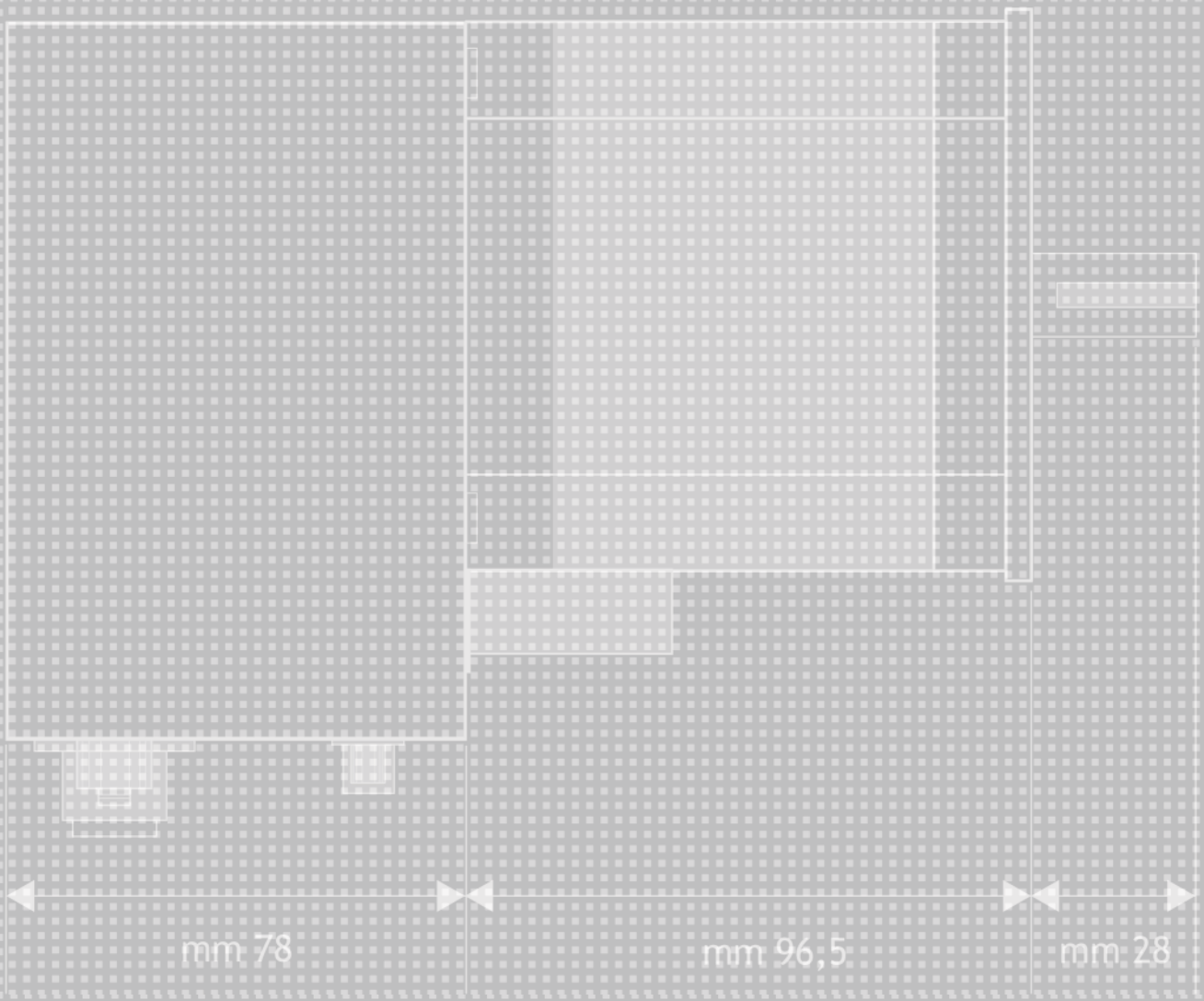


PRODUCT NEWS

Look Ahead!

TABLE OF CONTENTS

MOTION CONTROLLERS

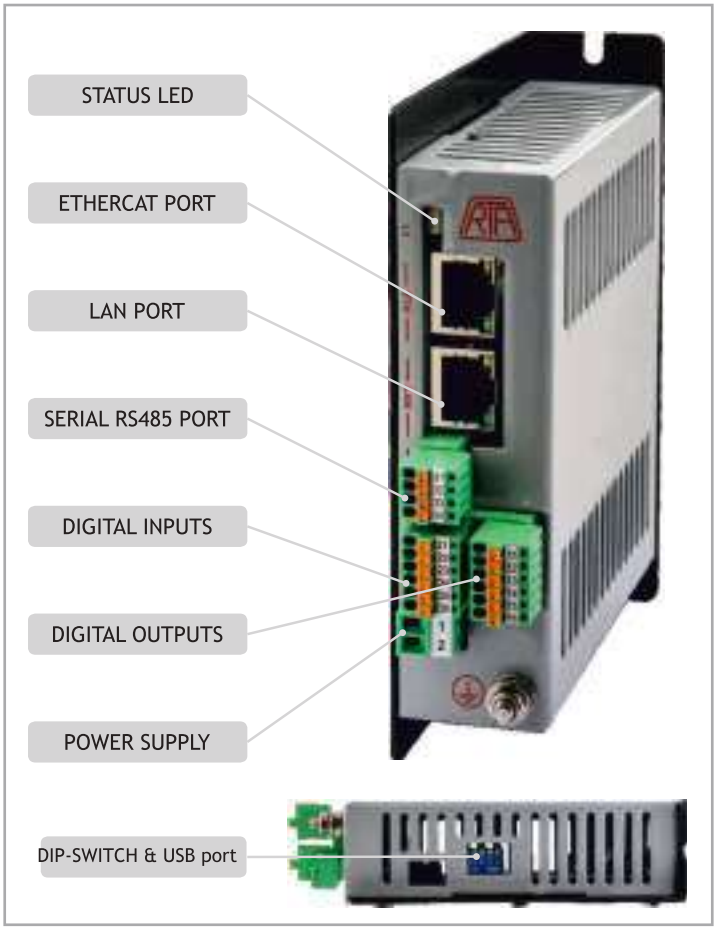
MiniMax EtherCAT® PLC

INTRODUCTION

MiniMax is an EtherCAT PLC designed for easy configuration and programming of stepper and servo drives. It allows to develop EtherCAT automation solutions ranging from basic to medium complexity. With an additional LAN port featuring a Modbus TCP/IP server protocol, it can be easily integrated with HMIs, third party PLCs, Industrial Pcs and other network devices.

HIGHLIGHTS

- Easy configuration and programming by *R.T.A. Studio* software for Microsoft Windows
- Up to 8 stepper or servo axis
- Full R.T.A. and SANYO DENKI EtherCAT drives compatibility
- Simple structured text programming with built-in function libraries
- Easy parameter configuration
- Extremely compact size
- USB or LAN programming, debugging and monitoring
- 5 Digital Inputs + 5 Digital Outputs



EASY PROGRAMMING SYSTEM

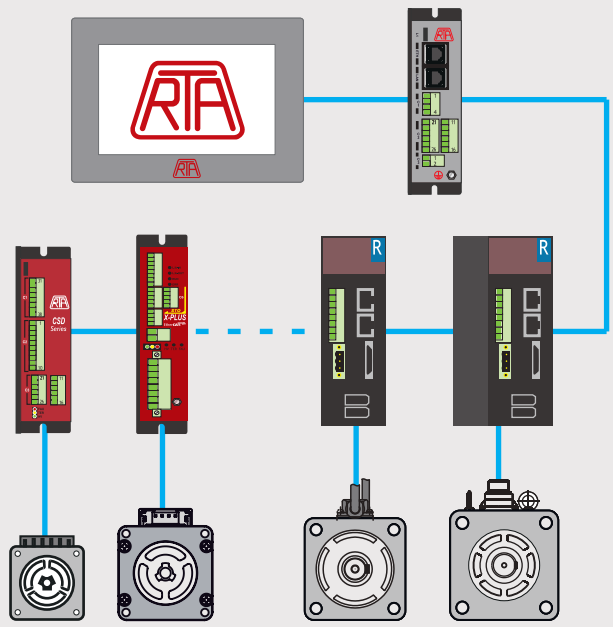
The R.T.A. programming system provided by *MiniMax* is a simple and high level programming language specifically designed for automation control.

Thanks to its bytecode compilation, the fast executing performance required for a realtime system is guaranteed.

TECHNICAL FEATURES

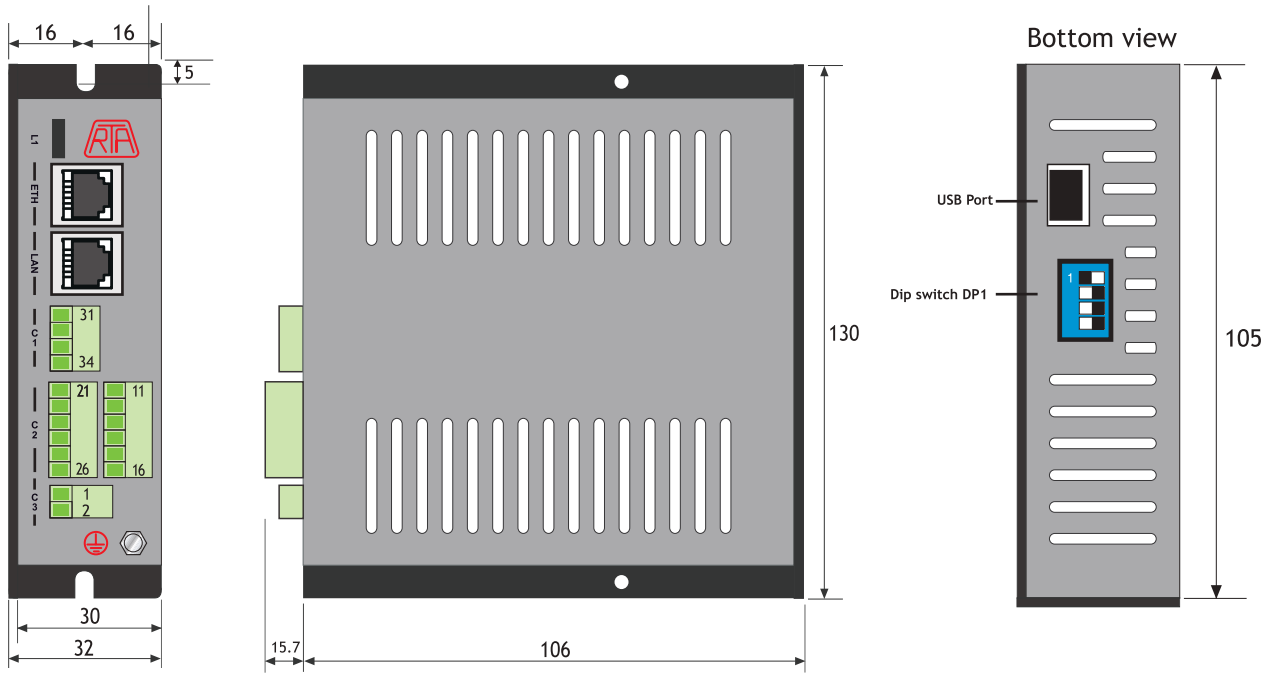
- Dual core 480 MHz ARM Processor with 64-bit precision float unit
- Realtime multitasking system up to 20 processes
- LAN port with Modbus TCP/IP server and UDP protocols
- RS-485 Modbus RTU master port
- 500 KB user program space
- Wide free user memory with +16000 registers (double float.) - 4000 retentive

R.T.A. *MiniMax* SYSTEM EXAMPLE



UP TO 8 STEPPER & SERVO AXIS

MECHANICAL DIMENSIONS



Dimensions in millimiters - Not in scale.

A-Series PLC SYSTEM CPU - Modules - HMI

INTRODUCTION

A-series integrated PLC system, including CPU, modules and touch screens, is a versatile and programmable logic controller, expandable with external modules.

It is typically suitable for simple stepper position applications, thanks to easy and flexible parameters setting.

It perfectly integrates with R.T.A. selected products and technologies, forming an easy-to-use control system.

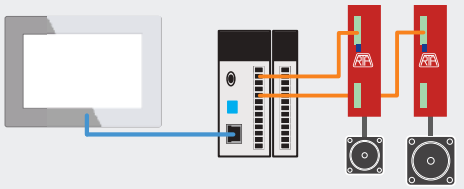
TOUCH SCREENS

- Easy integration with the PLC System
- Compact size
- Quick installation

R.T.A. PLC SYSTEM

POSITIONING CONTROL *made easy*

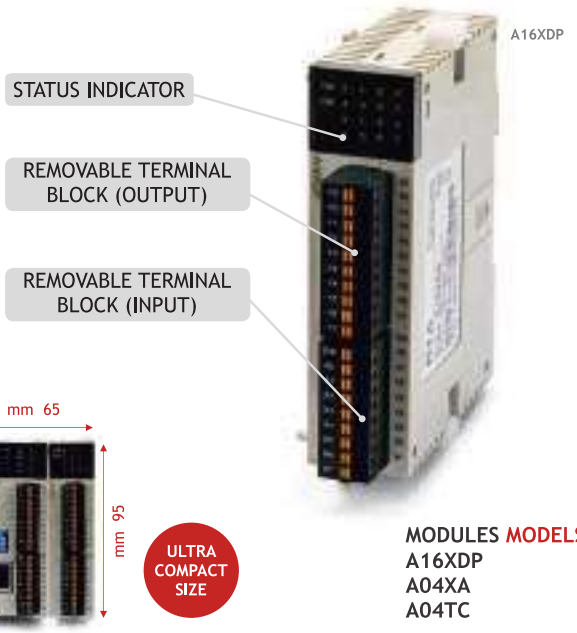
STEP-DIR — MODBUS TCP



LADDER LOGIC

Programming System

CPU MODELS
AH16S0P
AT16S0P



MODULES MODELS
A16XDP
A04XA
A04TC

MAIN FEATURES

CPU MAIN FEATURES		
	AH16S0P	AT16S0P
PULSE/TRAIN AXES	4	2
MOVEMENT	Single and multi-axes	Single axes movement
ETHERNET	yes	yes
EXPANDABLE	15 modules	15 modules
INPUT/OUTPUT	8 Digital Input / 8 Digital Output	

MODULES MAIN FEATURES			
	A16XDP	A04XA	A04TC
DIGITAL INPUT	8	0	0
DIGITAL OUTPUT	8	0	0
ANALOG INPUT		2	0
ANALOG OUTPUT		2	0
THERMOCOUPLE			4

TECHNICAL SPECIFICATIONS

PLC SPECIFICATIONS	AH16S0P	T16S0P
POWER SUPPLY	24 VDC ±15%	
POWER PROTECTION	DC input power polarity reverse, over voltage protection	
STEP/DIR OUTPUT	4 (200KHz, 24V PNP)	2 (200KHz, 24V PNP)
AB ENCODER INPUT	4 (200KHz, 24V PNP)	2 (200KHz, 24V PNP)

DIGITAL INPUT SPECIFICATIONS	
INPUT SIGNAL	24 VDC PNP
INPUT IMPEDANCE	4.3KΩ
MAX INPUT CURRENT	10 mA
INSULATION TYPE	Optoelectronic isolation for each channel

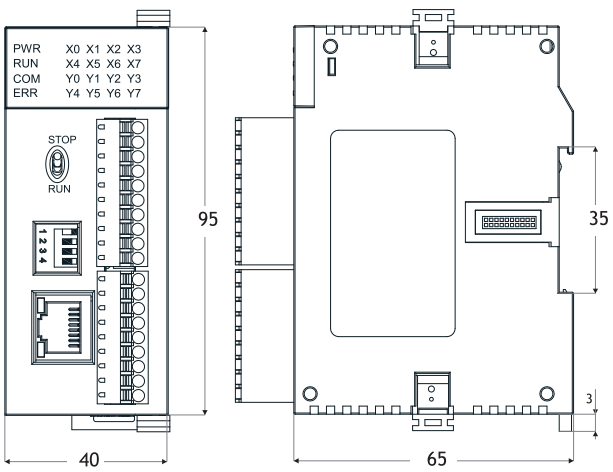
DIGITAL OUTPUT SPECIFICATIONS	
MAX LOAD	0,5A/1 point, 2A/4 points COM, 24VDC PNP
REACTION TIME	Off->On 10 ms, On->Off 5 ms
INSULATION TYPE	Optoelectronic isolation for each channel

ANALOG INPUT / OUTPUT SPECIFICATIONS					
	VOLTAGE INPUT/OUTPUT			CURRENT INPUT/OUTPUT	
INPUT/OUTPUT RANGE	0V - +10V	0V - +5V	1V - +5V	0 - 20 mA	4 - 20 mA
RESOLUTION	2.5 mV	1.25 mV	1.25 mV	5μA	
DIGITAL INPUT/OUTPUT RANGE	12 bits, Code range: 0~ 32000				

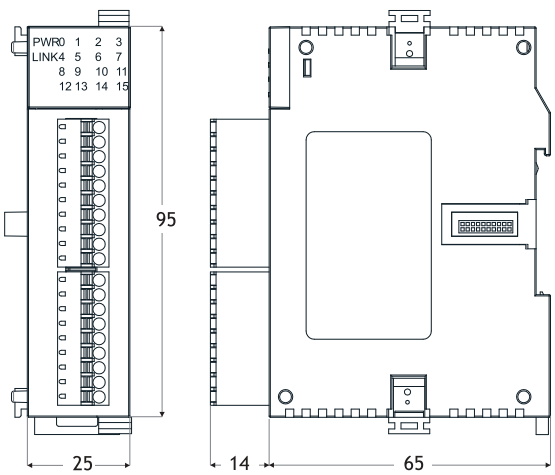
THERMOCOUPLE MODULE SPECIFICATIONS	
INPUT RANGE	IS, K, E, B, N, R, Wre/25, Wre5/26, [0, 20]mV, [0, 50]mV, [0, 100]mV
RESOLUTION	0.1°C
MAX INPUT RANGE	±30mA
RESPONSE TIME	560ms/4 Channel
DIGITAL OUTPUT RANGE	12 bits, Code range: 0 ~ 32000

MECHANICAL DIMENSIONS (mm)

CPU
AH16S0P
AT16S0P



MODULES
A16XDP
A04XA
A04TC



HMI Touch Screen - TS series

NEW Tech Specs

MAIN FEATURES

- Four models in two sizes
- Free developer tools
- Optional remote control (VPN)
- Easy integration with R.T.A. products
- R.T.A. support team

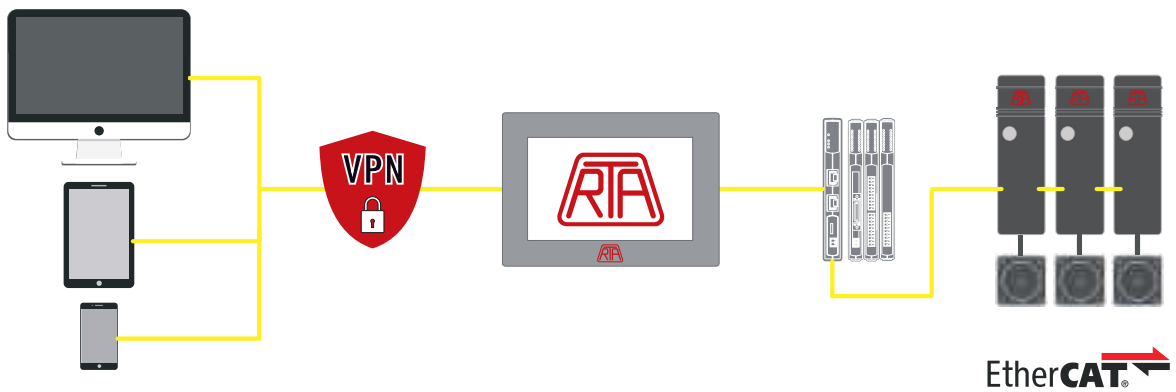
			NEW MODEL 	NEW MODEL 	NEW MODEL 
	MODEL	TS-07-IP-B-08072	TS-07-CMT-A-02078X	TS-07-CMT-A-03072XH2	TS-10-CMT-A-03092X
SOFTWARE FEATURES	*BASE FUNCTIONS	■	■	■	■
	**ADVANCED FUNCTIONS		■	■	■
	PLC TAG EMBEDDED IN PROJECT	■	■	■	■
	OPC SERVER			■	■
	EXTERNAL DATABASE			■	■
	SUPPORT				
REMOTE CONTROL	EASY ACCESS 2.0 (CRZACEA020)	/	Optional	Optional	Optional
I/O PORT	ETHERNET	10/100 Base-T x 1	10/100 Base-T x 2	10/100 Base-T x 2	10/100 Base-T x 1 10/100/1000 Base-T x 1

*Base functions: Picutres/ Sharpe Library embedded in project, Enhanced Security Mode, VNC Server, Circular Trend Display, Combo Button, Operation Log, OPC UA Client, Picture Viewer, Recipe Database / Reciper View

**Advanced functions: e-Mail, Media Player, MQTT (Publisher / Subscriber), USB Camera, IP Camera, VNC Viewer,

HOW THE REMOTE CONTROL WORKS

EasyAccess 2.0 enables the operator to easily connect and monitor the remote HMI from anywhere in the world, through a protected remote VPN connection.

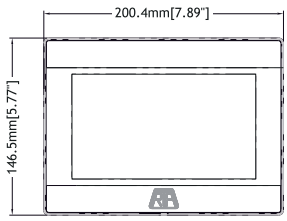


ADVANCED SPECIFICATIONS

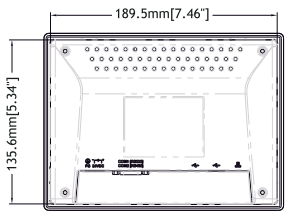
MODEL		TS-07-IP-B-08072	TS-07-CMT-A-02078X	TS-07-CMT-A-03072XH2	TS-10-CMT-A-03092X
DISPLAY	DISPLAY	7" TFT	7" TFT	7" TFT	9.7" TFT
	RESOLUTION	800x480	800x480	1024x600	1024x768
	BACKLIGHT LIFE TIME	>30,000 hrs.	>30,000 hrs.	>25,000 hrs.	>30,000 hrs.
MEMORY	FLASH	256 Mb	4 Gb	4 Gb	4 Gb
	RAM	128 Mb	1 Gb	1 Gb	1 Gb
PROCESSOR		Dual-core RISC	Quadcore RISC	Quadcore RISC	Quadcore RISC
I/O PORT	USB HOST	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1
	COM PORT	COM1 RS-232, COM2 RS-485 2W/4W	COM2 RS-485 2W/4W, COM3 RS-485 2W	COM2 RS-485 2W/4W, COM3 RS-485 2W CAN Bus	COM2 RS-485 2W/4W, COM3 RS-485 2W CAN Bus
		/	COM1 RS-232 4W, COM3 RS-232 2W	COM1 RS-232 4W, COM3 RS-232 2W	COM1 RS-232 4W, COM3 RS-232 2W
RTC		Built-in	Built-in	Built-in	Built-in
CERTIFICATE		CE	CE/UL	CE/UL	CE/UL
DIMENSIONS	DIMENSIONS WxHxD	200.4 x 146.5 x 34 mm	200.3 x 146.3 x 35 mm	200.3 x 146.3 x 35 mm	260.6 x 203.1 x 44.5 mm
	PANEL CUTOUT	192 x 138 mm	192 x 138 mm	192 x 138 mm	250 x 192 mm
ENVIROMENT	PROTECTION STRUCTURE	NEMA4 / IP65 Compliant Front Panel	UL Type 4X (indoor use only)/ NEMA4/ IP66 Compliant Front Panel	UL Type 4X (indoor use only)/ NEMA4/ IP66 Compliant Front Panel	UL Type 4X (indoor use only)/ NEMA4/ IP66 Compliant Front Panel
POWER	INPUT POWER	24 ± 20% VDC	24 ± 20% VDC	24 ± 20% VDC	24 ± 20% VDC
	POWER CONSUMPTION	450 mA at 24VDC	820 mA at 24VDC	850 mA at 24VDC	1 A at 24 VDC
	POWER ISOLATION	Built-in	Built-in	Built-in	Built-in

MECHANICAL DIMENSIONS (mm)

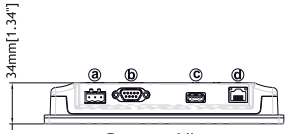
Model TS-07-IP-B-08072



Front View

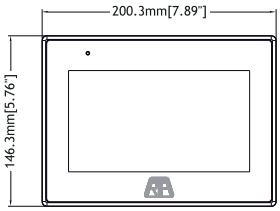


Rear View

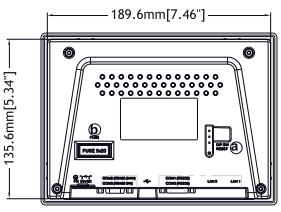


Bottom View

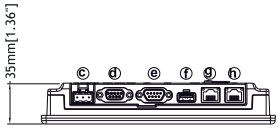
Model TS-07-CMT-A-03072XH2
TS-07-CMT-A-02078X



Front View

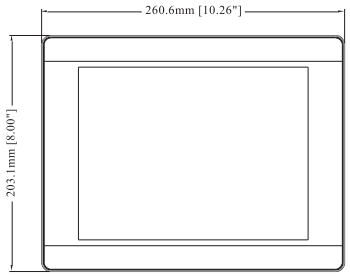


Rear View

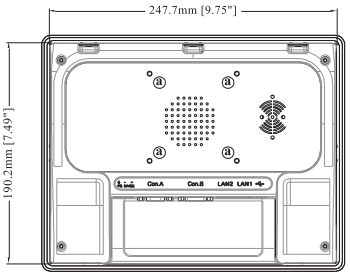


Bottom View

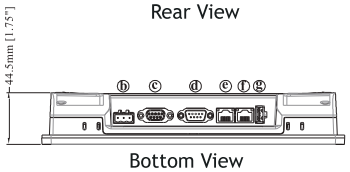
Model TS-10-CMT-A-03092X



Front View



Rear View

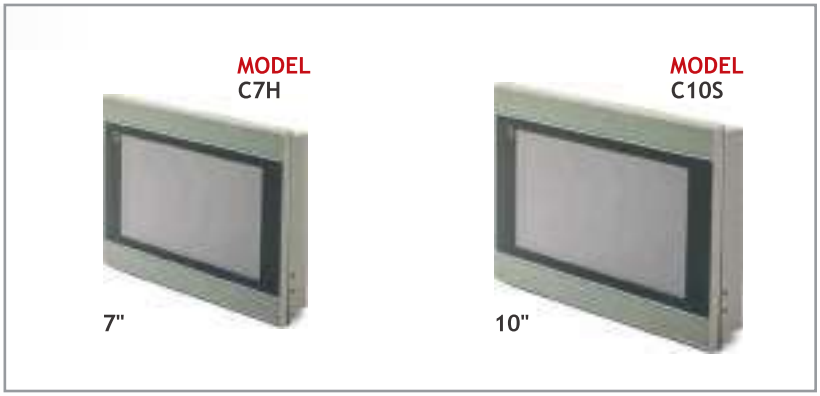


Bottom View

HMI *Touch Screen C7H - C10S*

MAIN FEATURES

- 2 serial ports, 2 USB ports, SD card
- Compact size for easy installation
- Easy integration with A-series PLC
- R.T.A. support team

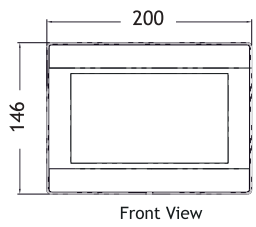


TECHNICAL SPECIFICATIONS

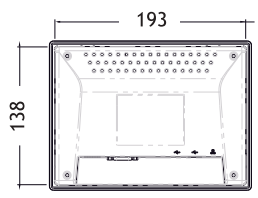
MODEL		C7H	C10S
DISPLAY	DISPLAY	7"	10.1"
	RESOLUTION	1024x600 pixels	1024x600 pixels
MEMORY	FLASH	4 Gb	
	RAM	512 Mb	
DIMENSIONS	DIMENSION	200x146x37 mm	270x212x35 mm
	WEIGHT	0.8 Kg	1.3 Kg
POWER	POWER CONSUMPTION	24±20% VDC	
	INPUT POWER	7 W	10 W

MECHANICAL DIMENSIONS (mm)

Model C7H



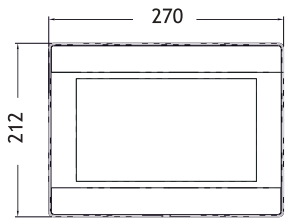
Front View



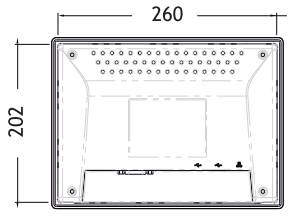
Rear View

Bottom View

Model C10S



Front View



Rear View

Bottom View

Ethernet switch MIEN2205

INTRODUCTION

MIEN2205 is a standard (unmanaged) Ethernet switch with 5x10/100Base-T(X) ports.
With its very compact size, it is easy to install and its rigid IP30 housing makes it suitable for diverse environments.

