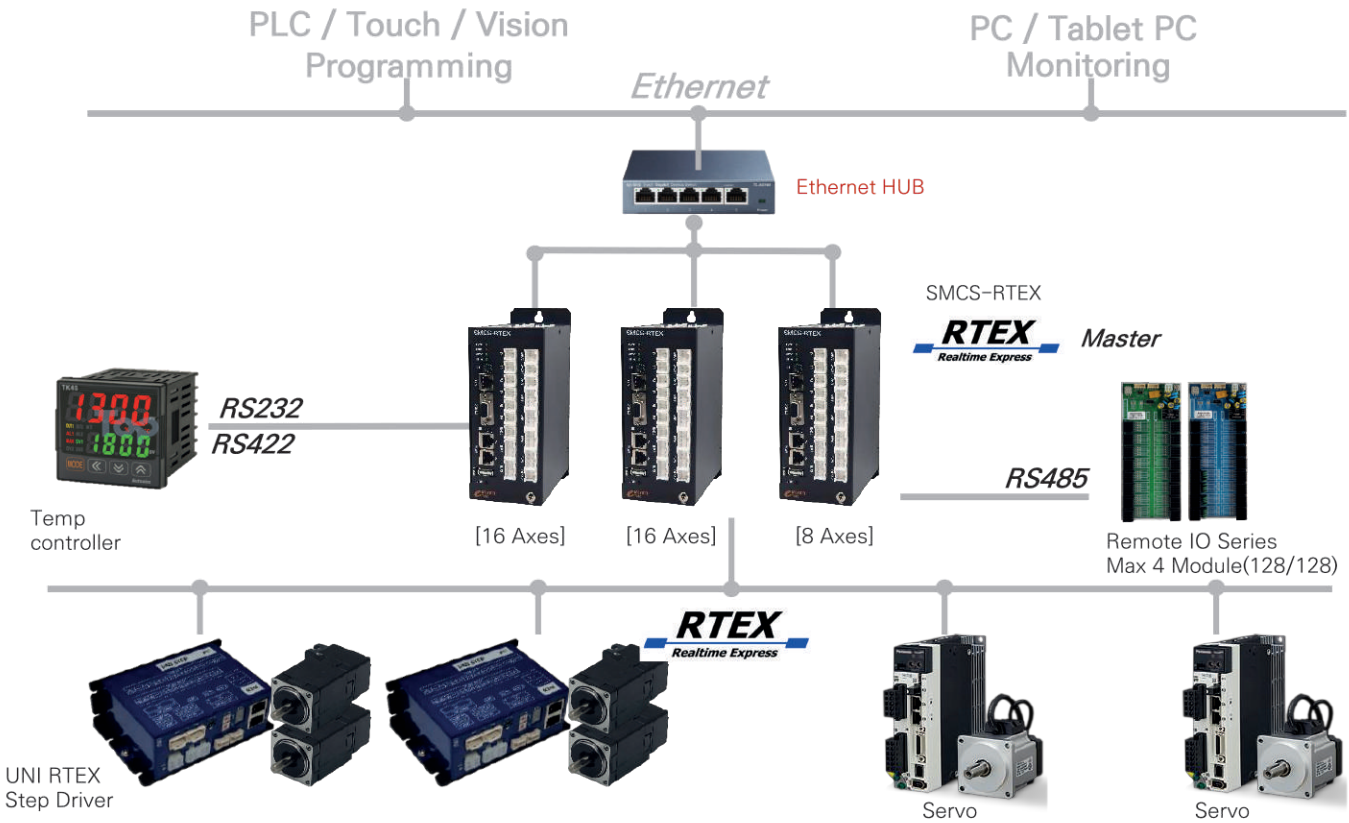
② Command Method
P = Pulse
ECAT= EtherCAT
RTEX = RTEX

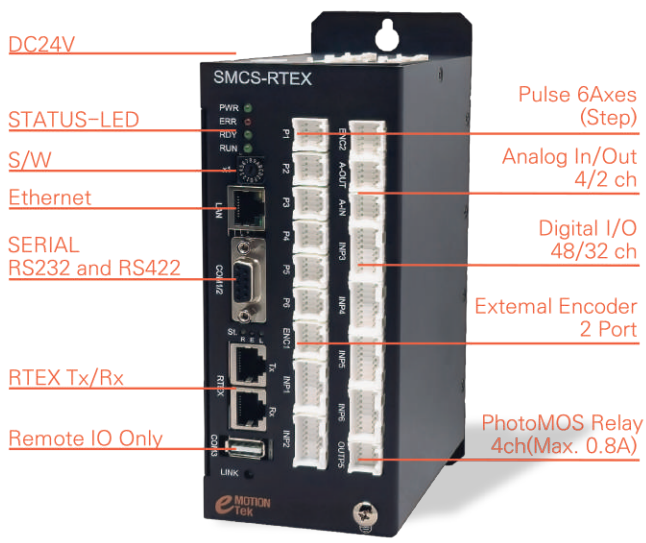
③ Control Axes
8 = 8Axes
16 = 16Axes

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 ControllerSMCS RTEX Series





RTEX
Realtime Express

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 restructions 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)
Extemal 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

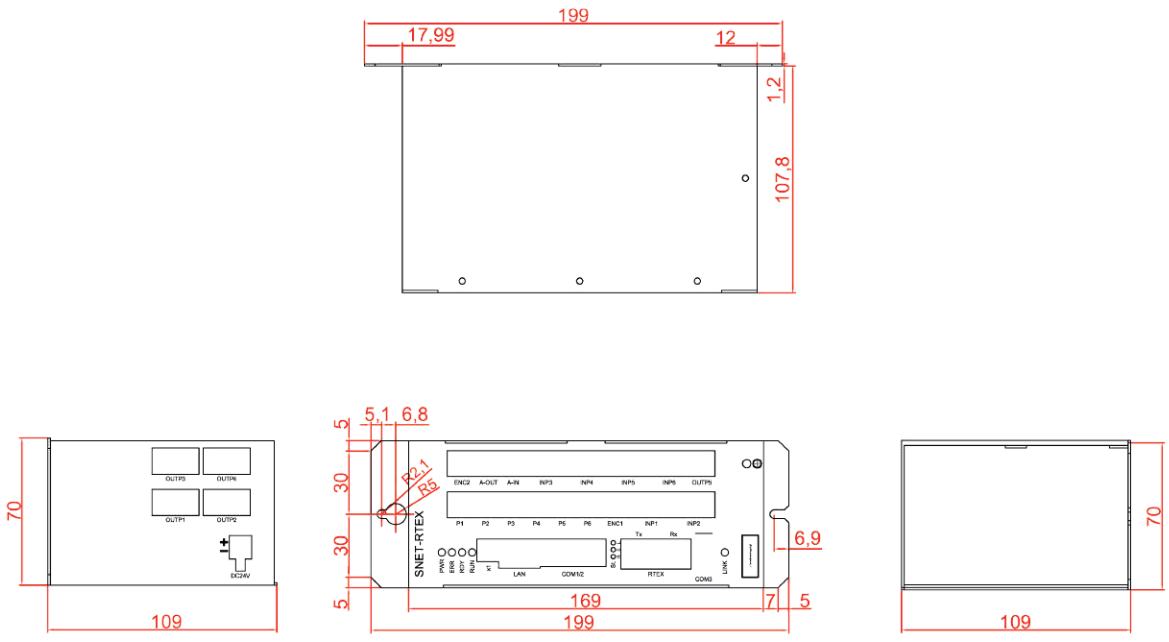
Specifications



	SMCS-RTEX-8	SMCS-RTEX-8-A	SMCS-RTEX-16	SMCS-RTEX-16-A
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			
Extemal 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			

Dimension

SMCS-RTEX-8, SMCS-RTEX-8-A, SMCS-RTEX-16, SMCS-RTEX-16-A



SMCS-RTEX Series Part Number Construction

SMCS-RTEX-8-A
① ② ③ ④

① Product Name
SNET = PC-Based Controller
SMCS = Stand-Alone Controller

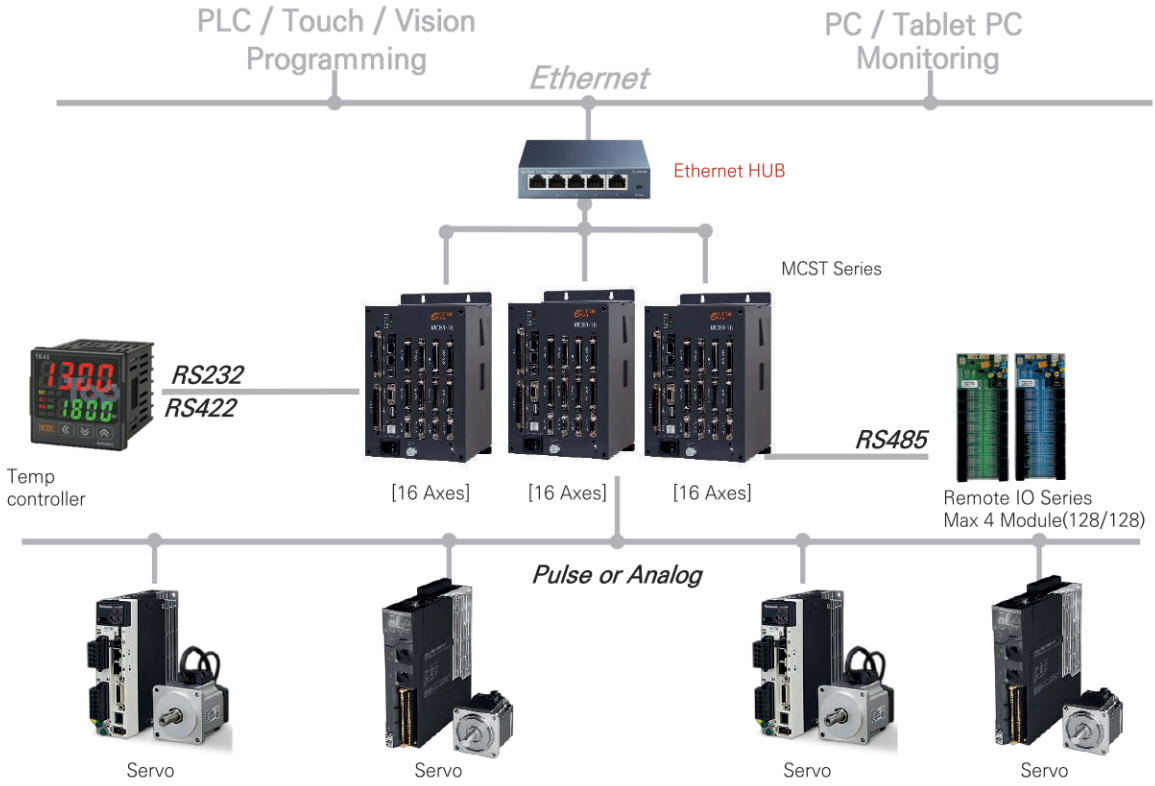
② Command Method
P = Pulse
ECAT = EtherCAT
RTEX = RTEX

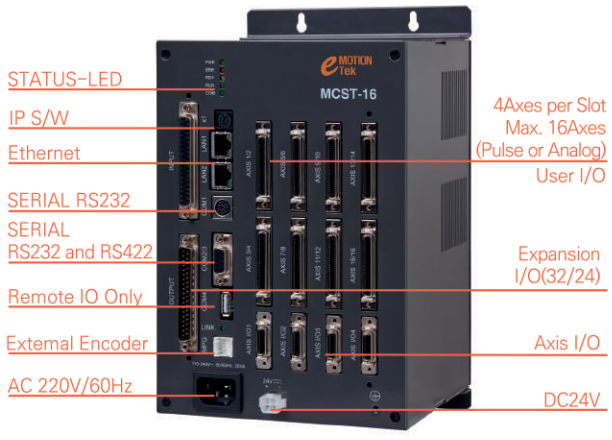
③ Control Axes
8 = 8Axes
16 = 16Axes

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

SMCS-RTEX Controller Product List	
SMCS-RTEX-8	RTEX, 8 Axes, I/O(48/36), Pulse or High Speed Trigger OUT
SMCS-RTEX-8-A	RTEX, 8 Axes, I/O(48/36), Analog I/O(4/2), Pulse or High Speed Trigger OUT
SMCS-RTEX-16	RTEX, 16 Axes, I/O(48/36), Pulse or High Speed Trigger OUT
SMCS-RTEX-16-A	RTEX, 16 Axes, I/O(48/36), Analog I/O(4/2), Pulse or High Speed Trigger OUT

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 restructions 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 : ±10V(16bits), ±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/24) + 24ch Output 1ch(Brake) x Axes(Max. 80mA Sink Current)
Option	
Analog Input	Port x 1ch(±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

MCST series Part Number Construction

MCST-16P 16 IO-ES2
① ② ③ ④ ⑤

① Product Name
MCST = Stand-Alone Controller

② Command Method
16P = Pulse
16A = Analog

③ Axes
4 = 4Axes
8 = 8Axes
12 = 12Axes
16 = 16Axes

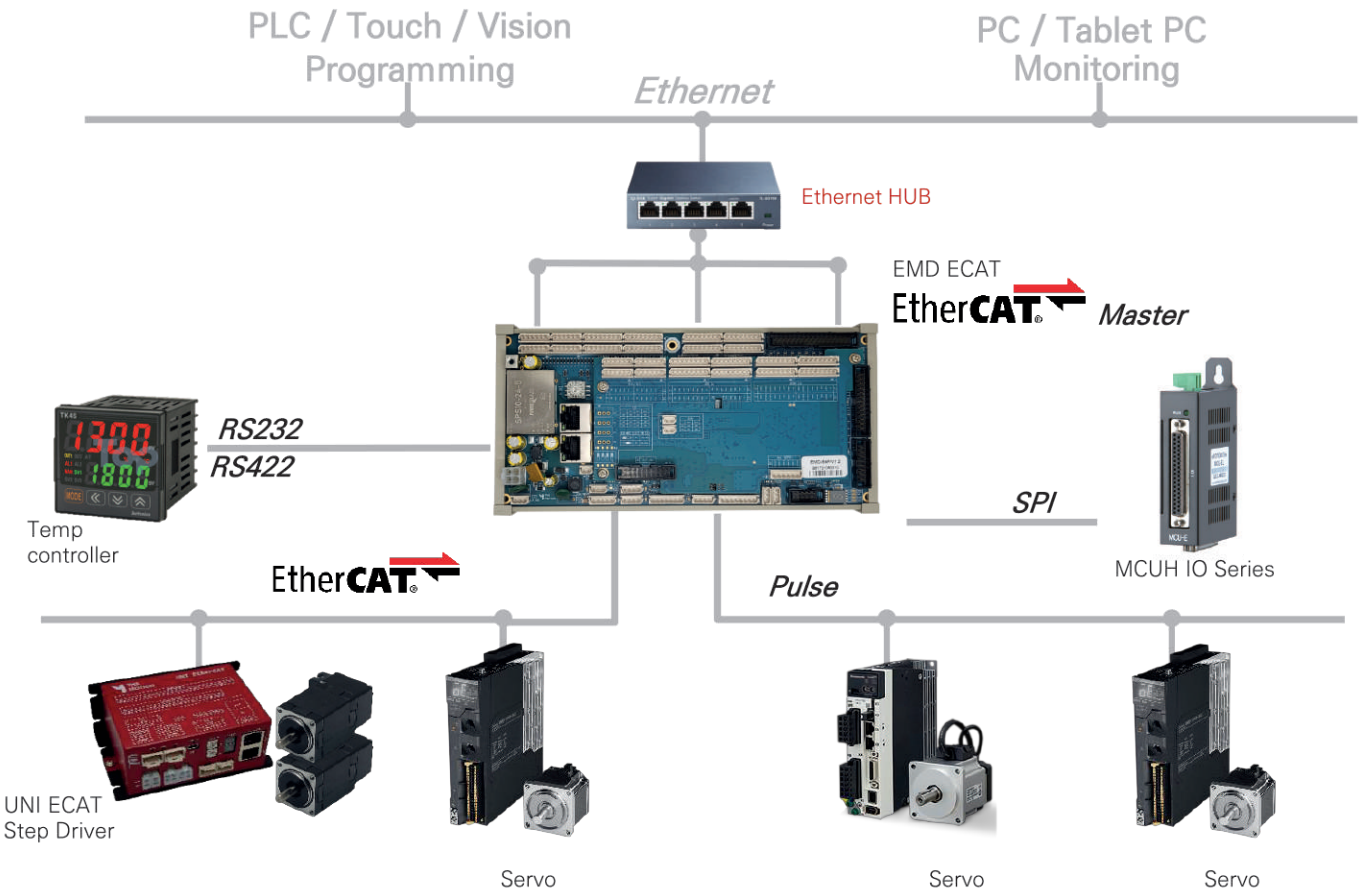
④ Option 1
IO = I/O (32ch/24ch) Added
None = Blank

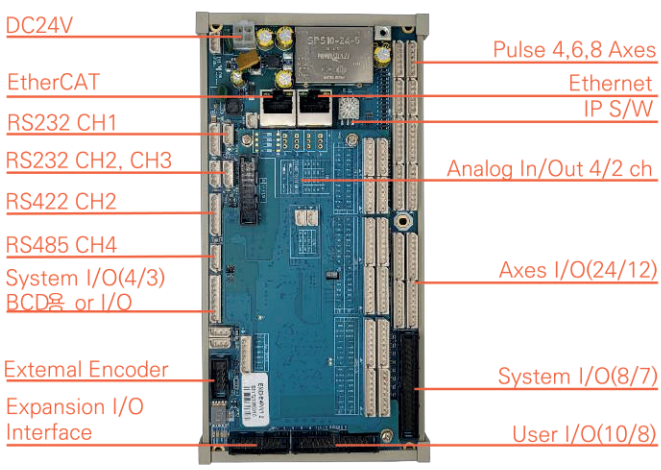
⑤ Option 2
E = I/O Expansion(SPI)
S1 = analog Input(2ch)
S2 = analog Input(4ch)
ES1 = I/O Expansion(SPI) + analog Input(2ch)
ES2 = I/O Expansion(SPI) + analog Input(4ch)
None = Blank

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

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
- 8Axex 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,L1.2V)
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)
Environment conditions	
Ambient temperature/ Humidity	0~+55°C/20~80% During operation -15~+60°C/10~90% During storage

Specifications

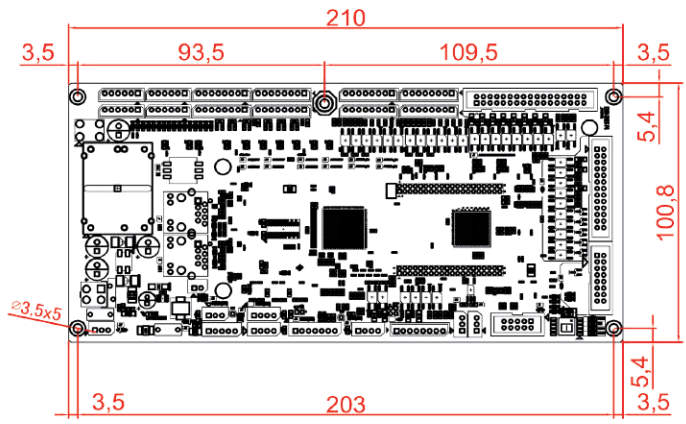




	EMD-ENET(ECAT)-4P	EMD-ENET(ECAT)-6P	EMD-ENET(ECAT)-8P
INTERFACES			
Power supply	24VDC/1A(TBOX 연결시 2A)		
Ethernet	1 x 10/100 Mbps(RJ45) STP Cable(above CAT5e)		
EtherCAT	1 x EtherCAT Master(RJ45) STP Cable(above CAT5e)		
Serial	2 x RS232, 1 x RS422(or RS232), 1 x RS485		
SPECIFICATIONS			
Control Axes	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		
Extemal 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)

② Command Method
ECAT = EtherCAT

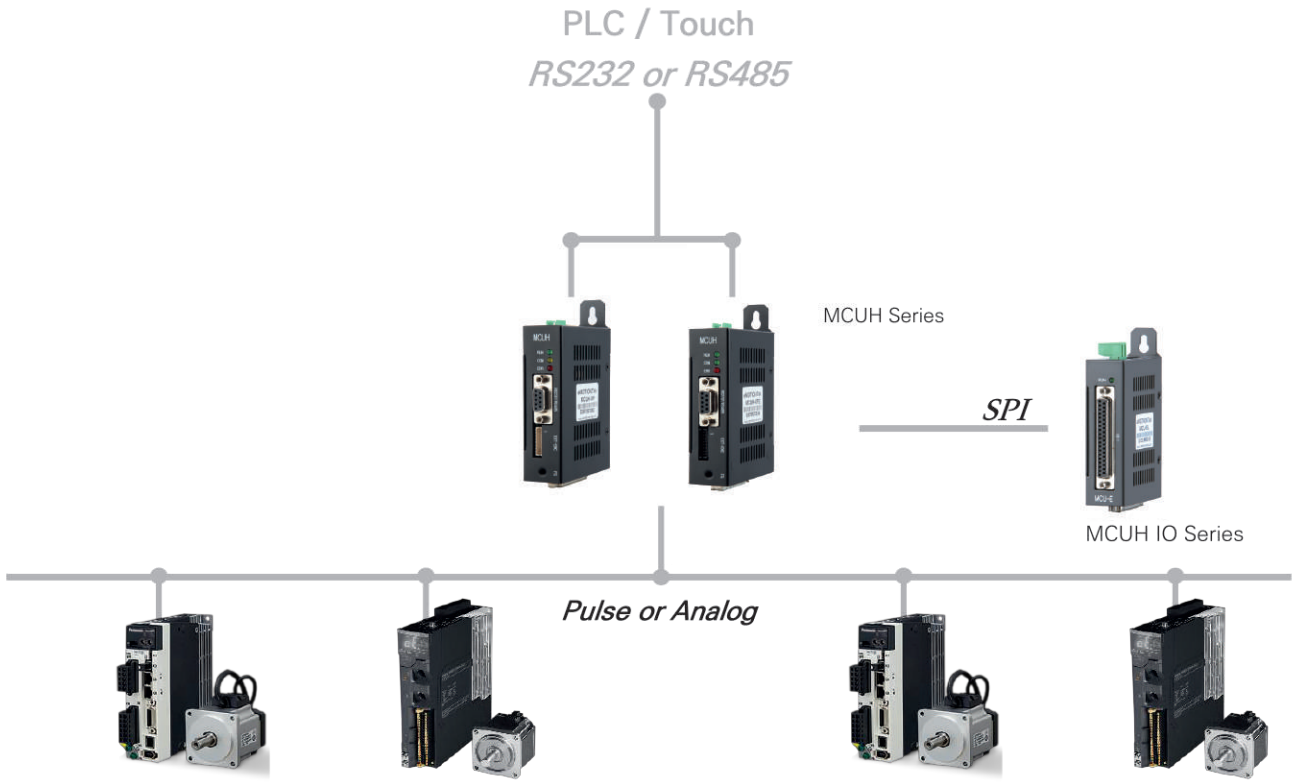
③ Axes Control Axes
4 = 4Axes
6 = 6Axes
8 = 8Axes

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

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





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

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)

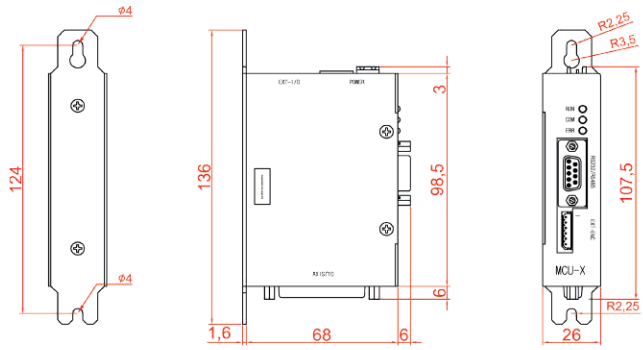
Specifications



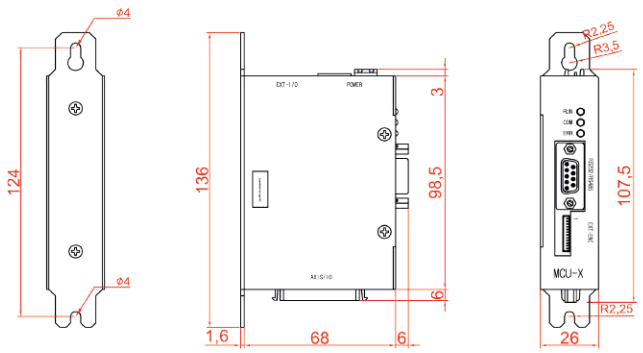
	MCUH-XP	MCUH-XP2	MCUH-XA	MCU-XA2
INTERFACES				
Power supply	24VDC/0.2A			
Serial	1 x RS232(Max. 38400Bps) 1 x RS485(Max. 38400Bps, 64 Nodes)			
SPECIFICATIONS				
Control Axes	1 Axis	2 Axes	1 Axis	2 Axes
Control Output	Diff. Line Drive CW/CCW, Pulse/Direction		Analog(-10~+10V,12Bit)	
Control Target	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, MCU-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
MCU-XA2	Analog, 2Axes

eMOTION Tek

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	GL-9041
Protocol	MODBUS TCP, Ethernet IP	EtherCAT	MODBUS TCP, Ethernet IP	EtherCAT	RTEX
Max. Node	Limited by Ethernet Spec.	65,535 Nodes	Limited by Ethernet Spec	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		

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)

