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AZ系列 支持EtherCAT

- ・AC电源输入 AZD-AED、AZD-CED
- ・DC**电**源输入 AZD-KED

基恩士(有限公司) KV-8000/KV-7500/KV-7300、KV-XH16EC 使用KV STUDIO**进**行**设**定



本手册介绍了EtherCAT通信的连接以及简单动作的流程。





- (1)在构筑**实际系统时,请务**必确认构成系统的各机械,各装置的规格。并有余地地对其规格和 性能进行使用。另外,为了将发生事故时的危险性降到最低,请进行安全回路设计等的安全 对策。
- (2)为了能安全使用系统,请事先准备好构成系统的各机械,各装置的操作手册和说明书。请在确认好包括「安全注意事项」,「使用须知」等注意事项后进行操作。

(3)请顾客自行确认系统应当适用的规格/法规。

(4)未得到**东**方马达中国总公司的许可,禁止对本资料的一部分或全部进行复写,翻印,再分发。

(5) 本**资料记载**内容**为**2022年6月的信息。因改善内容等需要,我司会无**预**告**对**本资料的内容进行 变更。

(6)本资料只记载了到机器通讯成立为止的操作顺序。未记载关于机械的个别操作,设置以及接 线

方法的相关内容。

关于通**讯连**接顺序以外的内容,请参阅该产品说明书,或直接向厂家进行咨询。



■对象产品

- ・系列:AZ系列/AZ系列搭载 电动传动装置
- ・**驱动**器:AZ系列 支持EtherCAT**驱动**器 AZD-AED、AZD-CED、AZD-KED



AZD-AED/CED AZD-KED

■使用**说明书** 请准备对象产品的使用说明书。可从本公司官方网站下载。



AZM46AK

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		项目	型号	备注
	MEXE02	CPU 组 合	KV-8000/KV-7500/ KV-7300 *1 (KEYENCE公司)	本手册使用KV-7500的 Ver.2.303。
	USB电缆线	运 动单 元	KV-XH16EC (KEYENCE公司)	本手册使用Ver.1.002。
NEYENCE ¥708 Хижис 1.776478-11 1.1776478-11 1.1776478-11		设定软件	KV STUDIO (KEYENCE公司)	本手册使用Ver.11.42。
	KV-8000/KV-7500/	AZ系列 驱动器	AZD-KED *2	DC24V输入
9009 - AR	KV-7300	AZ系列 电动机	AZM46AK	-
	KV-XHI6EC	AZ系列 电动 机 电缆线	CC010VZF2	-
	Ethernet电缆线	支援 软 件	MEXE02	本手册不使用
		∗1 CPU功能版本需要Ve	r.2.3或更高版本。	
	AZD-KED	*2本手册使用AZD-KED) <mark>进行说</mark> 明。使用其他 驱动 器	操作 时 的基本步 骤 相同。
	CC010VZF2			

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节点地址设定、ESI文件

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■节点地址**设**定

不需要设定AZ驱动器的"节点地址设定开关"。

因为节点地址是由PLC自动分配(请使KV STUDIO的轴构成设定中的"轴编号"与实际配置的配线顺序一致)。

■获取ESI文件 准备ESI文件。请从本公司官方网站下载。 https://www.orientalmotor.com.cn/

KV STUDIO启动

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本手册使用KV-7500进行说明。

启动KV STUDIO新建项目。

①**单击**新建的**图标**。

②设置项目名称、支持机型、项目保存位置,然后点击"OK"。

	KV STUDIO -	- 🗆	×
	File(E) View(V) Monitor/Simulator(N) Operation recorder/Replay(R) Tool(T) Window(W) Help(H)		
D			
			-
	New project X		
	Project name(N) PLC model(K)		
	sample KV-7500 V		
	Position(P)		
	C:\ KEYENCE\KVS11G\KVS\F F.efer(S)		
	Comment(C)		
	Detail(D) OK Cancel		
	Ready		🗢 USB 🔡