MODEL MIEN2205

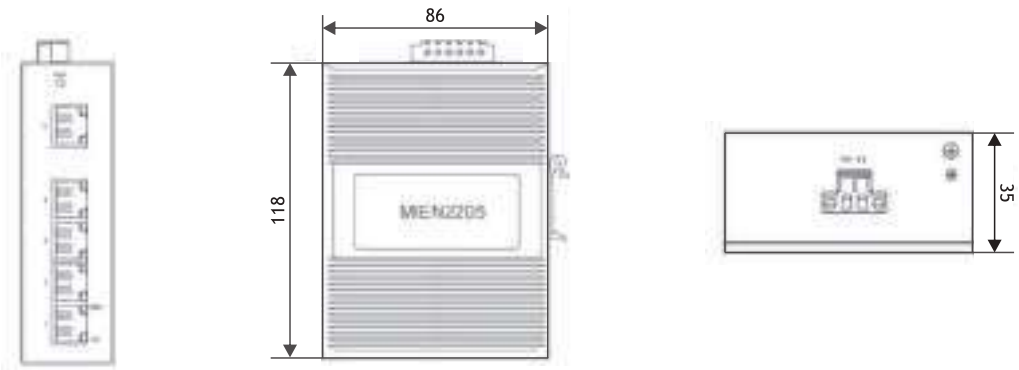
MAIN FEATURES

- Compact size for easy installation
- 5 ports 10/100base-T(X)
- Auto-negotiation and auto-MDI/MDI-X
- Store-and-Forward transmission
- Flow control
- DIN-rail and wall mounting

TECHNICAL SPECIFICATIONS

PHISICAL PORTS	
10/100BASE-T(X) PORTS IN RJ45 AUTO MDI/MDIX	5
POWER	
INPUT POWER	Dual 12-48VDC and 24VAC on 4-pin terminal block
POWER CONSUMPTION	<3Watts, 12-48VDC: 0.10A-0.04A, 24VAC: 0.10A
OVERLOAD CURRENT PROTECTION	Present
REVERSE POLARITY PROTECTION	Present
OPERATING TEMPERATURE	From -40°C to 85°C

MECHANICAL DIMENSIONS (mm)



SAFETY PLC *Wieland R1.190.1310.0*

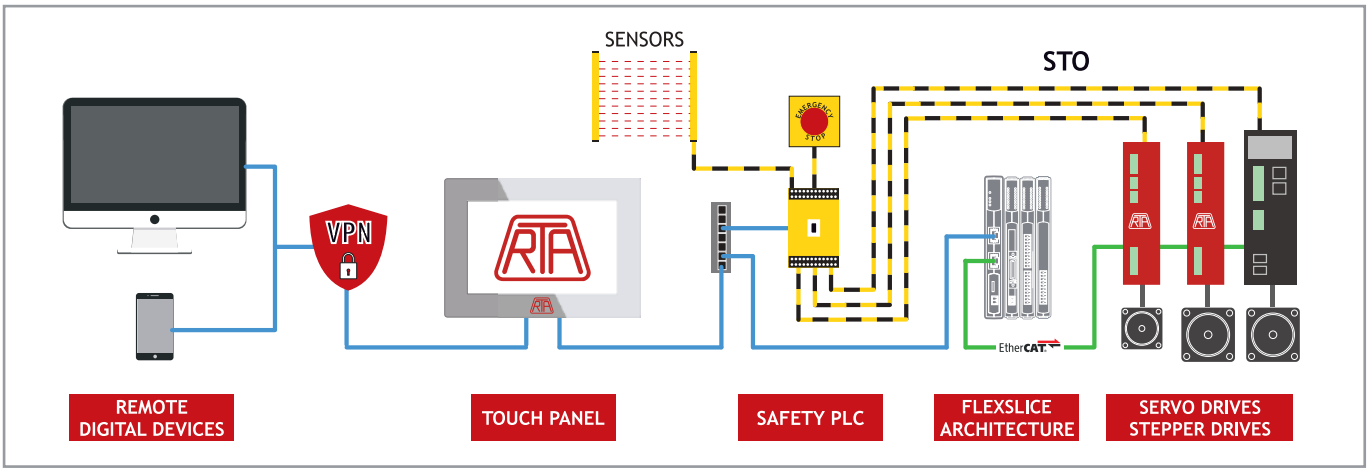
INTRODUCTION

The samosPRO Compact module is suitable for monitoring safety sensors, emergency STOP buttons, safety door switches and door locks, safety light curtains and laser scanners.

HIGHLIGHTS

- 16 safe input, 4 safe output
- 4 configurable I/Os
- Mini-USB and Ethernet ports
- Modbus TCP/IP comunication
- Easy integration in the R.T.A. system

R.T.A. SAFETY PLC SYSTEM



MAIN FEATURES

GENERAL FEATURES	
TYPE OF PROTECTION (ACCORDING TO DIN 60529)	IP20
NORMATIVE	EN 62508, EN 62061, EN ISO 13849-1, EN 50156, EN 81-1
CERTIFICATIONS	TUV, UL

SAFETY PARAMETERS	
CATEGORY (ISO 13849-1)	4
PL (ISO 13849-1)	Level e
SIL_{CL} (IEC 62061)	3
HFT	1
T_M	20 a

TECHNICAL SPECIFICATIONS

POWER CIRCUIT	
OPERATING VOLTAGE RANGE	24 VDC -30%/+25%
NOMINAL POWER	3,5 W (Logic absortion)

INPUT CIRCUIT	
DIGITAL INPUTS	16 + 4 Configurable
INPUT VOLTAGE RANGE	15 VDC up to 30 VDC
NOMINAL CURRENT	2 mA

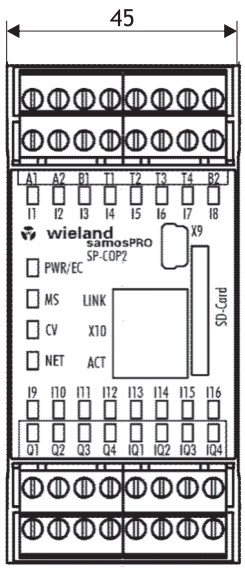
OUTPUT CIRCUIT	
DIGITAL OUTPUTS	4 + 4 Configurable
OUTPUT VOLTAGE RANGE	24 VDC
OUTPUT CURRENT I_n PER OUTPUT	4 A (I_{sum} 16 A)

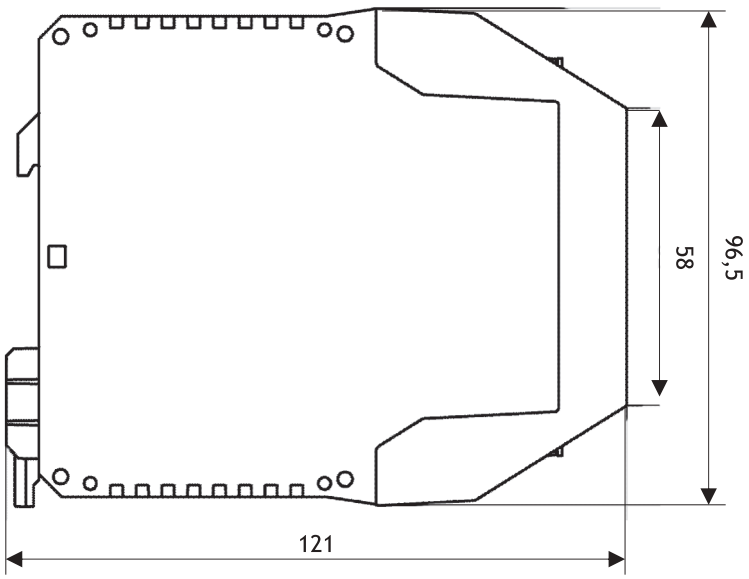
INTERFACE CIRCUIT	
ETHERNET INDUSTRIAL PROTOCOLS	Modbus TCP/IP
PROGRAM MEMORY	Esternal (Mandatory pairing with SD WIELAND R1.190.1000.00)

SAFETY FUNCTIONS

- ✓ Contactless operating selection function
- ✓ Control function of external contactors
- ✓ Contemporaneity button function
- ✓ Operation mode selection function
- ✓ Block restart funtion
- ✓ Bimanual function
- ✓ Safety function
- ✓ Access control function
- ✓ ON/OFF Delay timer

MECHANICAL DIMENSIONS (mm)





STEPPING MOTOR DRIVES

CSD MT Series Drives

Modbus TCP/IP

3rd FIRMWARE GENERATION

INTRODUCTION

- New series of stepping motor drives with Modbus interface, available with a 3rd generation firmware release and STO function.
- Drives optimized for coupling with SANYO DENKI stepping motors, fitted with encoder, but also able to manage third party motors.
- Compact system, developed to offer a wide variety of integrated functions and optimized for the most demanding motion control applications.

MAIN FEATURES

- Modes of operation: PP, PV, Homing.
- Wide range of motor phase current setting and motor current overboost (120%).
- Different variety of HOMING operation modes.
- Encoder feedback and support of different resolution.
- Touch Probe function available.
- Limit switches management.
- Auto-sync function available featuring a closed loop positioning.
- 5 + 5 I/Os (MT 94) and 2 + 3 I/Os (MT S4).
- UL/ CSA.

c UL us

AUTO SYNC FUNCTION

Please refer to download.rta.it for technical specifications

STO FUNCTION FEATURES

- Safe Torque Off (STO) function - SIL3
- Error Detection Monitor

SIL3 SAFE TORQUE OFF (STO)

Series	Model	V_{DC} range	I nom.	Digital In/Out	STO In	Dimensions
		(Volt)	(Amp)			(mm)
CSD MT	S4 STO	24 to 48	4.0	2/3	2	130x106x32
CSD MT	94	24 to 48	4.0	5/5	/	130x106x32

TECHNICAL FEATURES

- Range of operating voltage 24-48 VDC.
- Protections:
  -Protection against under-voltage and over-voltage.
  -Protection against a short-circuit at motor outputs.
  -Overtemperature protection.
- Electronic damping facility for further acoustic noise and mechanic vibrations reduction.
- Maximum compactness.
- Optoinsulated auxiliary and programmable inputs and outputs.
- Warranty: 24 months.

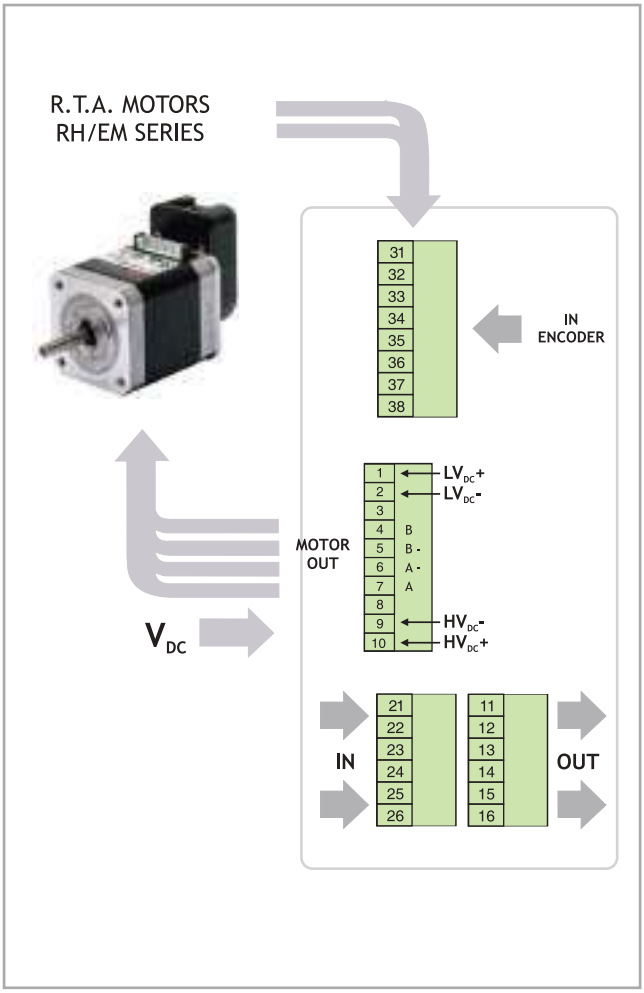
Modbus

WARRANTY 2 YEARS GARANZIA

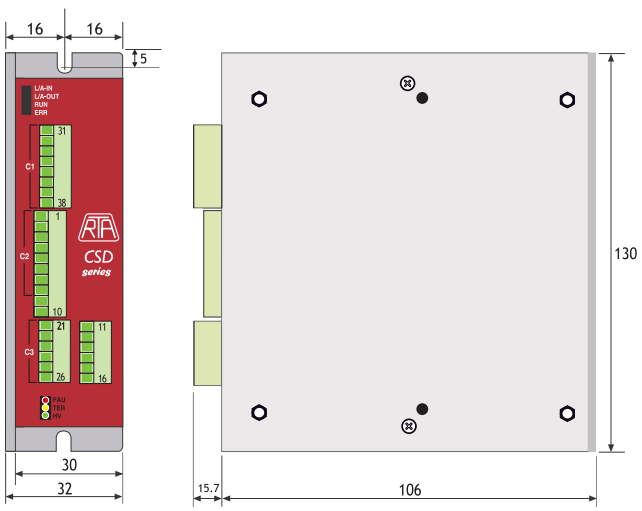
SCAN THE QR CODE TO WATCH A VIDEO ON THE AUTO-SYNC FUNCTION

AUTO SYNC FUNCTION

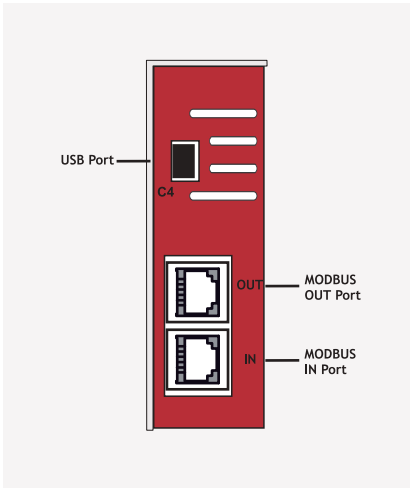
POWER AND LOGIC CONNECTIONS



MECHANICAL DIMENSIONS



CSD MT 94/S4
HIGH SIDE VIEW



Dimensions in millimeters - Not in scale.

CSD ET Series Drives

EtherCAT®

3rd FIRMWARE GENERATION

INTRODUCTION

- New series of stepping motor drives with EtherCAT interface, now available with a 3rd generation firmware release.
- Drives optimized for coupling with SANYO DENKI stepping motors, fitted with encoder, but also able to manage third part motors.
- Compact system, developed to offer a wide variety of integrated functions and optimized for the most demanding motion control applications.

MAIN EtherCAT FEATURES

- Modes of operation: PP, PV, Homing, CSP and CSV.
- Wide range of motor phase current setting and motor current overboost (120%).
- Different variety of HOMING operation modes.
- Encoder feedback and support of different resolution.
- Touch Probe function available.
- Limit switches management.
- Auto-sync function available featuring a closed loop positioning.
- 5 + 5 I/Os (ET 94) and 2 + 3 I/Os (ET S4).
- UL/ CSA.

c UL us

AUTO SYNC FUNCTION

Please refer to download.rta.it for technical specifications

STO FUNCTION FEATURES

- Safe Torque Off (STO) function - SIL3
- Error Detection Monitor

SIL3 SAFE TORQUE OFF (STO)

Series	Model	V_{DC} range	I nom.	Digital In/Out	STO In	Dimensions
		(Volt)	(Amp)			(mm)
CSD ET	S4 STO	24 to 48	4.0	2/3	2	130x106x32
CSD ET	94	24 to 48	4.0	5/5	/	130x106x32

TECHNICAL FEATURES

- Range of operating voltage 24-48 VDC.
- Protections:
  -Protection against under-voltage and over-voltage.
  -Protection against a short-circuit at motor outputs.
  -Overtemperature protection.
- Electronic damping facility for further acoustic noise and mechanic vibrations reduction.
- Available in plastic boxed version with plug-in connectors.
- Maximum compactness.
- Optoinsulated auxiliary and programmable inputs and outputs.
- Warranty: 24 months.

EtherCAT®

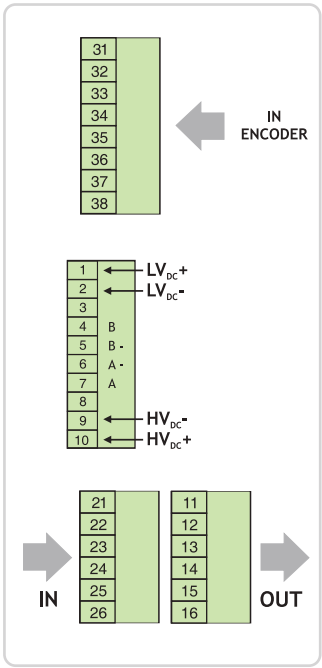
WARRANTY 2 YEARS GARANZIA

SCAN THE QR CODE TO WATCH A VIDEO ON THE AUTO-SYNC FUNCTION

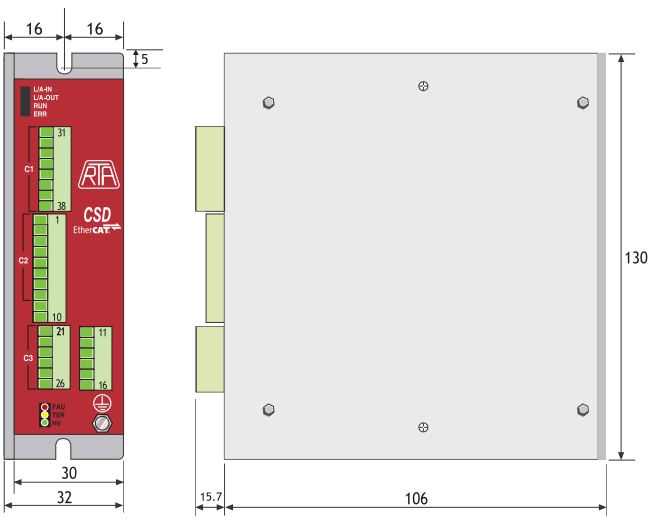
AUTO SYNC FUNCTION

POWER AND LOGIC CONNECTIONS

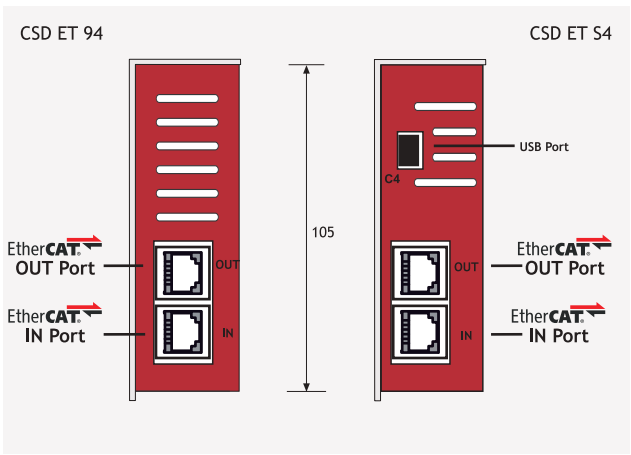
R.T.A. MOTORS
RH/EM SERIES



MECHANICAL DIMENSIONS

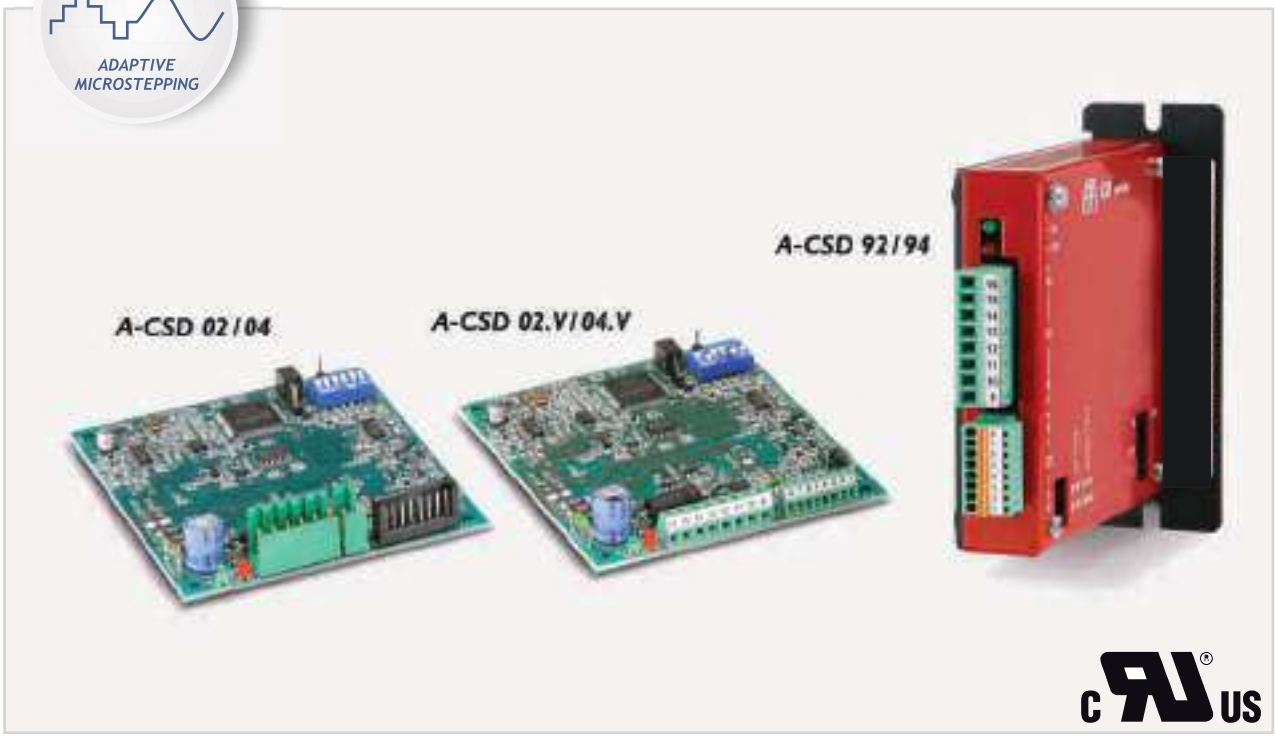


HIGH SIDE VIEW



Dimensions in millimeters - Not in scale.

A-CSD Series Drives



INTRODUCTION

- New series of bipolar microstep stepping motor drives, specifically developed for applications sensitive to acoustic noise and vibration.
- Significant evolution of the CSD series, preserving backward mechanical, electrical and applicative compatibility.
- Target: advanced applications requiring high precision, smoothness of movement and low acoustic noise.
- UL recognized.

HIGHLIGHTS

- Full digital microstepping drive.
- Adaptive microstepping up to a 3.200 step/rev.
- Intelligent management of the current profile that achieves good results in terms of smoothness of movement, low noise and vibration control.
- A highly sophisticated control system, preserving anyhow the traditional ease of use of R.T.A. drives.

Series	Model	V_{DC} range	I_{NP} min. (Peak value)	I_{NP} max. (Peak value)	Dimensions
		(Volt)	(Amp)	(Amp)	(mm)
A-CSD	02 - 02.V*	24 to 48	0.7	2.4	92x85x22
A-CSD	04 - 04.V*	24 to 48	2.6	4.4	92x85x23
A-CSD	92	24 to 48	0.7	2.4	99x90x21
A-CSD	94	24 to 48	2.6	4.4	99x90x21

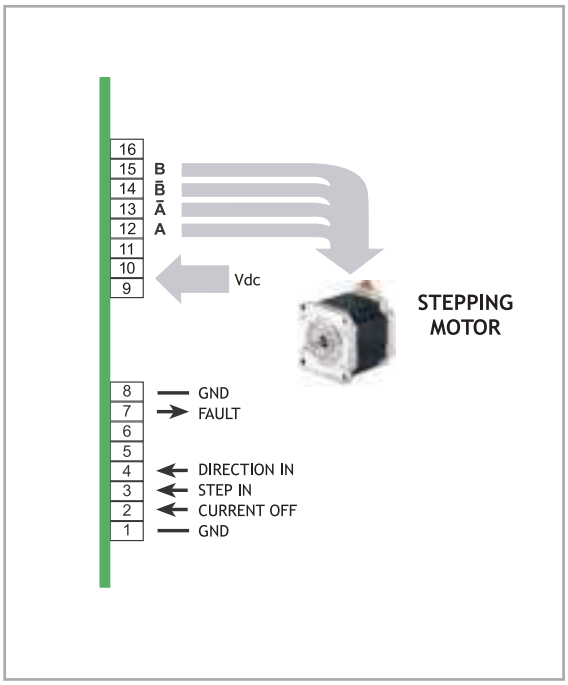
* A-CSD 02.V and A-CSD 04.V versions are equipped with screw-type connectors.

TECHNICAL FEATURES

- Range of operating voltage: 24-48 $V_{DC.}$
- Range of current: 0.7-4.4 Amp. Setting up to eight possible values by means of dip-switches.
- Microstepping: 400, 800, 1.600 and 3.200 steps/revolution. Setting by means of dip-switches.
- Automatic current reduction at motor standstill.
- Management of the current profile setting by means of a dip-switch.
- Protections:

  -Protection against under-voltage and over-voltage.
  -Protection against a short-circuit at motor outputs.
  -Overtemperature protection with thermal sensor.
- Electronic damping facility for further acoustic noise and mechanic vibrations reduction.
- Available versions: boxed/open frame, crimp-type/screw-type connectors. Maximum compactness.
- UL recognized.
- Warranty: 24 months.

POWER AND LOGIC CONNECTIONS

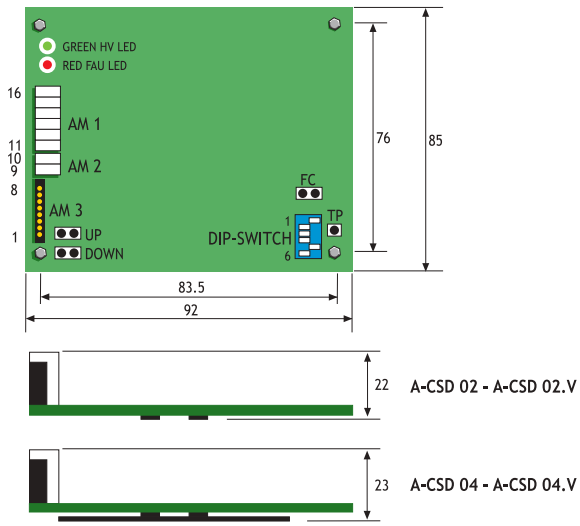


A-CSD is included in KIT CNC 02, a complete 48 VDC motion solution, designed for 3-axes CNC Router machines.