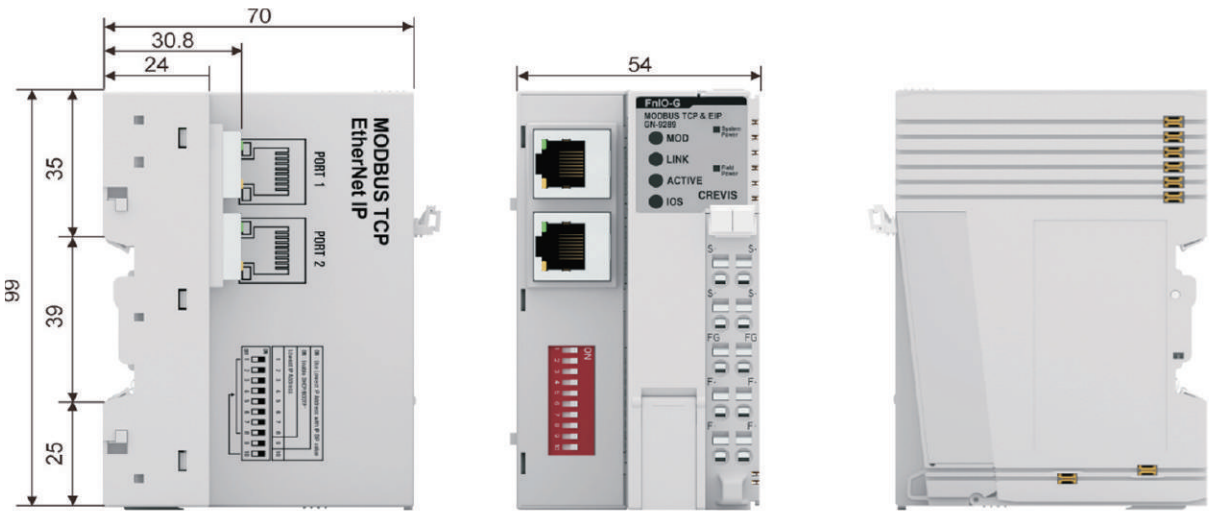
Model	Channel	Type	Range	Resolution	Power	Connector
GT-5212	2	RS-232	-18 ~ 18 V	TxD, RxD, Full	85 mA	10 RTB
GT-5232	2	RS-485	-	TxD, RxD, Half	85 mA	10 RTB

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

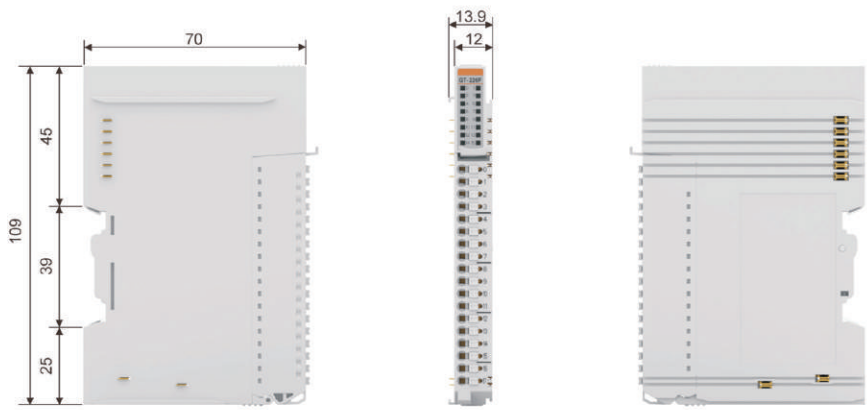


Dimension

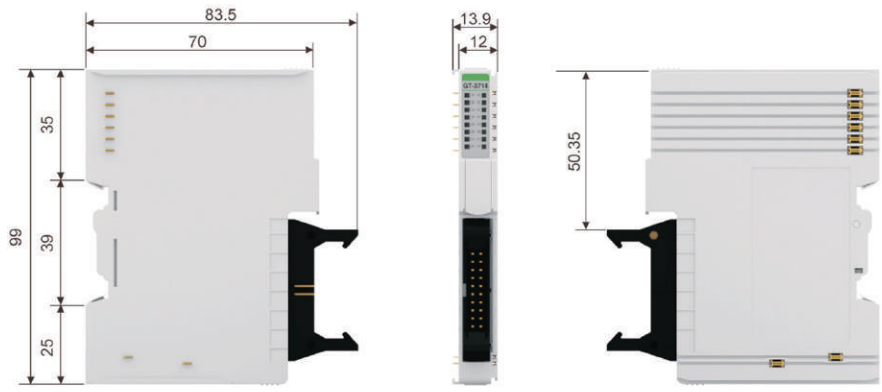
Slice IO(10 RTB)



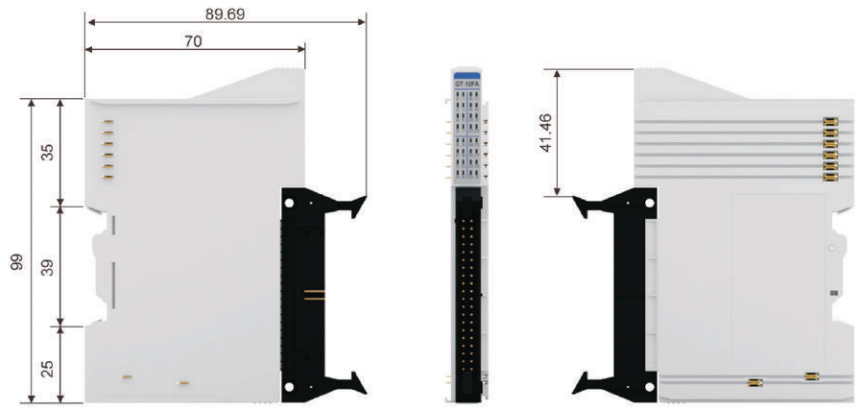
Slice IO(18 RTB)



Slice IO(20P Connector)



Slice IO(40P Connector)

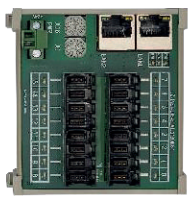
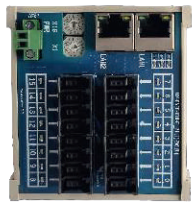
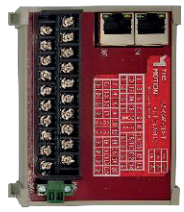
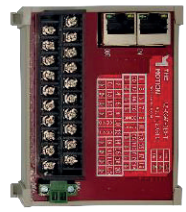


Network I/O Module
UZ ENET, ECAT I/O Series

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

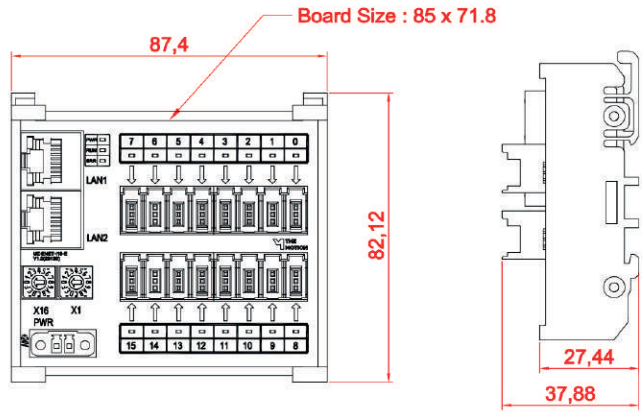
Specifications

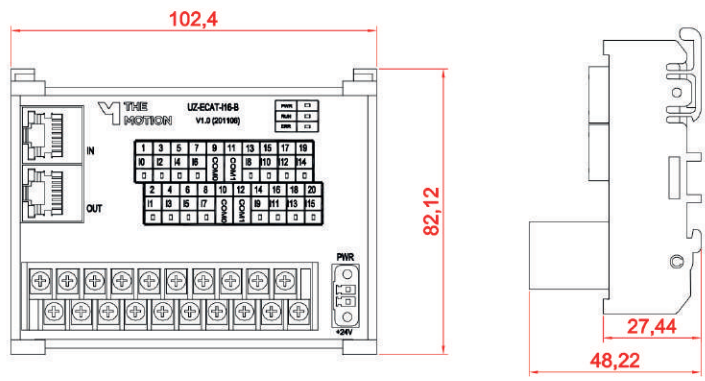
	UZ-ENET-IN16-E	UZ-ENET-OUT16-E	UZ-ECAT-IN16-T	UZ-ECAT-OUT16-T
INTERFACES				
Power supply	24VDC			
Communication	Ethernet	Ethernet	EtherCAT	EtherCAT
Communication Speed	10/100Base-TX			
I/O				
Input	16ch	-	16ch	-
Input Current/Voltage	5mA / 24V			
Output	-	16ch	-	16ch
Output Current/Voltage	500mA / 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	

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 ② ③ ④

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, E-CON
UZ-ENET-OUT16-E	Ethernet, Out16, E-CON

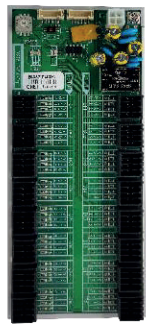
UZ-ECAT I/O Product	
UZ-ECAT-IN16-T	EtherCAT, In16, Terminal Block
UZ-ECAT-OUT16-T	EtherCAT, Out16, Terminal Block

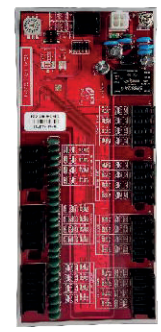
Network I/O Module
Remote I/O Series

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

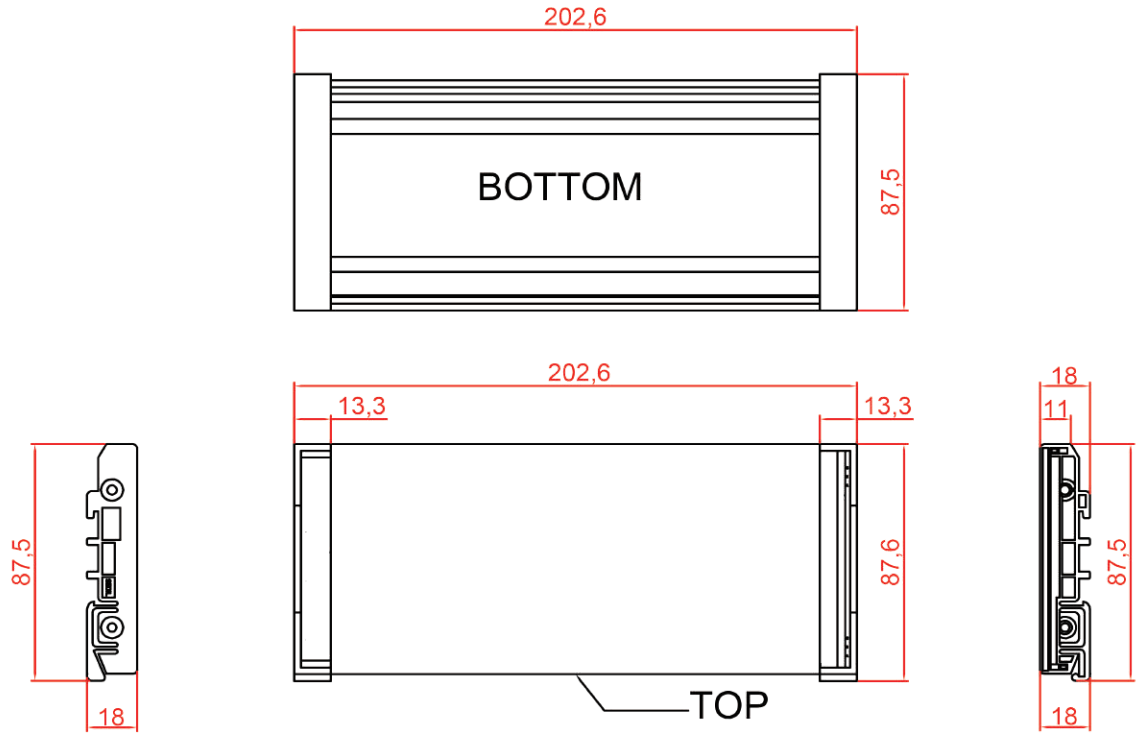


	GNET-D	GNET-R	GNET-RE	SNET-R
INTERFACES				
Power supply	24VDC			
Serial	RS485			
Communication Speed	Max. 600k bps			
Applicable products	SMCS Series, SNET Series, MCST Series			
I/O				
Input	32ch	32ch	32ch	32ch
Input Current/Voltage	2.5mA / 24V			
Output	32ch	16ch	20ch	-
Output Current/Voltage	200mA / 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			

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

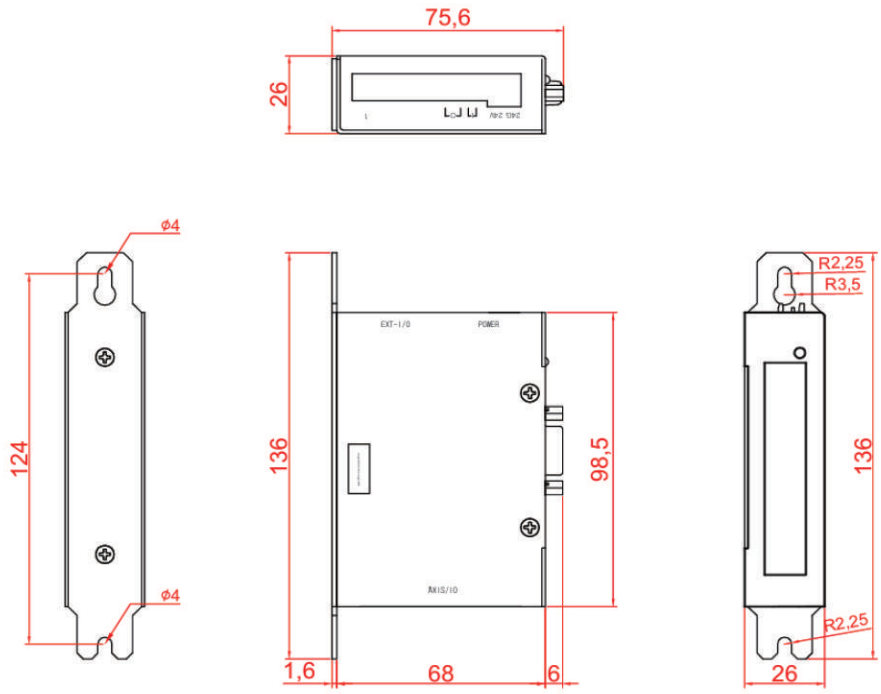




	MCUH-E	MCUH-EL
INTERFACES		
Power supply	24VDC	
Serial	Max. 10m 16pin Flat Cable	
Communication Speed	1.5Mbps	
Applicable products	MCUH Series, MCST Series, EMD Series	
I/O		
Input	20ch	32ch
Input Current/Voltage	5mA / 24V	
Output	14ch	24ch
Output Current/Voltage	24V(Max. 50mA Sink Current)	
Environment 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

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

THE MOTION

CONTENTS

· Step Driver
· Motor

THE MOTION

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

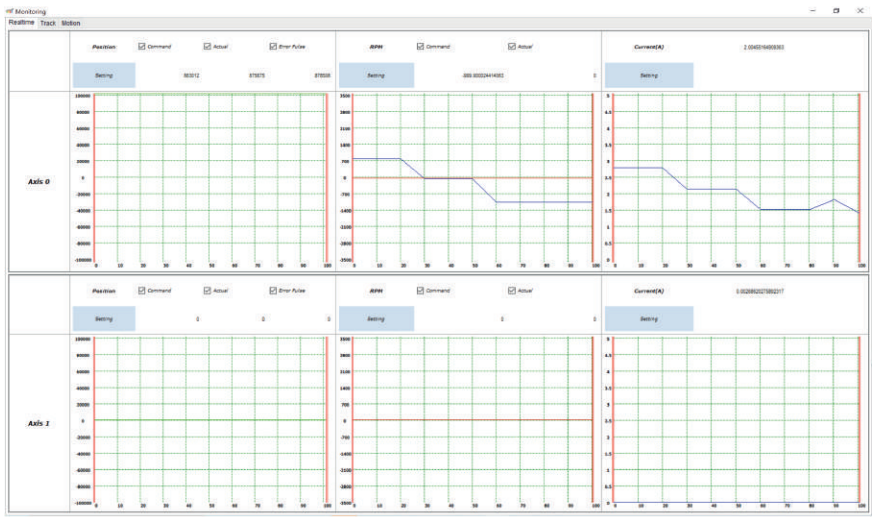
Easy manufacturer-specific motor setup

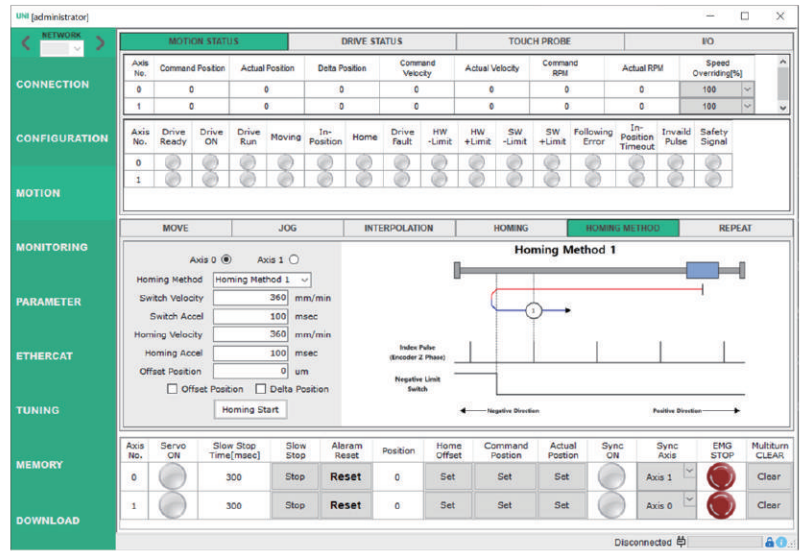
Manufacturer
None
eMOTIONTek
Shinano Kenshi
Autonics
Nidec
Oriental
Dings
Moons
Sanyo denki
Fastech
Saehan electronics
ERAETECH
Denso
Takasago Fluidic System
Casun
Leadshine
MINEBEA MITSUMI
Nanotec
ETC

Motor Size
ETC(Etc size)
20mm(0.78inch)
28mm(1.10inch)
35mm(1.37inch)
42mm(1.65inch)
56mm(2.20inch)
60mm(2.36inch)
86mm(3.38inch)

Part
UNIM-42M(SST43D2065)
UNIM-42L(STP-43D3091)
UNIM-42XL(STP-43D4009)
UNIM-42M-A(STP-43D2206)
UNIM-42L-A(STP-43D3113)
UNIM-42XL-A(STP-43D4014)

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 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 Absolute	Closed Loop	42 ~ 60mm	10,000ppr(17Bit)
	UNIM-SV-IP65	2 Phases Bi-polar IP 65	Closed Loop	56 ~ 86mm	4,000ppr
	UNIM-ST-HL	2 Phases Bi-polar Hollow Shaft	Open Loop	20 ~ 86mm	-
	UNIM-SV-HL	2 Phases Bi-polar Hollow Shaft	Closed Loop	20 ~ 86mm	10,000ppr (20,28,35mm 8,000ppr)

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

② Input Voltage
Blank = 24 VDC
B = 24VDC(Built-in Booster Converter)

③ Communication Method
RTEX = RTEX
ECAT = EtherCAT
ENET = Ethernet
PUL = Pulse

④ Feature
Mi = Compact
ST = Disconnect Power(Torque OFF)
Blank = Standard

⑤ Number of Motor Axis
1X = 1 Axis
2X = 2 Axes
4X = 4 Axes

⑥ 1st AXIS MOTOR
28S = 28mm S Size
28M = 28mm M Size
.
.
.
86L = 86mm L Size

⑦ 2nd, 3rd, 4th Axis Motor
Same as number 6

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 = Battery
-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 Type
Blank = Non
IP65 = IP65
HL = Hollow Shaft
VC = Vacuum

⑨ REDUCER
Blank = Non
R03 = 1:3
R05 = 1:5
R07 = 1:7
R10 = 1:10
⋮
R50 = 1:50

⑩ REDUCER Manufacturer
Blank = Non
A = APEX
H = HEUNGJIN
L = LS
G = G PLUS

UNI Motor Product

Open Loop	Closed Loop	Absolute	Open Loop (Hollow Shaft)	Closed Loop (Hollow Shaft)
UNIM-ST-20L-P	UNIM-SV-20L-G-P	UNIM-SA-42S-S-S	UNIM-ST-20M-P-HL	UNIM-SV-20M-G-P-HL
UNIM-ST-28S-S	UNIM-SV-28S-A-S	UNIM-SA-42M-S-S	UNIM-ST-20L-P-HL	UNIM-SV-20L-G-P-HL
UNIM-ST-28M-S	UNIM-SV-28M-A-S	UNIM-SA-42L-S-S	UNIM-ST-28S-P-HL	UNIM-SV-28S-G-P-HL
UNIM-ST-28L-S	UNIM-SV-28L-A-S	UNIM-SA-56S-S-S	UNIM-ST-28M-P-HL	UNIM-SV-28M-G-P-HL
UNIM-ST-35M-P	UNIM-SV-35M-G-P	UNIM-SA-56M-S-S	UNIM-ST-28L-P-HL	UNIM-SV-28L-G-P-HL
UNIM-ST-35L-P	UNIM-SV-35L-G-P	UNIM-SA-56L-S-S	UNIM-ST-35M-P-HL	UNIM-SV-35M-G-P-HL
UNIM-ST-42S-S	UNIM-SV-42S-A-S	UNIM-SA-60S-S-S	UNIM-ST-35L-P-HL	UNIM-SV-35L-G-P-HL
UNIM-ST-42M-S	UNIM-SV-42M-A-S	UNIM-SA-60M-S-S	UNIM-ST-42S-P-HL	UNIM-SV-42S-A-P-HL
UNIM-ST-42L-S	UNIM-SV-42L-A-S	UNIM-SA-60L-S-S	UNIM-ST-42L-P-HL	UNIM-SV-42L-A-P-HL
UNIM-ST-56S-S	UNIM-SV-56S-A-S		UNIM-ST-56S-P-HL	UNIM-SV-56S-A-P-HL
UNIM-ST-56M-S	UNIM-SV-56M-A-S		UNIM-ST-56M-P-HL	UNIM-SV-56M-A-P-HL
UNIM-ST-56L-S	UNIM-SV-56L-A-S		UNIM-ST-86M-P-HL	UNIM-SV-86M-A-P-HL
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			

⋮

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 = RTEX
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





PC and HMI

USB

RTEX
Realtime Express



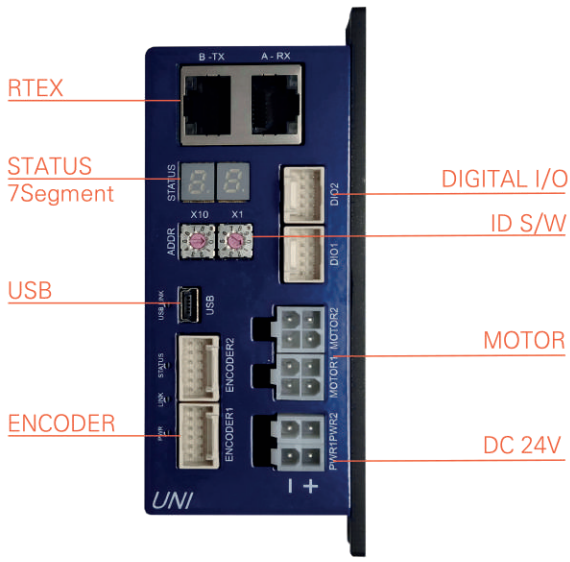
Master
SNET-RTEX



Servo driver

UNI STEP Driver
Open or Closed Loop Stepping System

Panasonic



Input Voltage	24VDC ±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
Realtime Express

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

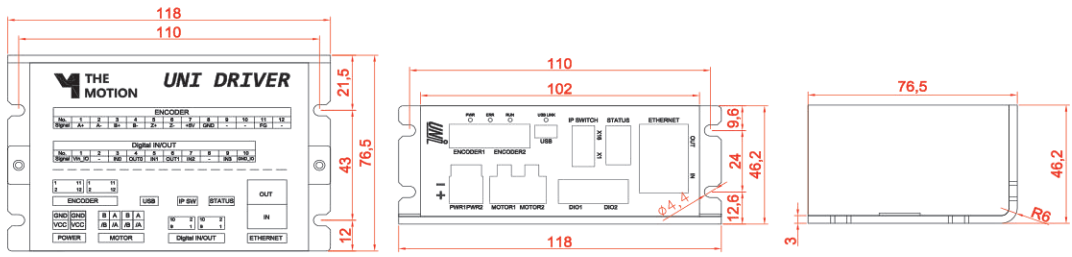
Specifications



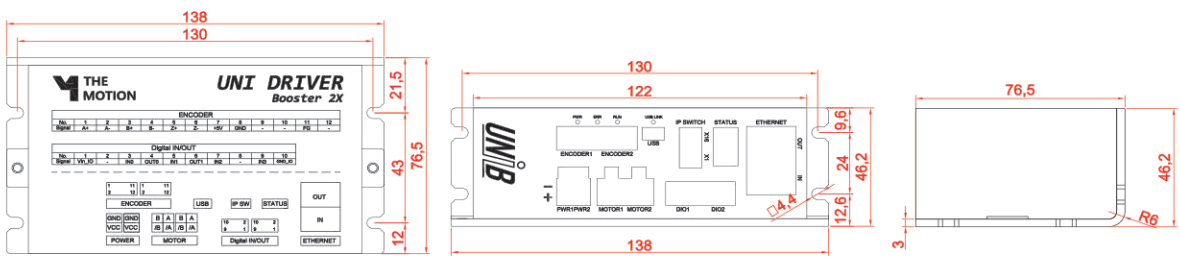
		USV(T)B RTEX-1X	USV(T)B RTEX-1X-86	USV(T) RTEX-2X	USV(T)B RTEX-2X
Features		Realtime Express(RTEX) STEP Driver			
Power	Input Voltage	24VDC(±10%)	48VDC(±10%)	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)			
Control Method		Open Loop, Closed Loop			
Control Motor		2 Phase Bipolar STEP MOTOR			
Communication Cycle		0.5, 1 ms			
Operation Mode		Cyclic Position Mode(CP)			
Resolution[ppr]		1,600 ~ 32,000			
Communi-cation	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