设定单元配置。显示是否要先进行单元配置设定的对话框,请点击"Yes"。



7





选择"KV-XH16EC",通过双击或拖放添加到PLC中。

🛗 Unit Editor - Edit mode									_		×
File(F) Edit(E) Convert(P) View	w(V) Option(O) Window(W)	Help(H)								
💀 🔐 🔐 😹 🖬 🖆 🖬	🛛 🕄 🛒	60 B. B . B	a 💼 🔣 🕄								
		1				Unit		1			д
Width:97mm Height:90mm	KV-7500 K	W-XH16EC				Sele	ect unit(<u>1</u>)	Setup u	unit(<u>2</u>)		
Depth:95mm							818: TE T	_			
Curr. Cons.:360mA Weight:460g							Positi«	oning/Mo	otion unit		^
							KV-XHO	4ML	ML-III	4-axis	
	R30000 -33915	R34000 -47115					KV-XH1	6ML	ML-III	16-axis	
							KV-XH1	.6EC	EtherCA	T 16-ax	····
							KV-SHU	4121	Pulse 4	-axes h	
							KV-MC2	.07	Pulse 2	-axis p	
							KV-MC4	00	Puise 4	-axis p	···· ¥
						KV-	-XH16EC	- motion	16 2000	(Ether)	· እጥ ነ
						105	SICIONIN	g motion	I. IC AXES	(Ether)	AI)
						/					
Message											д
Process Rot	w No.	Code	Message								
H + + H Message				<							>
					Editor	ine:1, Co	ol:2	OK	Cancel	Appl	

单元配置设定

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①点击"Auto-assign relay/DM"。

②点击"OK"。

③确认分配到的DM编号和继电器编号,点击"OK"。







设定轴构成。双击" Axis configuration setting "。

KV STUDIO -[Editor: KV-7500] - [sample *]											- 0	×
File(F) Edit(E) View(V) Program(M) ST/Script(S)	Convert	(A) Monitor/	Simulator(N)	Debug(D)	Tool(T) Wi	ndow(W) H	Help(H)					
🗄 🗅 🤒 🗟 📾 📸 🝓 😹 🖶 💪 😮 🗄 👥 USB		-	🗈 🕈 🛪	🗈 🔬 🛃	🤹 🏛 🎒	DEV DEV	F5 SF5 F4 S 니는 _;#는 니户 년	F4 F7 SF7 ₩ -OØ-	F8 SF8 F9 !	SF9		
i 🖍 🌐 📰 🌌 🗃 🎬 🖷 🏅 🕏 🔂 🔩 🔘 🌘			н н т н	> 0 J	s Ó e	Editor		• I C	Comments Co	omment 1	•	
Project 🛛 🗘 🗙	Main	×										
Duit configuration]											÷
🖬 [0] KV-7500		1	2	3	4	5	6	7	8	9	10	÷
 [1] KV-XH16EC R34000 DM10300 Im Axis configuration setting Unit common setting Axis control setting 	00001											
 Point parameter Sync control setting Unit Program Option setting 	00002											
Unit configuration switching Device comment Label CPU system setting	00003											
<pre>Frogram: sample Frogram: sample</pre>	00004											
Standby module Fixed-period module Inter-unit sync module	00005											
C S S S S S S S S S S S S S S S S S S S												
Project Library	00006						1	- 	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -		~
												🗢 USB 🔡

轴构成设定



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首先注册ESI文件。 双击" Register ESI file ",以注册**对**象产品的ESI文件。

[1] Axis configurat	tion setting			×
			Search	
KV-XH10EC	Set up max number of axes	16 axes	All All vendors	~
	Control period/L)	1mc v	ORIENTAL MOTOR CO.,LTD. Step Drivers	
	Control period(L)	Help	AZD-KED rev0000 (0x00000000)	[Detailed setting required]
			Register ESI file]	
			ESI文件注册完成后 文件将如屏幕所示	, AZ 驱动 器 显 示。



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①从ESI文件列表中选择要使用的产品,然后通过双击或拖放将其添加到KV-XH16EC配置中。 本手册作为示例选择AZD-KED。

②显示对话框,请点击"OK"。继续设定。

[1] Axis configuration setting			×
KV-XH16EC Set up max. numbe Control period(L)	er of axes 16 axes 1ms ~ Help	Search All All vendors ORIENTAL MOTOR Stop Drivers AZD-KED rev Induct axis (Register ESI file)	CO.,LTD.
Servo	KV STUDIO Set up according to the device i	n the Slave detailed setting. OK OK No.(A) 1 Uct name(N) OK OK OK OK Max. motor speed(S) Max. motor torque(T) 35	D-KED rev0000 RIENTAL MOTOR CO.,LTD. bit (1048576) V PLS/rev Custom(U) 00.00 min-1 0.00 % Slave detailed setting(D)
			OK Cancel