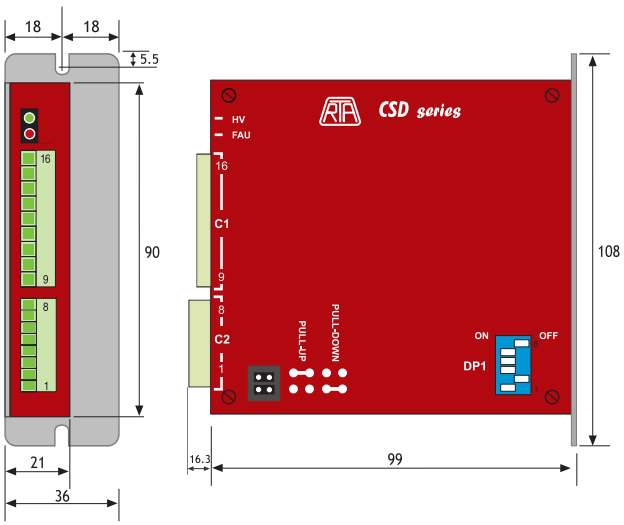
FIND OUT MORE

MECHANICAL DIMENSIONS

A-CSD 02 / A-CSD 04

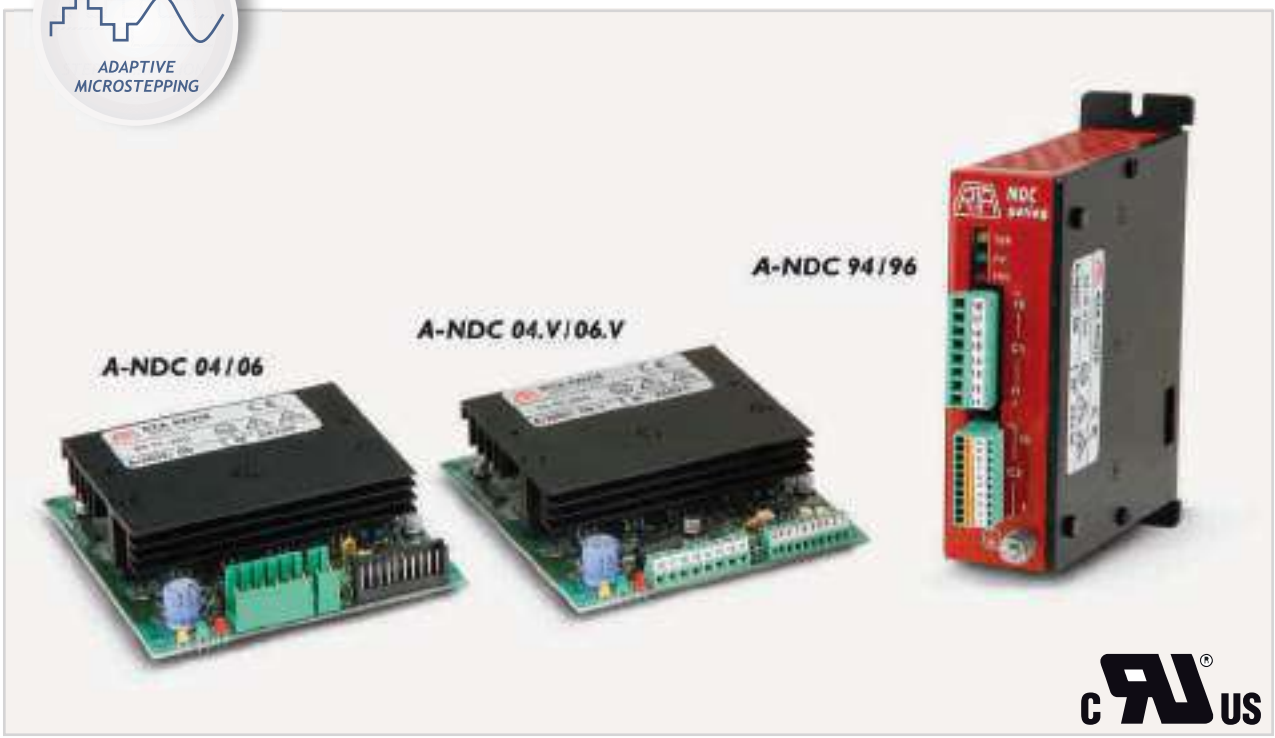


A-CSD 92 / A-CSD 94



Dimensions in millimeters - Not in scale.

A-NDC Series Drives



INTRODUCTION

- New series of bipolar microstep stepping motor drives, specifically developed for applications sensitive to acoustic noise and vibration.
- Significant evolution of the NDC series, preserving backward mechanical, electrical and applicative compatibility.
- Target: advanced applications requiring high precision, smoothness of movement and low acoustic noise.
- UL recognized.

HIGHLIGHTS

- Full digital microstepping drive.
- Adaptive microstepping up to a 12.800 step/rev (1/64).
- Intelligent management of the current profile that achieves good results in terms of smoothness of movement, low noise and vibration control.
- A highly sophisticated control system, preserving anyhow the traditional ease of use of R.T.A. drives.

Series	Model	V_{DC} range	I_{NP} min. (Peak value)	I_{NP} max. (Peak value)	Dimensions
		(Volt)	(Amp)	(Amp)	(mm)
A-NDC	04 - 04.V*	24 to 85	0.6	2.0	101x94x25
A-NDC	06 - 06.V*	24 to 85	1.9	6.0	101x94x25
A-NDC	94	24 to 85	0.6	2.0	110x108x34
A-NDC	96	24 to 85	1.9	6.0	110x108x34

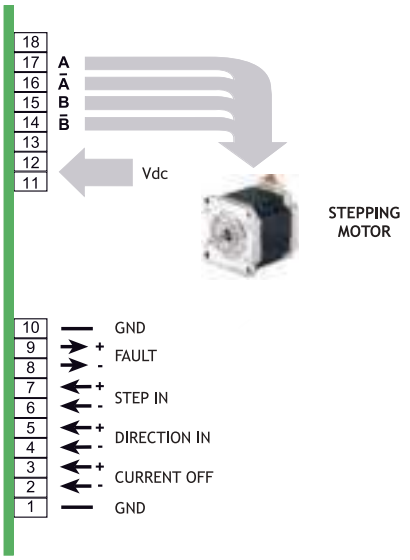
* A-NDC 04.V and A-NDC 06.V versions are equipped with screw-type connectors.

TECHNICAL FEATURES

- Range of operating voltage: 24-85 $V_{DC.}$
- Range of current: 0.6-6 Amp. Setting up to eight possible values by means of dip-switches.
- Microstepping: 400, 800, 1.600, 3.200, 6.400 and 12.800 steps/revolution. Setting by means of dip-switches.
- Automatic current reduction at motor standstill.
- Management of the current profile setting by means of a dip-switch.
- Protections:

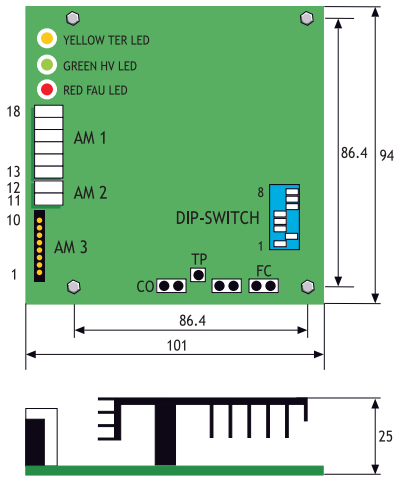
  -Protection against under-voltage and over-voltage.
  -Protection against a short-circuit at motor outputs.
  -Overtemperature protection with thermal sensor.
- Electronic damping facility for further acoustic noise and mechanic vibrations reduction.
- Available versions: boxed/open frame, crimp-type/screw-type connectors. Maximum compactness.
- Optoinsulated inputs to ensure best EM noise immunity.
- UL recognized.
- Warranty: 24 months.

POWER AND LOGIC CONNECTIONS

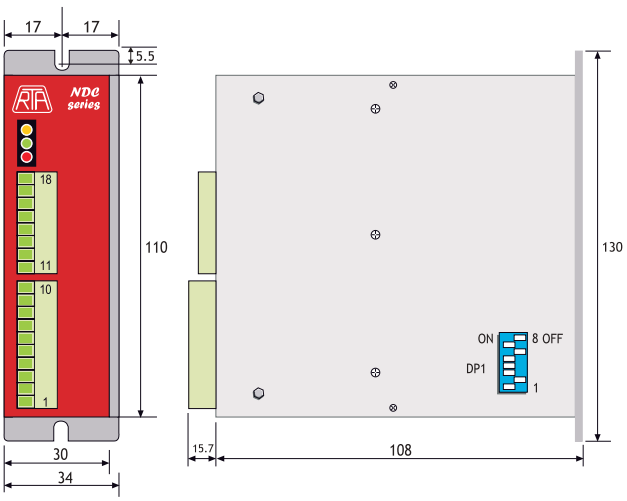


MECHANICAL DIMENSIONS

A-NDC 04 / A-NDC 06



A-NDC 94 / A-NDC 96



Dimensions in millimeters - Not in scale.

ADW Series Drives

ANALOG INPUT

ADW 96

ADW 06

ADW 06.V

INTRODUCTION

- ADW is the new R.T.A. electronic drive designed for all applications where accurate SPEED CONTROL is needed.
- The motor velocity can be regulated in 3 ways:
  - Analog voltage input
  - External potentiometer
  - Internal speed settings
- The extended ADW power range (24-75 V_{DC}, 0.65 - 6.0 A) and its versatility (four Modes of Operation) allow to access to a wide variety of application fields.
- UL recognized.

HIGHLIGHTS

- Any speed-regulated applications with variable or pre-set velocity setting.
- Conveyors:
  - Single belt transport
  - Multi belt transport with high precision position/speed synchronization.
- Jog or adjustment movements.

MODES OF OPERATION

1 RUN MODE
2 START/STOP MODE
3 CW/CCW (JOG)
4 LIMIT SWITCH MODE

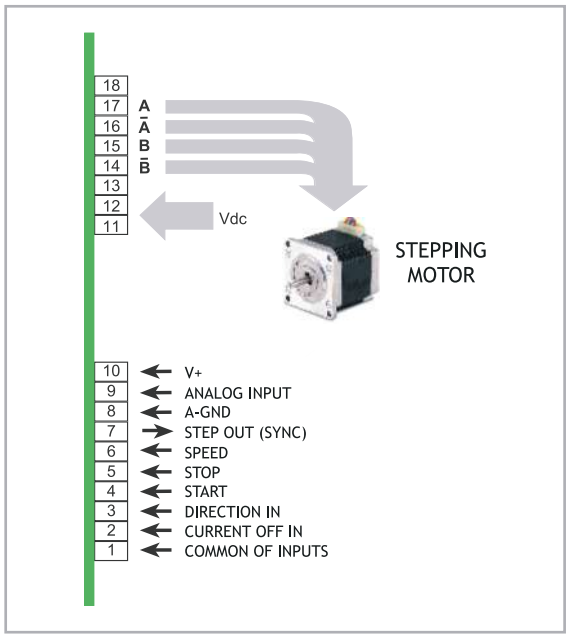
Series	Model	V_{DC} range	I_{NP} min. (Peak value)	I_{NP} max. (Peak value)	Dimensions
		(V)	(A)	(A)	(mm)
ADW	04 - 04.V*	24 to 75	0.65	2.0	122x94x25
ADW	06 - 06.V*	24 to 75	1.9	6.0	122x94x25
ADW	94	24 to 75	0.65	2.0	129x110x34
ADW	96	24 to 75	1.9	6.0	129x110x34

* ADW 04.V and ADW 06.V versions are equipped with screw-type connectors.

TECHNICAL FEATURES

- Range of operating voltage: 24-75 $V_{DC.}$
- Range of current: 0.65-6 A. Easy setting of values by means of dip-switches.
- Wide speed range: 0.8 rpm to 2,000 rpm. Continuous operation zone up to approx 400 rpm, depending on motor choice.
- 64 internally selectable preset speed.
- 0-5Vdc or 0-10Vdc selectable analog command range.
- Low & High-speed motion profile.
- Adjustable internal acceleration/deceleration ramp.
- Voltage source for potentiometer available at connector.
- "Auto-stop" function.
- All opto-insulated digital inputs.
- *Sync-out* for multi-Axis synchronization.
- Over-voltage, short-circuit and thermal protection.
- UL recognized.
- Warranty: 24 months.

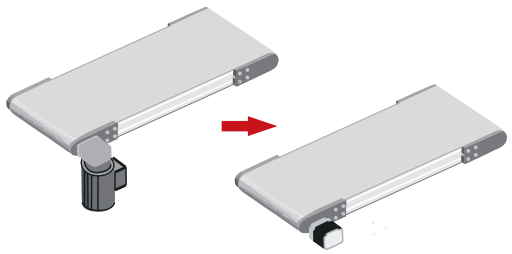
POWER AND LOGIC CONNECTIONS



BENEFITS VS. CONVENTIONAL *INVERTERS + AC MOTORS + WORM GEARBOX* SETUP.

- Broader and more accurate speed range [0.8 rpm to 2,000 rpm]
- Zero-deviation motor speed control at any speed. [motor speed is not affected by variable factors like load, inertia or friction].
- The motors automatically act as brake at zero speed.
- Easy multi-axis synchronization in Position and Speed.
- No need of worm gearbox due to the high-torque at low rotation speed range [0-400 rpm].
- Smaller dimension: overall size < 1/3 compared with traditional AC Asynchronous sets.
- Lower weight.

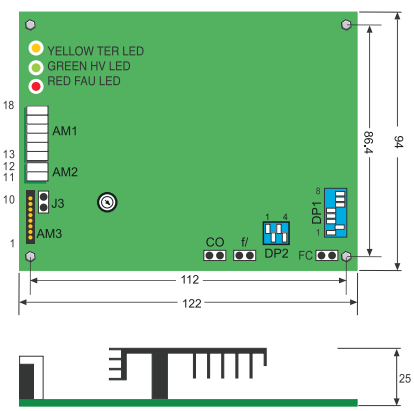
TYPICAL APPLICATION: DIMENSIONAL COMPARISON

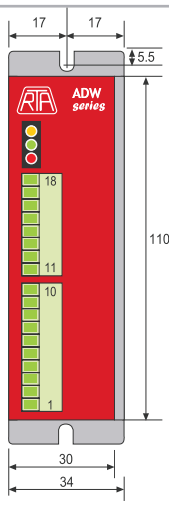


Motor volume reduction up to 70%!

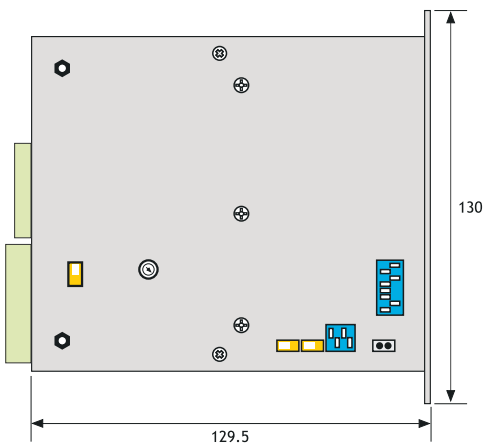
MECHANICAL DIMENSIONS

ADW 04-06





ADW 94-96



Dimensions in millimeters - Not in scale.

X-PLUS RS4 Series Drives

INTRODUCTION

- X-Plus RS4 is a new model of RTA flagship high-power stepping motor drive with Step & Direction interface.
- The embedded Auto-Sync function with encoder enhances the drive features and optimizes the motor performances.
- It is the ideal solution for advanced applications requiring high performances, high precision in the motor behaviour and accuracy in control positioning.

Step-Dir EVOLUTION = ADVANCED ADAPTIVE MICROSTEPPING + AUTO SYNC FUNCTION

HIGHLIGHTS

- Embedded Auto-Sync function with encoder, featuring a closed loop positioning.
- SIL3-PLe STO safety function.
- Easy parameter setting via DIP switches.
- Integrated system for back EMF energy dissipation with optional external resistor.
- Advanced diagnostic tools.
- Zero index searching function.

EMBEDDED AUTO-SYNC FUNCTION

STO FUNCTION FEATURES

- Safe Torque Off (STO) function - SIL3-PIe
- Error Detection Monitor (EDM) output

SIL3
SAFE TORQUE OFF (STO)

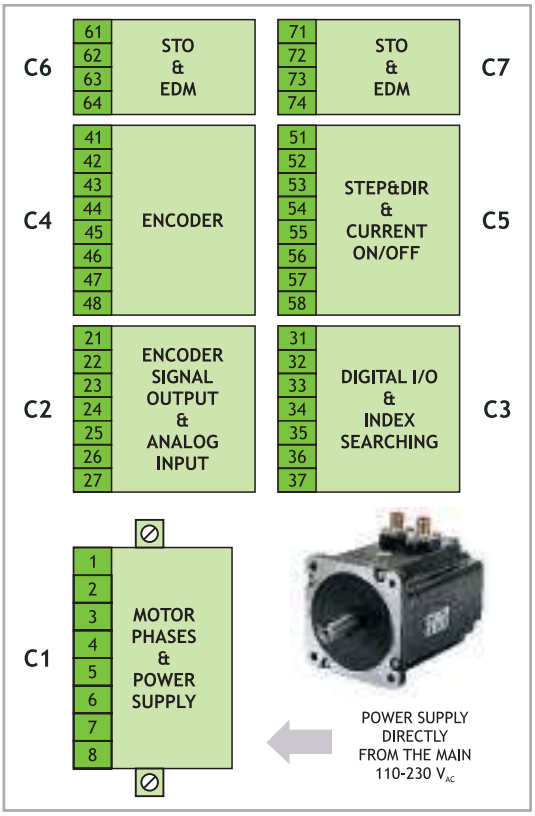
ONE OF THE MOST COMPACT DRIVES WITH POWER INPUT DIRECTLY FROM THE MAIN AC SUPPLY (110 - 230 VAC)

Series	Model	V_{AC} range	I_{NP} min. (Peak value)	I_{NP} max. (Peak value)	Dimensions
		(Volt)	(Amp)	(Amp)	(mm)
X-PLUS	RS4	110 to 230 +/- 15%	1.2	4.8	169x129x46

TECHNICAL FEATURES

- Range of operating nominal voltage: 110-230 $V_{AC.}$
- Range of current motor settings: 1.2-4.8 Amp.
  Setting up to four possible values by means of dip-switches.
- Microstepping: 1600, 3200, 6400 and 12800 steps/revolution.
  Setting by means of dip-switches.
- Various encoder resolution available
- Automatic current reduction at motor standstill.
- Protections:
  -Protection against under-voltage and over-voltage.
  -Protection against a short-circuit at motor outputs.
  -Overtemperature protection with thermal sensor.
  -Open motor/encoder phase.
- Electronic damping facility for further acoustic noise and mechanic vibrations reduction.
- Boxed version with plug-in connectors.
  Maximum compactness.
- Optoinsulated digital I/O to ensure best EM noise immunity.
- Modes of operation: STEP/DIR or analog input velocity setpoint
- Coupling with stepping motors rated for high insulation is mandatory.
- Warranty: 24 months.

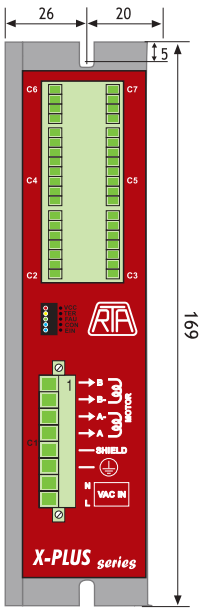
POWER AND LOGIC CONNECTIONS

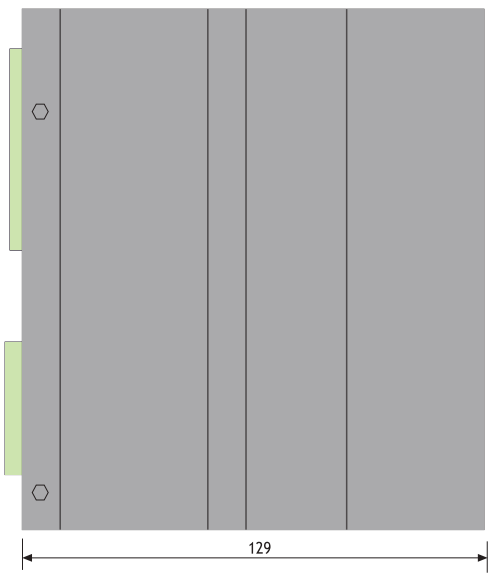


SCAN THE QR CODE TO WATCH A VIDEO ON THE AUTO-SYNC FUNCTION

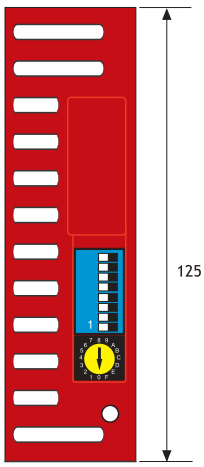
AUTO SYNC FUNCTION

MECHANICAL DIMENSIONS





X-PLUS RS4 TOP VIEW



Dimensions in millimeters - Not in scale.

R-MOD ET Combo Unit

3rd FIRMWARE GENERATION

EtherCAT®

INTRODUCTION

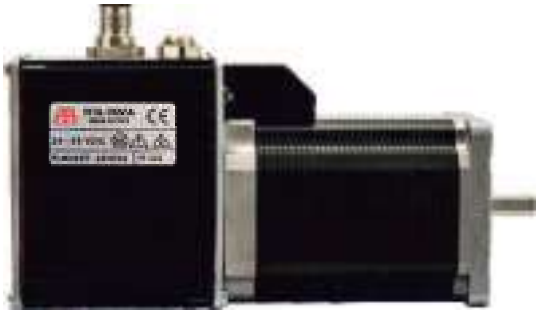
R-MOD ET is a series of stepping motors in two sizes with integrated ministep bipolar chopper EtherCAT drives, based on incremental or battery-less multi-turn absolute encoder.

HIGHLIGHTS

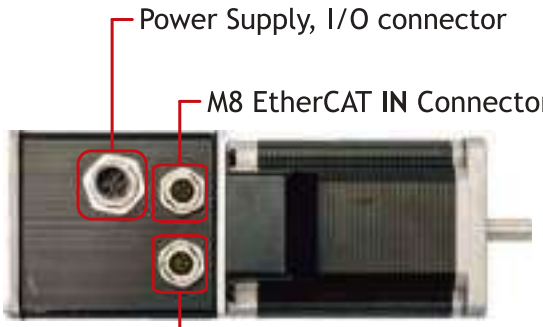
FULL CLOSED LOOP

- New generation Full Closed Loop Absolute Encoder version available
- Holding Torque up to 300 Ncm
- Communication by means of EtherCAT interface
- Different Operation Modes
- Available Inputs
- Different HOMING operation modes
- PROXIMITY hardware input
- AUTO-SYNC function
- Battery-less Multi-turn ABSOLUTE ENCODER versions
- CSA Certified

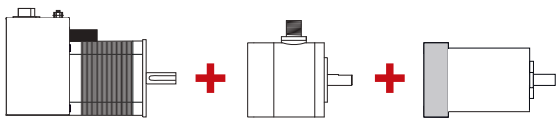
SIDE VIEW



TOP VIEW



Front Brake and/or Gearbox versions available



AUTO SYNC FUNCTION

BATTERY-LESS ABSOLUTE ENCODER

CE

SPACE SAVING SOLUTION

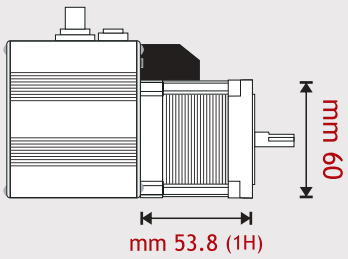
Please refer to download.rta.it for technical specifications

SCAN THE QR CODE TO WATCH A VIDEO ON THE AUTO-SYNC FUNCTION

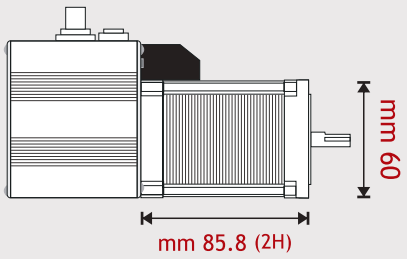
AUTO SYNC FUNCTION

Models	Motor Lenght (mm)	Holding Torque (Ncm)	Encoder Type	Digital In/Out	Certifications
R-MOD ET A3H2MK *Full Closed Loop*	85.8	300	Battery-less Multi-turn Absolute	1/0	CE
R-MOD ET E3H2MA	85.8	300	Incremental	1/0	CE

SIZES AND PERFORMANCES



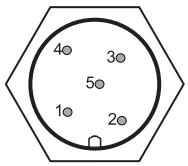
Holding Torque: 170 Ncm



Holding Torque: 300 Ncm

CONNECTION SCHEME

CN1



1: Input (PX / Touch probe)
2: Power supply
3: Input (PX / Touch probe)
4: GND
5: Logic power supply

CN2

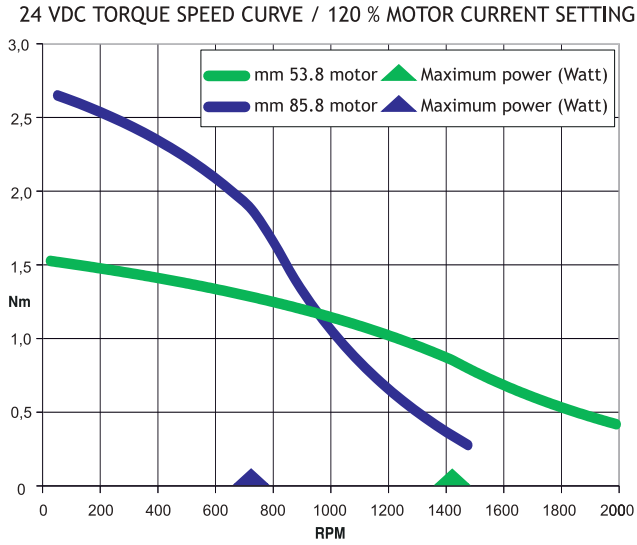
EtherCAT OUT (Female)

CN3

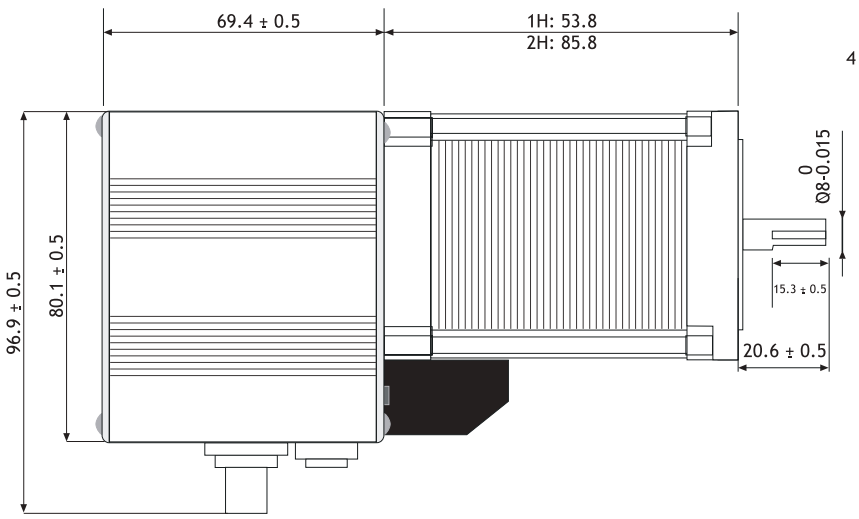
EtherCAT IN (Female)

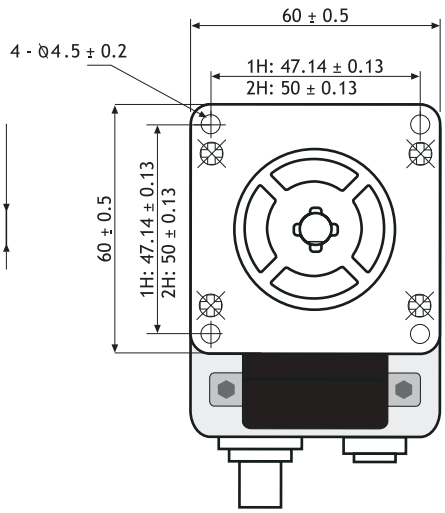
1: Trasmit Data +
2: Receive Data +
3: Trasmit Data -
4: Receive data -

TORQUE/SPEED CURVE



MECHANICAL DIMENSIONS (mm)





Starter kit and cable set available.

HI-MOD ETS Combo Unit

3rd FIRMWARE GENERATION

EtherCAT®

INTRODUCTION

HI-MOD ETS is a series of stepping motors in three sizes with integrated ministep bipolar chopper EtherCAT drives and STO Function, based on incremental or battery-less multi-turn absolute encoder.