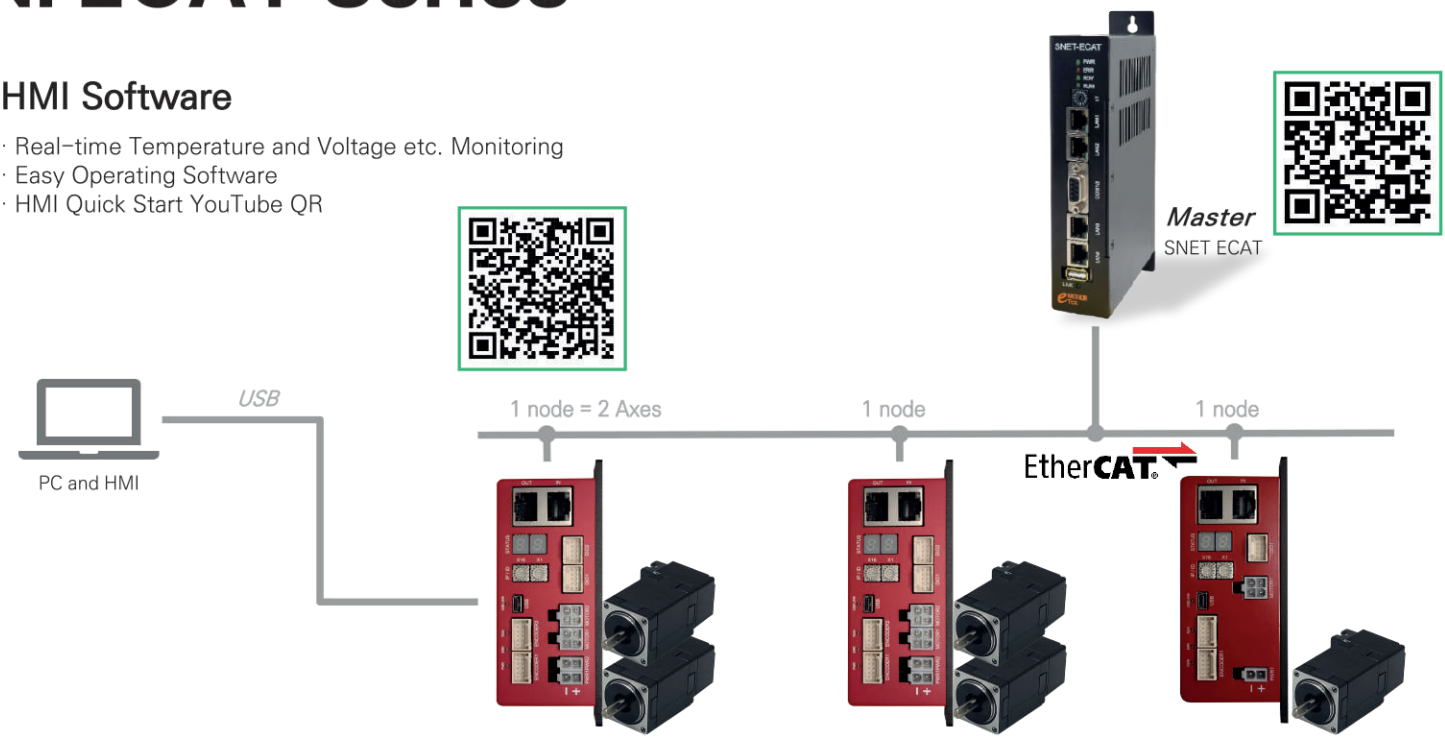
USV(T)B-RTEX-2X



EtherCAT Network Type
UNI ECAT Series

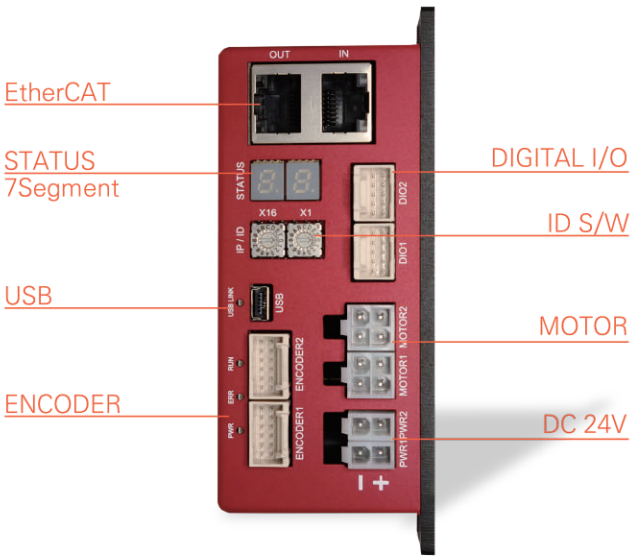
HMI Software

· 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 ±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 Technology Group

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

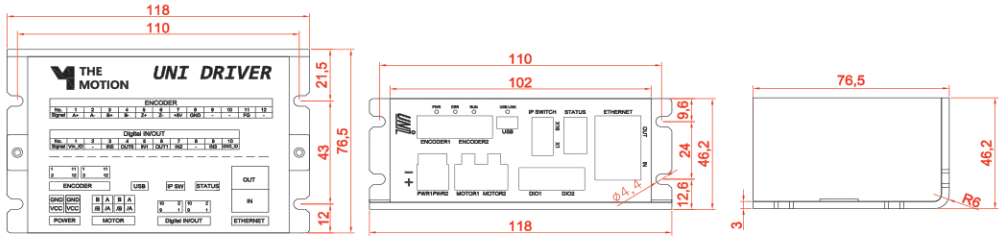
Specifications



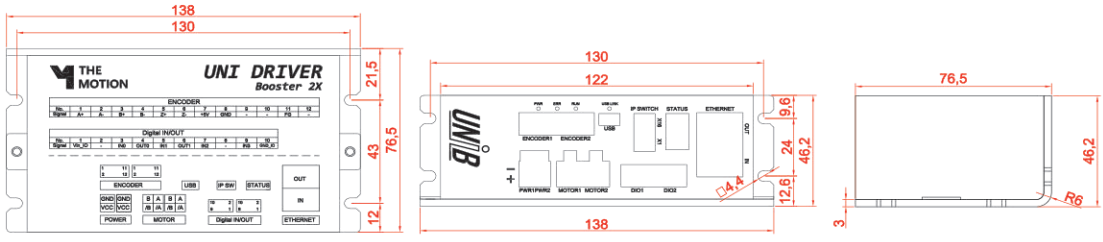
		USV(T)B ECAT-1X	USV(T)B ECAT-1X-86	USV(T) ECAT-2X	USV(T)B ECAT-2X
Features		EtherCAT STEP Driver			
Power	Input Voltage	24VDC(±10%)	48VDC(±10%)	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)			
Control Method		Open Loop, Closed Loop			
Control Motor		2 Phase Bipolar STEP MOTOR			
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	Cyclic Position Mode(CP), Free Run, DC Mode			
Resolution[ppr]		1,600 ~ 32,000			
Communi-cation	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



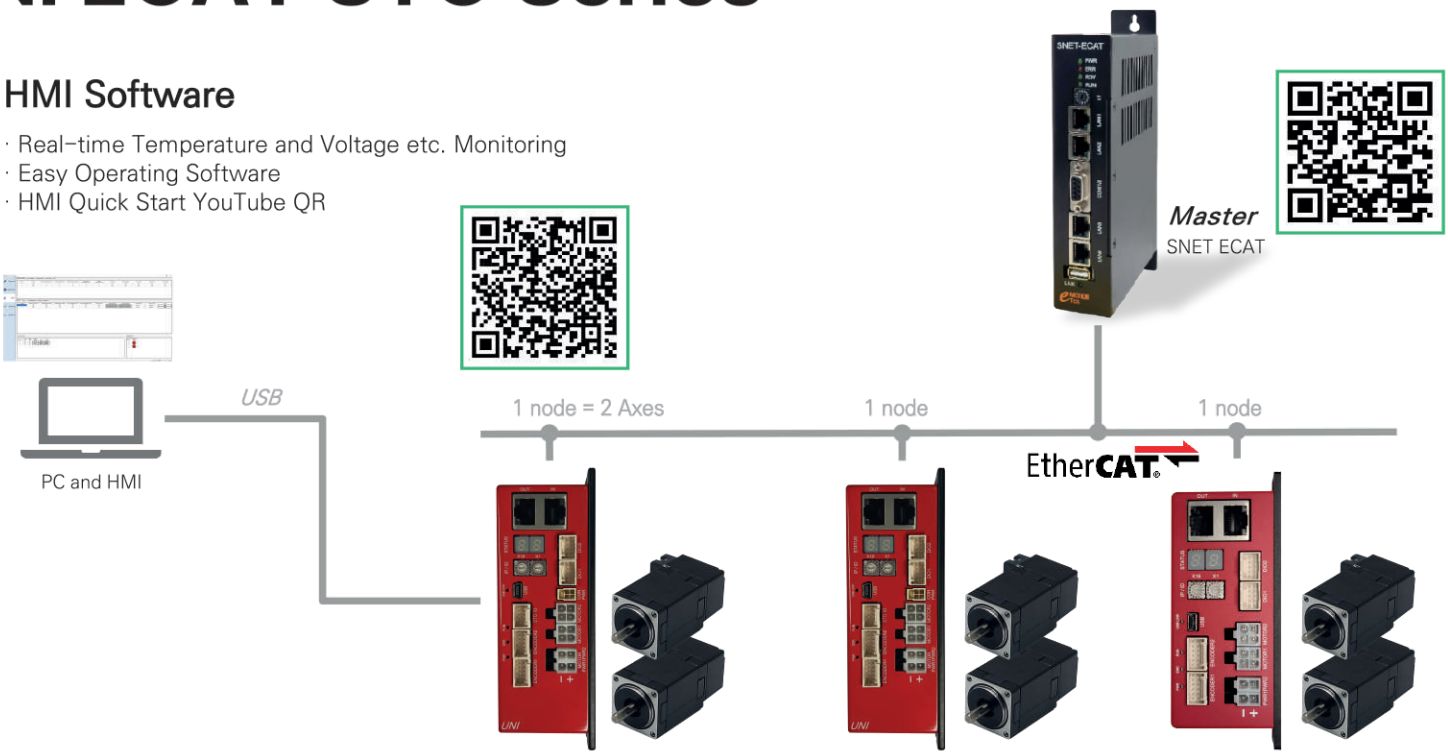
USV(T)B-ECAT-2X



EtherCAT Network Type
UNI ECAT STO Series

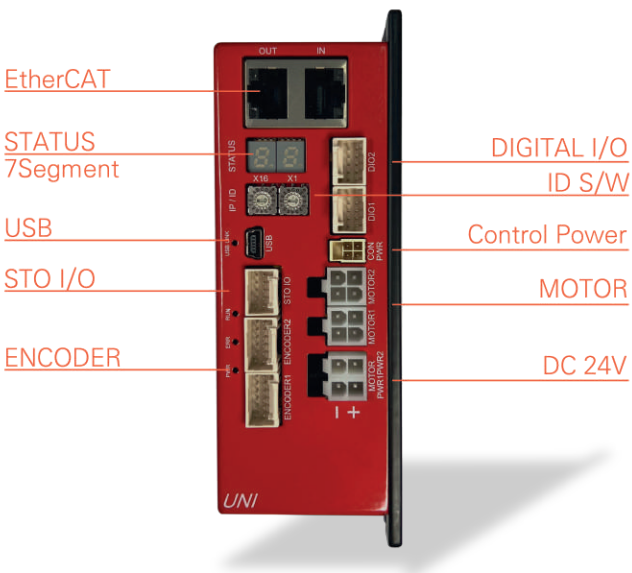
HMI Software

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



UNI STEP Driver

Open or Closed Loop Stepping System



Input Voltage	24Vdc ±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

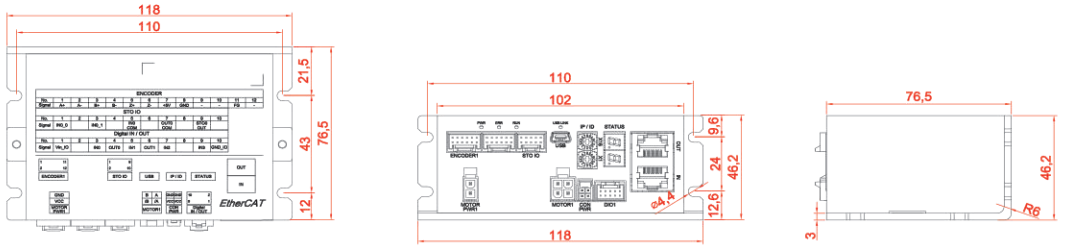
Specifications



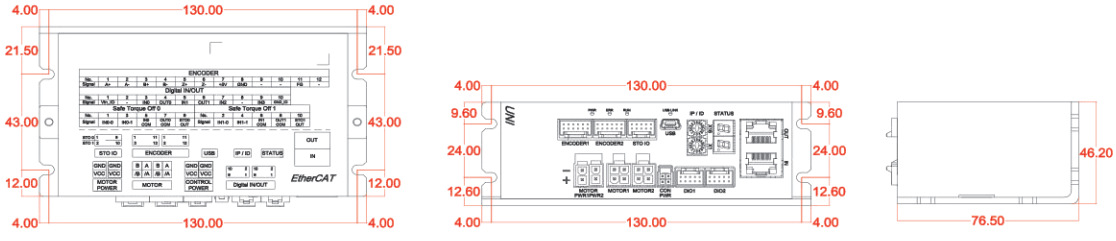
		USV(T)B ECAT-ST-1X	USV(T)B ECAT-ST-1X-86	USV(T) ECAT-ST-2X	USV(T)B ECAT-ST-2X
Features		EtherCAT STEP Driver			
Power	Input Voltage	24VDC(±10%)	48VDC(±10%)	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)			
Control Method		Open Loop, Closed Loop			
Control Motor		2 Phase Bipolar STEP MOTOR			
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		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







Master
SNET ECAT



USB

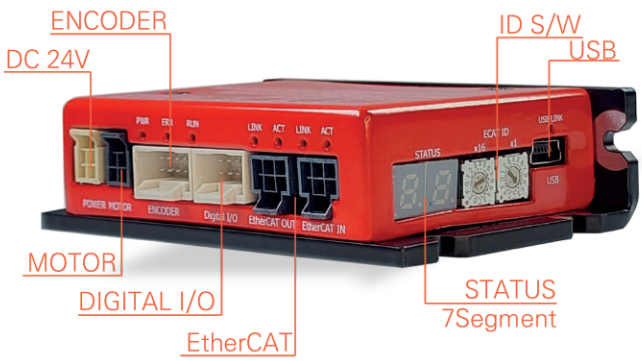
PC and HMI

EtherCAT



UNI STEP Driver

Open or Closed Loop Stepping System



Input Voltage	24Vdc ±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

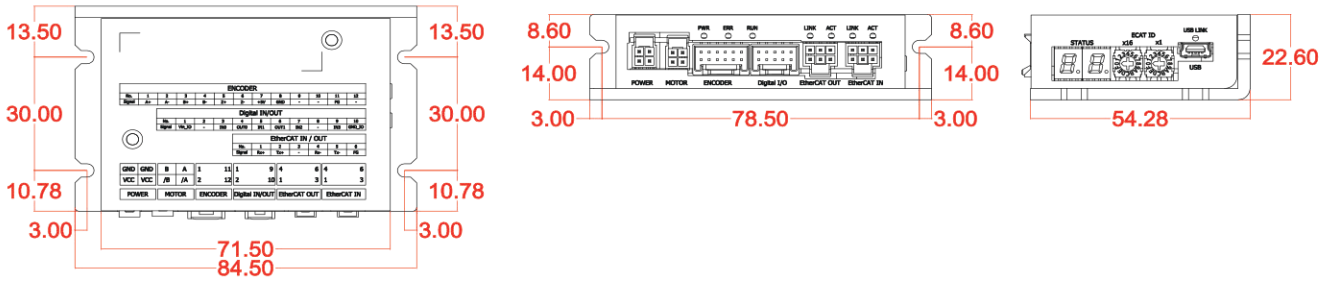




		UST ECAT-Mi-1X	USV ECAT-Mi-1X
Features		EtherCAT STEP Driver	
Power	Input Voltage	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA(Except motor current)	
Control Method		Open Loop	Closed Loop
Control Motor		2 Phase Bipolar STEP MOTOR	
Ether CAT	Protocol	CoE (CiA402 Drive Profile)	
	Cycle Time	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	4ea
	Voltage	24VDC	
	Current	10mA	
Output	Number of Channels	2ea	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

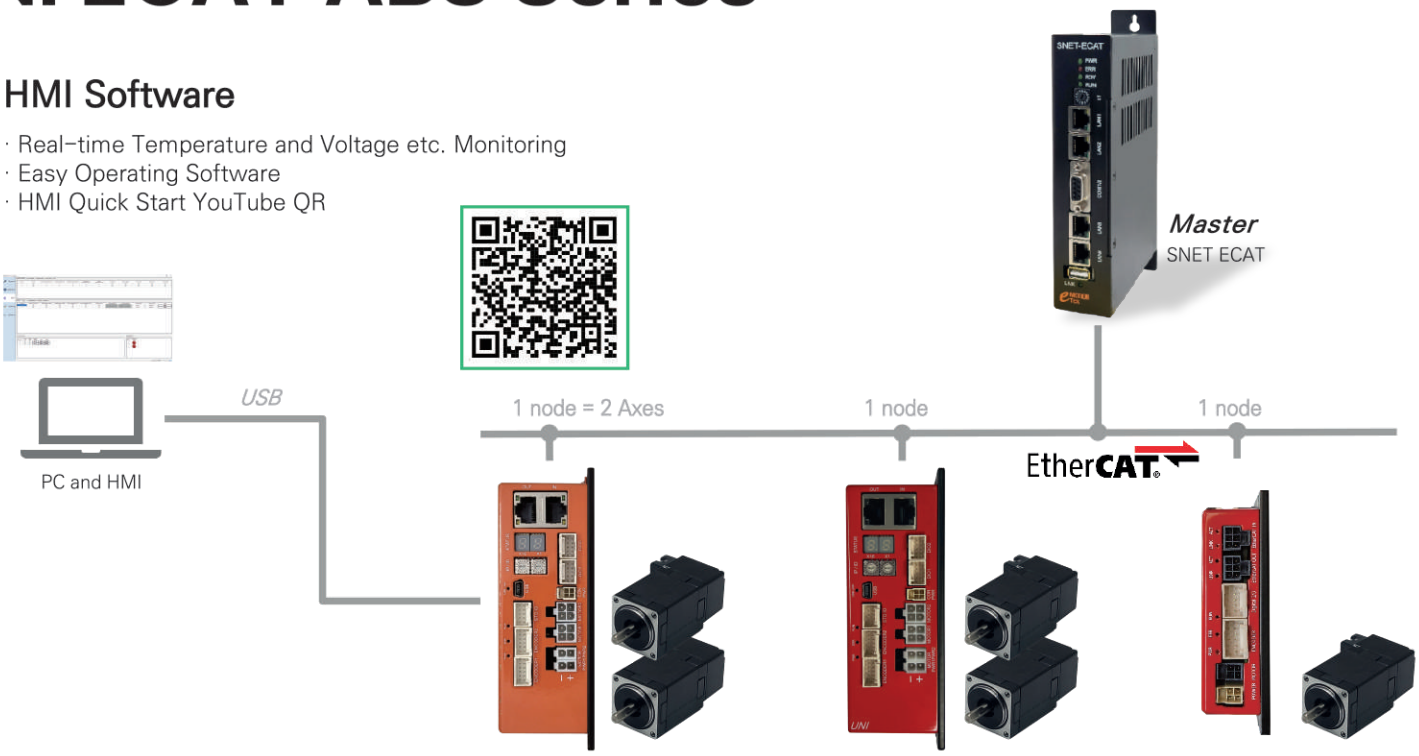
USV(T)-ECAT-Mi-1X



EtherCAT Network Type
UNI ECAT ABS Series

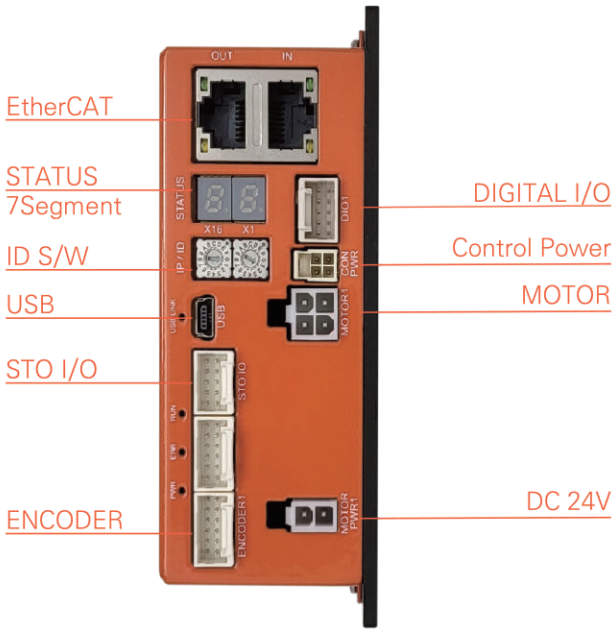
HMI Software

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



UNI STEP Driver

Closed Loop Stepping System



Input Voltage	24VDC ±10%
OutputCurrent	Max. 500mA(Except motor current)
Cycle Time	0.125 ~ 1ms
Control Method	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]

EtherCAT Technology Group *ABS*

EtherCAT STEP Driver Features

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

Product model name

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

Specifications

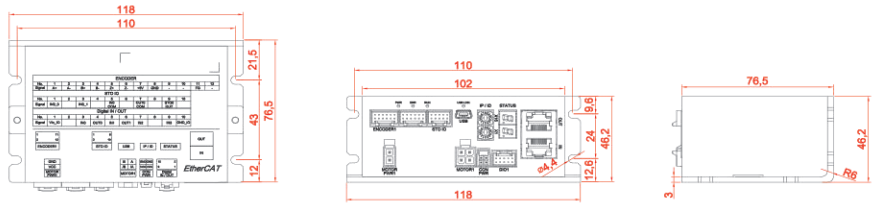




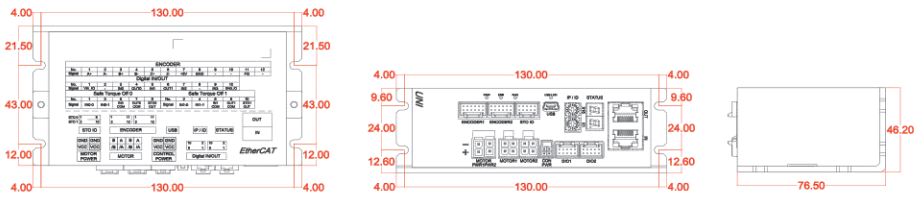
		USAB ECAT-ST-1X	USAB ECAT-ST-2X
Features		EtherCAT STEP Driver	
Power	Input Voltage	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)	
Control Method		Closed Loop	
ControlrMotor		2 Phase Bipolar STEP MOTOR	
Ether CAT	Protocol	CoE (CiA402 Drive Profile)	
	Cycle Time	0.125 ~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][17BIT]	
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



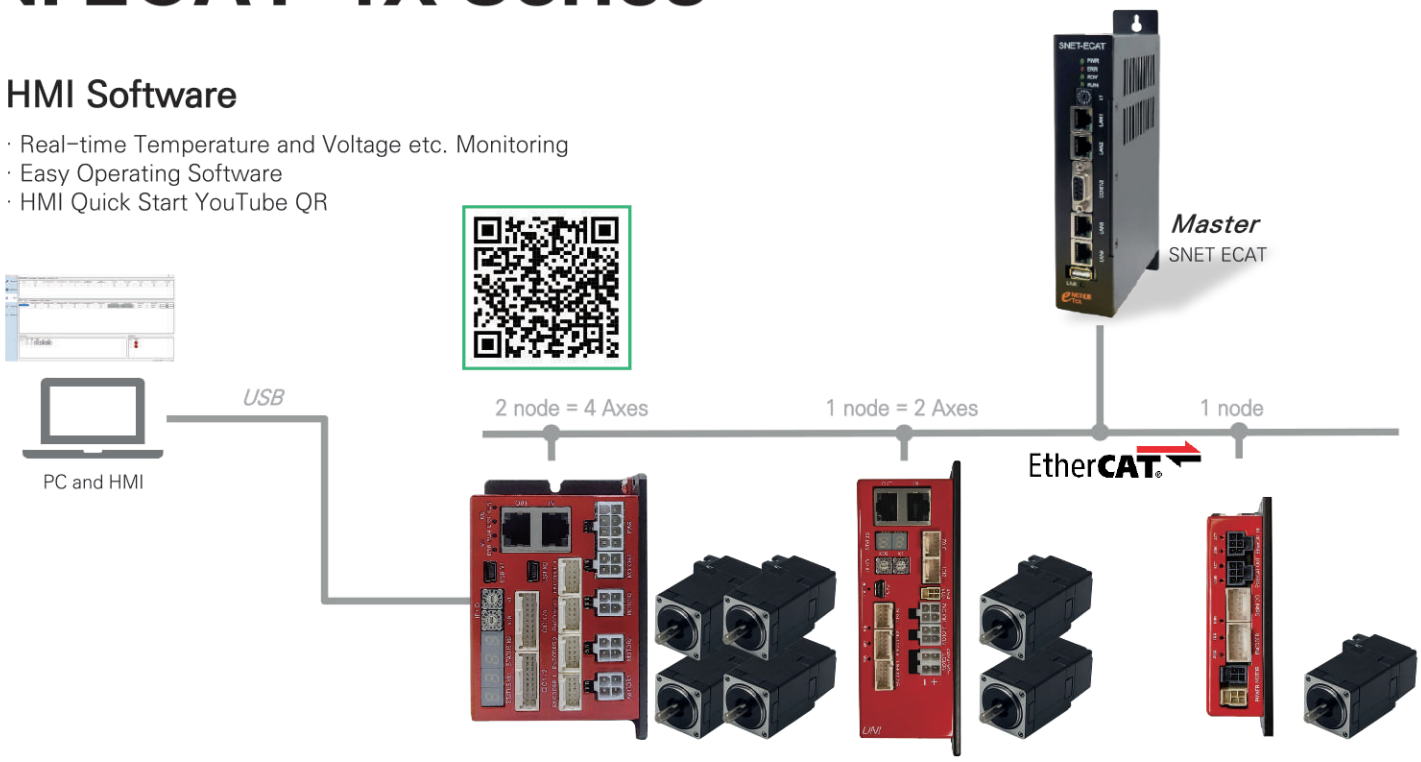
USAB-ECAT-ST-2X



EtherCAT Network Type
UNI ECAT 4X Series

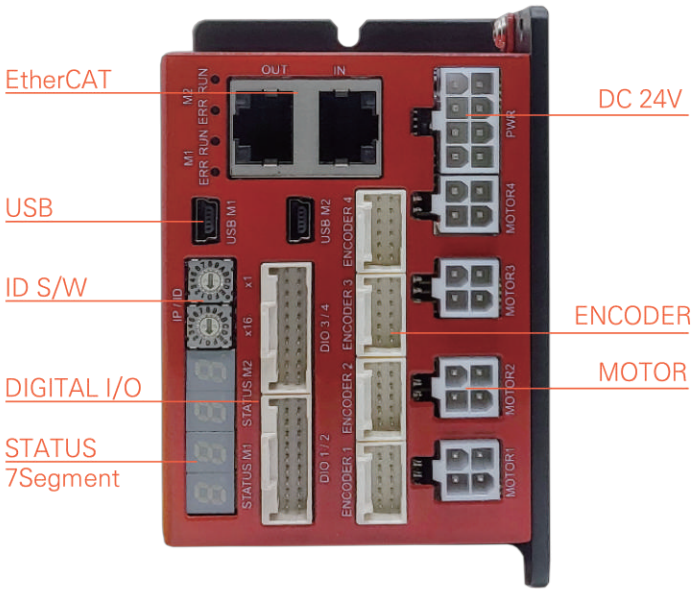
HMI Software

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



UNI STEP Driver

Open or Closed Loop Stepping System



Input Voltage	24VDC ±10%
OutputCurrent	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 Technology Group 4X