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进行从站**详细设**定。首先**请**确认" Type "为伺服。

Slave detailed setting		X
Basic PDO mapping Motion function	setting	
Parar	neter	Setting item
	Туре	Servo 🔻
	Axis No.	
	Number of occupied axes	1
Desie	Product name	AZD-KED rev0000
Basic	Vendor	ORIENTAL MOTOR CO, LTD.
	Vendor ID	0x000002BE(702)
	Product code	0x000013E5(5093)
	Revision No.	0×0000000(0)
	Check vendor ID	Used
	Check product code	Not used
	Check revision No.	Not used
Check at the start of communication	Check method of revision No.	
	Explicit device ID check	Not used
	Explicit device ID	1001
	Explicit device ID register	308
Other	Extension setting	Disable
		OK Cancel

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进行PDO映射设定。

①单击" PDO mapping "选项卡。

②双击。

③选择"1600 Receive PDO mapping 1"。还可通过双击"(Add)"来添加更多的对象。

④单击"OK"。之后会显示" Assign all PDO entries(Master -> Slave)to the motion function diagram "的信息。请点击"OK"。

Slave detailed setting					×				
Basic PDO mapping Mption function setting									
Direction PDO mapping name (index) (Add)	PDO entry name	Index	Data s	ze (bit)					
(Add)	Add PDO	I., I.				×			
	Select from default de Select from default de	vice definition vice definition	(3)		~				
	1001 Receive PDO m Index (map)(I)	apping 2 0001		Add PDO					×
	Name (Add)		Index (entry)	1600 Receive PDO n	mapping 1			~	
				Name(N)	Receive PD	00 mapping 1			
				Index (map)(l)	1600		н	EX ~	
				Name		Index (entry)	Data size (bit)		
				Controlword Target position		0x6040:00 0x607A:00		16 32	_
				Modes of operation (Add)		0x6060:00		8	+
									^ +
									+
									-
							(4) ок	Ca	ncel



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⑤ 同样进行发送PDO的设定。双击发送PDO区域。
 ⑥选择"1A00 Transmit PDO mapping1"。还可通过双击"(Add)"来添加更多的对象。
 ⑦单击"OK"。

Slave detailed setting				×			
Basic PDO mapping Motion function setting							
Direction PDO mapping name (index) Receive PDO mapping 1 (0x1600) (Add) (Add) 5	PDO entry name Controlword Target position Modes of operation	Index 0x6040:00 0x607A:00 0x6060:00	Data size (bit) 16 32 8		г		
	Add PDO Select from default devi Select from default devi 1A00 Transmit PDO ma 1A01 Transmit PDO ma Index (map)(I) 0	ice definition 6 ce definition apping 1 apping 2 1001	HE>	×			
	Name (Add)	Index (entry)	Add PDO 1A00 Transmit PD Name(N) Index (map)(l)	DO mapping 1 Transmit PC 1A00	DO mapping 1	НЕХ	×
			Nan Statusword Position actual va Modes of operati (Add)	ne alue alue on display	Index (entry) 0x6041:00 0x6064:00 0x6061:00	Data size (bit)	16 32 8 ×
					(7) ок	Cancel



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在上一页的步骤⑦中**单击**"OK"后,将出**现**以下状态。

Slave detai	led setting				×
Basic F	PDO mapping Motion function setting				
Direction	PDO mapping name (index)	PDO entry name	Index	Data size (bit)	
		Controlword	0x6040:00	16	
	Receive PDO mapping 1 (0x1600)	Target position	0x607A:00	32	
		Modes of operation	0x6060:00	8	
	(Add)				
		Statusword	0x6041:00	16	
	Transmit PDO mapping 1 (0x1A00)	Position actual value	0x6064:00	32	
		Modes of operation display	0x6061:00	8	
	(Add)				
				×]
				OK Cancel	