HIGHLIGHTS

FULL CLOSED LOOP

- New generation Full Closed Loop Absolute Encoder versions available
- Holding Torque up to 920 Ncm
- Communication by means of EtherCAT interface
- Different Operation Modes
- Available Inputs / Outputs
- Different HOMING operation modes
- PROXIMITY hardware input
- AUTO-SYNC function
- Battery-less Multi-turn ABSOLUTE ENCODER versions
- STO Function - SIL3 with Error Detection Monitor

AUTO SYNC FUNCTION

BATTERY-LESS ABSOLUTE ENCODER

STO SIL3 SAFE TORQUE OFF (STO)

c UL us

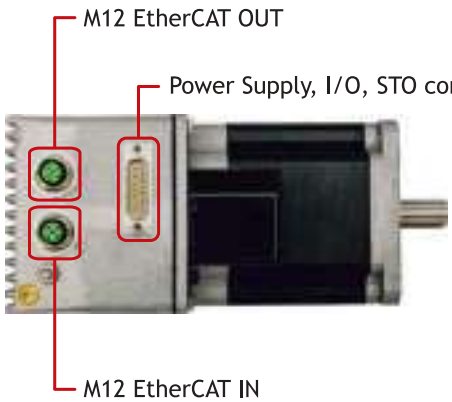
CE

SPACE SAVING SOLUTION

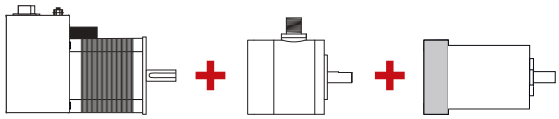
Please refer to download.rta.it for technical specifications

SIDE VIEW

TOP VIEW



Front Brake and/or Gearbox versions available

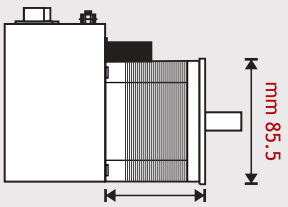


SCAN THE QR CODE TO WATCH A VIDEO ON THE AUTO-SYNC FUNCTION

AUTO SYNC FUNCTION

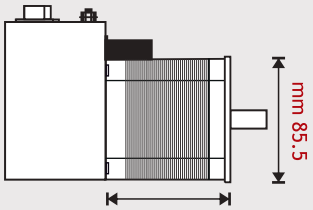
Models	Motor Lenght (mm)	Holding Torque (Ncm)	Encoder Type	Digital In/Out	STO In	Certifications
HI-MOD ETS A4F2HK *Full Closed Loop*	96.5	700	Battery-less Multi-turn Absolute	2/2	2	CE,UL,CSA + STO SIL3
HI-MOD ET A5F2HK *Full Closed Loop*	96·5	700	Battery-less Multi-turn Absolute	2/2	/	CE,UL,CSA
HI-MOD ETS E4F2HC	96.5	700	Incremental	2/2	2	CE,UL,CSA + STO SIL3
HI-MOD ET E3F2HA	96.5	700	Incremental	1/0	/	CE

SIZES AND PERFORMANCES



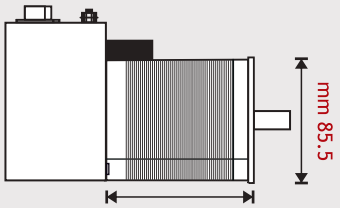
mm 66 (1H)

Holding Torque: 360 Ncm



mm 96.5 (2H)

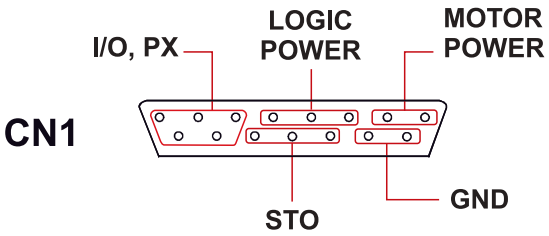
Holding Torque: 700 Ncm



mm 127 (3H)

Holding Torque: 920 Ncm

CONNECTION SCHEME



CN2

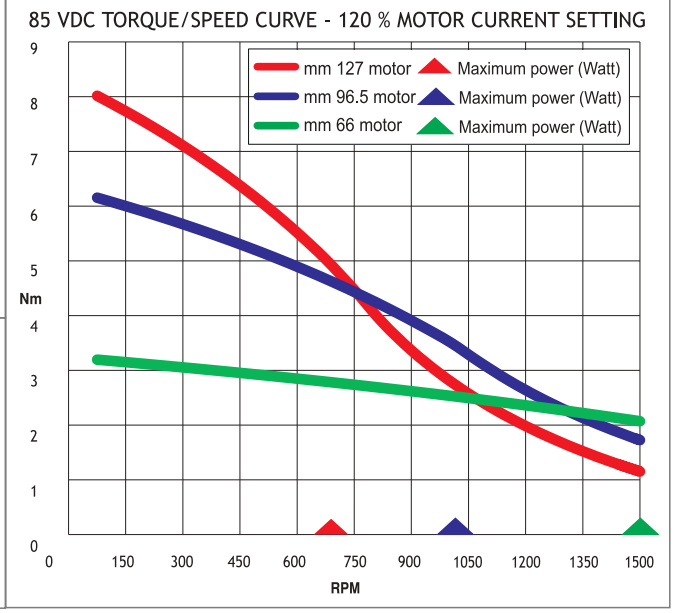
EtherCAT OUT (Female)

CN3

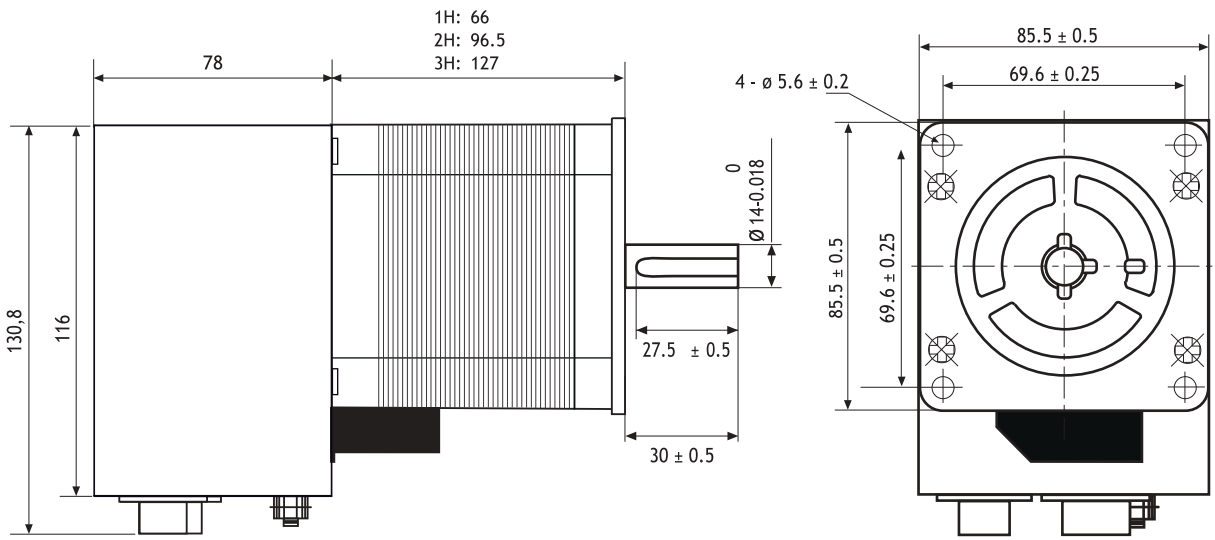
EtherCAT IN (Female)

1: Trasmit Data +
2: Receive Data +
3: Trasmit Data -
4: Receive data -

TORQUE/SPEED CURVE



MECHANICAL DIMENSIONS (mm)



Starter kit and cable set available.

STEPPING MOTOR DRIVES ACCESSORIES

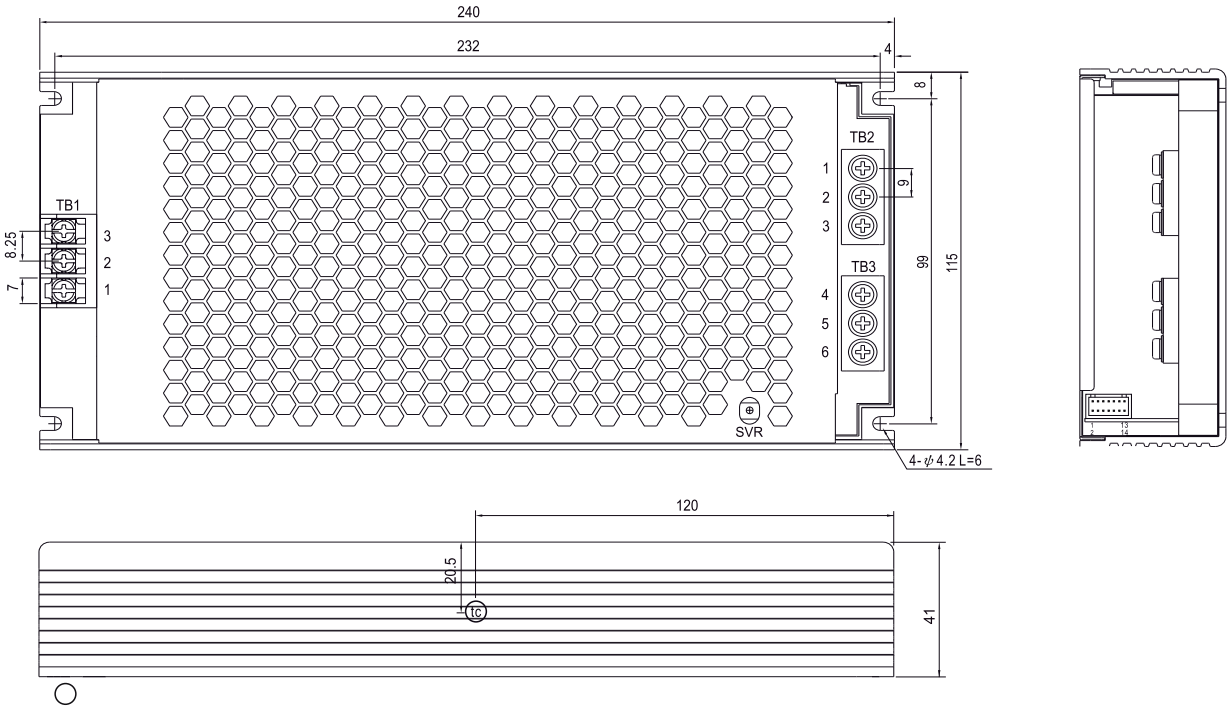
SWITCHING POWER SUPPLY

R-UHP 1000-48 SWITCHING POWER SUPPLY

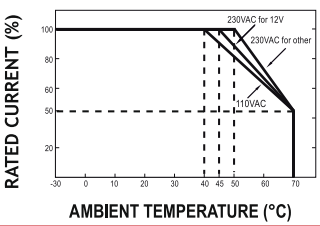
Main Features

- 21 A output - 48 VDC
- AC input voltage range:90~264 VAC
- -30~+70 °C ambient temperature
- Protections: Short Circuit, Overload, Over Voltage, Over Temperature
- V_{DC_OK} signal active
- Led indicator for power on
- Warranty: 24 months

Dimensions (Units:mm)



MORE INFO

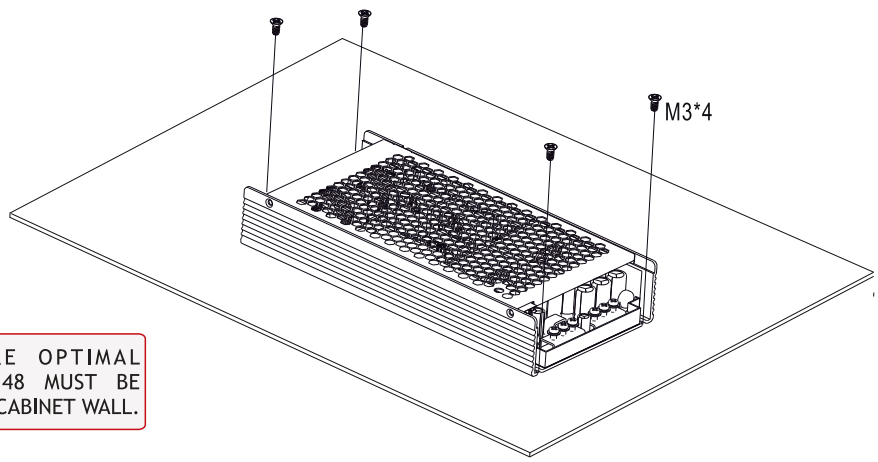


DERATING CURVE

Specifications

MODEL		R-UHP 1000-48
OUTPUT	DC VOLTAGE	48V
	RATED CURRENT	21A
	RATED POWER	1008W
	VOLTAGE ADJ. RANGE	48 ~ 57.6V
	VOLTAGE TOLERANCE Note.	±1.0%
	LINE REGULATION	±0.5%
	LOAD REGULATION	±0.5%
INPUT	VOLTAGE RANGE Note.3	90 ~ 264VAC 127 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz
	EFFICIENCY	96%
	AC CURRENT (Typ.)	10.1A/115VAC 5.3A/230VAC
	OVERLOAD	105 ~ 120% rated output power
		Protection type: Constant current limiting with delay shutdown after 3 seconds, re-power to cover
	OVER VOLTAGE	59 ~ 66 V
		Protection type: Shut down O/P voltage, re-power on to recover
	OVER TEMPERATURE	Protection type: Shut down O/P voltage, recovers automatically after temperature goes down
FUNCTION	DC_OK SIGNAL(Optional)	The TTL signal out, PSU turn on=4.5 ~ 5.5V; PSU turn off= -01 ~ 0.5V
ENVIRONMENT	WORKING TEMP.	-30 ~ +70°C (Refer to «Derating Curve»)
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes
SAFETY & EMC (Note.5)	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved; design refer to BS EN/EN61558-1, BS EN/EN60335-1
	WITHSTAND VOLTAGE	I/P-O/P:3 75KVAC I/P-FG:2KVAC O/P-FG:1 25KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC/25°C/70%RH
	EMC EMISSION	Compliance to EN55032,GB9254,Class B, EN55014,EN61000-3-2,-3,EAC TP TC 020
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11;EN61000-6-2 (EN50082-2), heavy industry level ,criterial A, EAC TP TC020
OTHERS	MTBF	218.86K hrs min. Telcordia SR-332 (Bellcore); 69.81K hrs min. MIL-HDBK-217F(25°C)
NOTE	1. All parameters NOT specially mentioned are measured at 230 VAC input, rated load and 25°C ambient temperature. 2. Tolerance: includes set up tolerance, line regulation and load regulation. 3. Please check the derating curve for more details. 4.The ambient temperature derating of 5°C /1000m is needed for operating altitude greater than 2000m (6500ft). 5. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that is still meets EMC directives.	

Mounting

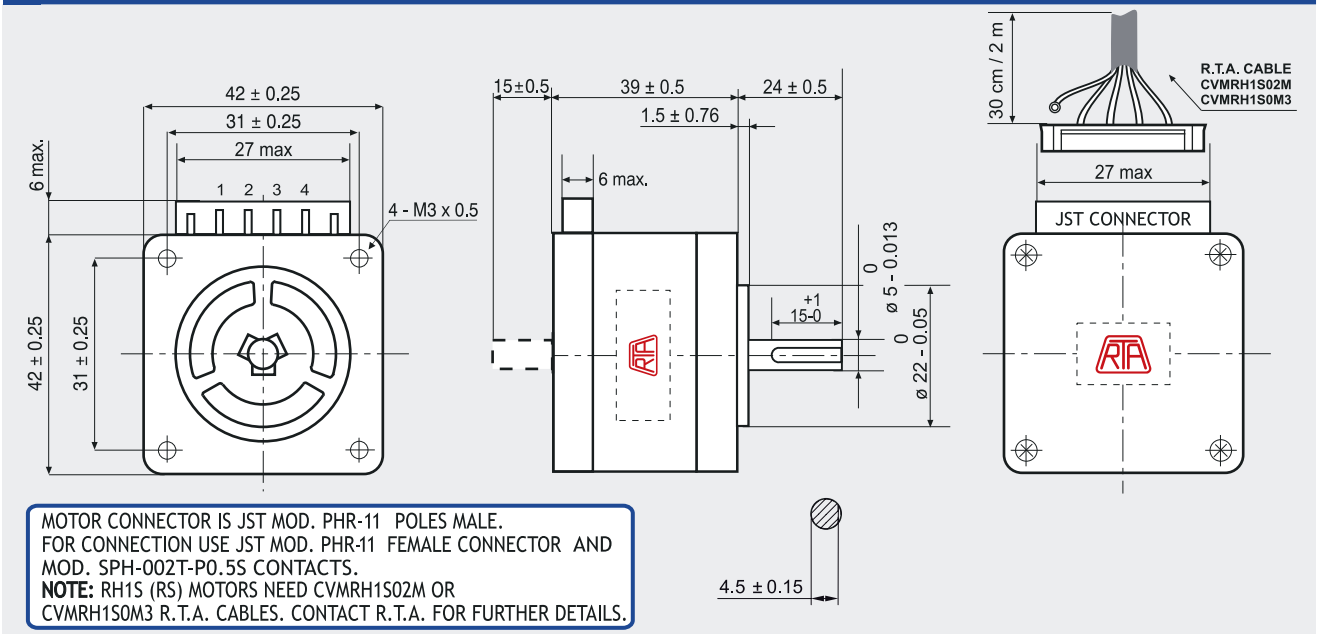


IN ORDER TO ASSURE OPTIMAL DISSIPATION, R-UHP 1000-48 MUST BE INSTALLED ON ELECTRICAL CABINET WALL.

STEPPING MOTORS

RH 1S1H

Dimensions (Unit:mm)



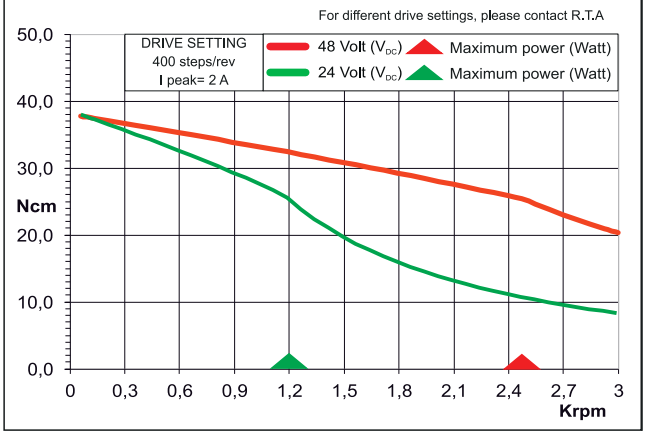
MOTOR CONNECTOR IS JST MOD. PHR-11 POLES MALE.
FOR CONNECTION USE JST MOD. PHR-11 FEMALE CONNECTOR AND MOD. SPH-002T-P0.5S CONTACTS.
NOTE: RH1S (RS) MOTORS NEED CVMRH1S02M OR CVMRH1S0M3 R.T.A. CABLES. CONTACT R.T.A. FOR FURTHER DETAILS.

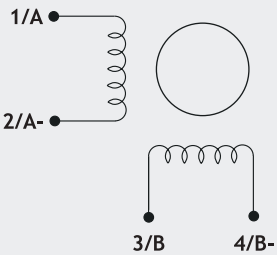
FEATURES

MODEL		RH 1S1H (RH 1S1H-RS)
BASIC STEP ANGLE		1.8 ± 0.09°
BIPOLAR CURRENT	(Amp)	2.0
UNIPOLAR CURRENT	(Amp)	
RESISTANCE	(Ohm)	1.1
INDUCTANCE	(mH)	2.4
BIPOLAR HOLDING TORQUE	(Ncm)	43
UNIPOLAR HOLDING TORQUE	(Ncm)	
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	46
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	93000
BACK E.M.F.	(V/Krpm)	21.5
MASS	(Kg)	0.3
PROTECTION DEGREE		IP40
LEADS CODE		V

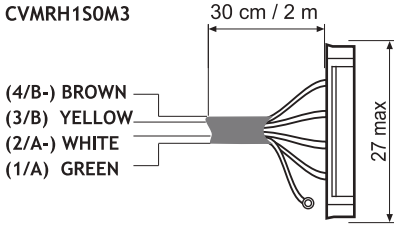
Codes between brackets refer to double shaft models.

TORQUE/SPEED CURVE





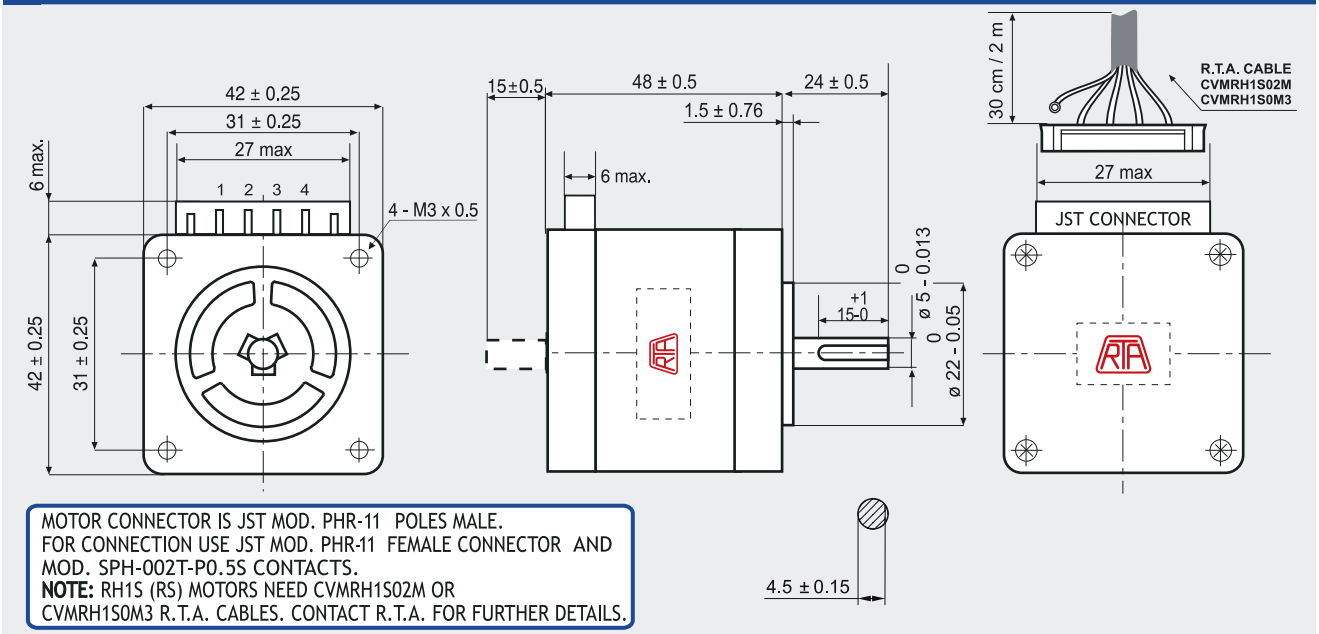
R.T.A. MOTOR CABLE
CVMRH1S02M
CVMRH1S0M3



Suggested R.T.A. drive series: BSD, CSD, FLEX-DRIVE

RH 1S2H

Dimensions (Unit:mm)



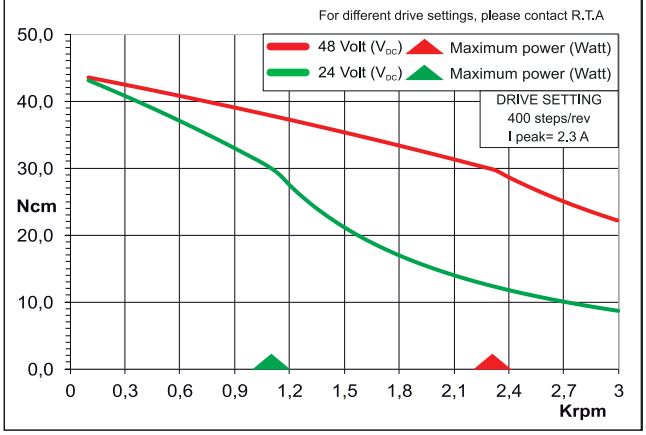
MOTOR CONNECTOR IS JST MOD. PHR-11 POLES MALE.
FOR CONNECTION USE JST MOD. PHR-11 FEMALE CONNECTOR AND MOD. SPH-002T-P0.5S CONTACTS.
NOTE: RH1S (RS) MOTORS NEED CVMRH1S02M OR CVMRH1S0M3 R.T.A. CABLES. CONTACT R.T.A. FOR FURTHER DETAILS.

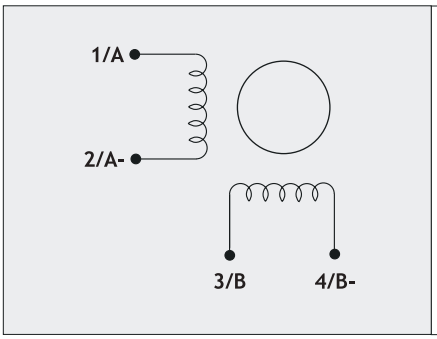
FEATURES

MODEL		RH 1S2H (RH 1S2H-RS)
BASIC STEP ANGLE		1.8 ± 0.09°
BIPOLAR CURRENT	(Amp)	2.3
UNIPOLAR CURRENT	(Amp)	
RESISTANCE	(Ohm)	0.93
INDUCTANCE	(mH)	2.2
BIPOLAR HOLDING TORQUE	(Ncm)	56
UNIPOLAR HOLDING TORQUE	(Ncm)	
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	63
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	89000
BACK E.M.F.	(V/Krpm)	24.3
MASS	(Kg)	0.38
PROTECTION DEGREE		IP40
LEADS CODE		V

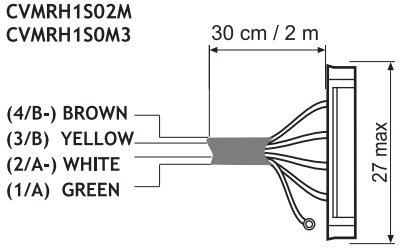
Codes between brackets refer to double shaft models.

TORQUE/SPEED CURVE





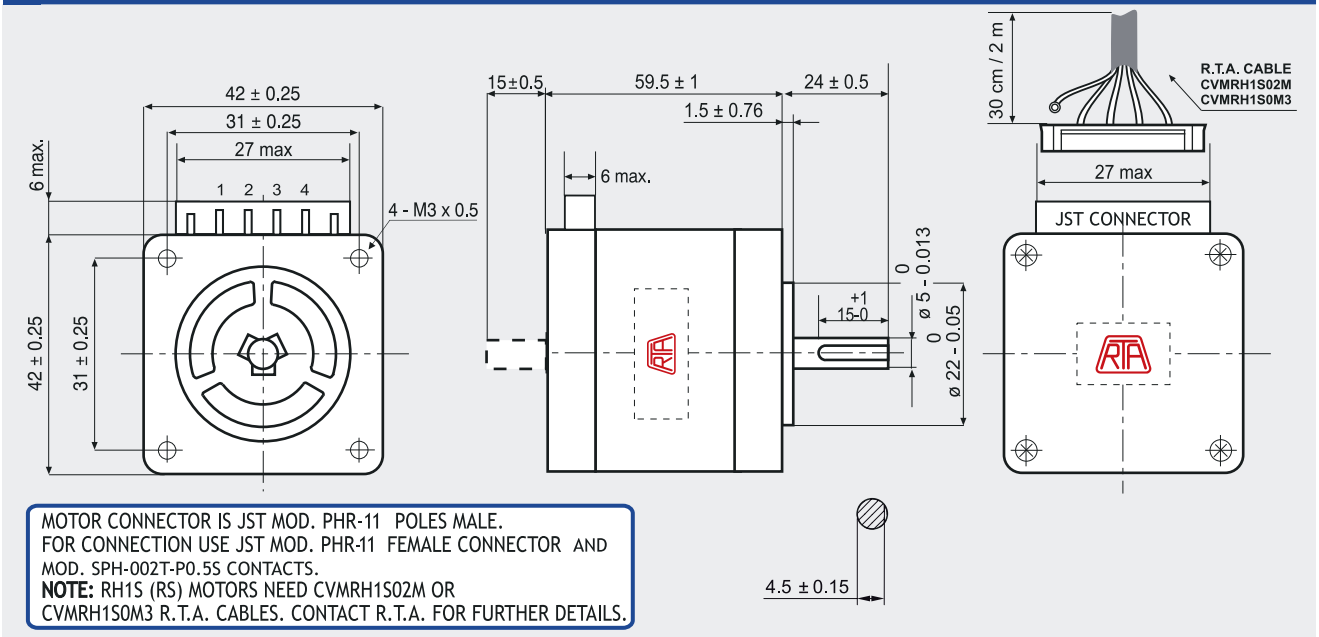
R.T.A. MOTOR CABLE
CVMRH1S02M
CVMRH1S0M3



Suggested R.T.A. drive series: BSD, CSD, FLEX-DRIVE

RH 1S3H

Dimensions (Unit:mm)



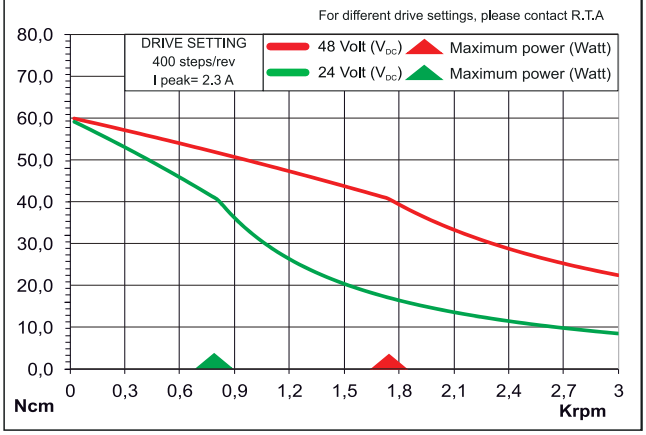
MOTOR CONNECTOR IS JST MOD. PHR-11 POLES MALE.
FOR CONNECTION USE JST MOD. PHR-11 FEMALE CONNECTOR AND MOD. SPH-002T-P0.5S CONTACTS.
NOTE: RH1S (RS) MOTORS NEED CVMRH1S02M OR CVMRH1S0M3 R.T.A. CABLES. CONTACT R.T.A. FOR FURTHER DETAILS.