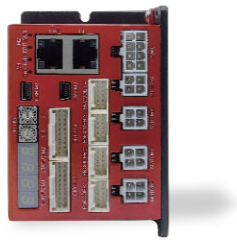
EtherCAT STEP Driver Features

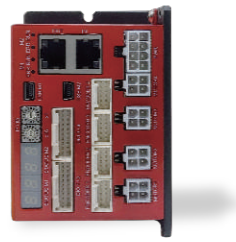
- EtherCAT Network Driver
- CSP, PP, HM Supported
- No Gain Tuning / No Hunting
- Fast Response
- Open Loop or Closed Loop System
- Applicable to motors from various manufacturers

Product model name

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

Specifications

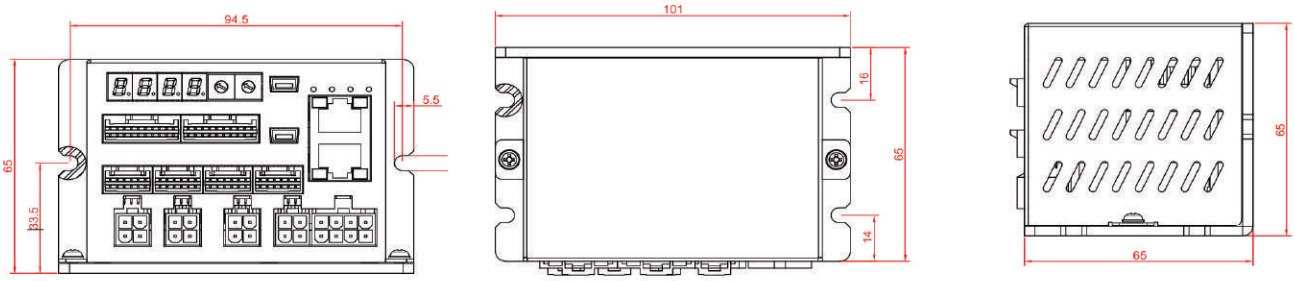




		UST ECAT-4X	USV ECAT-4X
Features		EtherCAT STEP Driver	
Power	Input Voltage	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA(Except motor current)	
Control Method		Open Loop	Closed Loop
Control Motor		2 Phase Bipolar STEP MOTOR	
Ether CAT	Protocol	CoE (CiA402 Drive Profile)	
	Cycle Time	0.125 ~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	4ea x Axis
	Voltage	24VDC	
	Current	10mA	
Output	Signals	2ea x Axis	2ea x Axis
	Voltage	24VDC	
	Current	500mA	
Motor Size		20 ~ 60mm	20 ~ 60mm
Max Speed[rpm]		3000	
Size[mm]		101 * 65 * 65	

Dimension

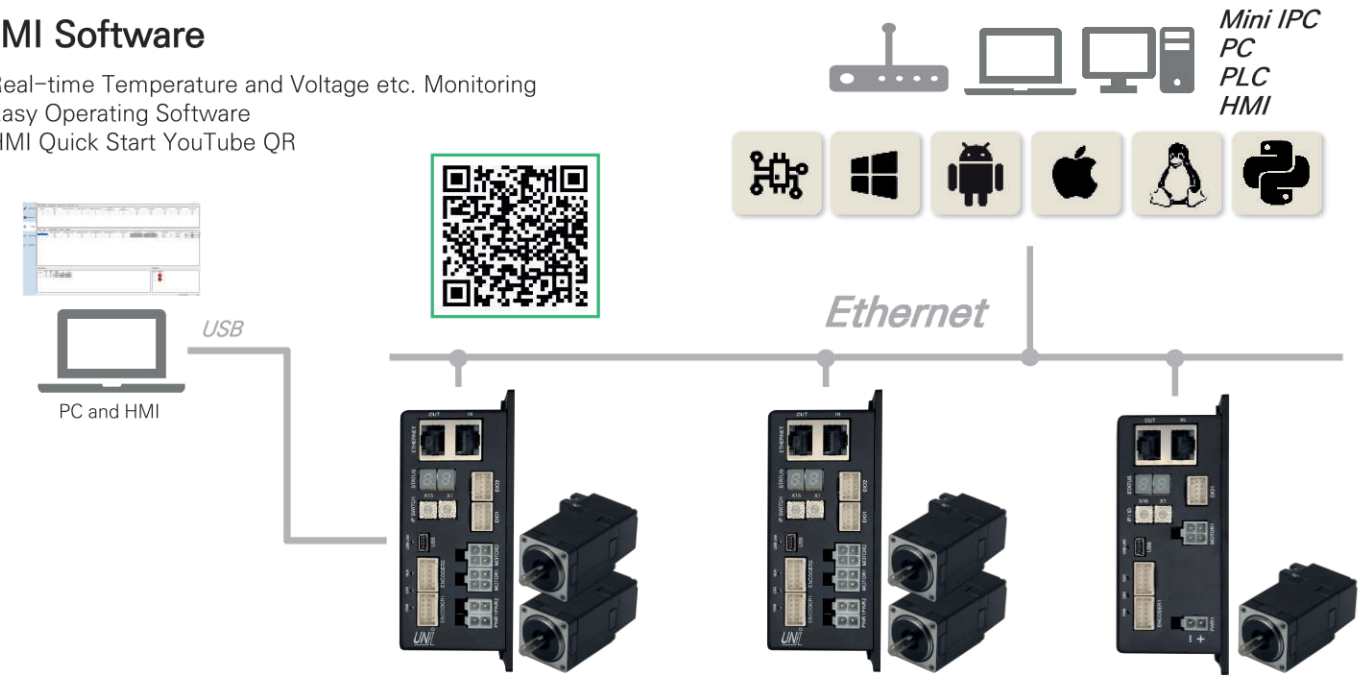
USV(T)-ECAT-4X



Ethernet Network Type
UNI ENET Series

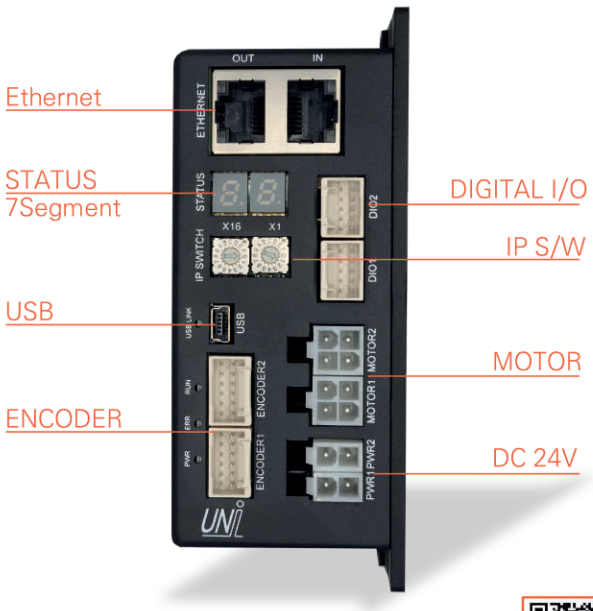
HMI Software

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



UNI STEP Driver

Open or Closed Loop Stepping System



YouTube Demo

Input Voltage	24VDC ±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

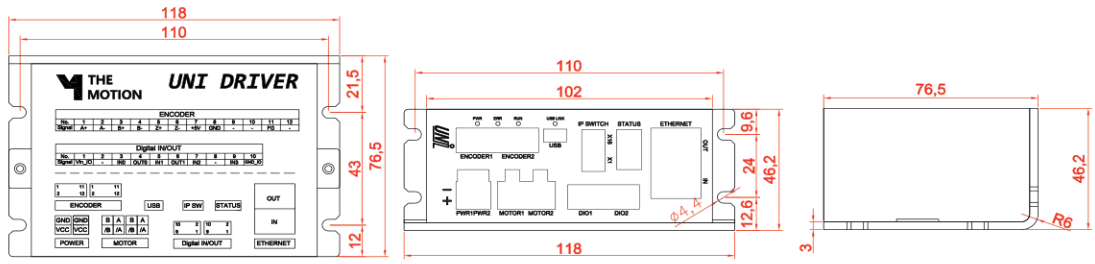
Specifications



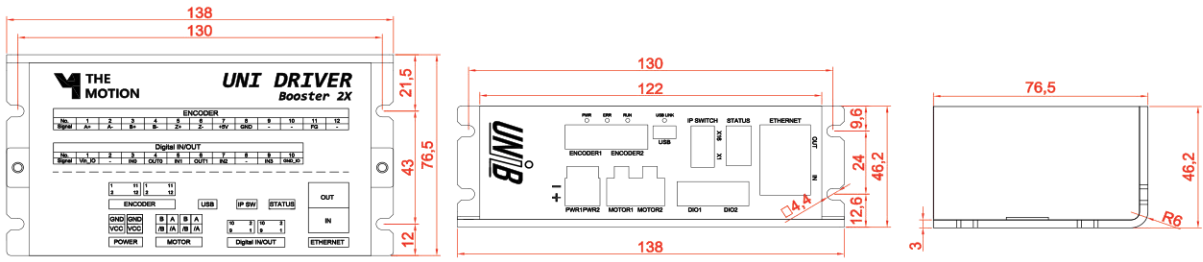
		USV(T)B ENET-1X	USV(T)B ENET-1X-86	USV(T) ENET-2X	USV(T)B ENET-2X
Features		Ethernet STEP Controller & Driver All-In-One			
Power	Input Voltage	24VDC(±10%)	48VDC(±10%)	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)			
Control Method		Open Loop, Closed Loop			
Control Motor		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



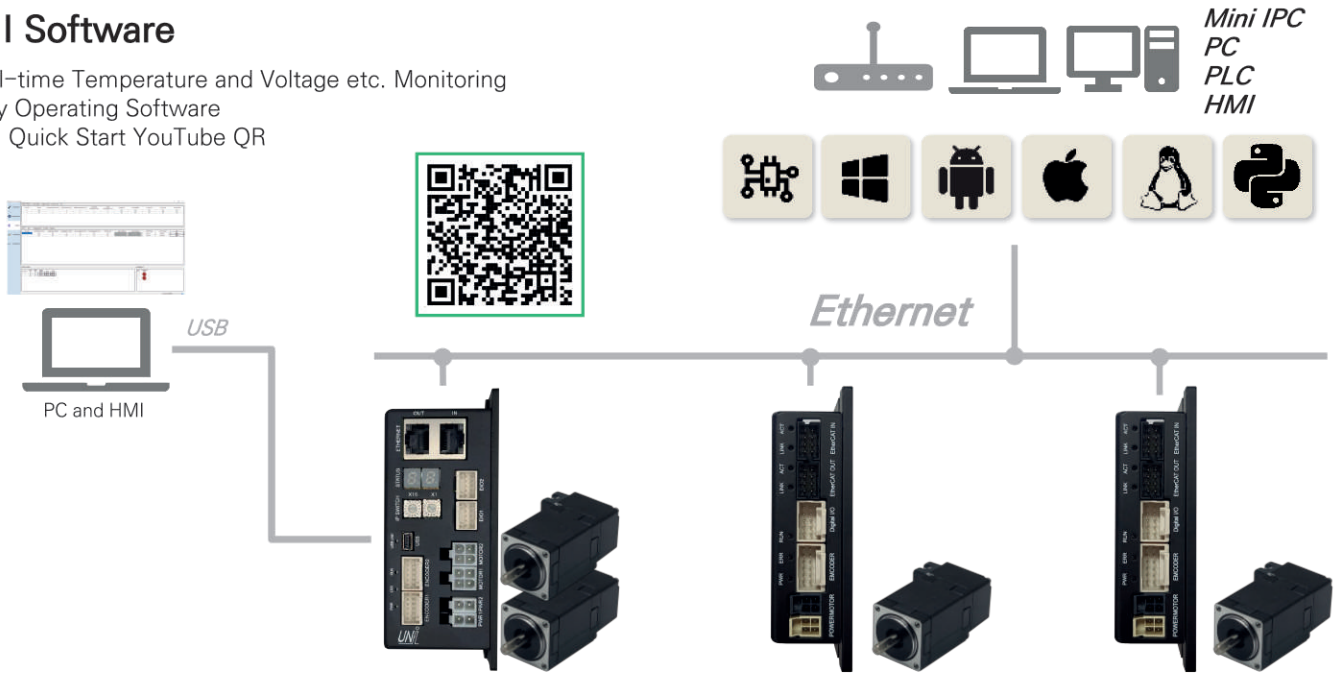
USV(T)B-ENET-2X



Ethernet Network Type
UNI ENET Compact Series

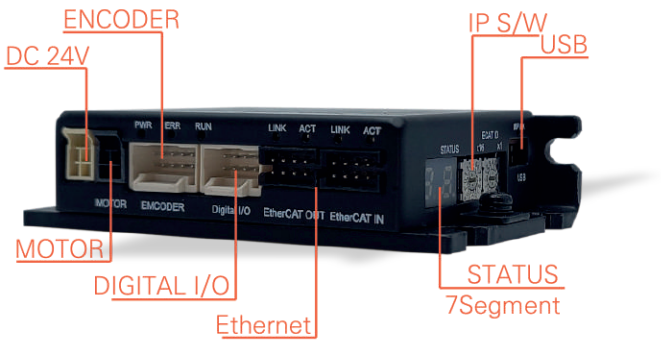
HMI Software

· 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

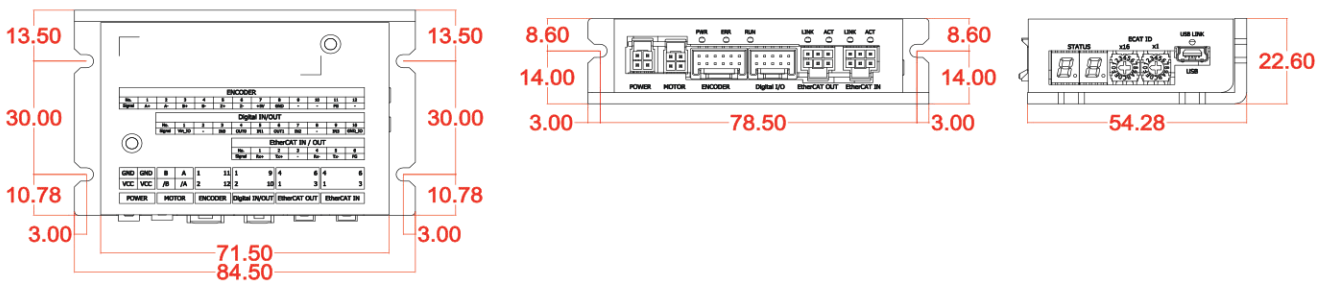


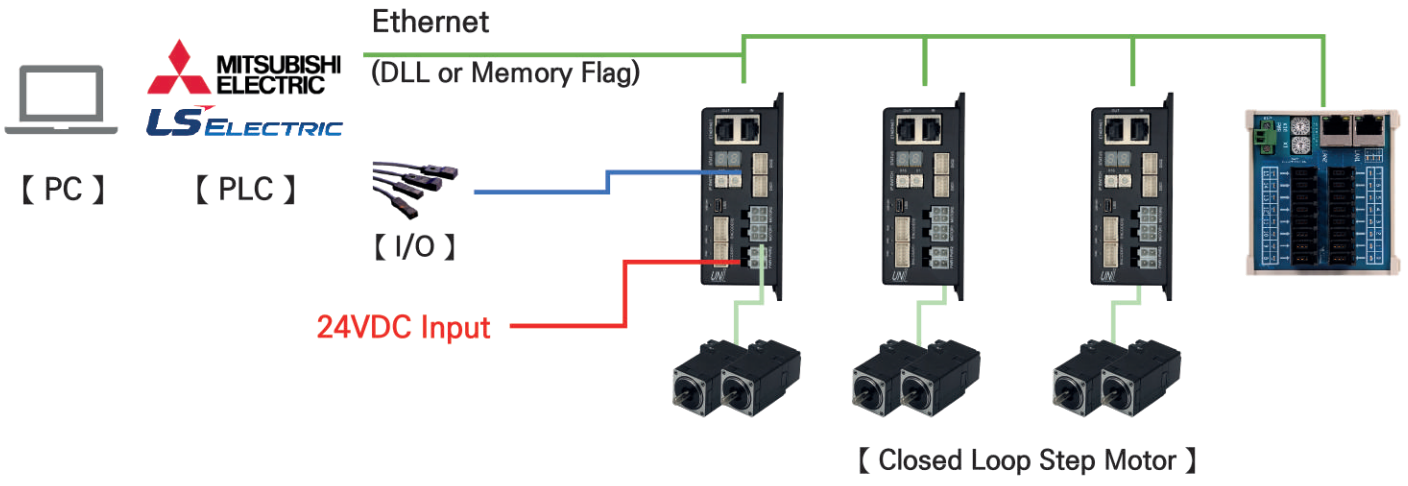


		UST ENET-Mi-1X	USV ENET-Mi-1X
Features		Ethernet STEP Controller & Driver All-In-One	
Power	Input Voltage	24VDC(±10%)	24VDC(±10%)
	Current Consumption	Max. 500mA (Except motor current)	
Control Method		Open Loop	Closed Loop
Control Motor		2 Phase Bipolar STEP MOTOR	
Connection Method		Ethernet(Daisy 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	4ea
	Voltage	24VDC	
	Current	10mA	
Output	Number of Channels	2ea	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

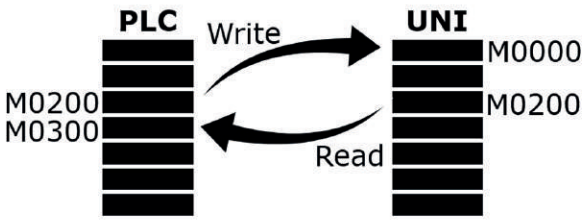
USV(T)-ENET-Mi-1X





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)

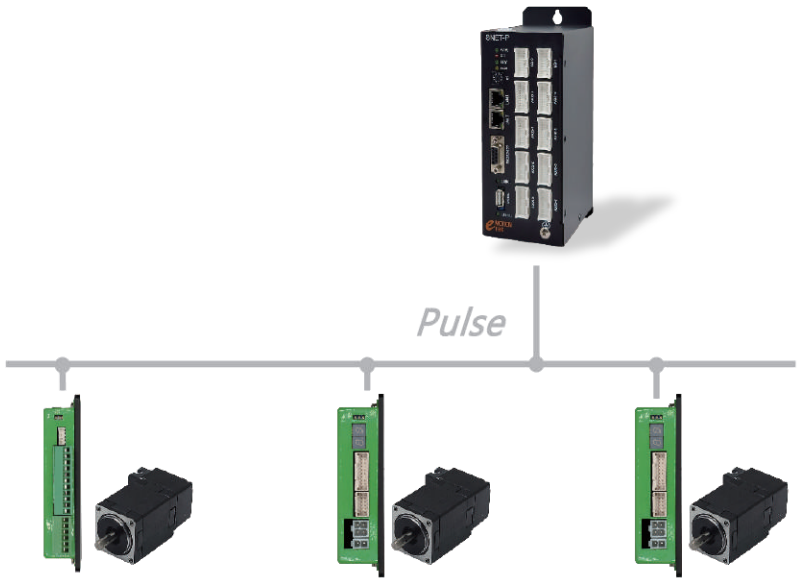
Various Motion Controls

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

PC-based Motion Control

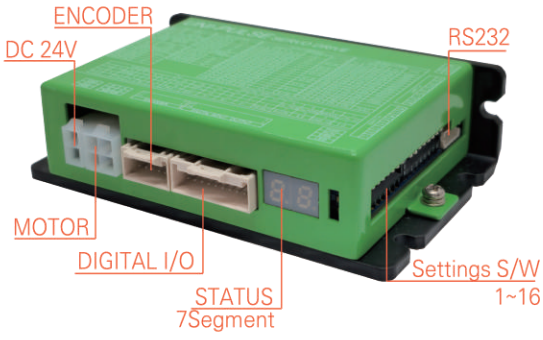
· Motion Commands Using Ethernet (Windows DLL)
· Max. 253 IP Controllable

Standard Type
UNI PUL Series



UNI STEP Driver

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



Input Voltage	24Vdc ±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

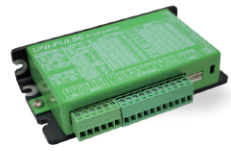
Pulse STEP Driver Features

- 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

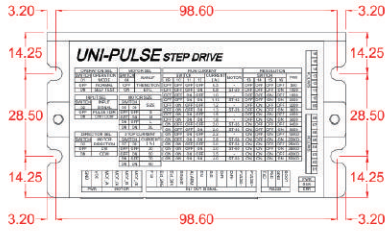
Specifications

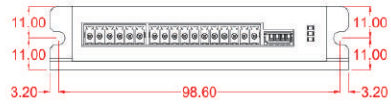




		UST PUL-1X	USV PUL-1X	USVB PUL-1X
Series		Pulse STEP Driver		
Features		24VDC(±10%)		
Power	Input Voltage	Max. 500mA (Except motor current)		
	Current Consumption	Open Loop	Closed Loop	Closed Loop
Control Method		2 Phase Bipolar STEP MOTOR		
Control Motor		Ethernet(Daisy Chain Device Max. 253 IP Control)		
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		
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	