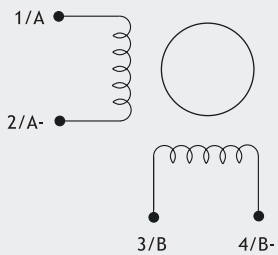
FEATURES

MODEL		RH 1S3H (RH 1S3H-RS)
BASIC STEP ANGLE		1.8 ± 0.09°
BIPOLAR CURRENT	(Amp)	2.3
UNIPOLAR CURRENT	(Amp)	
RESISTANCE	(Ohm)	1.2
INDUCTANCE	(mH)	3.0
BIPOLAR HOLDING TORQUE	(Ncm)	80
UNIPOLAR HOLDING TORQUE	(Ncm)	
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	94
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	85100
BACK E.M.F.	(V/Krpm)	34.7
MASS	(Kg)	0.51
PROTECTION DEGREE		IP40
LEADS CODE		V

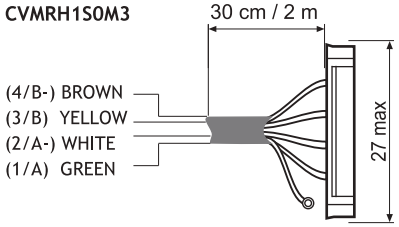
Codes between brackets refer to double shaft models.

TORQUE/SPEED CURVE





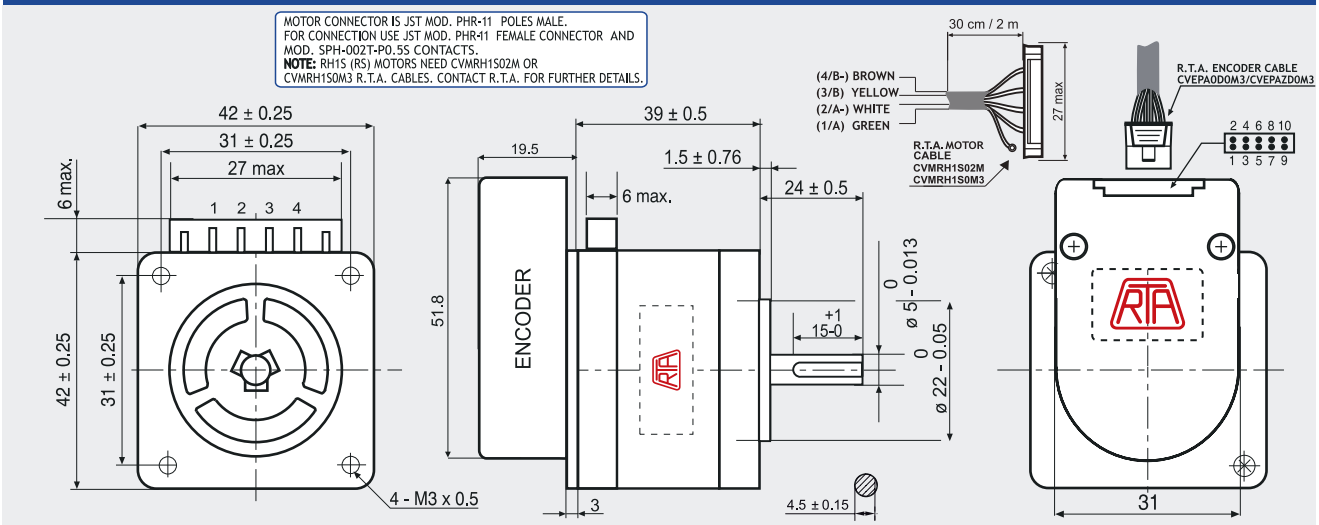
R.T.A. MOTOR CABLE
CVMRH1S02M
CVMRH1S0M3



Suggested R.T.A. drive series: BSD, CSD, FLEX-DRIVE

RH 1S1H-0XX0

Dimensions (Unit:mm)

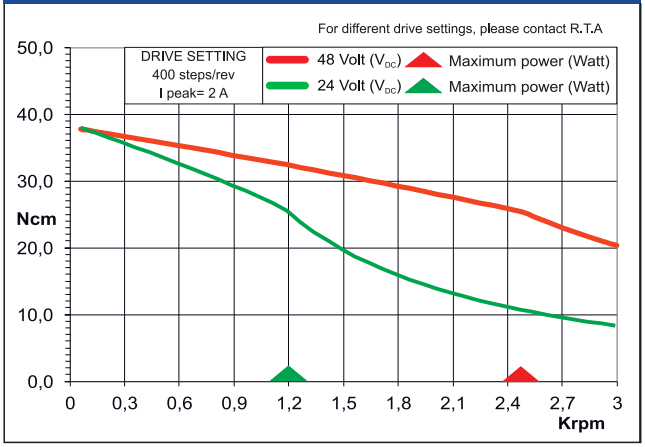


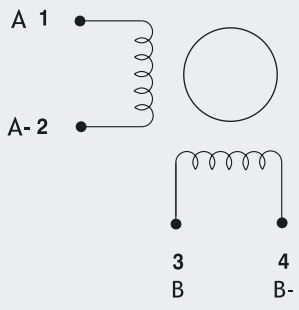
ENCODER OPTIONS:		RH 1S1H-04D0	RH 1S1H-04E0	RH 1S1H-0HE0
RESOLUTION		400 cpr	400 cpr	4000 cpr
INDEX		No	Yes	Yes
CURRENT CONSUMPTION	(mA)	50	50	85
HIGH LEVEL OUTPUT	(Volt)	5 (TIP) - 4.75 (MIN) (I_{MAX}=25mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)
LOW LEVEL OUTPUT	(Volt)	0.25 (TIP) - 0.6 (MAX) (I_{MAX}=25mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)
OUTPUT SIGNAL		Differential	Differential	Differential
MAXIMUM FREQUENCY	(KHz)	100	100	720
POWER SUPPLY VOLTAGE	(Volt)	5 V_{DC} ±10%	5 V_{DC} ±10%	5 V_{DC} ±10%

FEATURES

MODEL		RH 1S1H
BASIC STEP ANGLE		1.8 ± 0.09°
BIPOLAR CURRENT	(Amp)	2.0
UNIPOLAR CURRENT	(Amp)	
RESISTANCE	(Ohm)	1.1
INDUCTANCE	(mH)	2.4
BIPOLAR HOLDING TORQUE	(Ncm)	43
UNIPOLAR HOLDING TORQUE	(Ncm)	
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	46
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	93000
BACK E.M.F.	(V/Krpm)	21.5
MASS	(Kg)	0.3
PROTECTION DEGREE		IP40
LEADS CODE		V

TORQUE/SPEED CURVE





RTA MOTOR CABLE COLORS

DESCRIPTION	
CHANNEL A	GREEN
CHANNEL A-	WHITE
CHANNEL B	YELLOW
CHANNEL B-	BROWN

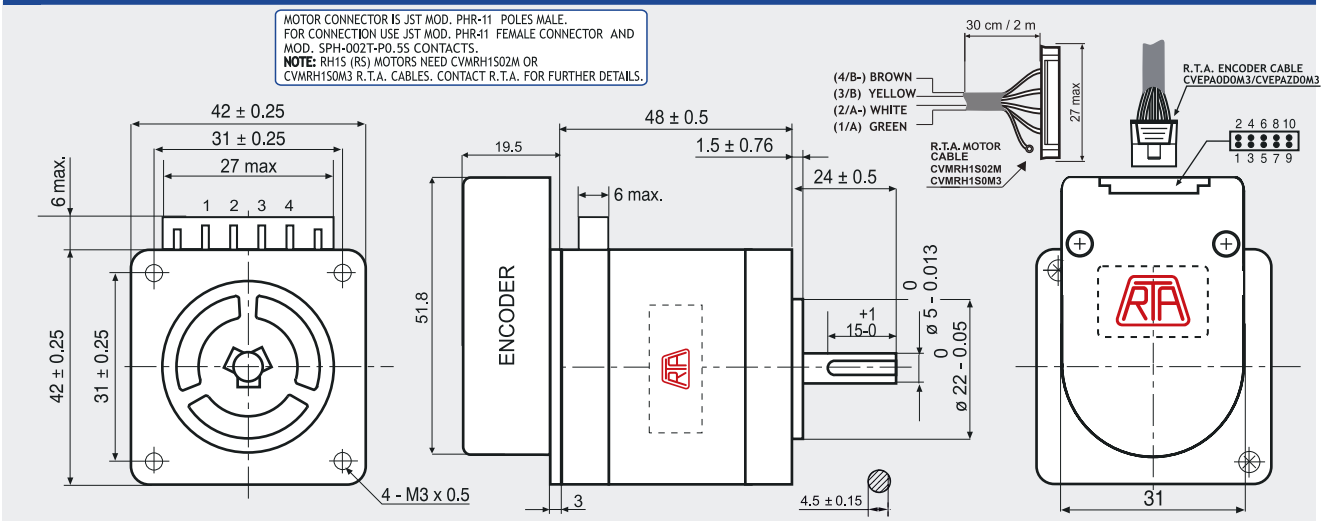
ENCODER PIN-OUT

DESCRIPTION	04D0 PINS	04E0/0HE0 PINS	R.T.A. CABLE LEADS COLOR
CHANNEL A+	6	6	GREEN
CHANNEL A-	5	5	PURPLE
CHANNEL B+	8	8	BLUE
CHANNEL B-	7	7	BROWN
+ DC (5V)	2	2	RED
GROUND	3	3	BLACK
INDEX+	/	10	ORANGE
INDEX-	/	9	WHITE
R.T.A. CABLE (30 cm)	CVEPA0D0M3	CVEPAZD0M3	

Suggested R.T.A. drive series: BSD, CSD, FLEX-DRIVE

RH 1S2H-0XX0

Dimensions (Unit:mm)

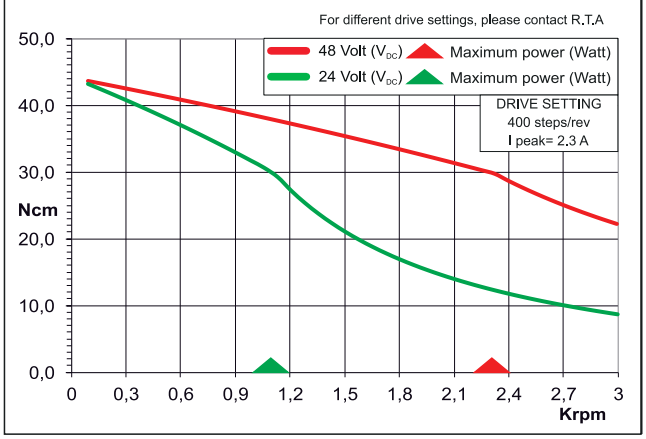


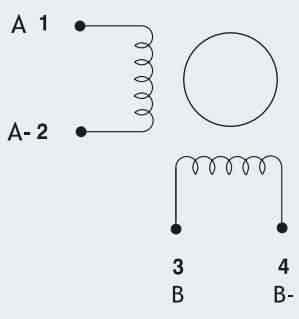
ENCODER OPTIONS:		RH 1S2H-04D0	RH 1S2H-04E0	RH 1S2H-0HE0
RESOLUTION		400 cpr	400 cpr	4000 cpr
INDEX		No	Yes	Yes
CURRENT CONSUMPTION	(mA)	50	50	85
HIGH LEVEL OUTPUT	(Volt)	5 (TIP) - 4.75 (MIN) (I_{MAX}=25mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)
LOW LEVEL OUTPUT	(Volt)	0.25 (TIP) - 0.6 (MAX) (I_{MAX}=25mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)
OUTPUT SIGNAL		Differential	Differential	Differential
MAXIMUM FREQUENCY	(KHz)	100	100	720
POWER SUPPLY VOLTAGE	(Volt)	5 V_{DC} ±10%	5 V_{DC} ±10%	5 V_{DC} ±10%

FEATURES

MODEL		RH 1S2H
BASIC STEP ANGLE		1.8 ± 0.09°
BIPOLAR CURRENT	(A)	2.3
UNIPOLAR CURRENT	(A)	
RESISTANCE	(Ohm)	0.93
INDUCTANCE	(mH)	2.2
BIPOLAR HOLDING TORQUE	(Ncm)	56
UNIPOLAR HOLDING TORQUE	(Ncm)	
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	63
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	89000
BACK E.M.F.	(V/Krpm)	24.3
MASS	(Kg)	0.38
PROTECTION DEGREE		IP40
LEADS CODE		V

TORQUE/SPEED CURVE





RTA MOTOR CABLE COLORS

DESCRIPTION	
CHANNEL A	GREEN
CHANNEL A-	WHITE
CHANNEL B	YELLOW
CHANNEL B-	BROWN

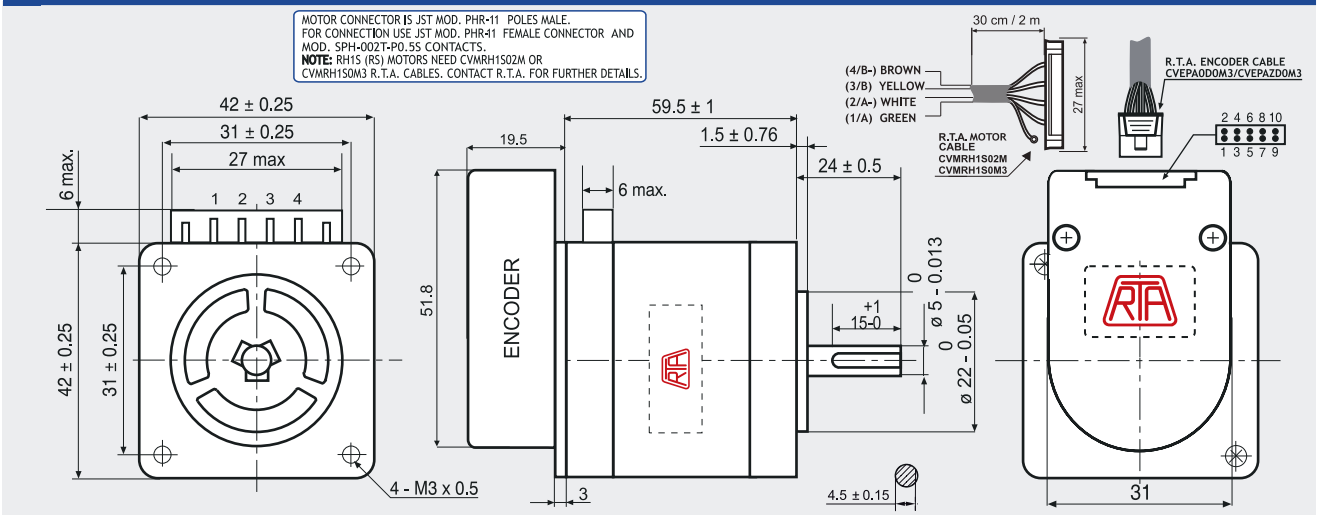
ENCODER PIN-OUT

DESCRIPTION	04D0 PINS	04E0/0HE0 PINS	R.T.A. CABLE LEADS COLOR
CHANNEL A+	6	6	GREEN
CHANNEL A-	5	5	PURPLE
CHANNEL B+	8	8	BLUE
CHANNEL B-	7	7	BROWN
+ DC (5V)	2	2	RED
GROUND	3	3	BLACK
INDEX+	/	10	ORANGE
INDEX-	/	9	WHITE
R.T.A. CABLE (30 cm)	CVEPA0D0M3	CVEPAZD0M3	

Suggested R.T.A. drive series: BSD, CSD, FLEX-DRIVE

RH 1S3H-0XX0

Dimensions (Unit:mm)

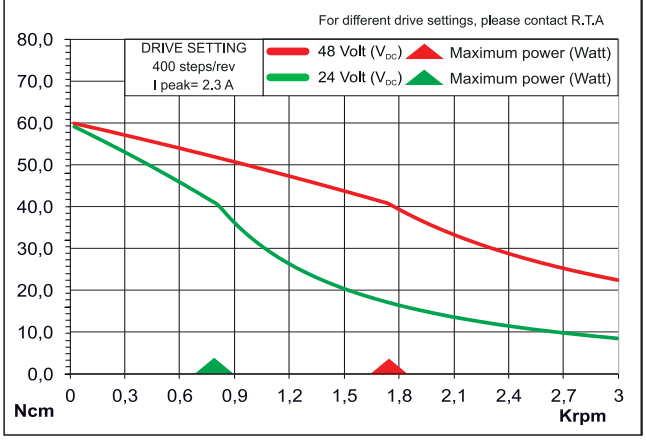


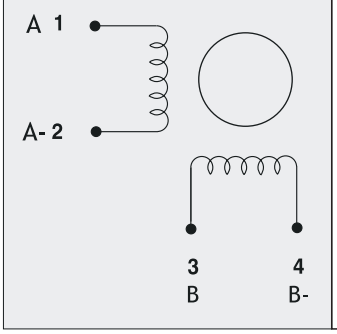
ENCODER OPTIONS:		RH 1S3H-04D0	RH 1S3H-04E0	RH 1S3H-0HE0
RESOLUTION		400 cpr	400 cpr	4000 cpr
INDEX		No	Yes	Yes
CURRENT CONSUMPTION	(mA)	50	50	85
HIGH LEVEL OUTPUT	(Volt)	5 (TIP) - 4.75 (MIN) (I_{MAX}=25mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)
LOW LEVEL OUTPUT	(Volt)	0.25 (TIP) - 0.6 (MAX) (I_{MAX}=25mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)
OUTPUT SIGNAL		Differential	Differential	Differential
MAXIMUM FREQUENCY	(KHz)	100	100	720
POWER SUPPLY VOLTAGE	(Volt)	5 V_{DC} ±10%	5 V_{DC} ±10%	5 V_{DC} ±10%

FEATURES

MODEL		RH 1S3H
BASIC STEP ANGLE		1.8 ± 0.09°
BIPOLAR CURRENT	(Amp)	2.3
UNIPOLAR CURRENT	(Amp)	
RESISTANCE	(Ohm)	1.2
INDUCTANCE	(mH)	3.0
BIPOLAR HOLDING TORQUE	(Ncm)	80
UNIPOLAR HOLDING TORQUE	(Ncm)	
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	94
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	85100
BACK E.M.F.	(V/Krpm)	34.7
MASS	(Kg)	0.51
PROTECTION DEGREE		IP40
LEADS CODE		V

TORQUE/SPEED CURVE





RTA MOTOR CABLE COLORS

DESCRIPTION	
CHANNEL A	GREEN
CHANNEL A-	WHITE
CHANNEL B	YELLOW
CHANNEL B-	BROWN

ENCODER PIN-OUT

DESCRIPTION	04D0 PINS	04E0/0HE0 PINS	R.T.A. CABLE LEADS COLOR
CHANNEL A+	6	6	GREEN
CHANNEL A-	5	5	PURPLE
CHANNEL B+	8	8	BLUE
CHANNEL B-	7	7	BROWN
+ DC (5V)	2	2	RED
GROUND	3	3	BLACK
INDEX+	/	10	ORANGE
INDEX-	/	9	WHITE
R.T.A. CABLE (30 cm)	CVEPA0D0M3	CVEPAZD0M3	

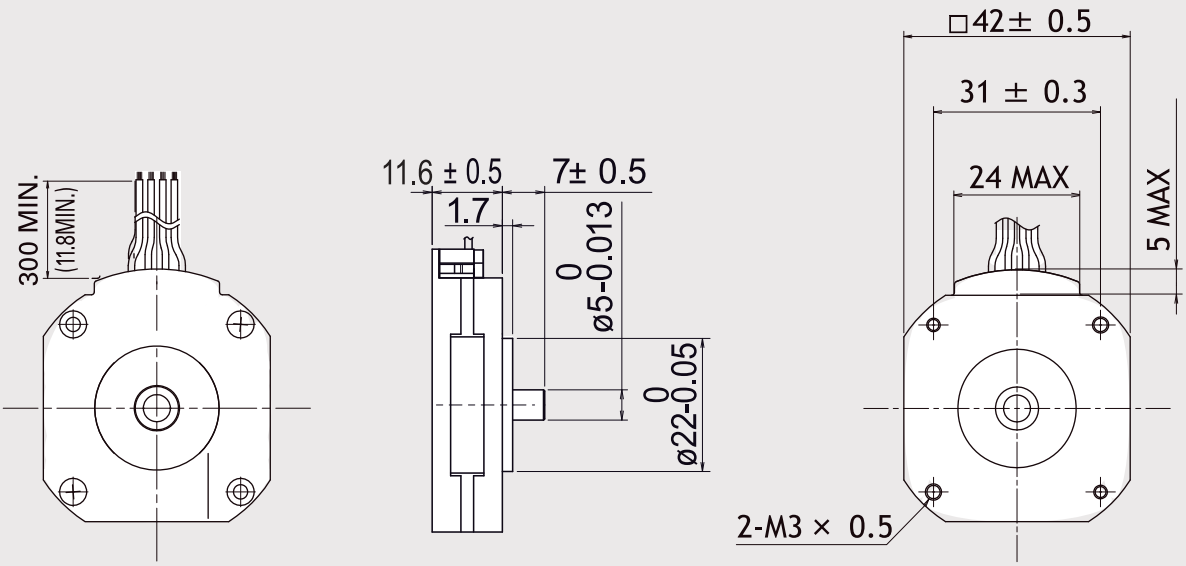
Suggested R.T.A. drive series: BSD, CSD, FLEX-DRIVE

SS2421-5041

PANCAKE TYPE motor

SANYO DENKI
SANMOTION

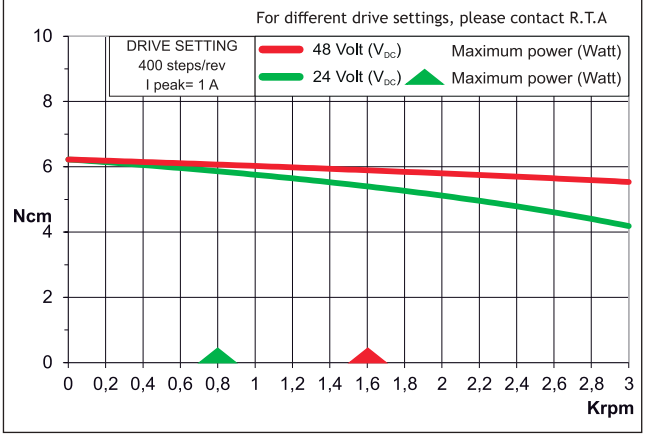
Dimensions (Unit:mm)



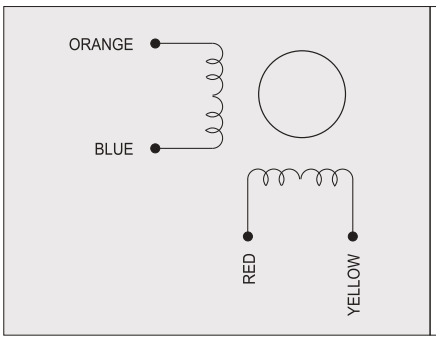
FEATURES

MODEL		SS2421-5041
BASIC STEP ANGLE		1.8° ± 0.09°
BIPOLAR CURRENT	(Amp)	1.0
UNIPOLAR CURRENT	(Amp)	
RESISTANCE	(Ohm)	3.5
INDUCTANCE	(mH)	1.2
BIPOLAR HOLDING TORQUE	(Ncm)	8.3
UNIPOLAR HOLDING TORQUE	(Ncm)	
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	0.015
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	55000
BACK E.M.F.	(V/Krpm)	8.0
MASS	(Kg)	0.07

TORQUE/SPEED CURVE



R.T.A. s.r.l. PAVIA (ITALY) SANYO DENKI CO.,Ltd (JAPAN)



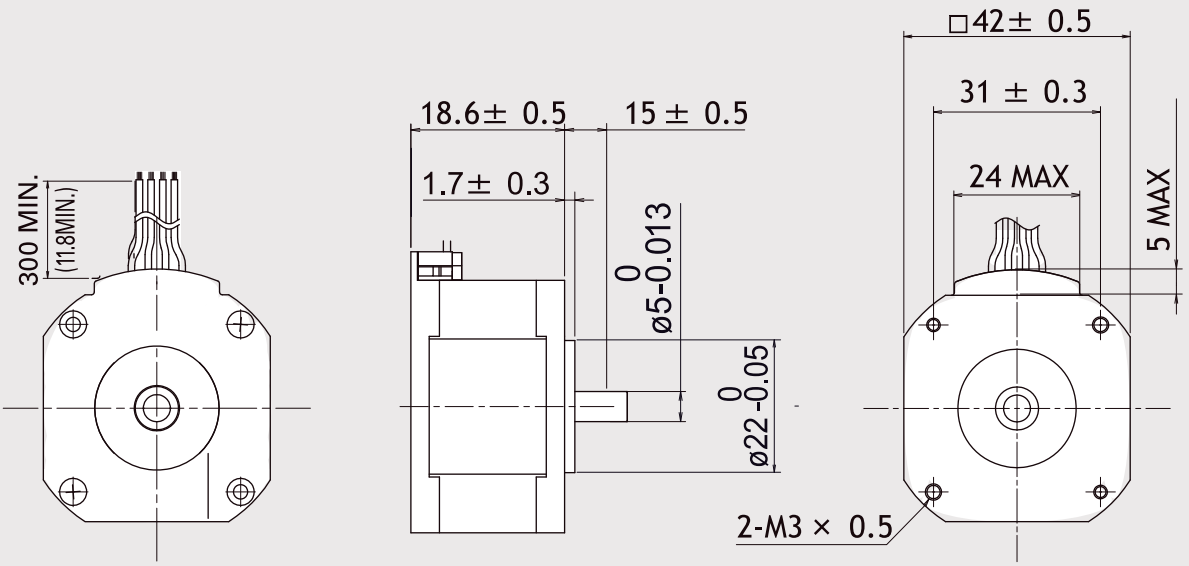
Suggested driver: contact R.T.A.

SS2422-5041

PANCAKE TYPE motor

SANYO DENKI
SANMOTION

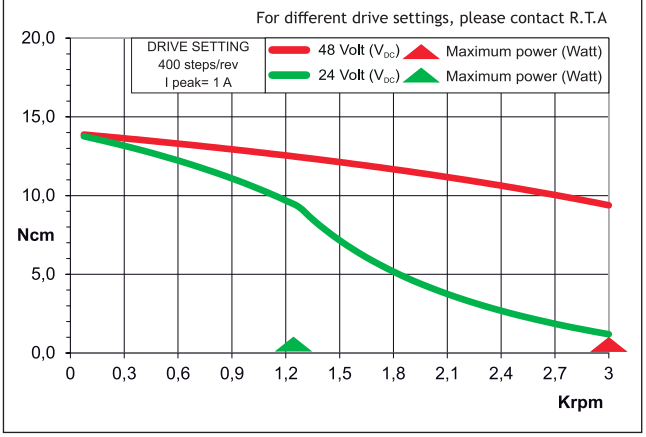
Dimensions (Unit:mm)



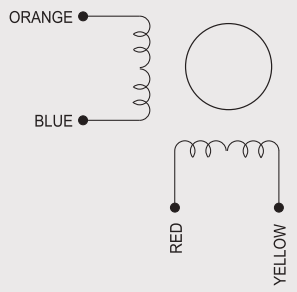
FEATURES

MODEL		SS2422-5041 (SS2422-5011)
BASIC STEP ANGLE		1.8° ± 0.09°
BIPOLAR CURRENT	(Amp)	1.0
UNIPOLAR CURRENT	(Amp)	
RESISTANCE	(Ohm)	5.4
INDUCTANCE	(mH)	2.9
BIPOLAR HOLDING TORQUE	(Ncm)	18.6
UNIPOLAR HOLDING TORQUE	(Ncm)	
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	0.028
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	63000
BACK E.M.F.	(V/Krpm)	18
MASS	(Kg)	0.14

TORQUE/SPEED CURVE



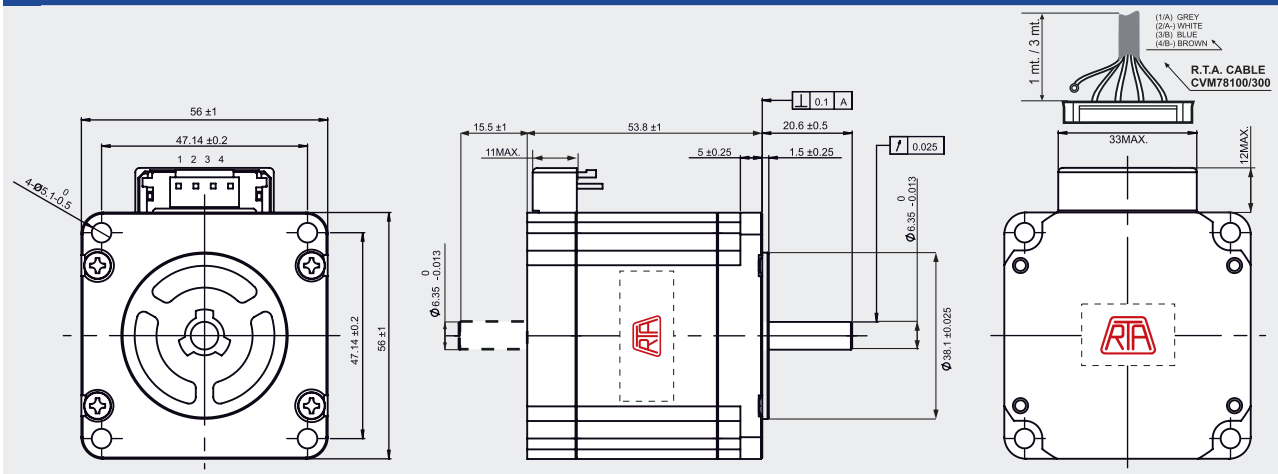
R.T.A. s.r.l. PAVIA (ITALY) SANYO DENKI CO.,Ltd (JAPAN)



Suggested driver: contact R.T.A.