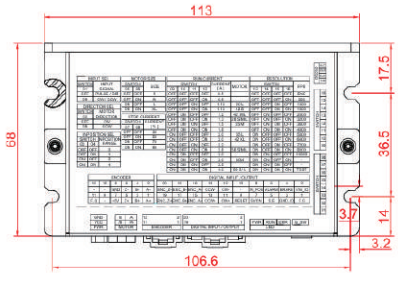
UST-PUL-1X

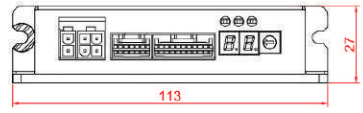


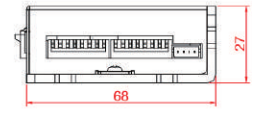




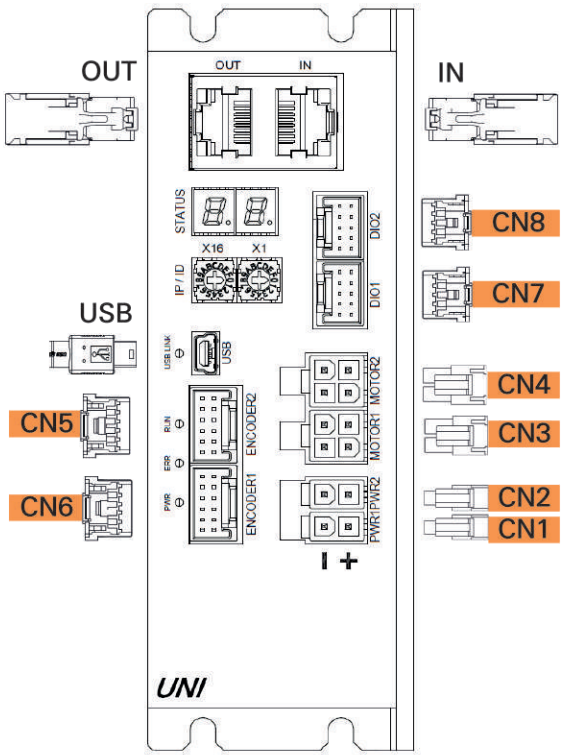
USV-PUL-1X & USVB-PUL-1X

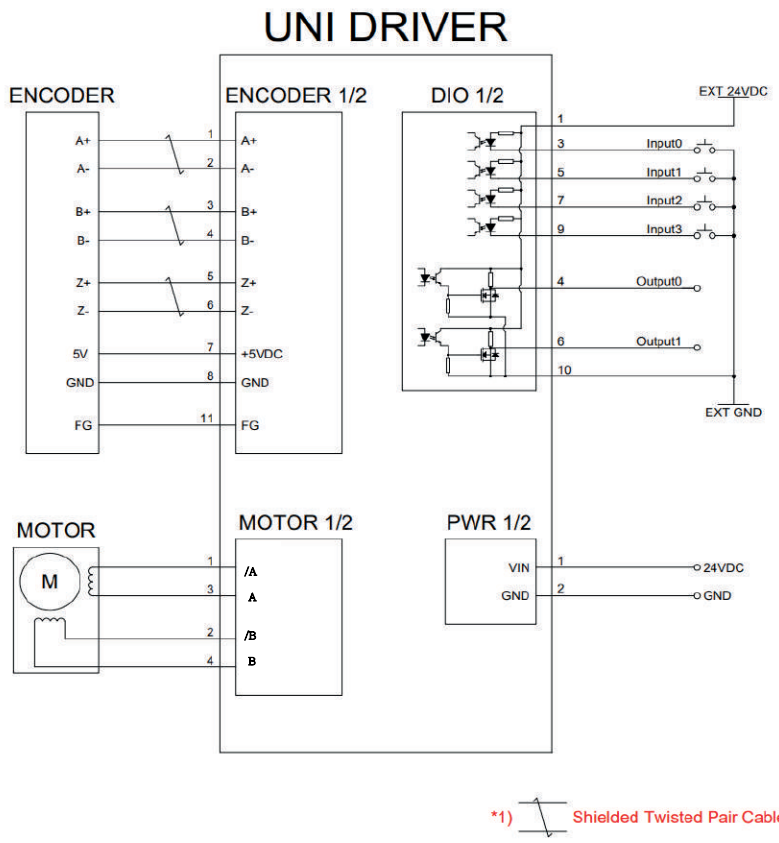






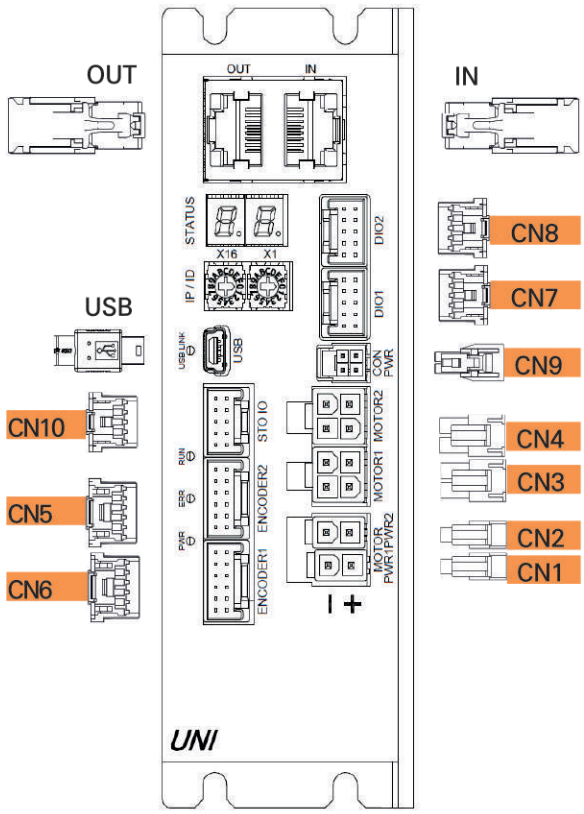
Cable wiring diagram (UNI RTEX, ECAT, ENET Series)

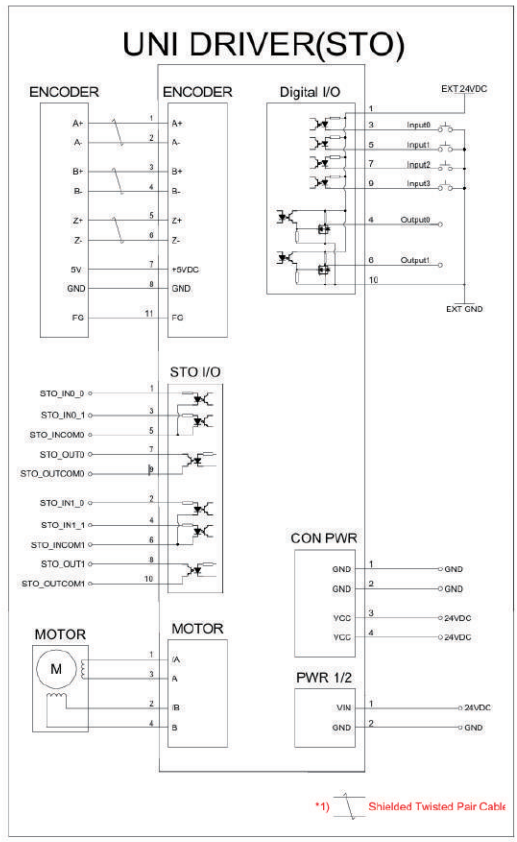




Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	PWR1, 2	Header	LAD1140-02	18-24 AWG	HANLIM Electronics Or Molex
	CN1, 2	Housing	CHD1140-02		
		Crimp Terminal	CTD1140		
Motor	MOTOR1, 2	Header	LAD1140-04	18-24 AWG	HANLIM Electronics Or Molex
	CN3, 4	Housing	CHD1140-04		
		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				

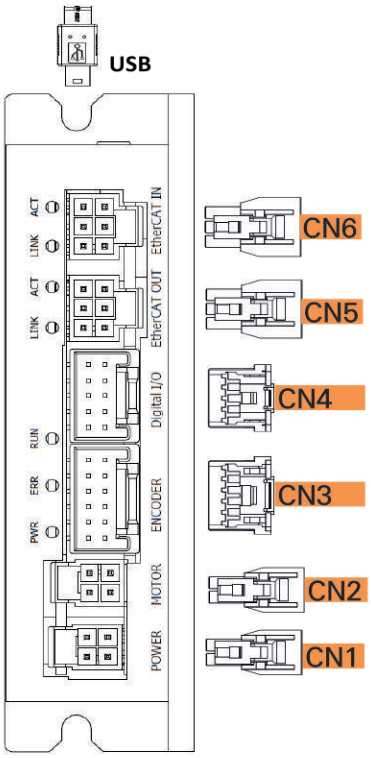
Cable wiring diagram (UNI ECAT STO Series)

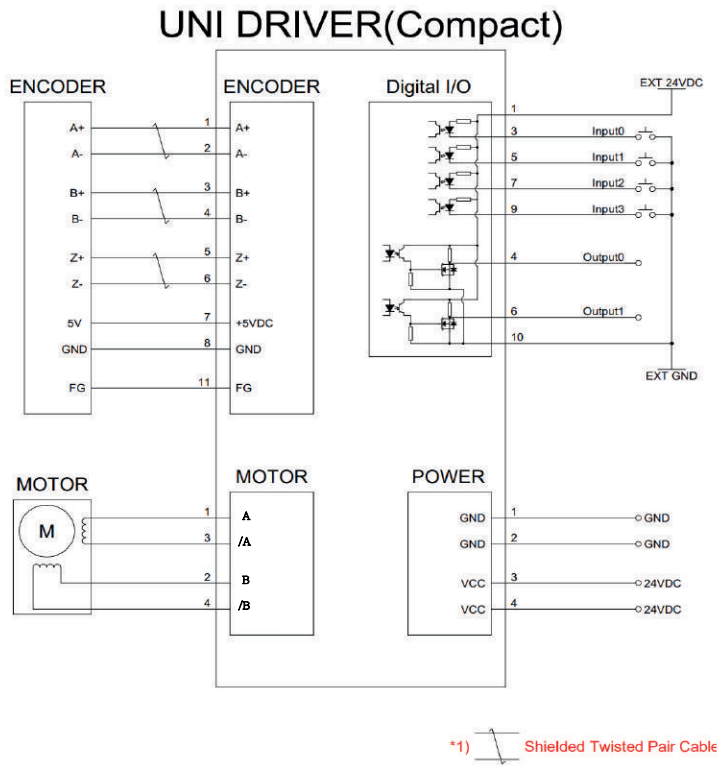




Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	PWR1, 2	Header	LAD1140-02	18-24 AWG	HANLIM Electronics Or Molex
	CN1, 2	Housing	CHD1140-02		
		Crimp Terminal	CTD1140		
Motor	MOTOR1, 2	Header	LAD1140-04	18-24 AWG	HANLIM Electronics Or Molex
	CN3, 4	Housing	CHD1140-04		
		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				

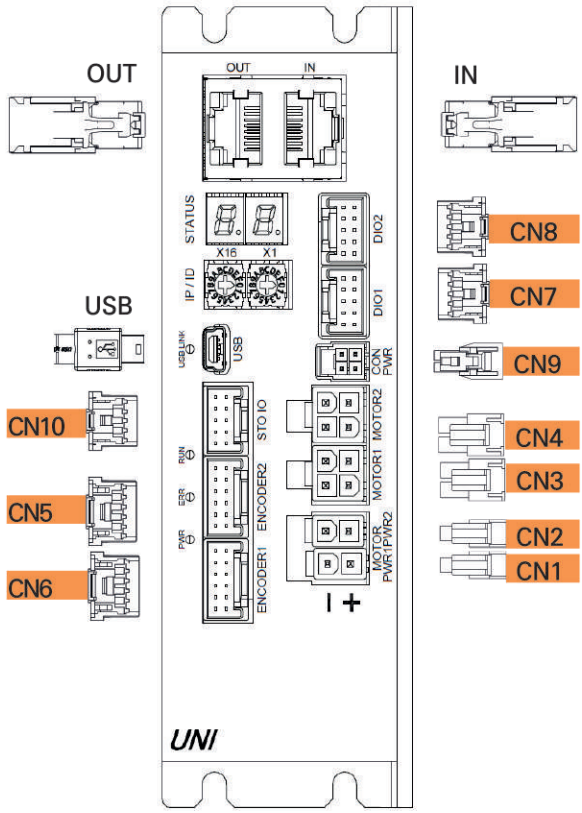
Cable wiring diagram (UNI ECAT, ENET Compact Series)

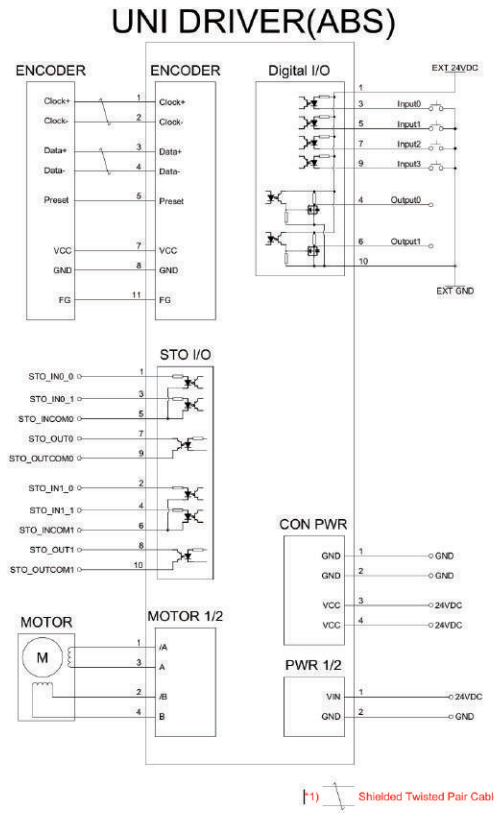




Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	PWR	Header	1053142104	20-22 AWG	Molex
	CN1	Housing	1053082204		
		Crimp Terminal	1053002400		
Motor	MOTOR	Header	1053141104	20-22 AWG	Molex
	CN2	Housing	1053081204		
		Crimp Terminal	1053002400		
ENCODER (Closed Loop)	ENCODER	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).			

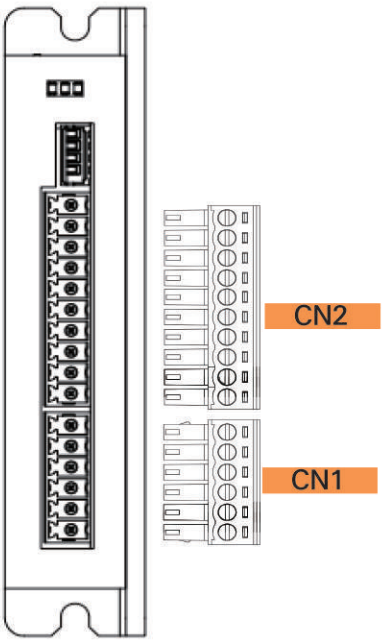
Cable wiring diagram (UNI ECAT ABS Series)



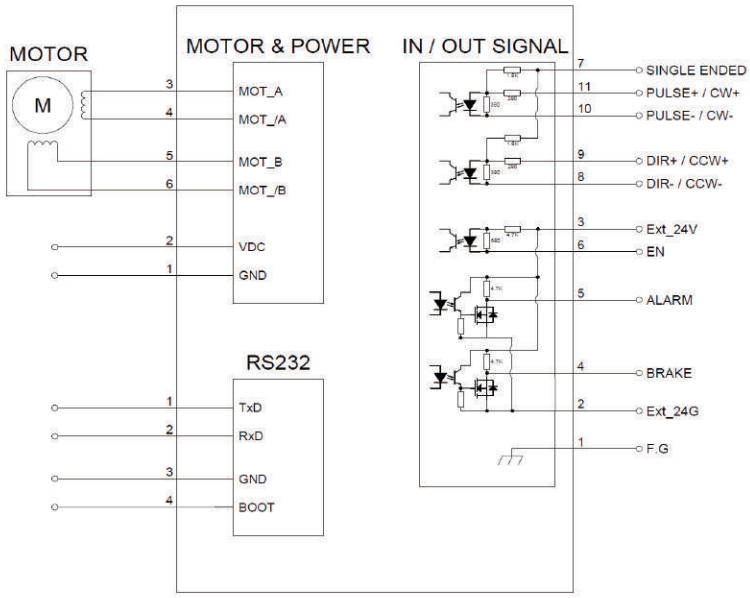


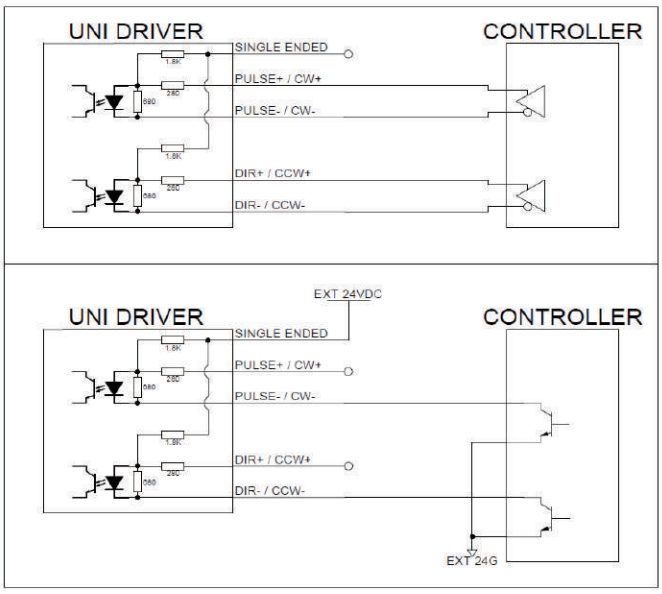
Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	PWR1, 2	Header	LAD1140-02	18-24 AWG	HANLIM Electronics Or Molex
	CN1, 2	Housing	CHD1140-02		
		Crimp Terminal	CTD1140		
Motor	MOTOR1, 2	Header	LAD1140-04	18-24 AWG	HANLIM Electronics Or Molex
	CN3, 4	Housing	CHD1140-04		
		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)



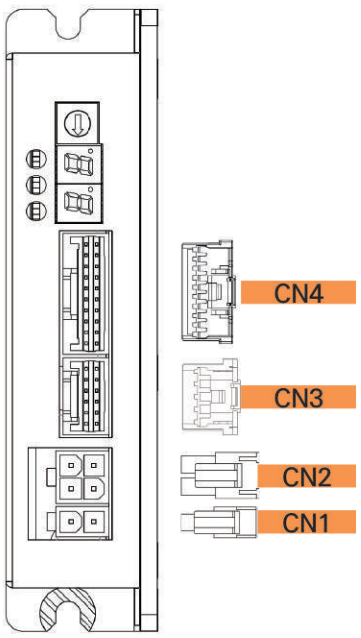
UNI PULSE OPEN LOOP

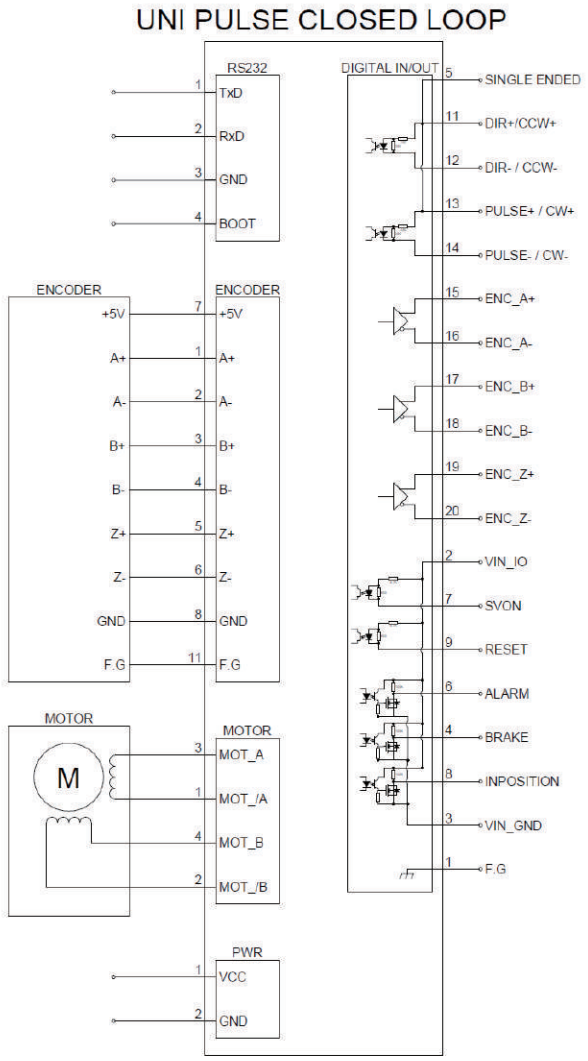




Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	POWER	Header	15EDGRC-3.5-06P	16-28 AWG	Degson
	CN1	Housing	15EDGK-3.5-06P		
Motor	MOTOR	Header	15EDGRC-3.5-06P	16-28 AWG	Degson
	CN1	Housing	15EDGK-3.5-06P		
I/O	Digital I/O	Header	15EDGRC-3.5-11P	16-28 AWG	Degson
	CN2	Housing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

Cable wiring diagram (UNI PULSE Closed Loop Series)





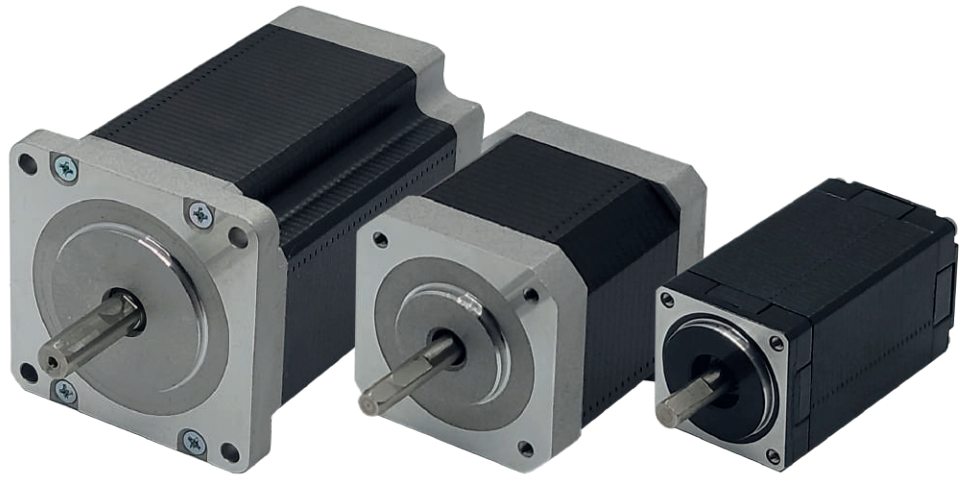
Application	Symbol	Name	Model Number	Applicable Wire	Manufacturer
Power Supply	PWR	Header	LAD1140-02	18-24 AWG	HANLIM Electronics Or Molex
	CN1	Housing	CHD1140-02		
		Crimp Terminal	CTD1140		
Motor	MOTOR	Header	LAD1140-04	18-24 AWG	HANLIM Electronics Or Molex
	CN2	Housing	CHD1140-04		
		Crimp Terminal	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		

THE MOTION

STEP MOTOR

UNIM-ST(Open Loop)
UNIM-SV(Closed Loop)
UNIM-SA(Absolute)
UNIM-SV-IP65(Closed Loop)
UNIM-ST-HL(Open Loop)
UNIM-SV-HL(Closed Loop)
ETC

Step Motor(Open Loop)
UNIM-ST Series



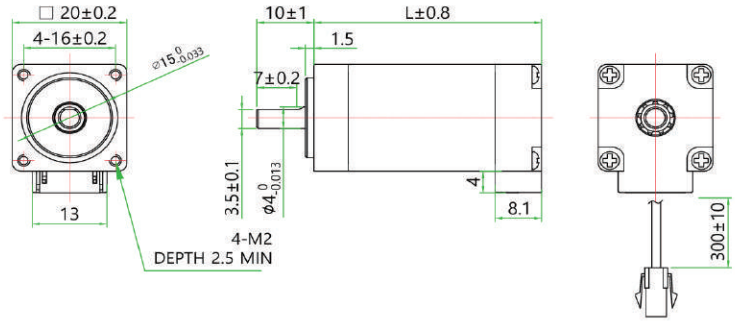
UNIM-ST Series											
Model		20L	28S	28M	28L	35M	35L	42S	42M	42L	42XL
Drive Method	-	BI-POLAR									
Number of Phases	-	2	2	2	2	2	2	2	2	2	2
Step Angle	-	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Current	[A]	0.8	1.3	1.3	1.3	1.5	2	1.13	1.13	2	2
Resistance	[Ω]	6.5	1.45	1.7	2.25	1.65	1.65	3.2	3.45	1.4	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-cm²]	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-cm²]	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

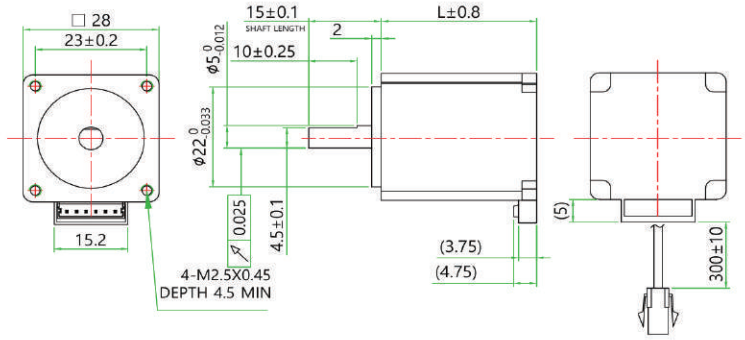
UNIM-ST-20mm

MODEL	LENGTH(mm)
UNIM-ST-20L	39.75



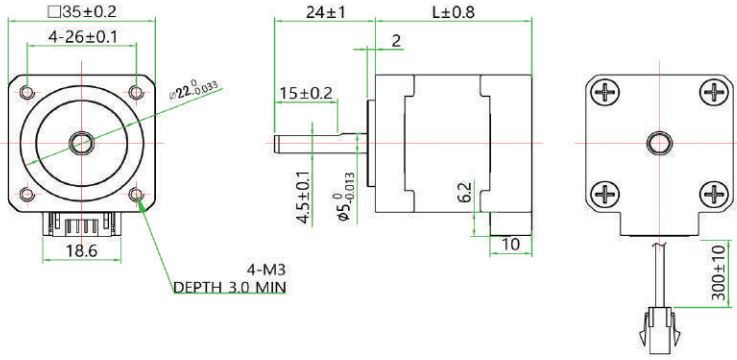
UNIM-ST 28mm

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



UNIM-ST 35mm

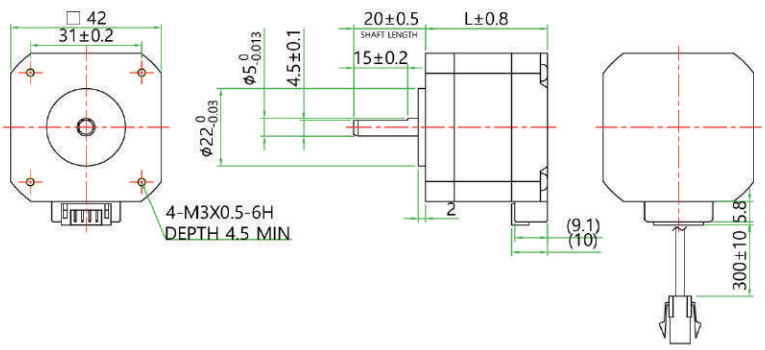
MODEL	LENGTH(mm)
UNIM-ST-35M	37.25
UNIM-ST-35L	54.75



Dimension – UNIM-ST Series

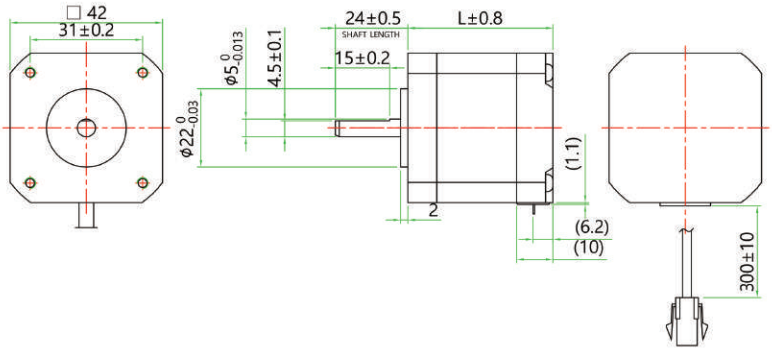
UNIM-ST 42mm

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



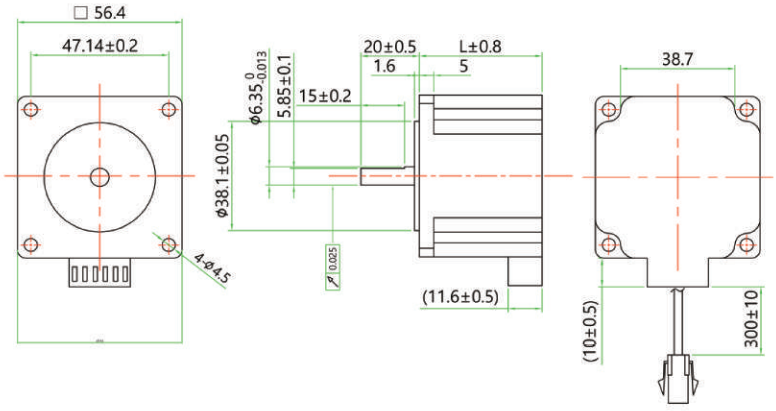
UNIM-ST 42mm

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



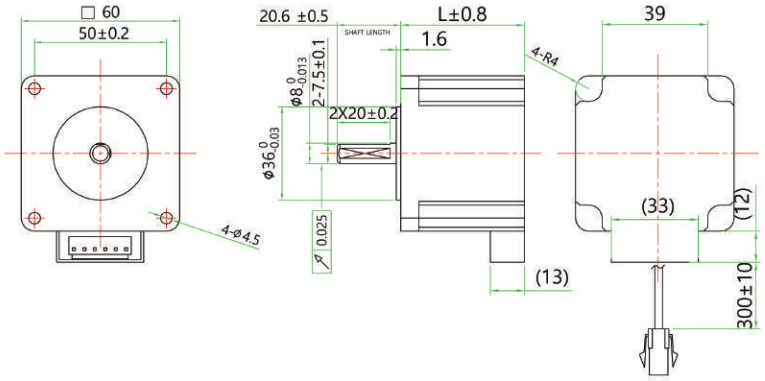
UNIM-ST 56mm

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



UNIM-ST 60mm

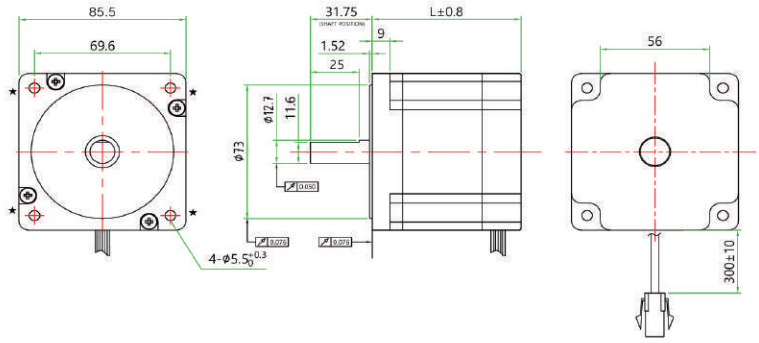
MODEL	LENGTH(mm)
UNIM-ST-60S	46.3
UNIM-ST-60M	55.8
UNIM-ST-60L	87.8



Dimension – UNIM-ST Series

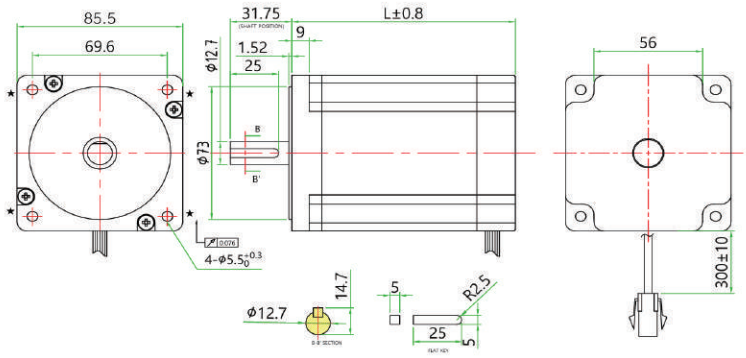
UNIM-ST 86mm

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



UNIM-ST 86mm

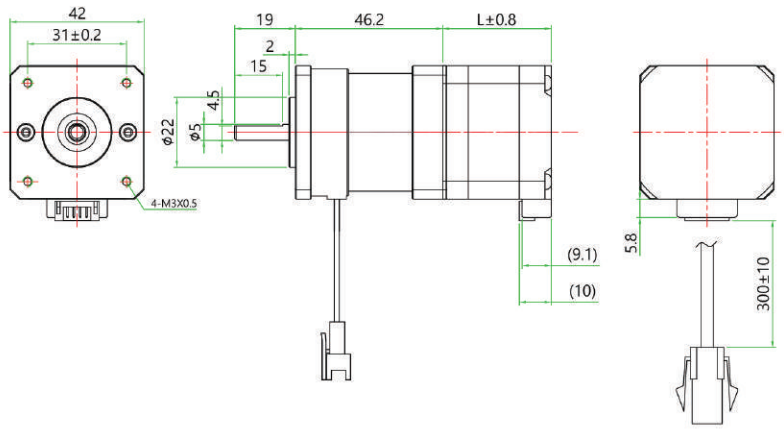
MODEL	LENGTH(mm)
UNIM-ST-86L	115.35



Dimension –
UNIM-ST Series + Brake

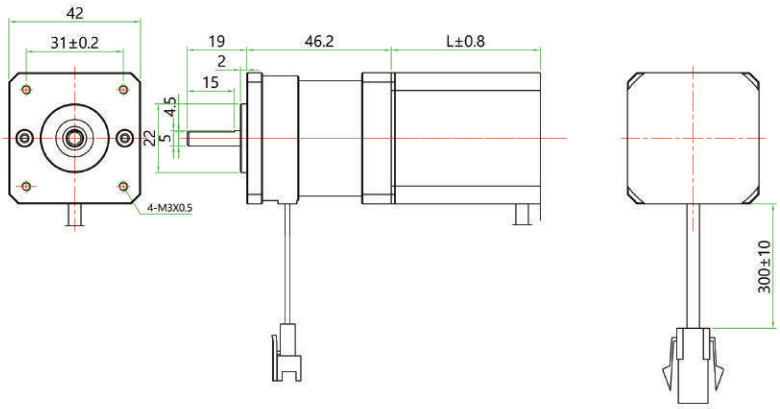
UNIM-ST 42mm

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



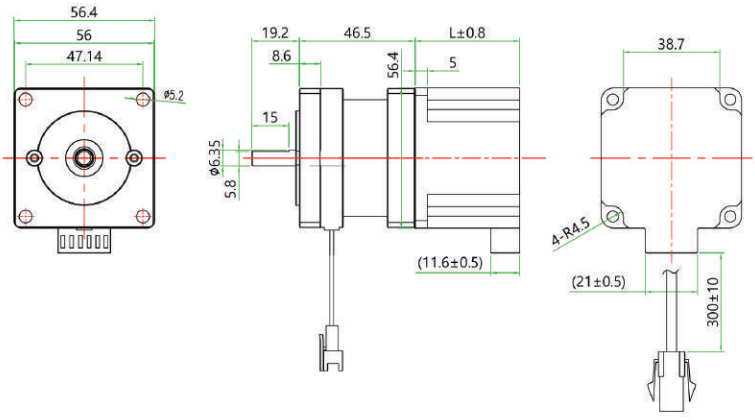
UNIM-ST 42mm

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



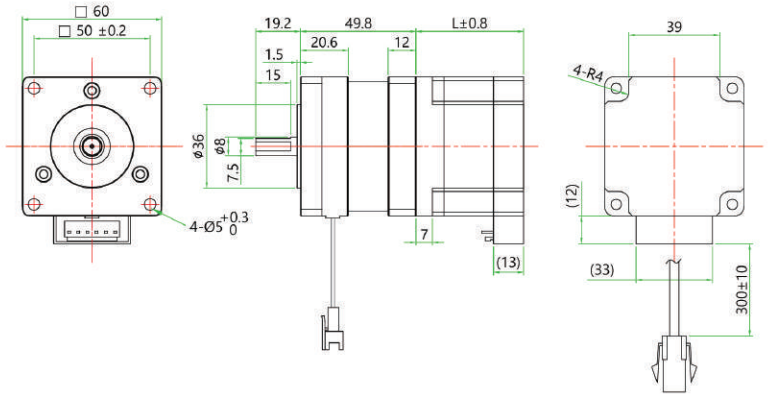
UNIM-ST 56mm

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



UNIM-ST 60mm

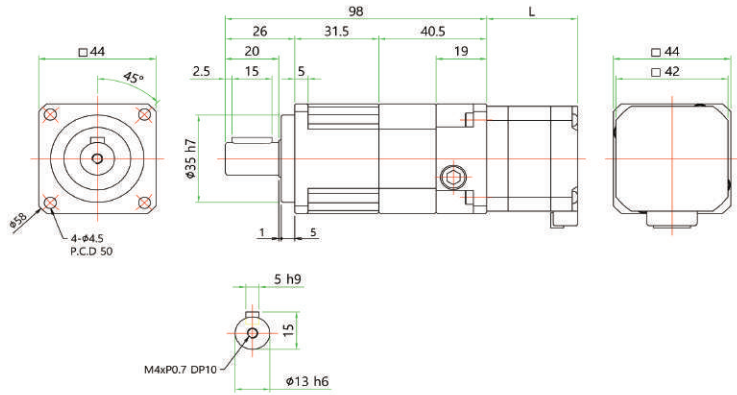
MODEL	LENGTH(mm)
UNIM-ST-60S (BK)	46.3
UNIM-ST-60M (BK)	55.8
UNIM-ST-60L (BK)	87.8



Dimension – UNIM-ST Series + Reducer(1Stage)

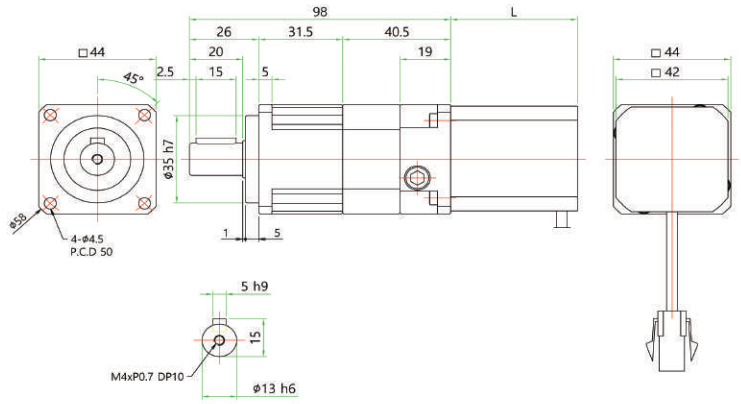
UNIM-ST 42mm

MODEL	LENGTH(mm)
UNIM-ST-42S(R3~10)	34
UNIM-ST-42M(R3~10)	40



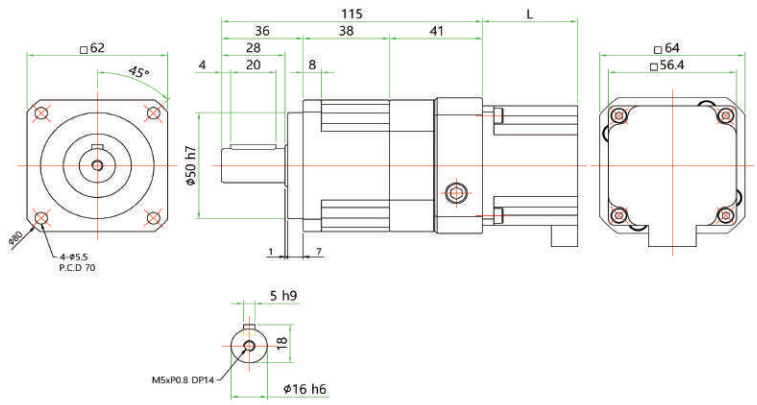
UNIM-ST 42mm

MODEL	LENGTH(mm)
UNIM-ST-42L(R3~10)	47.5
UNIM-ST-42XL(R3~10)	53.5



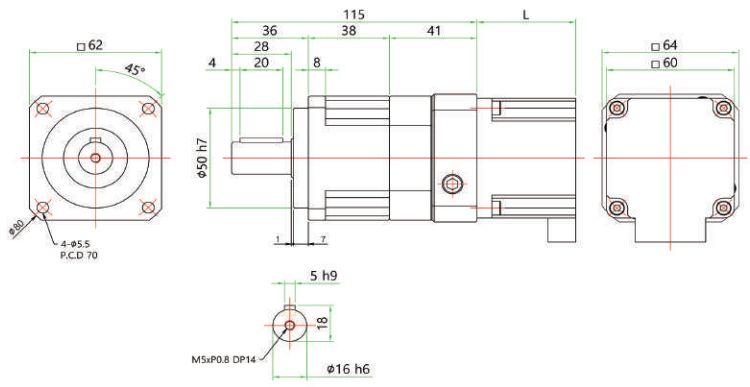
UNIM-ST 56mm

MODEL	LENGTH(mm)
UNIM-ST-56S(R3~10)	42
UNIM-ST-56M(R3~10)	54.5
UNIM-ST-56L(R3~10)	77.5



UNIM-ST 60mm

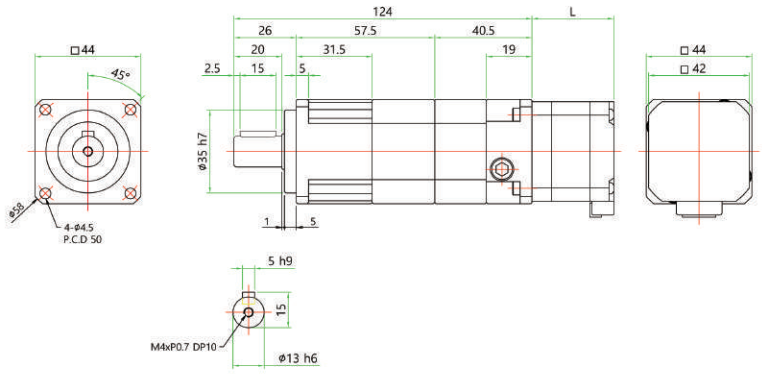
MODEL	LENGTH(mm)
UNIM-ST-60S(R3~10)	46.3
UNIM-ST-60M(R3~10)	55.8
UNIM-ST-60L(R3~10)	87.8



Dimension –
UNIM-ST Series + Reducer(2Stage)

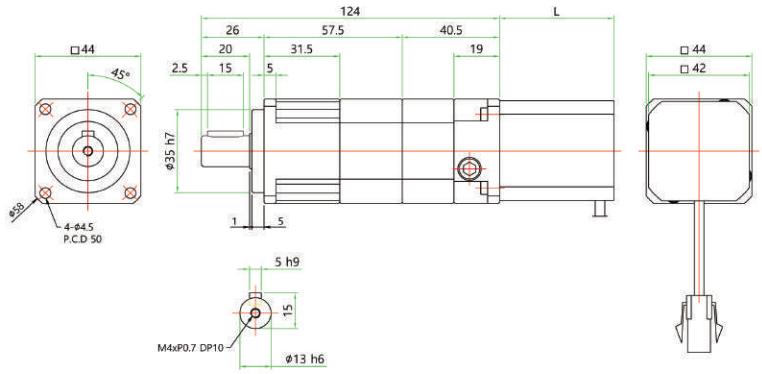
UNIM-ST 42mm

MODEL	LENGTH(mm)
UNIM-ST-42S(R15~50)	34
UNIM-ST-42M(R15~50)	40



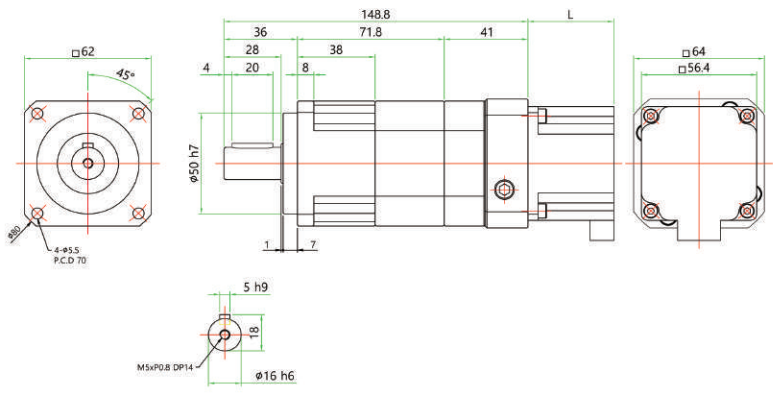
UNIM-ST 42mm

MODEL	LENGTH(mm)
UNIM-ST-42L(R15~50)	47.5
UNIM-ST-42XL(R15~50)	53.5



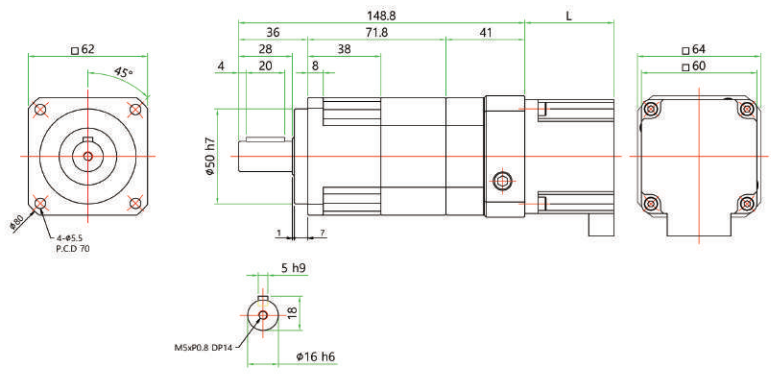
UNIM-ST 56mm

MODEL	LENGTH(mm)
UNIM-ST-56S(R15~50)	42
UNIM-ST-56M(R15~50)	54.5
UNIM-ST-56L(R15~50)	77.5



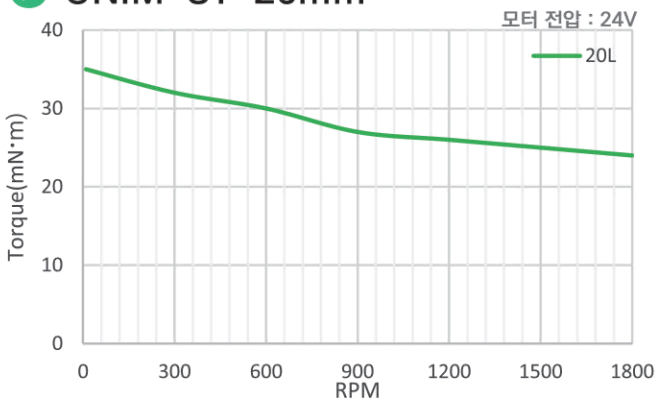
UNIM-ST 60mm

MODEL	LENGTH(mm)
UNIM-ST-60S(R15~50)	46.3
UNIM-ST-60M(R15~50)	55.8
UNIM-ST-60L(R15~50)	87.8

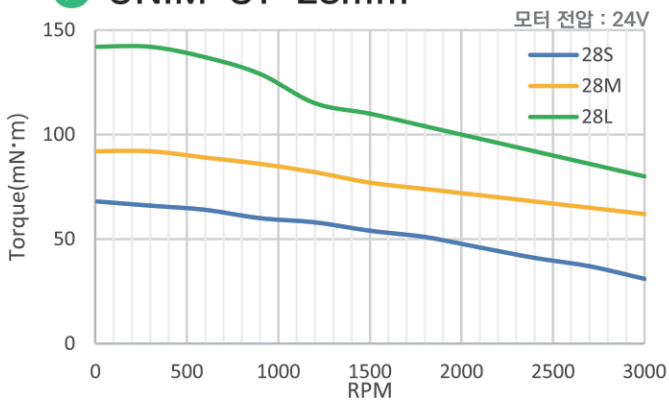


Torque Performance Curves

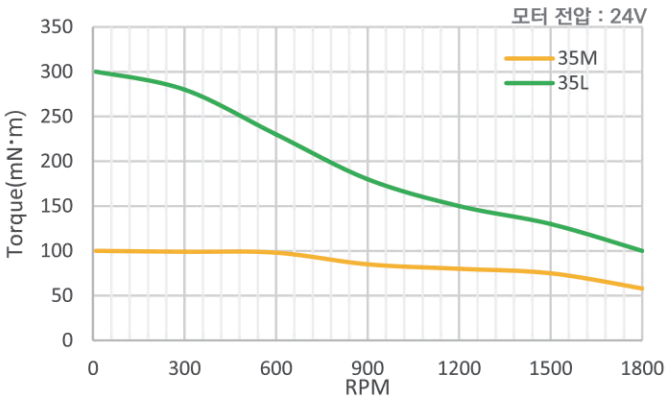
UNIM-ST-20mm



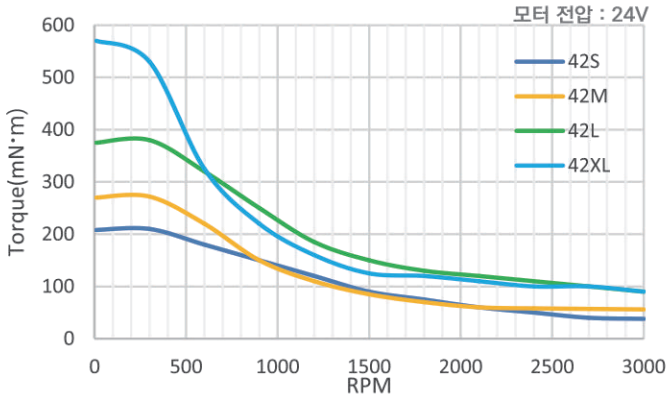
UNIM-ST-28mm



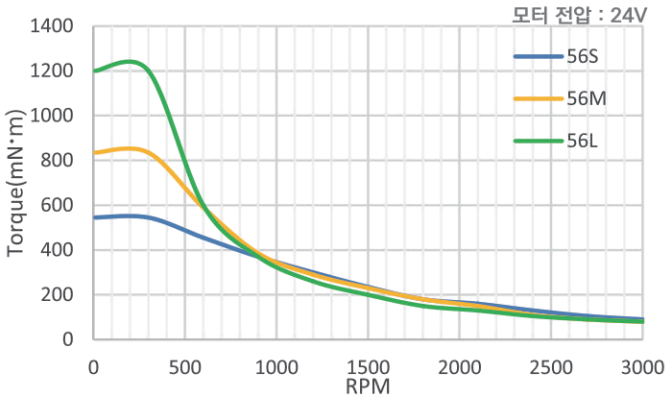
UNIM-ST-35mm



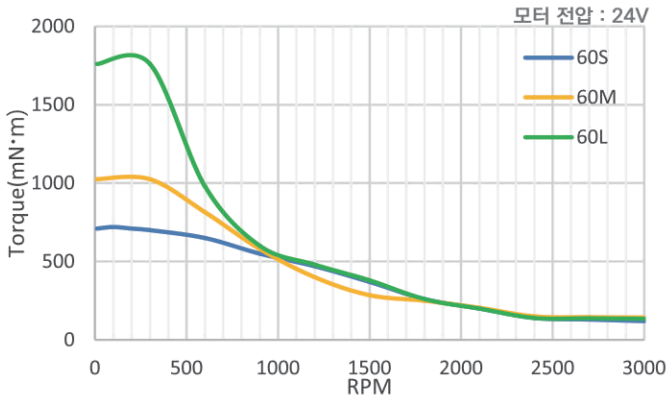
UNIM-ST-42mm



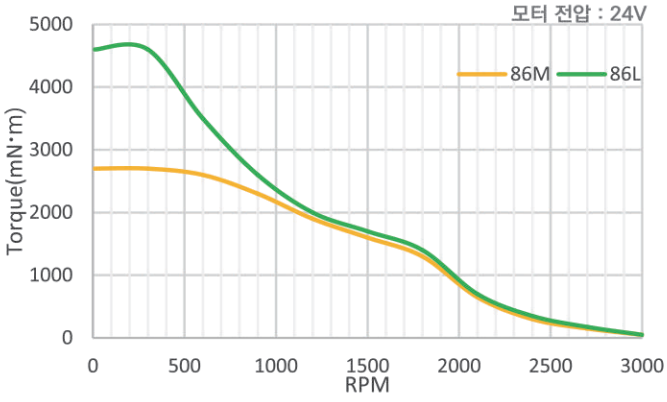
UNIM-ST-56mm



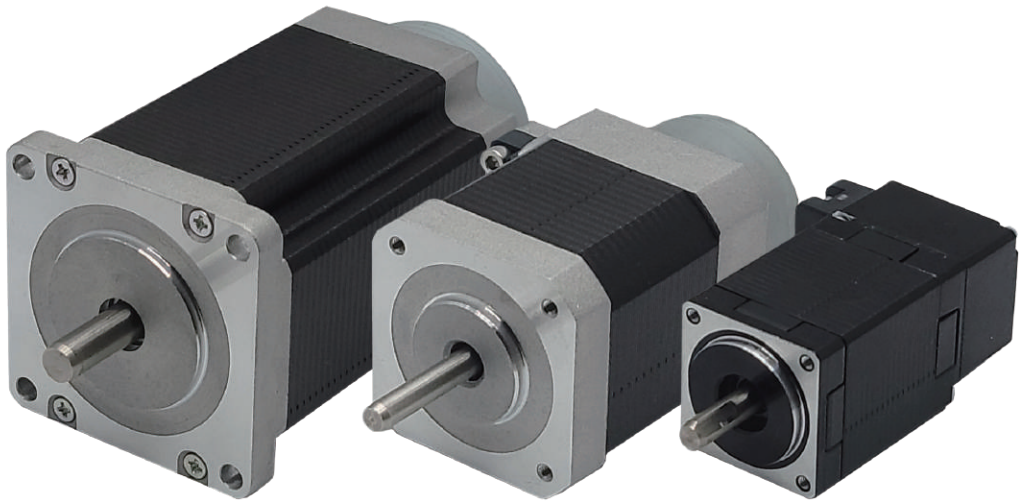
UNIM-ST-60mm



UNIM-ST-86mm



STEP Motor(Closed Loop)
UNIM-SV Series



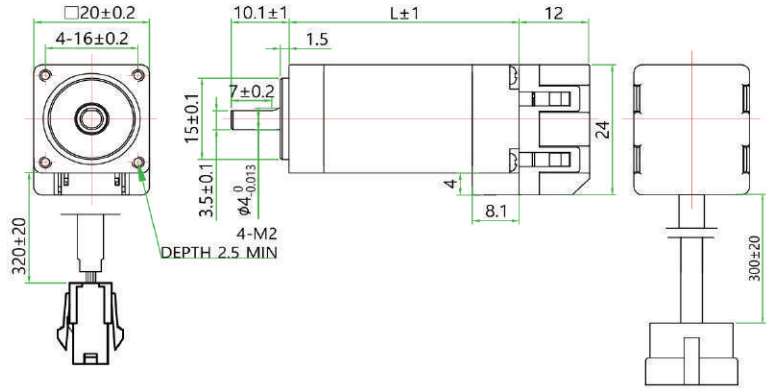
UNIM-SV Series											
Model		20L-G	28S-A	28M-A	28L-A	35M-G	35L	42S-A	42M-A	42L-A	42XL-A
Drive Method	-	BI-POLAR									
Number of Phases	-	2	2	2	2	2	2	2	2	2	2
Encoder	[PPR]	8,000	10,000	10,000	10,000	8,000	8,000	10,000	10,000	10,000	10,000
Step Angle	-	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Current	[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-cm²]	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-cm²]	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