RH 2S1M

Dimensions (Unit:mm)



MOTOR CONNECTOR IS JST mod. B4P-VH 4 POLES MALE.
FOR CONNECTION USE JST mod. VHR-4N FEMALE CONNECTOR AND mod. SVH-21 T-P1.1 CONTACTS.
NOTE: RH2S (RS) MOTORS NEED CVM78100 AND CVM78300 R.T.A. CABLES. CONTACT R.T.A. FOR FURTHER DETAILS.

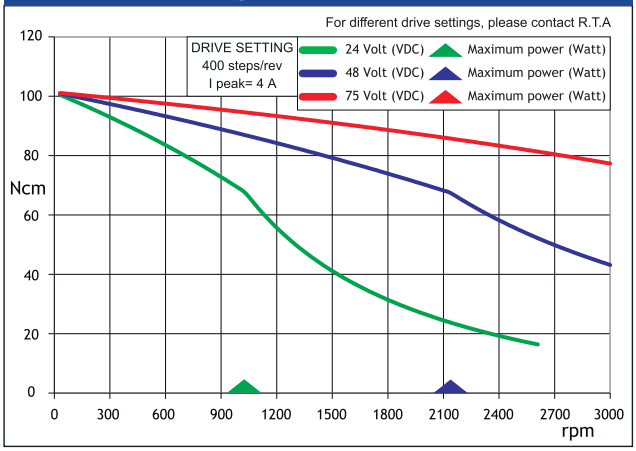
+ 30%
HOLDING TORQUE
THAN THE PREVIOUS «H» SERIES

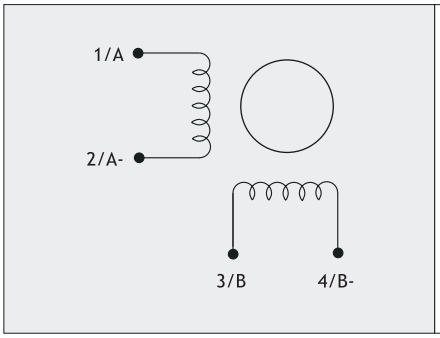
FEATURES

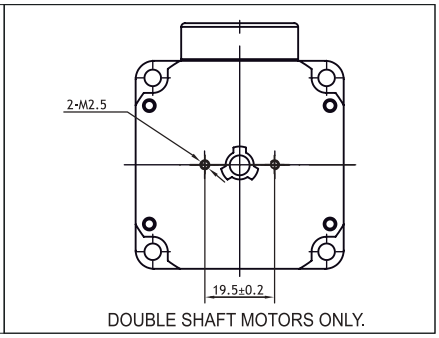
MODEL		RH 2S1M (RH 2S1M-RS)
BASIC STEP ANGLE		1.8 ± 0.09°
BIPOLAR CURRENT	(Amp)	4.0
UNIPOLAR CURRENT	(Amp)	
RESISTANCE	(Ohm)	0.37
INDUCTANCE	(mH)	1.5
BIPOLAR HOLDING TORQUE	(Ncm)	140
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	280
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	50000
BACK E.M.F.	(V/Krpm)	35
MASS	(Kg)	0.69
INTERNATIONAL STANDARDS		UL, CSA
PROTECTION DEGREE		IP40
LEADS CODE		V

Codes between brackets refer to double shaft models.

TORQUE/SPEED CURVE





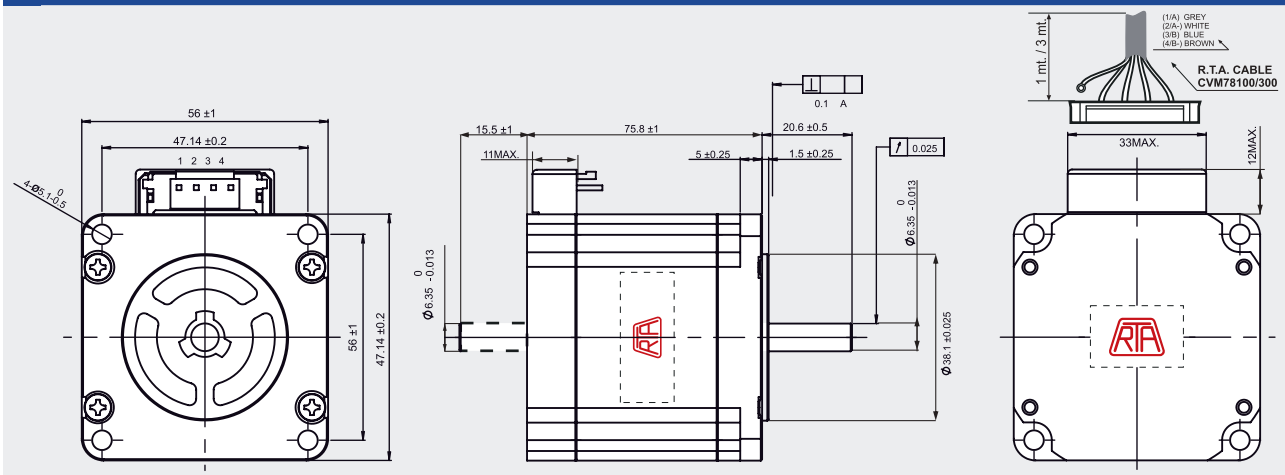


DOUBLE SHAFT MOTORS ONLY.

Suggested R.T.A. drive series: BSD, CSD, FLEX-DRIVE, NDC

RH 2S2M

Dimensions (Unit:mm)



MOTOR CONNECTOR IS JST mod. B4P-VH 4 POLES MALE.
FOR CONNECTION USE JST mod. VHR-4N FEMALE CONNECTOR AND mod. SVH-21 T-P1.1 CONTACTS.
NOTE: RH2S (RS) MOTORS NEED CVM78100 AND CVM78300 R.T.A. CABLES. CONTACT R.T.A. FOR FURTHER DETAILS.

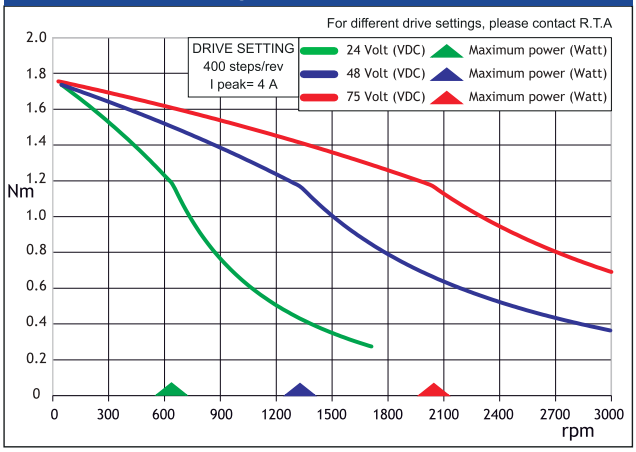
+ 40%
HOLDING TORQUE
THAN THE PREVIOUS «H» SERIES

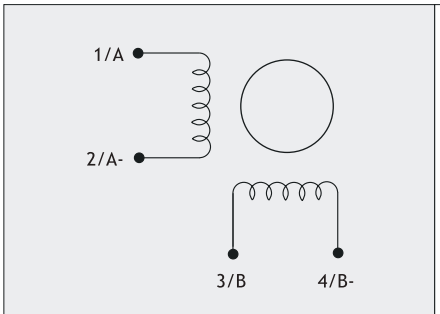
FEATURES

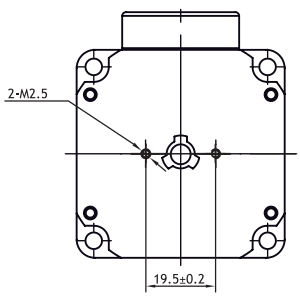
MODEL		RH 2S2M (RH 2S2M-RS)
BASIC STEP ANGLE		1.8 ± 0.09°
BIPOLAR CURRENT	(Amp)	4.0
UNIPOLAR CURRENT	(Amp)	
RESISTANCE	(Ohm)	0.52
INDUCTANCE	(mH)	2.4
BIPOLAR HOLDING TORQUE	(Ncm)	235
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	500
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	47000
BACK E.M.F.	(V/Krpm)	58.7
MASS	(Kg)	1.1
INTERNATIONAL STANDARDS		UL, CSA
PROTECTION DEGREE		IP40
LEADS CODE		V

Codes between brackets refer to double shaft models.

TORQUE/SPEED CURVE





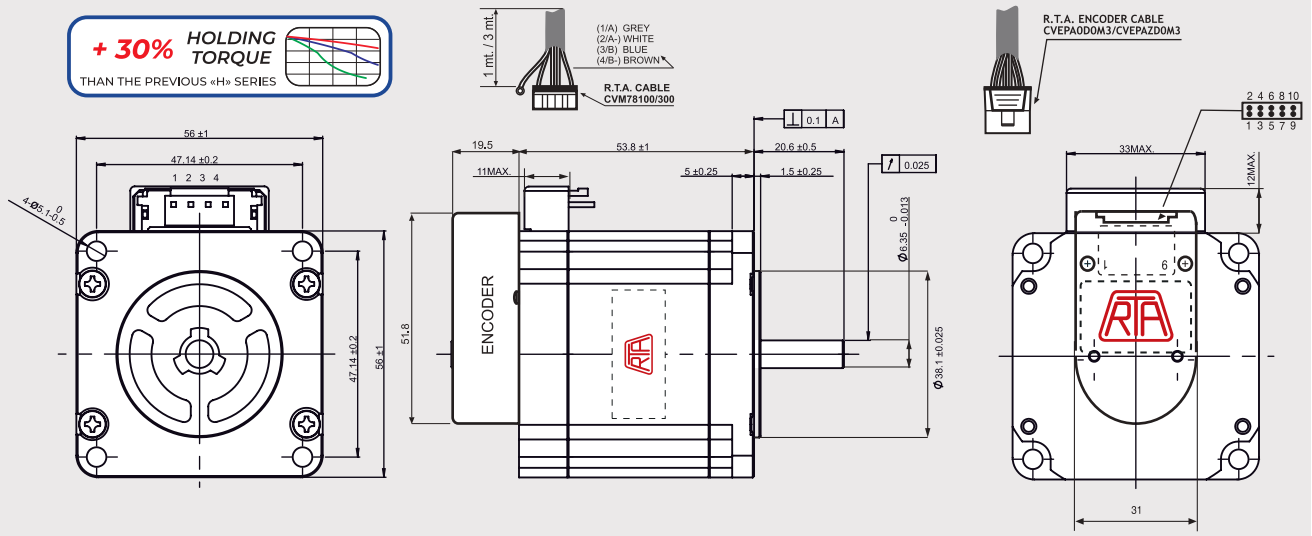


DOUBLE SHAFT MOTORS ONLY.

Suggested R.T.A. drive series: BSD, CSD, FLEX-DRIVE, NDC

RH 2S1M-0XX0

Dimensions (Unit:mm)

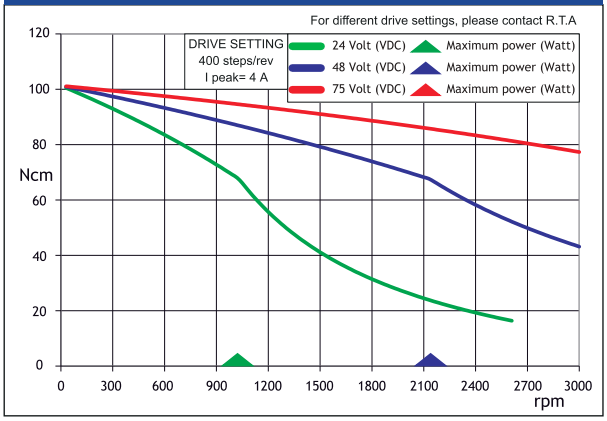


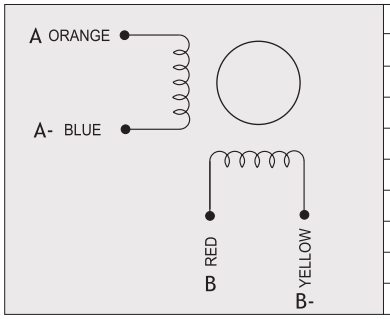
ENCODER OPTIONS:		RH 2S1M-04D0	RH 2S1M-04E0	RH 2S1M-0HE0
RESOLUTION		400 cpr	400 cpr	4000 cpr
INDEX		No	Yes	Yes
CURRENT CONSUMPTION	(mA)	50	50	85
HIGH LEVEL OUTPUT	(Volt)	5 (TIP) - 4.75 (MIN) (I_{MAX}=25mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)
LOW LEVEL OUTPUT	(Volt)	0.25 (TIP) - 0.6 (MAX) (I_{MAX}=25mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)
OUTPUT SIGNAL		Differential	Differential	Differential
MAXIMUM FREQUENCY	(KHz)	100	100	720
POWER SUPPLY VOLTAGE	(Volt)	5 V_{DC} ± 10%	5 V_{DC} ± 10%	5 V_{DC} ± 10%

ENCODER NEEDS CVEPA0D0M3 OR CVEPAZD0M3 R.T.A. CABLE. CONTACT R.T.A. FOR FURTHER DETAILS

FEATURES		
MODEL		**RH 2S1M-0XX0**
BASIC STEP ANGLE		1.8 ± 0.09°
BIPOLAR CURRENT	(Amp)	4.0
UNIPOLAR CURRENT	(Amp)	
RESISTANCE	(Ohm)	0.37
INDUCTANCE	(mH)	1.5
BIPOLAR HOLDING TORQUE	(Ncm)	140
UNIPOLAR HOLDING TORQUE	(Ncm)	
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	280
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	50000
BACK E.M.F.	(V/Krpm)	35
MASS	(Kg)	0 69
PROTECTION DEGREE		IP40
LEADS CODE		V

TORQUE SPEED/CURVE



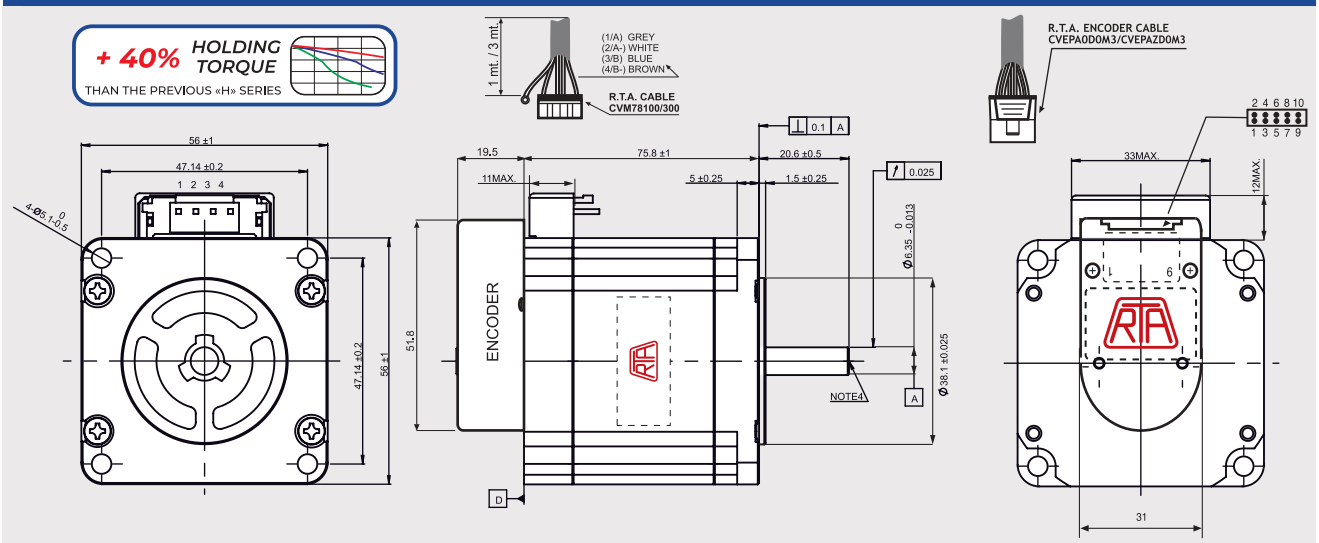


ENCODER PIN-OUT				
DESCRIPTION	04D0 PINS	04E0 PINS	0HE0 PINS	R.T.A. CABLE LEADS COLOR
CHANNEL A+	6	6	6	GREEN
CHANNEL A-	5	5	5	PURPLE
CHANNEL B+	8	8	8	BLUE
CHANNEL B-	7	7	7	BROWN
+ DC (5V)	2	2	2	RED
GROUND	3	3	3	BLACK
INDEX+	/	10	10	ORANGE
INDEX-	/	9	9	WHITE

Suggested R.T.A. drive series: BSD, CSD, FLEX-DRIVE, NDC

RH 2S2M-0XX0

Dimensions (Unit:mm)

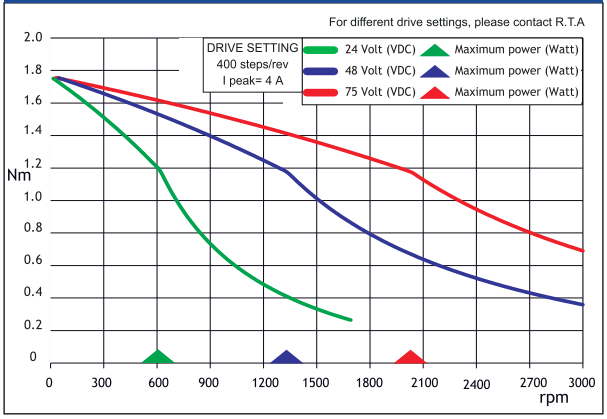


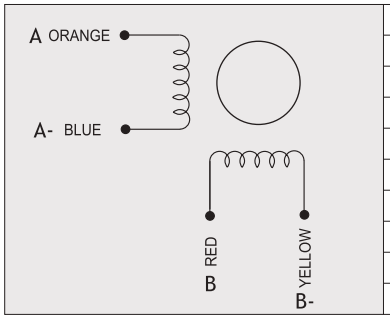
ENCODER OPTIONS:		RH 2S2M-04D0	RH 2S2M-04E0	RH 2S2M-0HE0
RESOLUTION		400 cpr	400 cpr	4000 cpr
INDEX		No	Yes	Yes
CURRENT CONSUMPTION	(mA)	50	50	85
HIGH LEVEL OUTPUT	(Volt)	5 (TIP) - 4.75 (MIN) (I_{MAX}=25mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)
LOW LEVEL OUTPUT	(Volt)	0.25 (TIP) - 0.6 (MAX) (I_{MAX}=25mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)
OUTPUT SIGNAL		Differential	Differential	Differential
MAXIMUM FREQUENCY	(KHz)	100	100	720
POWER SUPPLY VOLTAGE	(Volt)	5 V_{DC} ± 10%	5 V_{DC} ± 10%	5 V_{DC} ± 10%

ENCODER NEEDS CVEPA0D0M3 OR CVEPAZD0M3 R.T.A. CABLE. CONTACT R.T.A. FOR FURTHER DETAILS

FEATURES		
MODEL		**RH 2S2M-0XX0**
BASIC STEP ANGLE		1.8 ± 0.09°
BIPOLAR CURRENT	(Amp)	4.0
UNIPOLAR CURRENT	(Amp)	
RESISTANCE	(Ohm)	0.52
INDUCTANCE	(mH)	2.4
BIPOLAR HOLDING TORQUE	(Ncm)	235
UNIPOLAR HOLDING TORQUE	(Ncm)	
ROTOR INERTIA	(Kgm ^{2} x 10 $^{-7}$)	500
THEORETICAL ACCELERATION	(rad x sec.$^{-2}$)	47000
BACK E.M.F.	(V/Krpm)	58.7
MASS	(Kg)	1.1
PROTECTION DEGREE		IP40
LEADS CODE		V

TORQUE SPEED/CURVE



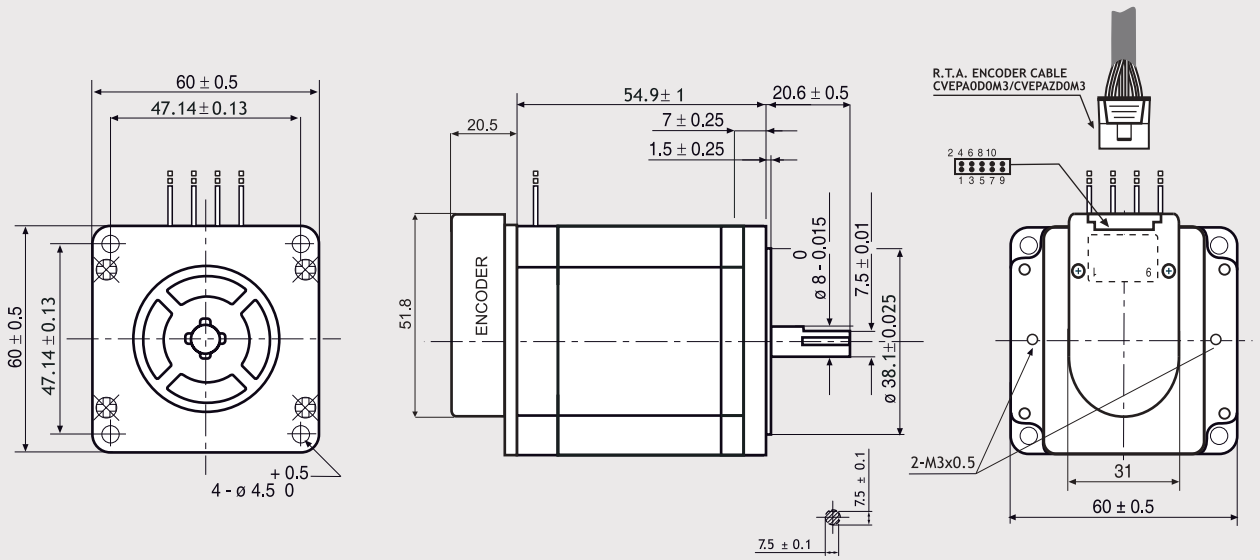


ENCODER PIN-OUT				
DESCRIPTION	04D0 PINS	04E0 PINS	0HE0 PINS	R.T.A. CABLE LEADS COLOR
CHANNEL A+	6	6	6	GREEN
CHANNEL A-	5	5	5	PURPLE
CHANNEL B+	8	8	8	BLUE
CHANNEL B-	7	7	7	BROWN
+ DC (5V)	2	2	2	RED
GROUND	3	3	3	BLACK
INDEX+	/	10	10	ORANGE
INDEX-	/	9	9	WHITE

Suggested R.T.A. drive series: BSD, CSD, FLEX-DRIVE, NDC

EM 6H1M-0XX0

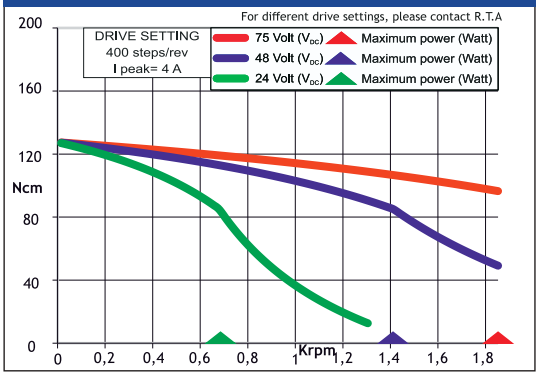
Dimensions (Unit:mm)



SANYO DENKI MOTOR FEATURES

MODEL		EM 6H1M-0XX0
SANYO DENKI MOTOR CODE		103-H7822-1731
BASIC STEP ANGLE		1.8° ± 0.09°
BIPOLAR PARALLEL CURRENT	(A)	4.0
RESISTANCE	(Ohm)	0.43
INDUCTANCE	(mH)	1.38
BIPOLAR HOLDING TORQUE	(Ncm)	137
ROTOR INERTIA	($Kgm^2 \times 10^{-7}$)	400
THEORETICAL ACCELERATION	(rad × $sec.^{-2}$)	34200
BACK E.M.F.	(V/Krpm)	43
MASS	(Kg)	1.3
LEADS CODE		V

TORQUE/SPEED CURVE



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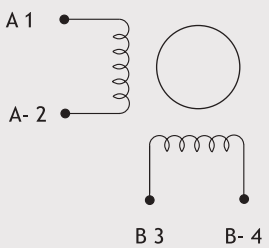
ENCODER OPTIONS:		EM 6H1M-04D0	EM 6H1M-04E0	EM 6H1M-0HE0
RESOLUTION		400 cpr	400 cpr	4000 cpr
INDEX		No	Yes	Yes
CURRENT CONSUMPTION	(mA)	50	50	85
HIGH LEVEL OUTPUT	(Volt)	5 (TIP) - 4.75 (MIN) (I_{MAX}=25mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)	3.4 (TIP) - 2.4 (MIN) (I_{MAX}=20mA)
LOW LEVEL OUTPUT	(Volt)	0.25 (TIP) - 0.6 (MAX) (I_{MAX}=25mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)	0.2 (TIP) - 0.4 (MAX) (I_{MAX}=20mA)
OUTPUT SIGNAL		Differential	Differential	Differential
MAXIMUM FREQUENCY	(KHz)	100	100	720
POWER SUPPLY VOLTAGE	(Volt)	5 V_{DC} ± 10%	5 V_{DC} ± 10%	5 V_{DC} ± 10%

ENCODER NEEDS CVEPA0D0M3 OR CVEPAZD0M3 R.T.A. CABLE. CONTACT R.T.A. FOR FURTHER DETAILS



ENCODER PIN-OUT

DESCRIPTION	04D0 PINS	04E0 PINS	0HE0 PINS	R.T.A. CABLE LEADS COLOR
CHANNEL A+	6	6	6	GREEN
CHANNEL A-	5	5	5	PURPLE
CHANNEL B+	8	8	8	BLUE
CHANNEL B-	7	7	7	BROWN
+ DC (5V)	2	2	2	RED
GROUND	3	3	3	BLACK
INDEX+	/	10	10	ORANGE
INDEX-	/	9	9	WHITE
R.T.A. CABLE	CVEPA0D0M3	CVEPAZD03M	CVEPAZD03M	

Suggested R.T.A. drive series: BSD, CSD, NDC, ADW, FLEX-DRIVE

STEPPING MOTORS ACCESSORIES

FRONT BRAKES

FB-M12-17-02-00000

FRONT BRAKES

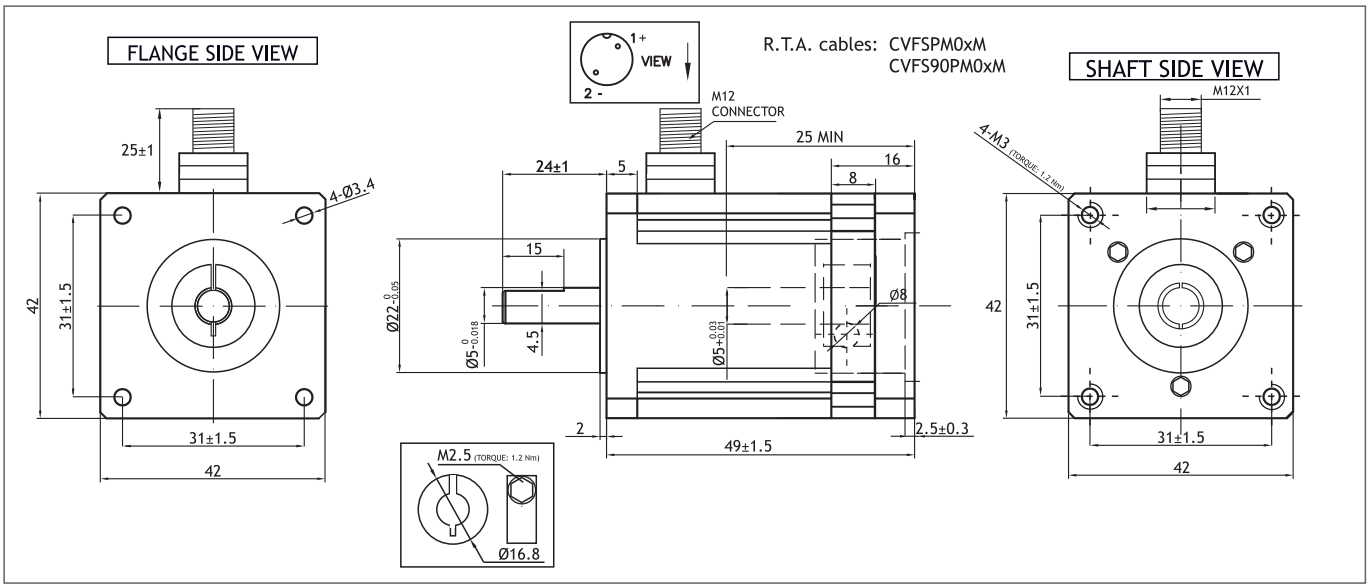
M12 CONNECTOR

24 VDC

NEMA 17

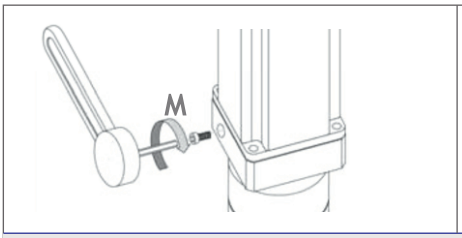
SCAN THE QR CODE TO WATCH A VIDEO ON FB SERIES FRONT BRAKES

Dimensions (Units:mm)



MODEL	Static torque (Nm)	Current (mA)	Voltage (V)	Power (W)	Mass (Kg)
FB-M12-17-02-00000	0.2	170	24 VDC	4.1	0.27

Suggested motors and cables



NEMA 17 motors

R.T.A. cables

CVFSPM0xM x=1m/3m

CVFS90PM0xM x=1m/3m

MOUNTING OPERATION MODE: ■ Tightening torque M= 1.2 Nm ■ Locking bolt M5 ■ R.T.A. Quality Control

CAUTION

Use for safety related functions is forbidden (EN 60204-1). Moreover, when the application arrangement is in such way that a brake fault or failure could generate a risk for property or human life, external independent safety protection system must be provided in the machine.