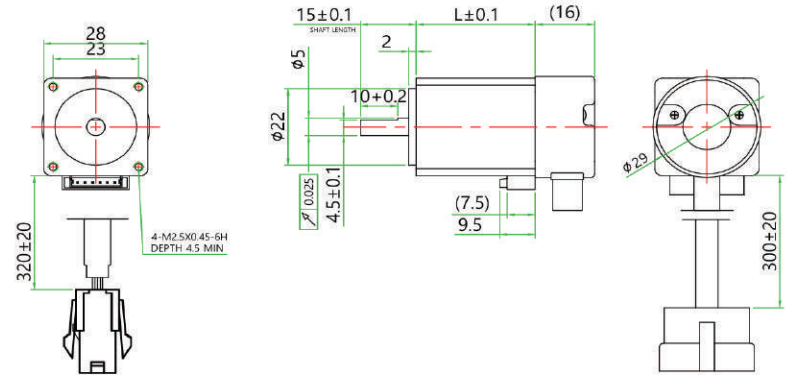
UNIM-SV 20mm

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



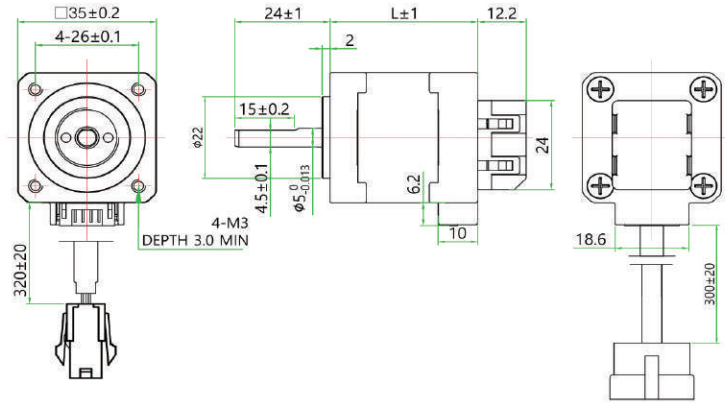
UNIM-SV 28mm

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



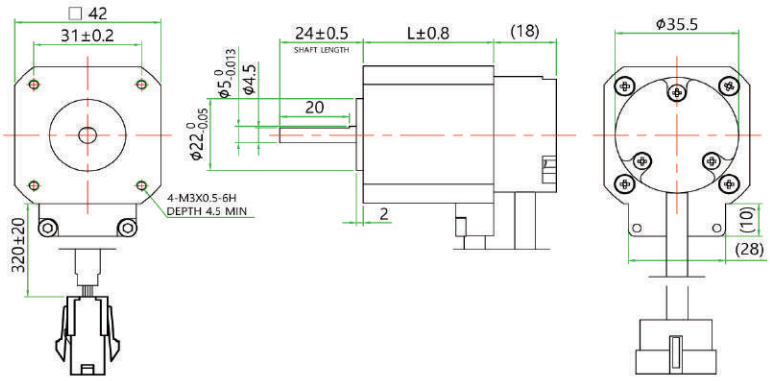
UNIM-SV 35mm

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



UNIM-SV 42mm

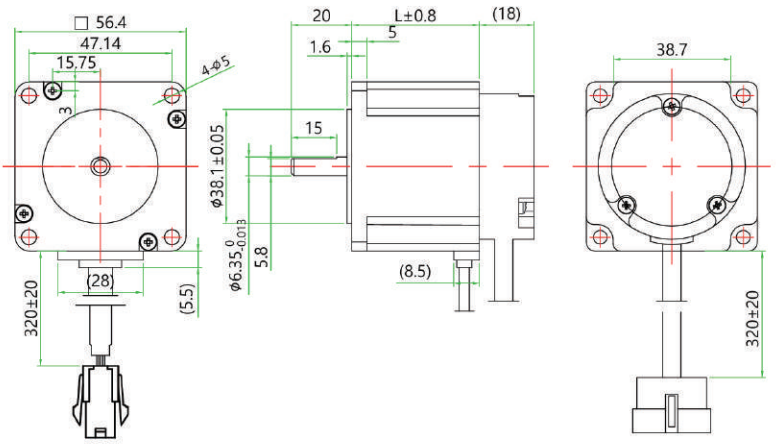
MODEL	LENGTH(mm)
UNIM-SV-42S	38.5
UNIM-SV-42M	45
UNIM-SV-42L	52
UNIM-SV-42XL	58



Dimension – UNIM-SV Series

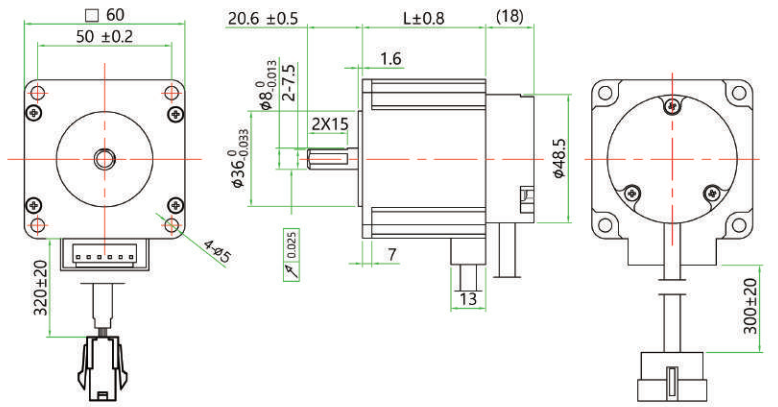
UNIM-SV 56mm

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



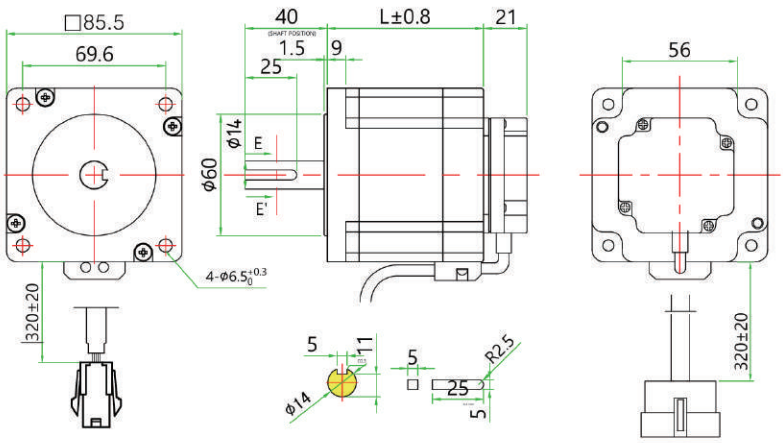
UNIM-SV 60mm

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



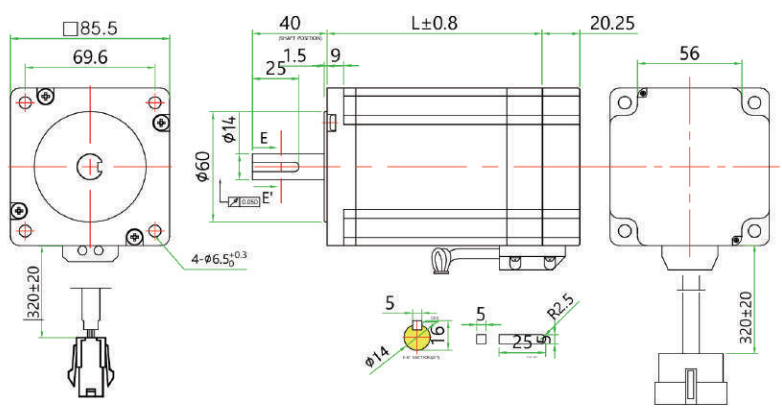
UNIM-SV 86mm

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



UNIM-SV 86mm

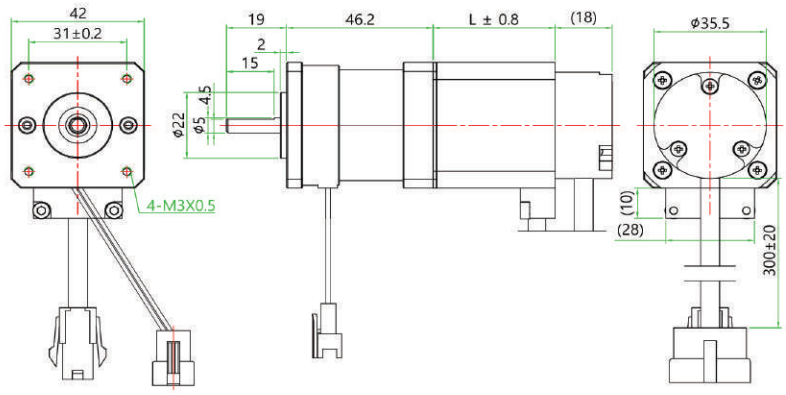
MODEL	LENGTH(mm)
UNIM-SV-86L	115.35



Dimension – UNIM-SV Series + Brake

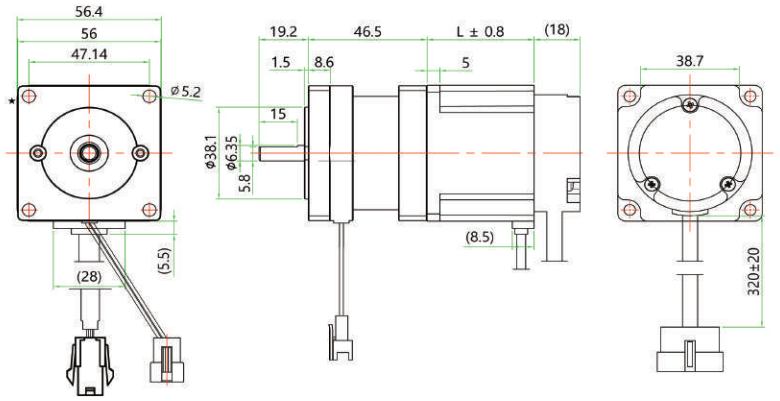
UNIM-SV 42mm

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



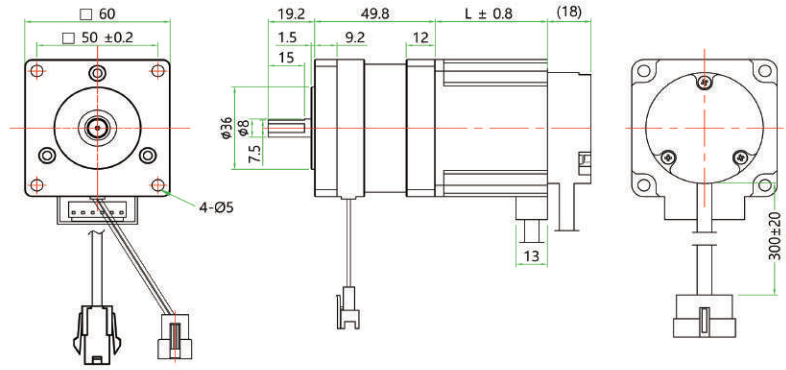
UNIM-SV 56mm

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



UNIM-SV 60mm

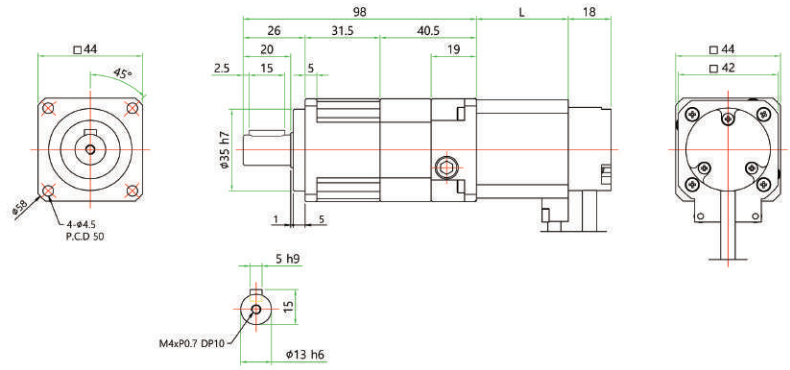
MODEL	LENGTH(mm)
UNIM-SV-60S(BK)	46.3
UNIM-SV-60M(BK)	55.8
UNIM-SV-60L(BK)	87.8



Dimension –
UNIM-SV Series + Reducer(1Stage)

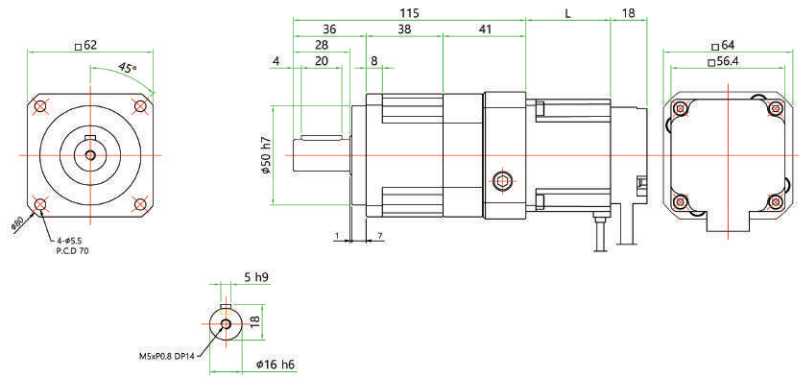
UNIM-SV 42mm

MODEL	LENGTH(mm)
UNIM-SV-42S(R3~10)	38.5
UNIM-SV-42M(R3~10)	45
UNIM-SV-42L(R3~10)	52
UNIM-SV-42XL(R3~10)	58



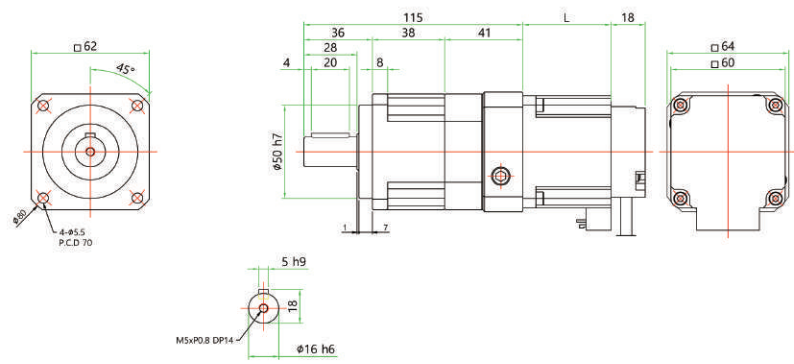
UNIM-SV 56mm

MODEL	LENGTH(mm)
UNIM-SV-56S(R3~10)	41.8
UNIM-SV-56M(R3~10)	54.5
UNIM-SV-56L(R3~10)	77.5



UNIM-SV 60mm

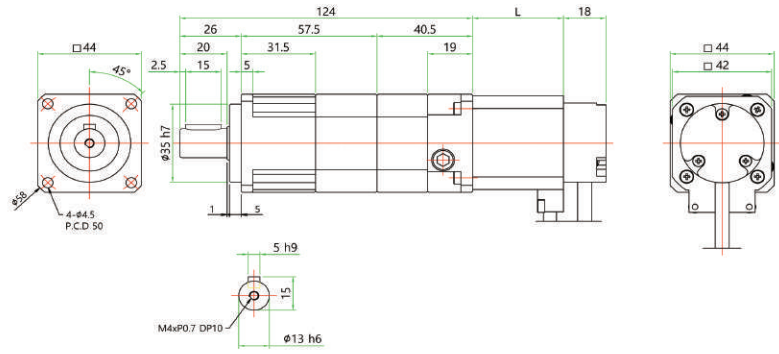
MODEL	LENGTH(mm)
UNIM-SV-60S(R3~10)	46.3
UNIM-SV-60M(R3~10)	55.8
UNIM-SV-60L(R3~10)	87.8



Dimension – UNIM-SV Series + Reducer(2Stage)

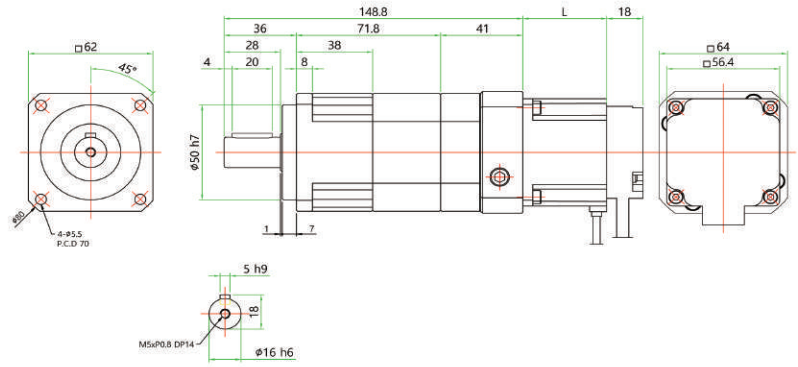
UNIM-SV 42mm

MODEL	LENGTH(mm)
UNIM-SV-42S(R15~50)	38.5
UNIM-SV-42M(R15~50)	45
UNIM-SV-42L(R15~50)	52
UNIM-SV-42XL(R15~50)	58



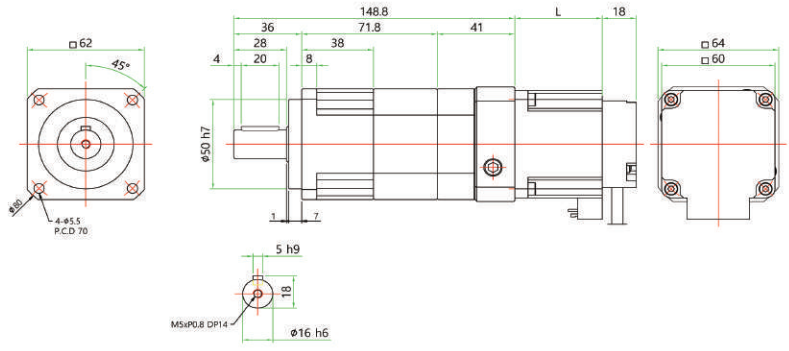
UNIM-SV 56mm

MODEL	LENGTH(mm)
UNIM-SV-56S(R15~50)	41.8
UNIM-SV-56M(R15~50)	54.5
UNIM-SV-56L(R15~50)	77.5



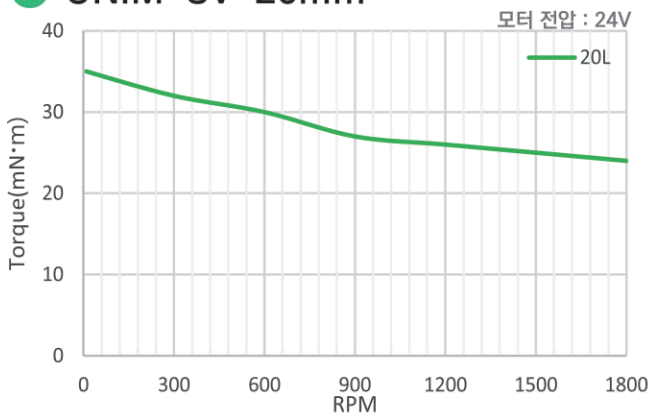
UNIM-SV 60mm

MODEL	LENGTH(mm)
UNIM-SV-60S(R15~50)	46.3
UNIM-SV-60M(R15~50)	55.8
UNIM-SV-60L(R15~50)	87.8

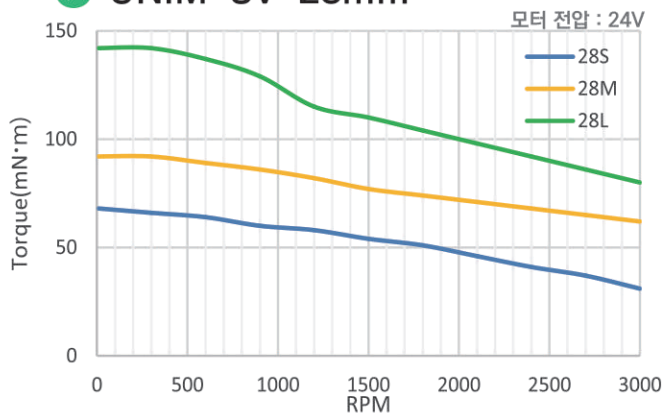


Torque Performance Curves

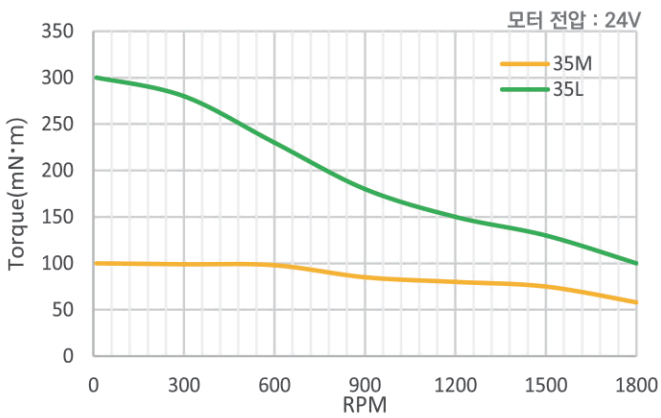
UNIM-SV-20mm



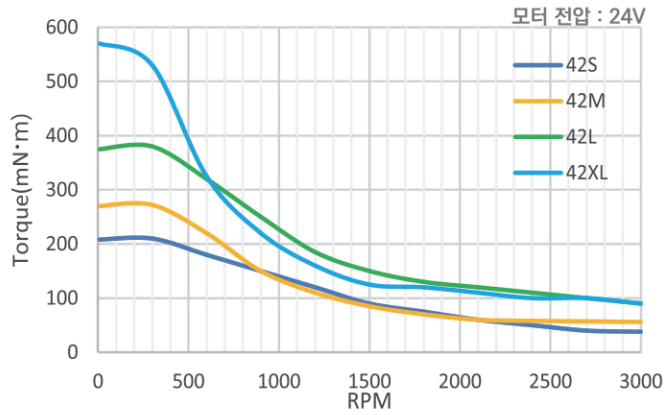
UNIM-SV-28mm



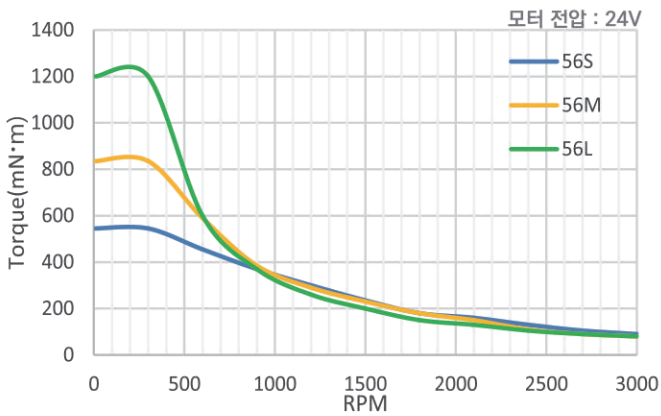
UNIM-SV-35mm



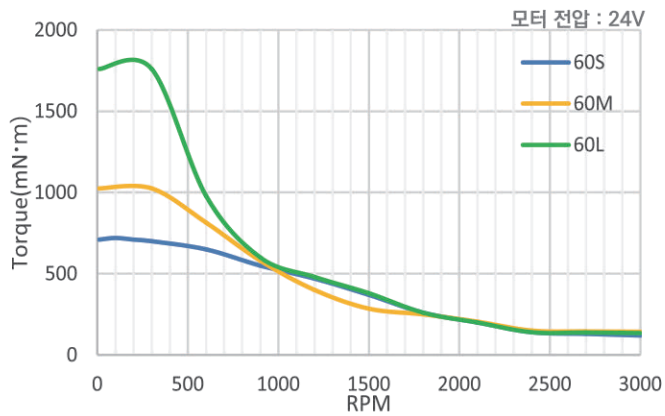
UNIM-SV-42mm



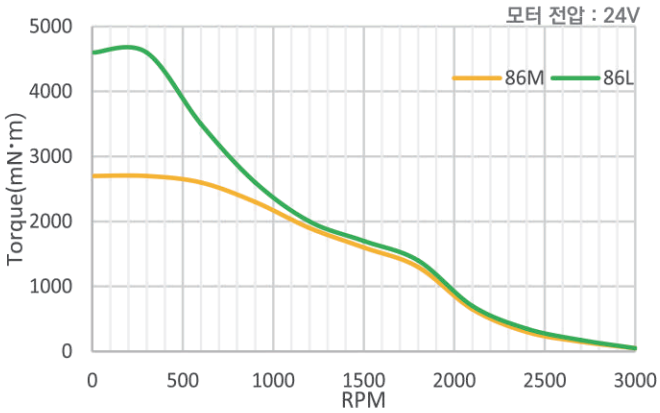
UNIM-SV-56mm



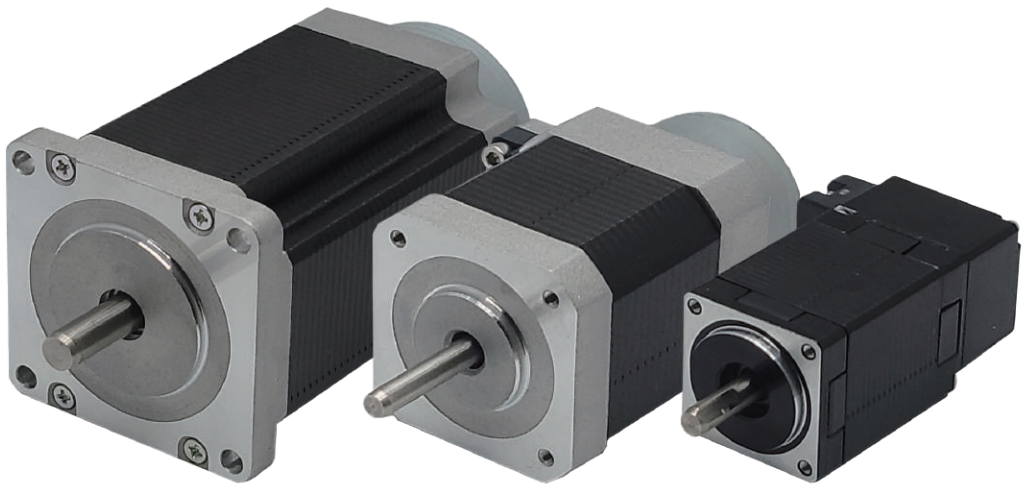
UNIM-SV-60mm



UNIM-SV-86mm



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

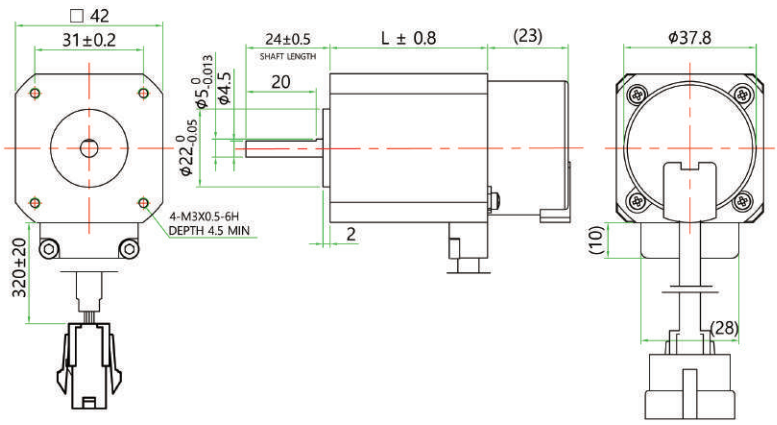


UNIM-SA Series								
Model		42M-S	42L-S	42XL-S	56M-S	56L-S	60M-S	60L-S
Drive Method	-	BI-POLAR						
Number of Phases	-	2	2	2	2	2	2	2
Encoder	[PPR]	10,000(17bit)						
Multi-turn		16bit						
Step Angle	-	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Current	[A]	1.2	1.2	2	2.8	4	4	4
Resistance	[Ω]	1.7	3.5	2	0.85	1.25	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	2.65	1.14	2.92
Rotor Inertia	[g-cm²]	56	72	89	245	470	245	920
Mass	[g]	310	496	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

Dimension – UNIM-SA Series

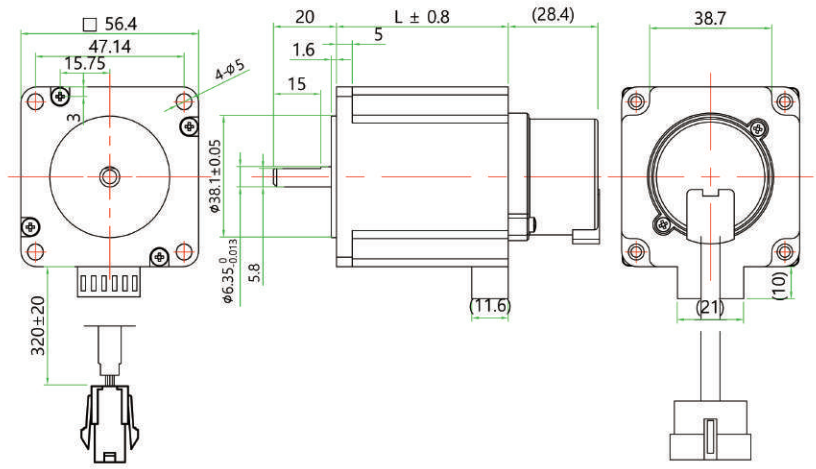
UNIM-SA 42mm

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



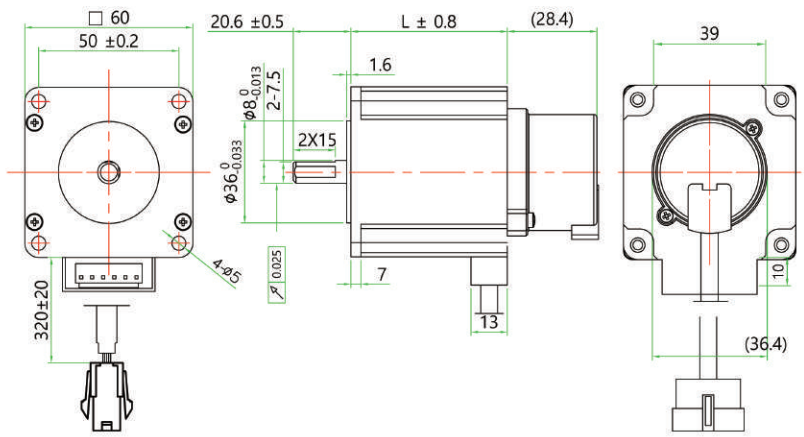
UNIM-SA 56mm

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



UNIM-SA 60mm

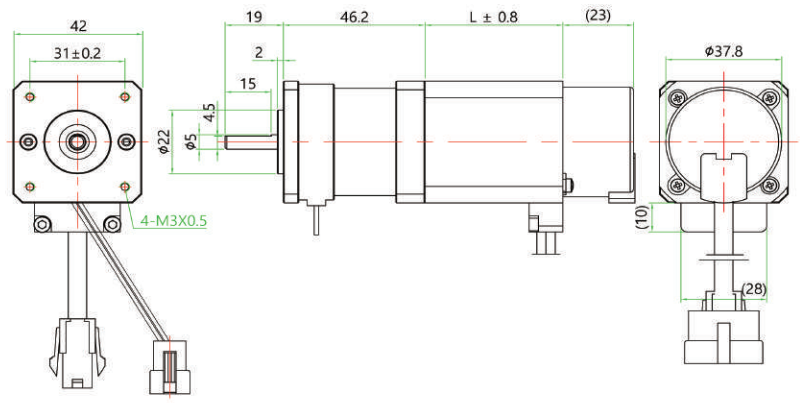
MODEL	LENGTH(mm)
UNIM-SA-60M	55.8
UNIM-SA-60L	87.8



Dimension – UNIM-SA Series + Brake

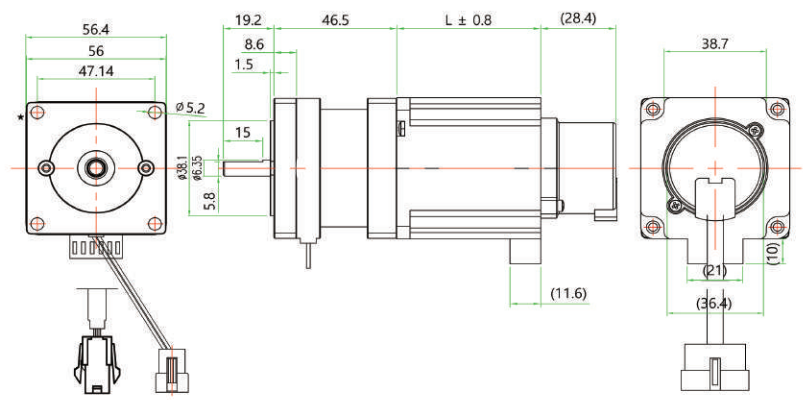
UNIM-SA 42mm

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



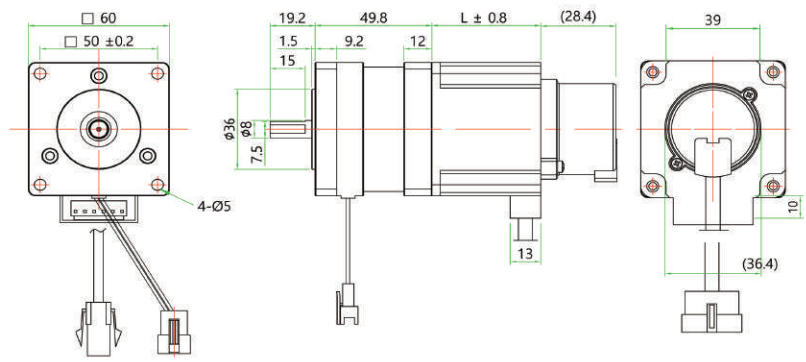
UNIM-SA 56mm

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

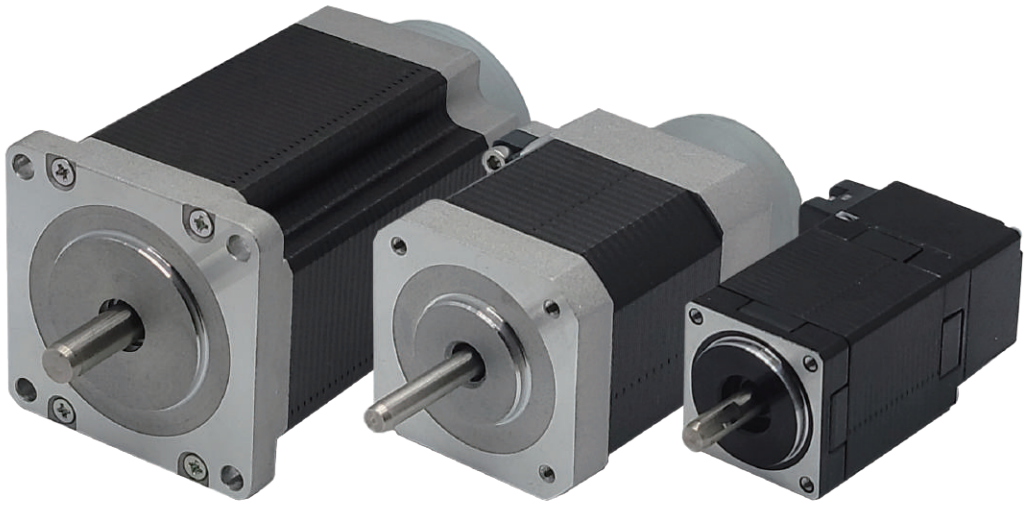


UNIM-SA 60mm

MODEL	LENGTH(mm)
UNIM-SA-60M(BK)	55.8
UNIM-SA-60L(BK)	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-cm²]	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.

Hollow Step Motor(Open Loop)
UNIM-ST-HL Series



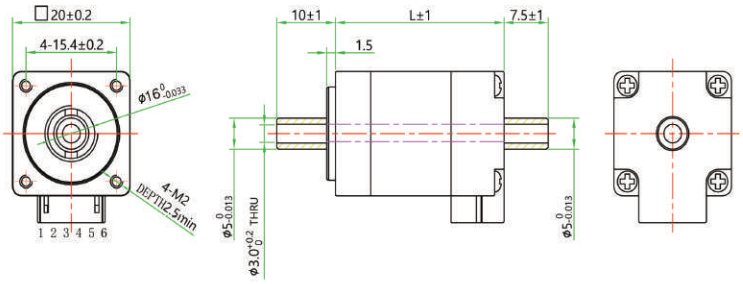
UNIM-ST-HL							
Model	Unit	20M-A	20L-A	28S-A	28M-A	28L-A	35M-A
Drive Method	-	BI-POLAR					
Number of Phases	-	2					
Step Angle	[°]	1.8					
Current	[A]	0.6	0.5	1	1.5	1.5	1.5
Resistance	[Ω]	5.4	11	2	1.5	1.8	1.65
Inductance	[mH]	2.2	4.5	2.5	1.84	2.4	2.7
Holding Torque	[N.m]	0.02	0.036	0.06	0.12	0.16	0.18
Rotor Inertia	[g-cm²]	1.6	2.9	9	12	18	20
Mass	[g]	40	60	100	150	200	210
Length	[mm]	28.65	39.15	32.2	45.15	51.8	37.25

UNIM-ST-HL							
Model	Unit	35L-A	42S-A	42L-A	56S-A	56M-A	86M-A
Drive Method	-	BI-POLAR					
Number of Phases	-	2					
Step Angle	[°]	1.8					
Current	[A]	1.2	1	2.5	2.6	2.5	3
Resistance	[Ω]	4.9	4.2	0.85	0.98	1.5	1.45
Inductance	[mH]	8	7.8	1.7	3.4	5.6	14
Holding Torque	[N.m]	0.34	0.31	0.56	1	1.5	4.5
Rotor Inertia	[g-cm²]	24	35	77	180	350	1800
Mass	[g]	230	240	360	520	850	2100
Length	[mm]	45.25	34.35	48.35	46.7	65.7	78.5

Dimension –
UNIM-ST-HL Series

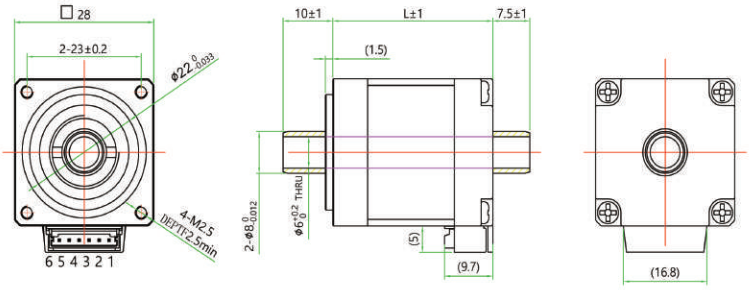
UNIM-ST-HL 20mm

MODEL	LENGTH(mm)
UNIM-ST-20M-HL	28.65
UNIM-ST-20L-HL	39.15



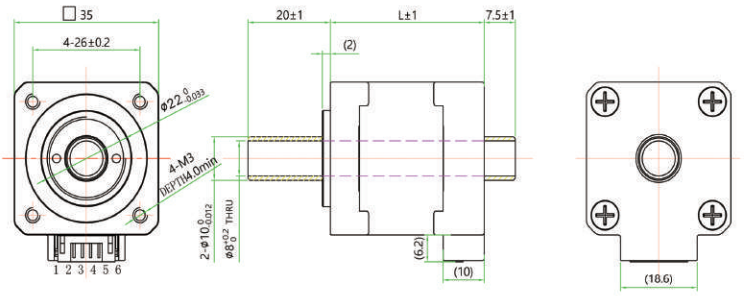
UNIM-ST-HL 28mm

MODEL	LENGTH(mm)
UNIM-ST-28S-HL	32.2
UNIM-ST-28M-HL	45.15
UNIM-ST-28L-HL	51.8



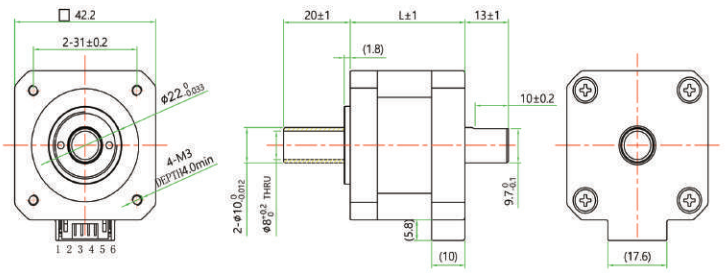
UNIM-ST-HL 35mm

MODEL	LENGTH(mm)
UNIM-ST-35M-HL	37.25
UNIM-ST-35L-HL	45.25



UNIM-ST-HL 42mm

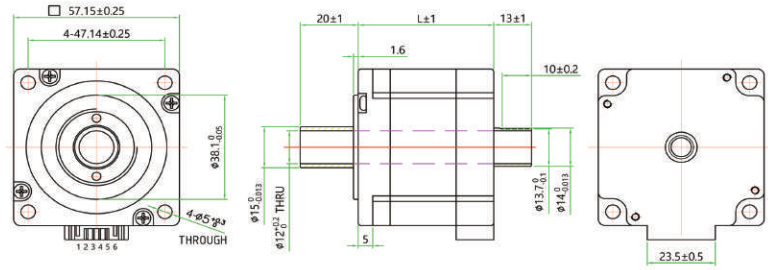
MODEL	LENGTH(mm)
UNIM-ST-42S-HL	34.35
UNIM-ST-42L-HL	48.35



Dimension – UNIM-ST-HL Series

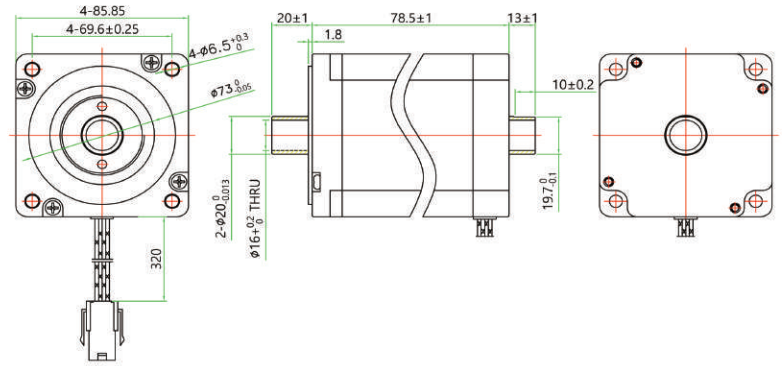
UNIM-ST-HL 56mm

MODEL	LENGTH(mm)
UNIM-ST-56S-HL	46.7
UNIM-ST-56M-HL	65.7



UNIM-ST-HL 86mm

MODEL	LENGTH(mm)
UNIM-ST-86M-HL	78.5



Hollow Step Motor(Closed Loop)
UNIM-SV-HL Series



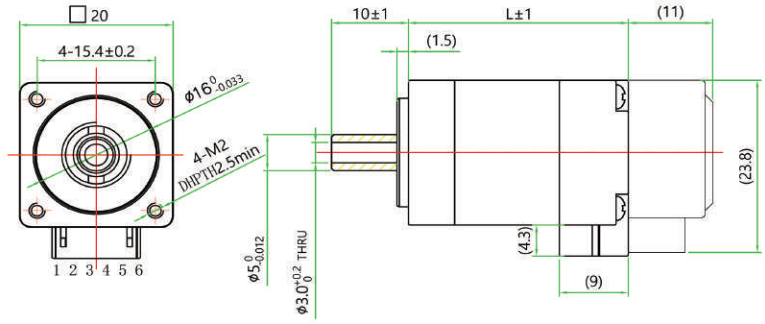
UNIM-SV-HL							
Model	Unit	20M-A	20L-A	28S-A	28M-A	28L-A	35M-A
Drive Method	-	BI-POLAR					
Number of Phases	-	2					
Encoder	[PPR]	8000	8000	8000	8000	8000	8000
Step Angle	[°]	1.8					
Current	[A]	0.6	0.5	1	1.5	1.5	1.5
Resistance	[Ω]	5.4	11	2	1.5	1.8	1.65
Inductance	[mH]	2.2	4.5	2.5	1.84	2.4	2.7
Holding Torque	[N.m]	0.02	0.036	0.06	0.12	0.16	0.18
Rotor Inertia	[g-cm²]	1.6	2.9	9	12	18	20
Mass	[g]	45	65	110	160	210	215
Length	[mm]	28.65	39.15	32.2	45.15	51.8	37.25
Encoder Length	[mm]	11	11	12	12	12	12

UNIM-SV-HL							
Model	Unit	35L-A	42S-A	42L-A	56S-A	56M-A	86M-A
Drive Method	-	BI-POLAR					
Number of Phases	-	2					
Encoder	[PPR]	8000	10000	10000	10000	10000	10000
Step Angle	[°]	1.8					
Current	[A]	1.2	1	2.5	2.6	2.5	3
Resistance	[Ω]	4.9	4.2	0.85	0.98	1.5	1.45
Inductance	[mH]	8	7.8	1.7	3.4	5.6	14
Holding Torque	[N.m]	0.34	0.31	0.56	1	1.5	4.5
Rotor Inertia	[g-cm²]	24	35	77	180	350	1800
Mass	[g]	235	290	410	570	900	2200
Length	[mm]	45.25	34.35	48.35	46.7	65.7	78.5
Encoder Length	[mm]	12	13.5	13.5	13.5	13.5	21.8

Dimension – UNIM-SV-HL Series

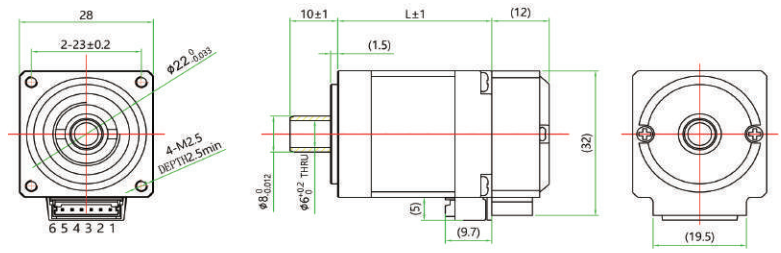
UNIM-SV-HL 20mm

MODEL	LENGTH(mm)
UNIM-SV-20M-HL	28.65
UNIM-SV-20L-HL	39.15



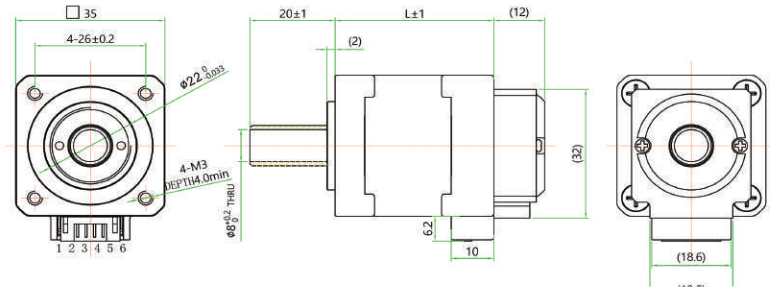
UNIM-SV-HL 28mm

MODEL	LENGTH(mm)
UNIM-SV-28S-HL	32.2
UNIM-SV-28M-HL	45.15
UNIM-SV-28L-HL	51.8



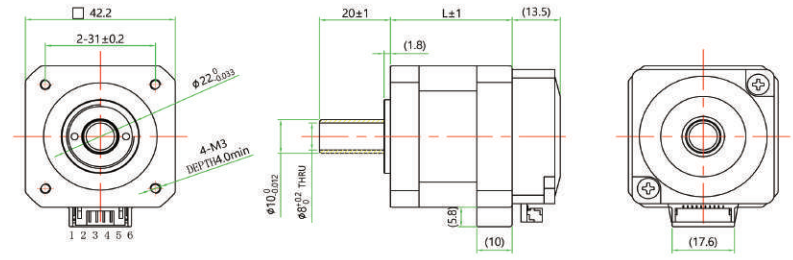
UNIM-SV-HL 35mm

MODEL	LENGTH(mm)
UNIM-SV-35M-HL	37.25
UNIM-SV-35L-HL	45.25



UNIM-SV-HL 42mm

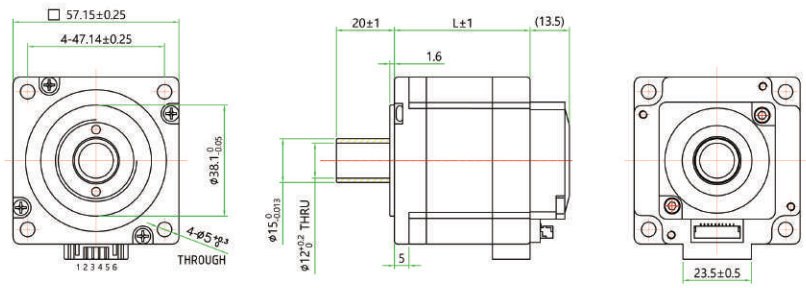
MODEL	LENGTH(mm)
UNIM-SV-42S-HL	34.35
UNIM-SV-42L-HL	48.35



Dimension –
UNIM-SV-HL Series

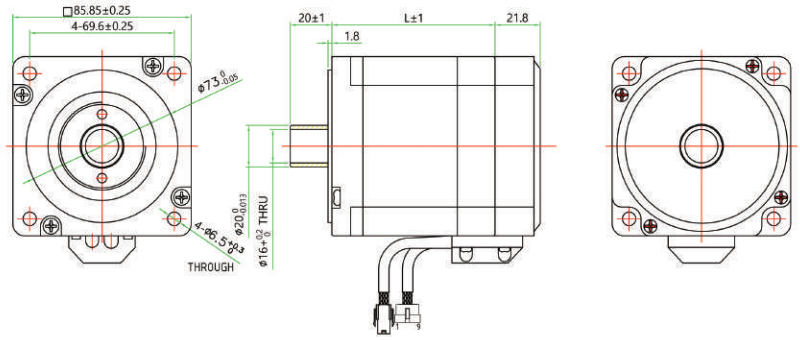
UNIM-SV-HL 56mm

MODEL	LENGTH(mm)
UNIM-SV-56S-HL	46.7
UNIM-SV-56M-HL	65.7



UNIM-SV-HL 86mm

MODEL	LENGTH(mm)
UNIM-SV-86M-HL	78.5



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(Option)
- 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	



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㈜ MOTION CONTROLLER

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