FB-M12-23-08-00000

FRONT BRAKES

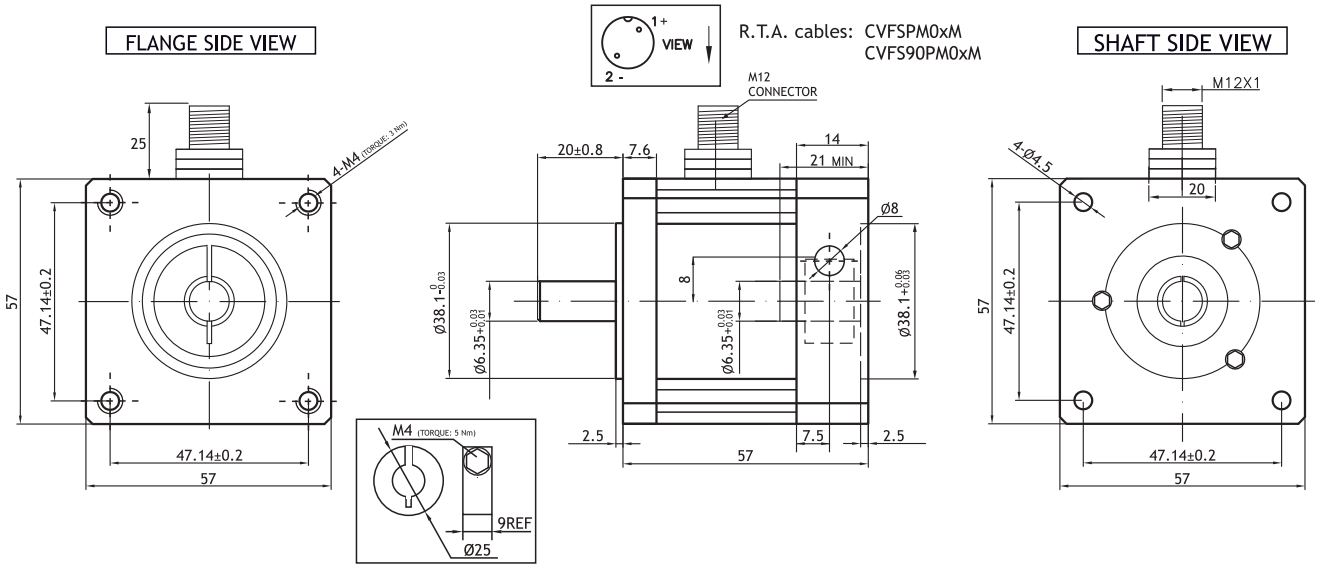
M12 CONNECTOR

24 VDC

NEMA 23

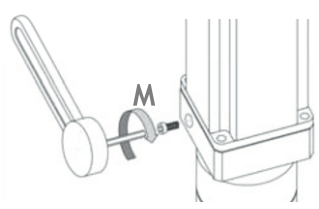
SCAN THE QR CODE TO WATCH A VIDEO ON FB SERIES FRONT BRAKES

Dimensions (Units:mm)



MODEL	Static torque (Nm)	Current (mA)	Voltage (V)	Power (W)	Mass (Kg)
FB-M12-23-08-00000	0.8	340	24 VDC	8.1	0.63

Suggested motors and cables



NEMA 23 motors

R.T.A. cables

CVFSPM0xM x=1m/3m

CVFS90PM0xM x=1m/3m

MOUNTING OPERATION MODE: ■ Tightening torque M= 5 Nm ■ Locking bolt M4 ■ R.T.A. Quality Control

CAUTION

Use for safety related functions is forbidden (EN 60204-1). Moreover, when the application arrangement is in such way that a brake fault or failure could generate a risk for property or human life, external independent safety protection system must be provided in the machine.

SERVO SYSTEMS

Dimensions: (60x160x130)
Model RS3A03A2HAE

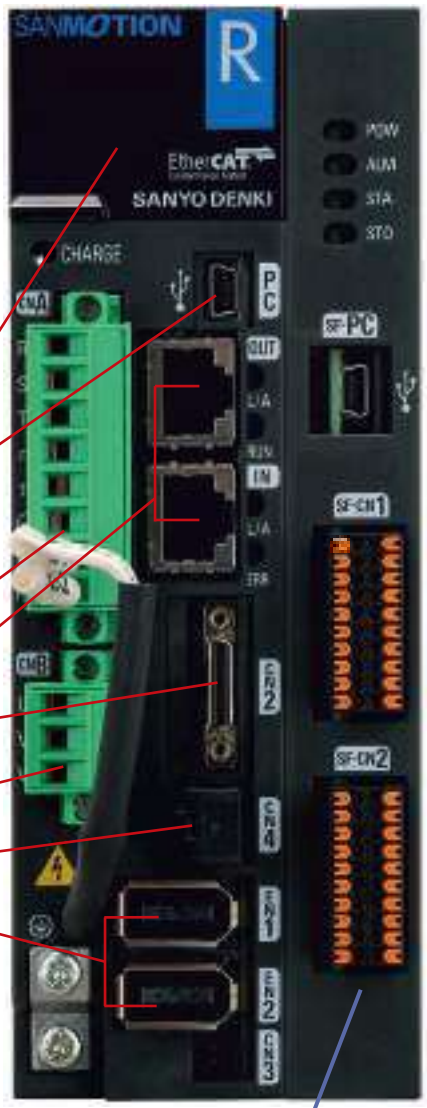
SANMOTION AC SERVO SYSTEMS RS3 | 230 VAC | SIL3 SAFE TORQUE OFF (STO) | EtherCAT

3rd GENERATION!

230 VAC SERVOAMPLIFIERS

ADVANCED SAFETY MODULE

RS3 SERIES AC SERVOAMPLIFIERS - EtherCAT INTERFACE & STO



FIVE DIGIT DISPLAY: It allows to monitor amplifier and EtherCAT Network.

PC CONNECTOR: The amplifier can be set and monitored by means of Personal Computer USB interface.

POWER CONNECTOR: 230VAC, single-phase or three-phase (configurable by user). Power sections kept separated for logic/signal and power. Built-in protection circuits against overload and input overvoltage.
Internal regenerative resistor. External regenerative resistor (optional)

EtherCAT INTERFACE CONNECTOR: RJ45 - CAT5e.

I/O CONNECTOR: 7 inputs and 2 outputs.

MOTOR POWER CONNECTOR - CONNETTORE POTENZA MOTORE

! SAFE TORQUE OFF SIL3 CONNECTOR SIL3

! **SECOND ENCODER CONNECTOR FOR EXTERNAL LINEAR SCALE TO AVOID BACKLASH**

MAIN FEATURES OF THE 3rd GENERATION

c UL us

- Advanced safety function
- Mode of Operation: Homing Mode, Profile Velocity Mode, Profile Position Mode, Profile Torque Mode, Cycle Sync Position Mode, Cycle Sync Velocity Mode, Cycle Sync Torque Mode.
- Touch Probe Function.
- Speed frequency response of 2.2 kHz [3.3 times that of previous RS1 model!]
- Safe Torque Off (STO) function - SIL3/IEC61508. Performance Level - PL = e/ISO13849-1
- RS3A03A2HAE covers 100W, 200W, 400W, 750W, 1000W, 1500W motors

SAFETY FUNCTIONS SPECIFICATIONS	
STO	SAFE TORQUE OFF
SS1	SAFE STOP 1
SS2	SAFE STOP 2
SOS	SAFE OPERATING STOP
SLS	SAFELY-LIMITED SPEED
SBC	SAFE BRAKE CONTROL
SSM	SAFE SPEED MONITOR

TECHNICAL DATA	EtherCAT Control		
MODEL	RS3A03A2HAE	RS3A05A2HAE	RS3A10A2HAE
MAX CURRENT	30 Amp	50 Amp	100 Amp
MOTOR OUTPUT STAGE	IGBT, PWM control, sinusoidal current		
POWER SUPPLY VOLTAGE	Single-phase or three-phase (configurable by the user) 200 VAC or 230 VAC (+10%, -15%) 50/60 Hz (± 3 Hz)		
LOGIC SUPPLY VOLTAGE	Single-phase from 200 VAC to 230 VAC (+10%, -15%) 50/60 Hz (± 3 Hz)		
DIMENSIONS (mm)	60x160x130	105x160x130	120x205x220
MASS (kg)	1.1	1.65	4.2

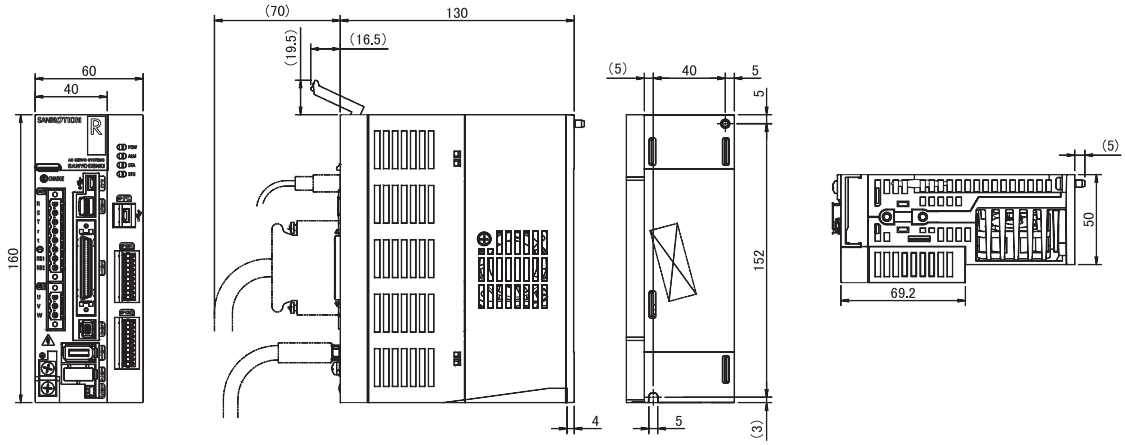
SANYO DENKI CO.,Ltd (JAPAN)
R.T.A. s.r.l. PAVIA (ITALY)

SANMOTION AC SERVO SYSTEMS RS3 | 230 VAC | SIL3 SAFE TORQUE OFF (STO) | ADVANCED SAFETY MODULE | EtherCAT

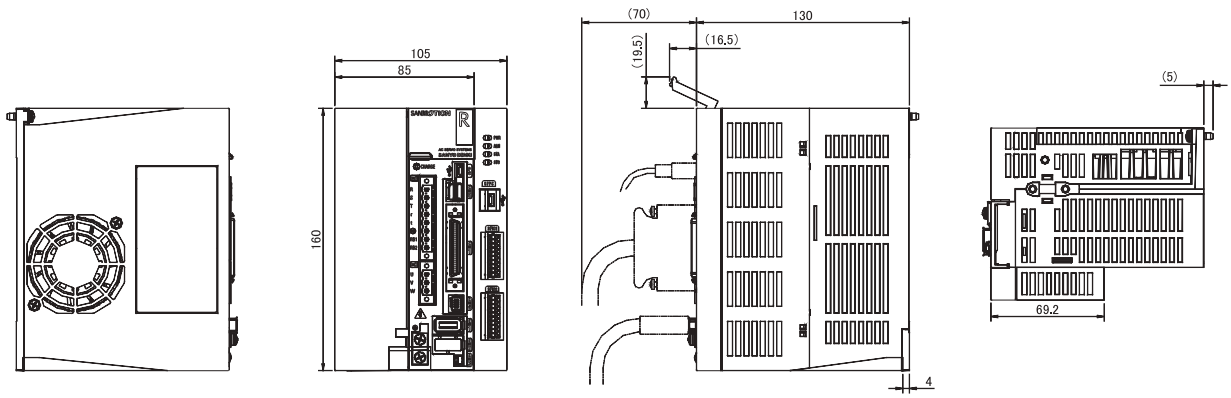
"RS3A" SERIES AC SERVOAMPLIFIERS:

EtherCAT VERSION OUTLINE DRAWINGS

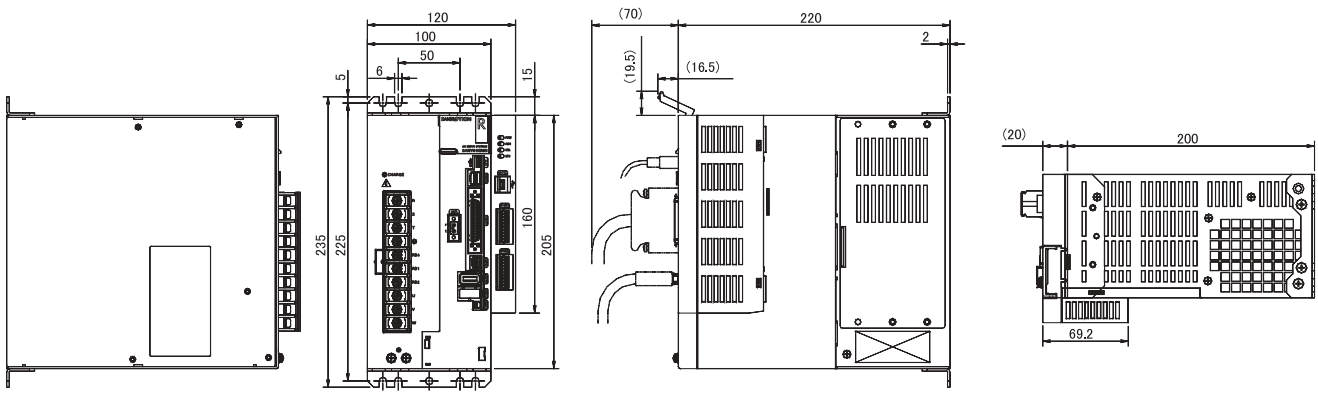
RS3A03A2HAE



RS3A05A2HAE



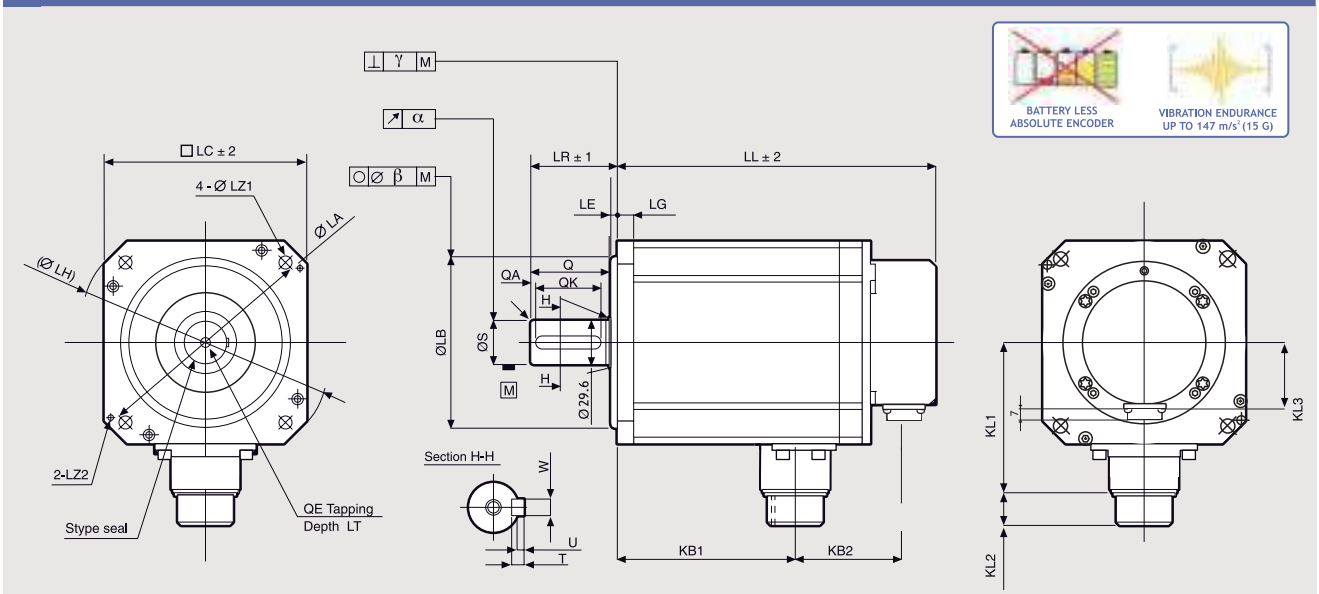
RS3A10A2HAE



Dimensions mm.

R2AA13200LXR00M (R2AA13200LCR00M)

Dimensions (Unit:mm)

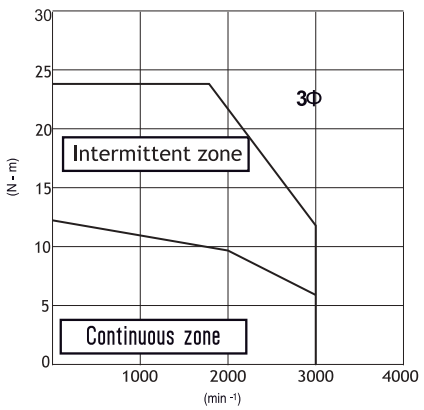


without brake LL	without brake KB2	with brake LL	with brake KB2	KL1	KL2	KL3	LG	LA	LB	LE	LH	LC	LZ1	LZ2	LR	S	Q	QA	QK	W	T	U	KB1	QE	LT
171	57	216	103	98	21	38	12	145	0 110-0.035	4	165	130	9	M6	55	0 28-0.013	50	3	42	0 8-0.036	7	3	99	M8	25

FEATURES

MODEL		R1AA13200LXR00M
NOMINAL POWER	(W)	2000
NOMINAL SPEED	(rpm)	2000
MAXIMUM SPEED	(rpm)	3000
NOMINAL TORQUE	(Nm)	9.5
STALL TORQUE	(Nm)	12
MAXIMUM TORQUE	(Nm)	24
INERTIA	($Kg*m^2$)	12.2×10^{-4}
ENCODER	(imp./rev)	SINGLE TURN: 131072 imp/rev (17 bit) MULTI TURN: 65536 turns (16 bit)
PROTECTION DEGREE		IP65
WEIGHT	[version with brake] (Kg)	10 (12)

TORQUE CURVE
R1AA13200F [2kW] + RS3A10



WITHOUT BRAKE
R2AA13200LXR00M

Indicated performances refer to motor controlled by related new RS3 standard and EtherCat amplifiers.

3Φ = torque curve with three-phase power supply

WITHOUT BRAKE
R2AA13200LCR00M

Suggested amplifiers: RS3A05A0AA2, RS3A05A2HA4W00

R.T.A. s.r.l. PAVIA (ITALY) SANYO DENKI CO.,Ltd (JAPAN)

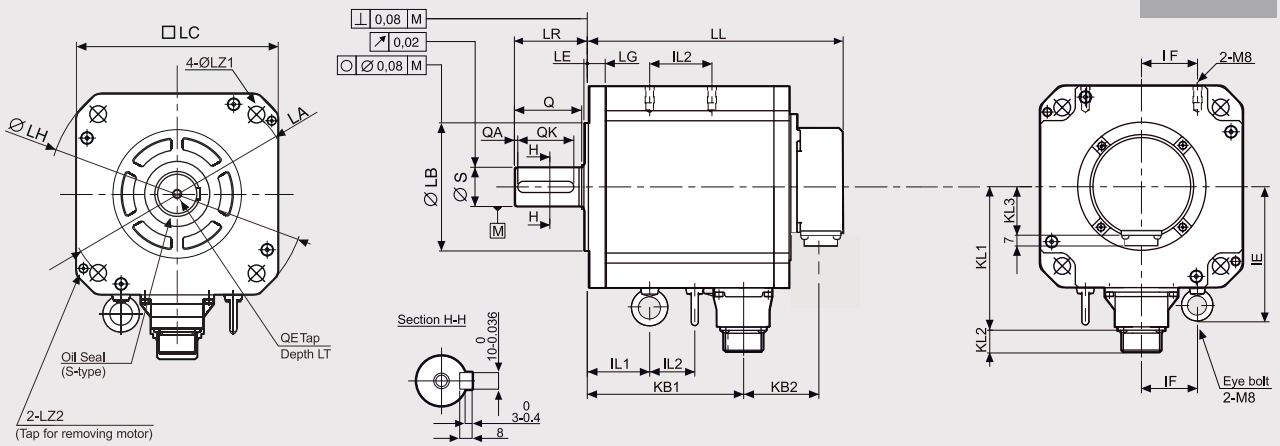
R2CA18350LXR00M (R2CA18350LCR00M)

SANYO DENKI
SANMOTION

Dimensions (Unit:mm)

c UL us

400 VAC



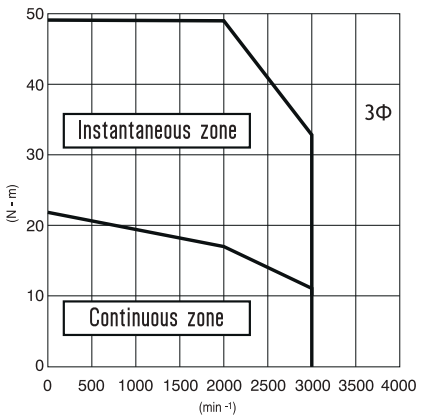
without brake LL	without brake KB2	with brake LL	with brake KB2	KL1	KL2	KL3	LG	LA	LB	LE	LH	LC	LZ1	LZ2	LR	S	Q	QA	QK	IL1	IL2	IF	IE	KB1	QE	LT
159	52	206	99	123	21	38	16	200	0 Ø114.3-0.035	3	Ø230	□180	Ø13.5	M8	65	0 Ø35-0.016	60	3	50	47	20	50	123	92	M8	25

FEATURES

MODEL		R2CA18350LXR00M (R2CA18350LCR00M)
NOMINAL POWER	(W)	3500
NOMINAL SPEED	(rpm)	2000
MAXIMUM SPEED	(rpm)	3000
NOMINAL TORQUE	(Nm)	17.0
STALL TORQUE	(Nm)	22.0
MAXIMUM TORQUE	(Nm)	49.0
INERTIA	($Kg*m^2$)	40×10^{-4}
BATTERY-LESS ABSOLUTE ENCODER	(imp./rev)	SINGLE TURN: 131072 imp/rev (17 bit) MULTI TURN: 65536 turns (16 bit)
PROTECTION DEGREE		IP65
WEIGHT	(Kg)	15.5

TORQUE CURVE

R2CA18350LXH [3.5kW] + RS3C05



WITHOUT BRAKE

Indicated performances refer to motor controlled by related RS3 standard and EtherCat amplifiers.

3Φ = torque curve with three-phase power supply

WITH BRAKE

Suggested amplifiers: RS3C05A0AA2, RS3C05A2HA4

R.T.A. s.r.l. PAVIA (ITALY) SANYO DENKI CO.,Ltd (JAPAN)

R2CA18450HXR00M (R2CA18450HCR00M)

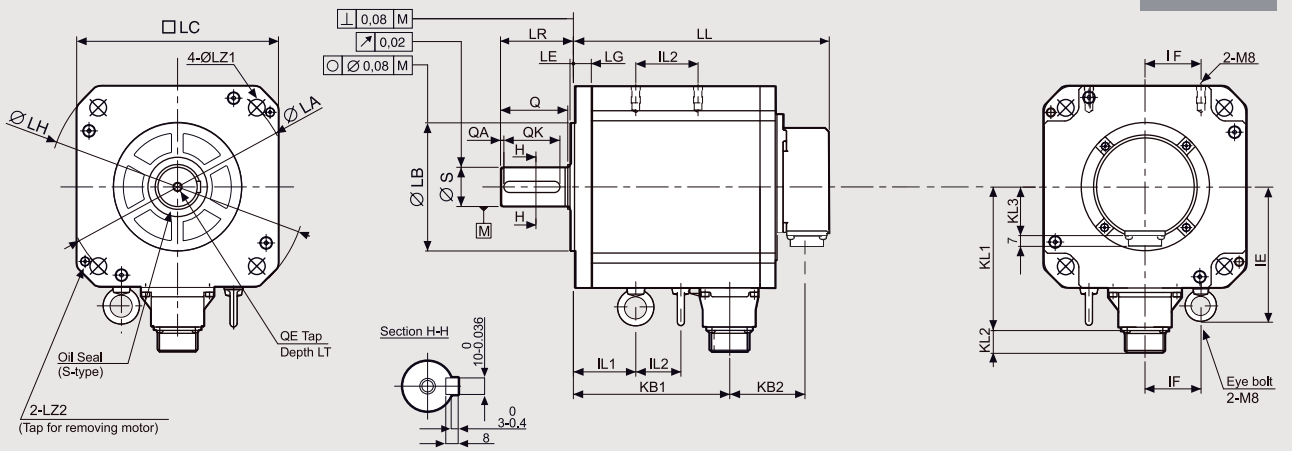
SANYO DENKI
SANMOTION

Dimensions (Unit:mm)

BATTERY LESS ABSOLUTE ENCODER

VIBRATION ENDURANCE UP TO 147 m/s² (15 G)

400 VAC



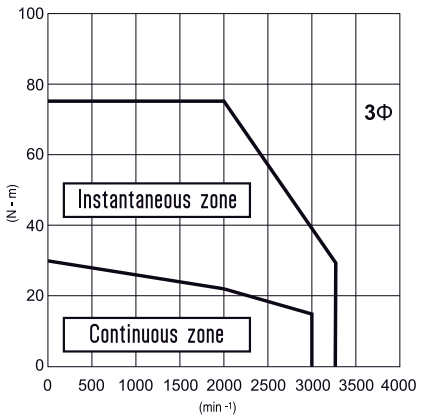
without brake LL	without brake KB2	with brake LL	with brake KB2	KL1	KL2	KL3	LG	LA	LB	LE	LH	LC	LZ1	LZ2	LR	S	Q	QA	QK	IL1	IL2	IF	IE	KB1	QE	LT
176	52	223	99	123	21	38	16	200	0 Ø114.3-0.035	3	Ø230	□180	Ø13.5	M8	65	0 Ø35-0.016	60	3	50	57	20	50	123	109	M8	25

FEATURES

MODEL		R2CA18450HXR00M (R2CA18450HCR00M)
NOMINAL POWER	(W)	4500
NOMINAL SPEED	(rpm)	2000
MAXIMUM SPEED	(rpm)	3500
NOMINAL TORQUE	(Nm)	21.5
STALL TORQUE	(Nm)	30
MAXIMUM TORQUE	(Nm)	75.0
INERTIA	(Kg*m²)	50×10^{-4}
BATTERY-LESS ABSOLUTE ENCODER	(imp./rev)	SINGLE TURN: 131072 imp/rev (17 bit) MULTI TURN: 65536 turns (16 bit)
PROTECTION DEGREE		IP65
WEIGHT	(Kg)	20 [24]

TORQUE CURVE

R2CA18450HX [4.5kW] + RS3C10



WITHOUT BRAKE

Indicated performances refer to motor controlled by related RS3 standard and EtherCat amplifiers.

3Φ = torque curve with three-phase power supply

WITH BRAKE

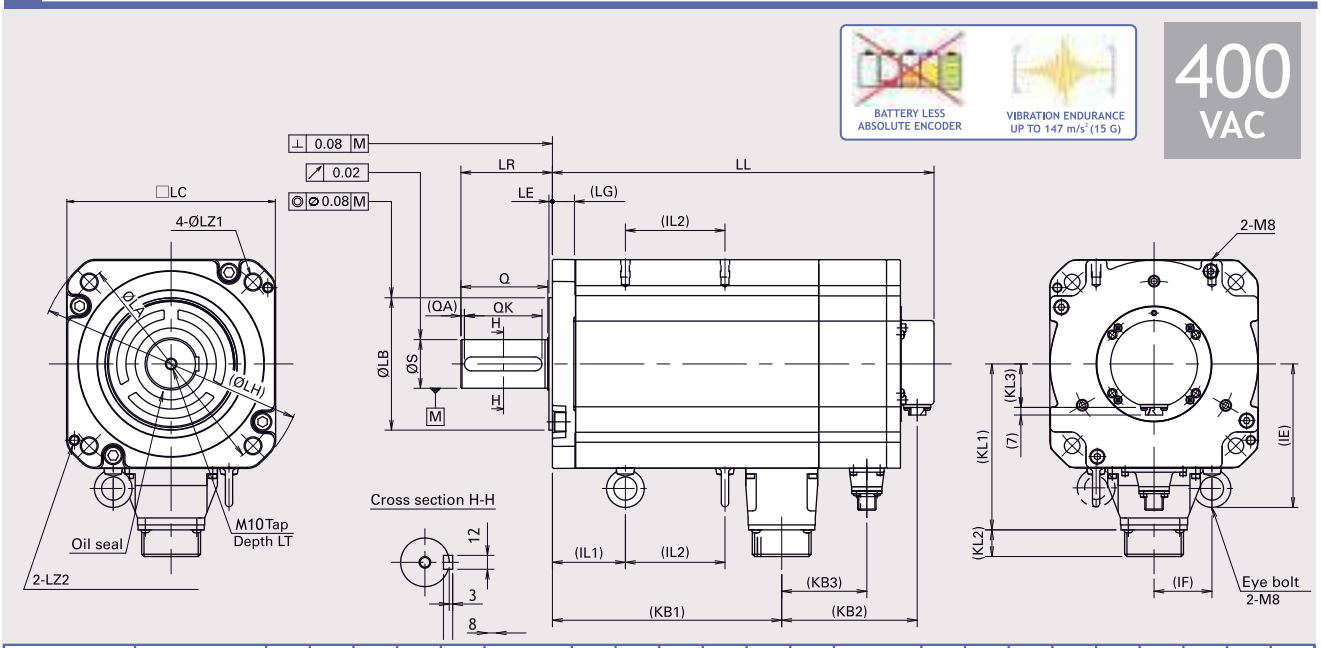
Suggested amplifiers: RS3C10A0AA2, RS3C10A2HA4

R.T.A. s.r.l. PAVIA (ITALY) SANYO DENKI CO.,Ltd (JAPAN)

R2CA18750HCR00M

SANYO DENKI
SANMOTION

Dimensions (Unit:mm)

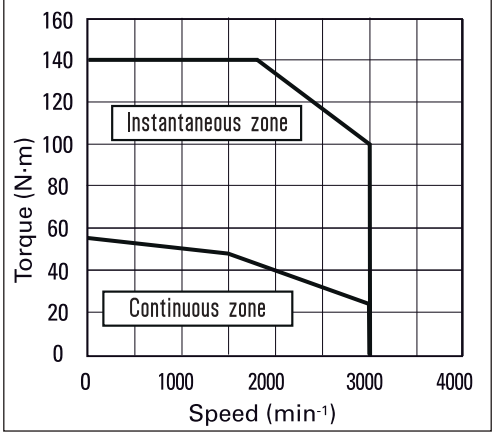


without brake			with brake			LG	KL1	KL2	KL3	LA	LB	LE	LH	LC	LZ1	LZ2	LR	S	Q	QA	QK	KB1	LT	IE	IF	IL1	IL2
LL	KB2	KB3	LL	KB2	KB3																						
--	--	--	329	117	74	19	144	22	38	200	0 114.3-0.0035	3	230	180	13.5	M8	79	0 42-0.016	75	3	67	198	25	123	50	63	86

FEATURES

MODEL		R2CA18750HCR00M
NOMINAL POWER	(W)	7500
NOMINAL SPEED	(rpm)	1500
MAXIMUM SPEED	(rpm)	3000
NOMINAL TORQUE	(Nm)	48
STALL TORQUE	(Nm)	54.9
MAXIMUM TORQUE	(Nm)	140
INERTIA	($Kg*m^2$)	98×10^{-4}
BATTERY-LESS ABSOLUTE ENCODER	(imp./rev)	SINGLE TURN: 131072 imp/rev (17 bit) MULTI TURN: 65536 turns (16 bit)
PROTECTION DEGREE		IP65
WEIGHT	(Kg)	38

TORQUE CURVE
R2CA18750HCR [7.5 KW] + RS3C15



Indicated performances refer to motor controlled by related RS3 standard and EtherCat amplifiers.

3Φ = torque curve with three-phase power supply

Suggested amplifiers: RS3C15A2HL4

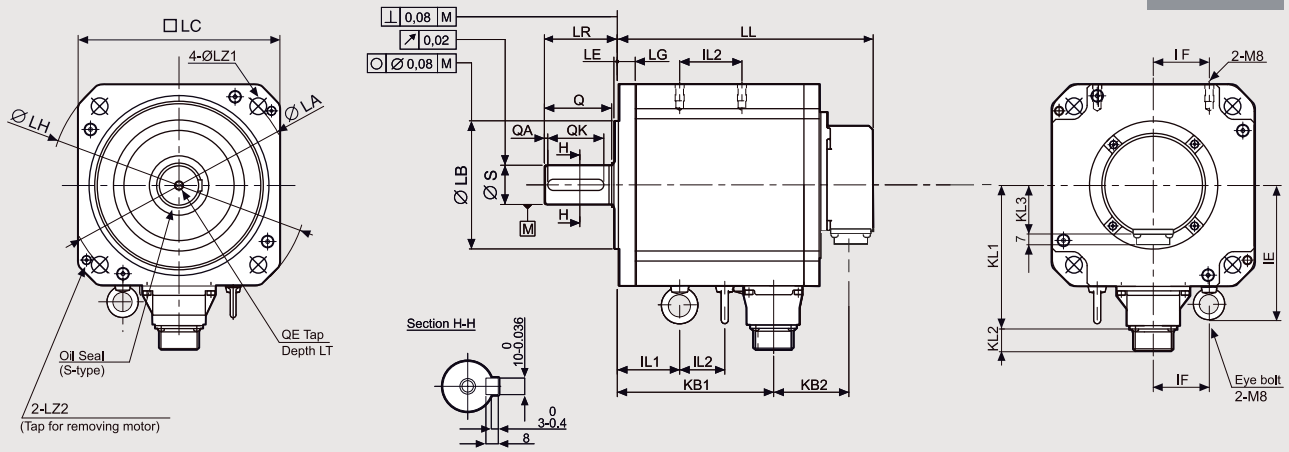
R.T.A. s.r.l. PAVIA (ITALY) SANYO DENKI CO.,Ltd (JAPAN)

R2CA2215KVXH00M

SANYO DENKI
SANMOTION

Dimensions (Unit:mm)

400 VAC



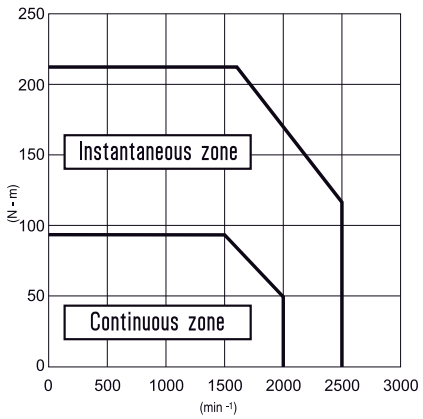
LL	KB2	KL1	KL2	KL3	LG	LA	LB	LE	LH	LC	LZ1	LZ2	LR	S	Q	QA	QK	IL1	IL2	IF	IE	KB1	QE	LT
397	78	162	22	38	19	235	0 Ø200-0.046	4	Ø270	□220	Ø13.5	M10	79	0 Ø55-0.019	79	3	67	98	150	60	142	304	M10	25

FEATURES

MODEL		R2CA2215KVXH00M
NOMINAL POWER	(W)	15000
NOMINAL SPEED	(rpm)	1500
MAXIMUM SPEED	(rpm)	2500
NOMINAL TORQUE	(Nm)	95.0
STALL TORQUE	(Nm)	95.0
MAXIMUM TORQUE	(Nm)	215
INERTIA	($Kg*m^2$)	288×10^{-4}
ENCODER	(imp./rev)	131072 (17BIT)
PROTECTION DEGREE		IP67
WEIGHT	(Kg)	74

TORQUE CURVE

R2CA2215KVXH [15.0kW] + RS3C15



WITHOUT BRAKE

(Version with brake available on request)

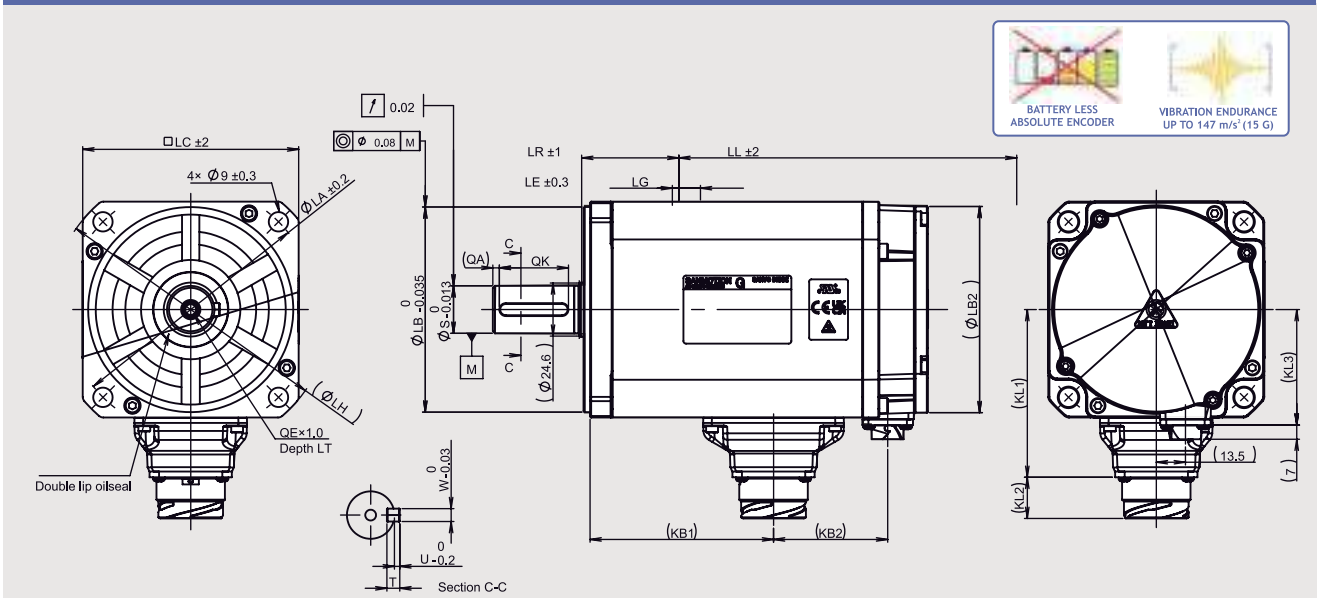
Indicated performances refer to motor controlled by related RS3 standard amplifiers.

Suggested amplifiers: RS3C15A0AL2

R.T.A. s.r.l. PAVIA (ITALY) SANYO DENKI CO.,Ltd (JAPAN)

GAM1AA150F0XRB3

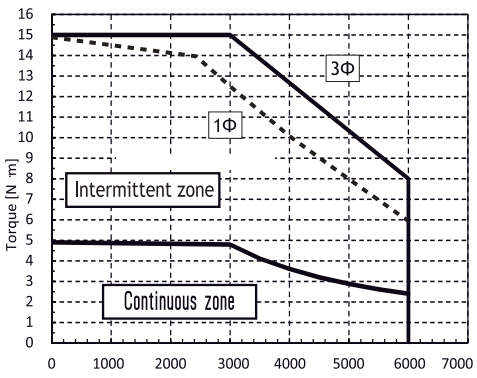
Dimensions (Unit:mm)



without brake LL	KB2	with brake LL	KB2	KL1	KL2	KL3	LG	LA	LB	LE	LH	LC	LZ1	LB2	LR	S	QA	QK	W	T	U	KB1	QE	LT
161	53	205.5	90	78	19	54	10	115	0 95.5-0.035	3	130	100	9	95.5	45	0 22-0.013	3	32	0 6-0.03	6	2.5	85	M6	20

MODEL		GAM1AA150F0XRB3
NOMINAL POWER	(W)	1500
NOMINAL SPEED	(rpm)	3000
MAXIMUM SPEED	(rpm)	6000
NOMINAL TORQUE	(Nm)	4.8
STALL TORQUE	(Nm)	4.9
MAXIMUM TORQUE	(Nm)	15.0
INERTIA	($Kg*m^2$)	$1.98x10^{-4}$
ENCODER	(imp./rev)	SINGLE TURN: 131072 imp/rev (17 bit) MULTI TURN: 65536 turns (16 bit)
PROTECTION DEGREE		IP67
WEIGHT	(Kg)	5.0

TORQUE CURVE
GAM1AA150F0XRB3 + RS3A05



GAM1AA150F0XRB3

Indicated performances refer to motor controlled by related new RS3 standard and EtherCat amplifiers.

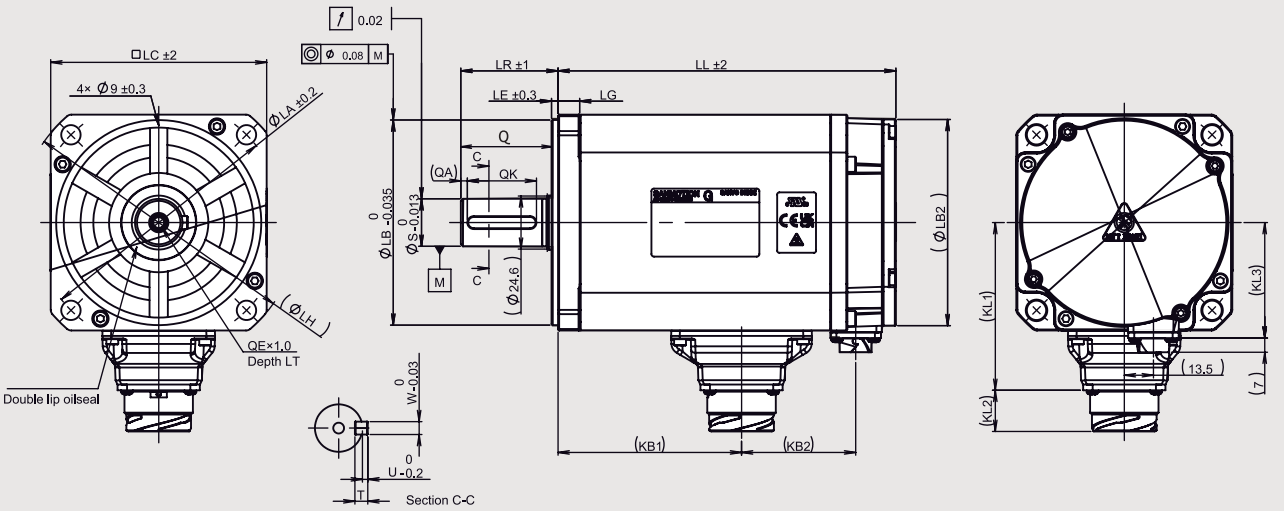
1Φ torque curve with single phase power supply
3Φ = torque curve with three-phase power supply

Suggested amplifiers: RS3A05A2HA4W00, RS3A05A0AA2, RS3A05A2HAE

R.T.A. s.r.l. PAVIA (ITALY) SANYO DENKI CO.,Ltd (JAPAN)

GAM2AA1050B0XNB3 [GAM2AA10150B0CNB3]

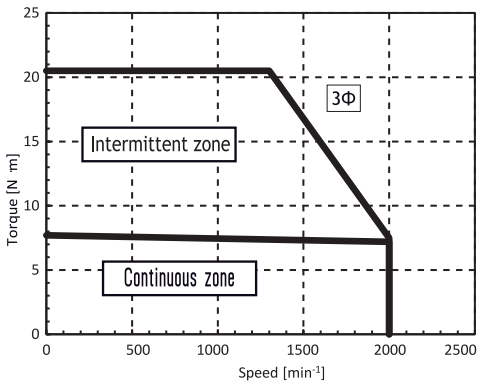
Dimensions (Unit:mm)



without brake LL	KB2	with brake LL	KB2	KL1	KL2	KL3	LG	LA	LB	LE	LH	LC	LZ1	LB2	LR	S	Q	QA	QK	W	T	U	KB1	QE	LT
161	45	205.5	90	78	19	54	10	115	0 95.5-0.035	3	130	100	9	95.5	45	0 22-0.013	40	3	32	0 6-0.03	6	2.5	97.5	M6	20

MODEL		GAM2AA10150B0XNB3 [GAM2AA10150B0CNB3]
NOMINAL POWER	(W)	1500
NOMINAL SPEED	(rpm)	2000
MAXIMUM SPEED	(rpm)	2000
NOMINAL TORQUE	(Nm)	7.2
STALL TORQUE	(Nm)	7.7
MAXIMUM TORQUE	(Nm)	20.5
INERTIA	($Kg*m^2$)	$6.10x10^{-4}$ [$6.45x10^{-4}$]
ENCODER	(imp./rev)	SINGLE TURN: 131072 imp/rev (17 bit) MULTI TURN: 65536 turns (16 bit)
PROTECTION DEGREE		IP67
WEIGHT	[version with brake] (Kg)	5.9 [7.5]

TORQUE CURVE
GAM2AA10150B0X[C] + RS3A03



R.T.A. s.r.l. PAVIA (ITALY) SANYO DENKI CO.,Ltd (JAPAN)

WITHOUT BRAKE
GAM2AA10150B0XNB3

Indicated performances refer to motor controlled by related new RS3 standard and EtherCat amplifiers.

1Φ torque curve with single phase power supply
3Φ = torque curve with three-phase power supply

WITH BRAKE
GAM2AA10150B0CNB3

Suggested amplifiers: RS3A03A2HA4W00, RS3A03A0AA2, RS3A03A2HAE

PLANETARY GEARBOXES

SG-P11-120-025-15-SM-286X-00000

PLANETARY GEARBOXES

SG 120

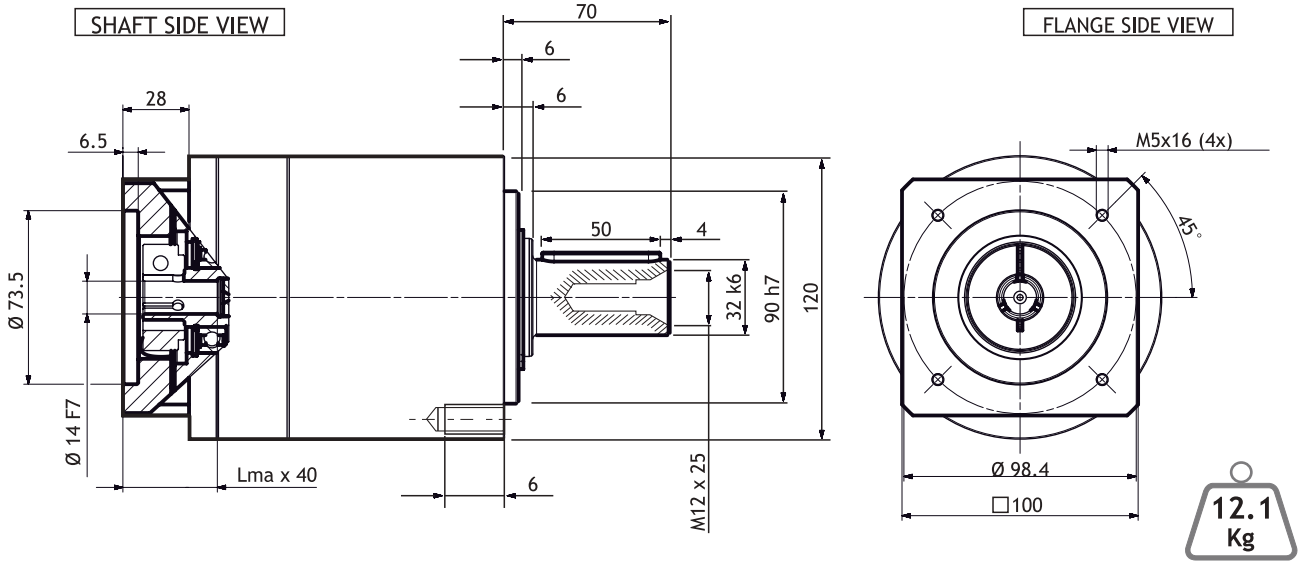
i=025

φ=15'

MADE IN ITALY

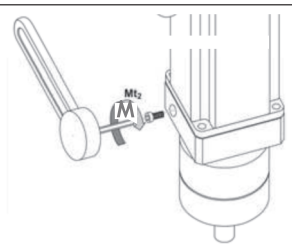
IP64

Dimensions (Units:mm)



MODEL	Rated output torque [Nm]	Maximum acceleration output torque [Nm]	Emergency step output torque [Nm]	Backlash [arcmin]	Nominal input speed [min^{-1}]	Maximum momentary input speed [min^{-1}]	Torsional stiffness [Nm/arcmin]	Maximum radial force applying on output shaft [N]	Maximum axial force applying on output shaft [N]	Gear efficiency [%]	Gear moment of inertia [$Kgcm^2$]
SG-P11-120-025-15-SM-286X-00000	110	190	360	15'	3000	4500	22.5	3500	3000	94	0.71

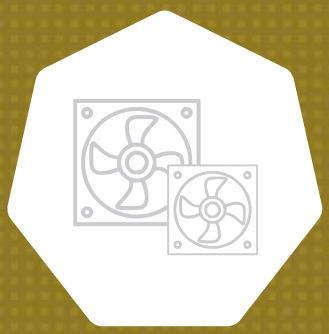
Suggested motors



RM 3RxM

RM 3TxM-0xx0

MOUNTING OPERATION MODE: ■ Tightening torque M=11 Nm ■ Locking bolt M6 ■ R.T.A. Quality Control



COOLING FANS

9G1224H102

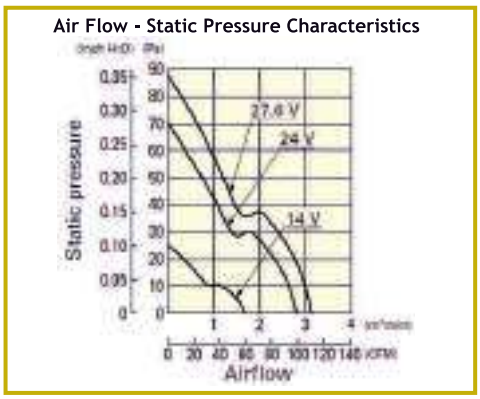
120x120x38 mm

24 V

General Specifications

- Material:
  - Frame: Plastics (Flammability: UL 94V-0)
  - Impeller: Plastics (Flammability: UL 94V-1)
- Expected Life: 40,000 h (L10:Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Lead Wire: ⊕ red ⊖ black or blue
- Storage Temperature: -30°C to +70°C (Non-condensing)
- Ball bearings
- International Standards: UL/CSA, TÜV, RoHS

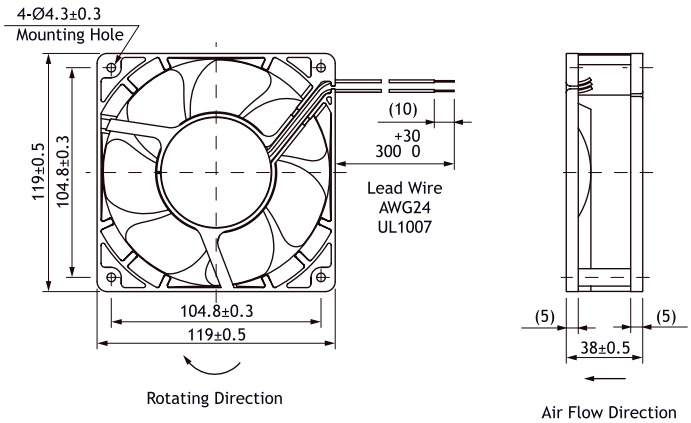
Air Flow - Static Pressure Characteristics



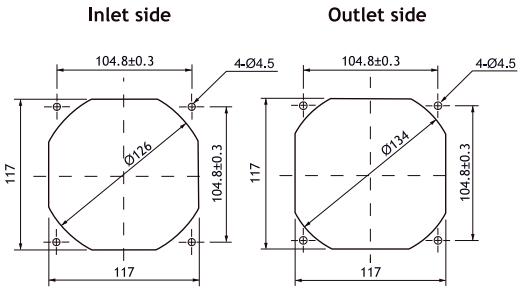
Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Air Flow [m³/min]	[CFM]	Max. Static Pressure [Pa]	[inchH2O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9G1224H102	24	14.0 to 27.6	0.22	5.28	2,600	2.8	99	70.4	0.283	39	-20 to +70	40,000/60°

Dimensions (Unit:mm)



Reference dimension of mounting holes and vent opening (Unit: mm)



120 mm sq.

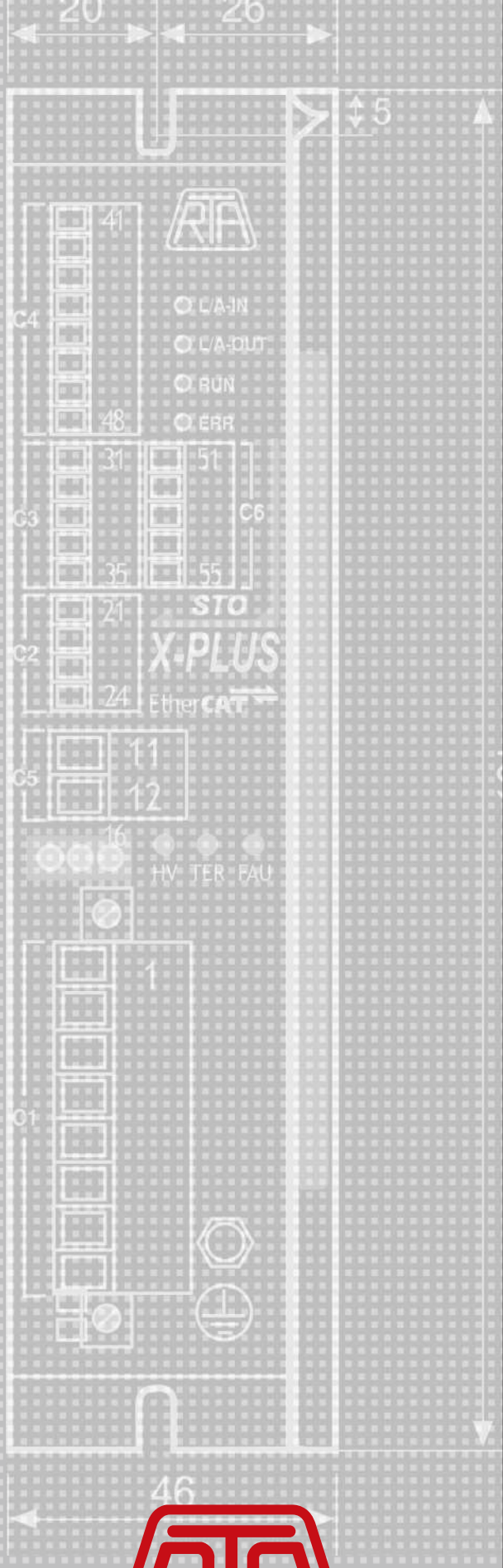
- Model always available on stock at R.T.A.
- Also available for online purchasing at www.rta-store.com

RTA S.r.l.
Via E. Mattei, 15 - Fraz. Divisa
27020 MARCIGNAGO (PV)
Tel. +39.0382.929.855
www.rta.it - e-mail: info@rta.it

RTA DEUTSCHLAND GmbH
Bublitzer Straße, 34
40599 DÜSSELDORF (Germany)
Tel. +49.211.749.668.60
Fax +49.211.749.668.66
www.rta-deutschland.de
e-mail: info@rta-deutschland.de

RTA IBERICA - Motion Control Systems S.L.
C/Generalitat 22, Local 1
08850 GAVA - BARCELONA (Spain)
Tel. +34.936.388.805
Fax +34.936.334.595
www.rta-iberica.es
e-mail: info@rta-iberica.es

RTA INDIA Pvt
SCMC House, 16/6, 3rd Floor
Vishal Nagar Road - Pimple Nilakh
PUNE 411027 (India)
Tel. +91.9422507445
www.rta-india.in
email: info@rta-india.in



Look Ahead!

NEWS_EN_MAR_24