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接下来,设定运动功能。将PDO映射对象分配给运动功能。

①点击" Motion function setting "选项卡。

②在屏幕蓝框虚线所示区域内点击鼠标右键,显示"Automatic assignment"点击。 ③点击"是"。





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在上一页的步骤③中**单击**"是"后,将出**现**以下状态。

Motion function map(M)

l r

Direction	Function name	Process data
	Control word [mandatory]	0x1600: Receive PDO mapping 1.0x6040:00: Controlword
	Position control - target position [mandatory]	0x1600: Receive PDO mapping 1.0x607A:00: Target position
	Position control - latch control	<no assignment=""></no>
	Change control mode	0x1600: Receive PDO mapping 1.0x6060:00: Modes of operati
	Speed control - target speed	<no assignment=""></no>
	Torque control - target torque	<no assignment=""></no>
	Torque limit	<no assignment=""></no>
	Torque control - max speed	<no assignment=""></no>
	Speed feedforward	<no assignment=""></no>
	Torque feedforward	<no assignment=""></no>
	Positive direction torque limit	<no assignment=""></no>
	Negative direction torque limit	<no assignment=""></no>
	Status word [mandatory]	0x1A00: Transmit PDO mapping 1.0x6041:00: Statusword
	(+) limit switch	<no assignment=""></no>
	(-) limit switch	<no assignment=""></no>
	Origin sensor	<no assignment=""></no>
	Stop sensor	<no assignment=""></no>
	Sync control external input	<no assignment=""></no>
	Feedback position [mandatory]	0x1A00: Transmit PDO mapping 1.0x6064:00: Position actual v
	Position control - latching status	<no assignment=""></no>
	Position control - latch position for origin sens	<no assignment=""></no>
	Current control mode	0x1A00: Transmit PDO mapping 1.0x6061:00: Modes of opera
	Driver alarm code	<no assignment=""></no>
	Feedback torque	<no assignment=""></no>
	Position control - latch position for stop senso	<no assignment=""></no>
	Feedback speed	<no assignment=""></no>
	User monitor area 1	<no assignment=""></no>
	User monitor area 2	<no assignment=""></no>
	User monitor area 3	<no assignment=""></no>
	User monitor area 4	<no assignment=""></no>



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④根据需要设定" Slave axis parameter "。本手册中保留初始设定。⑤设定完成后,点击"OK"。

Slave detailed setting		×
Basic PDO manning Motion function setting		
Notice function mapping		
Motion function map(M)	- · · ·	
Direction Function name	Process data	Bit Position
Control word [mandatory]	10x1600: Receive PDO mapping 1.0x6040:00: Controlword	
Position control - target position [mandatory]	0x1600: Receive PDO mapping 1.0x607A:00: Target position	
Position control - latch control	<no assignment=""></no>	
Change control mode	0x1600: Receive PDO mapping 1.0x6060:00: Modes of operati	
Speed control - target speed	<no assignment=""></no>	
Torque control - target torque	<no assignment=""></no>	
Torque limit	<no assignment=""></no>	
Torque control - max speed	<no assignment=""></no>	
Speed feedforward	<no assignment=""></no>	
Torque feedforward	<no assignment=""></no>	
Positive direction torque limit	<no assignment=""></no>	
Negative direction torque limit	<no assignment=""></no>	V
Slave axis parameter(S)		
Parameter	Setting item	
Motor type selection		Rotary type 👻
Electronic gear ratio(numerator)		1
Electronic gear ratio(denominator)		1
Speed unit		Command position/sec
Speed unit coefficient		1.000
		(5) OK Cancel
		Ŭ

轴构成设定 编码器分辨率的设定



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设定编码器分辨率。

①勾选"Custom"。

②在编码器分辨率中输入"10000"。

[1] Axis configurati	on setting		×
			Search
KV-XH16EC			All All vendors
Đ	Set up max. number of axes Control period(L)	16 axes 1ms v Help	ORIENTAL MOTOR CO.,LTD. AZD-KED rev0000 (0x00000000) [Detailed setting required] Virtual axis Register ESI file]
5	ation and a serve at a		
			Axis No.(A)
			Product name(N) AZD-KED rev0000
			Vendor(V) ORIENTAL MOTOR CO.,LTD.
			Axis comment(C)
			Encoder resolution(E) 10000 2 PLS/rev
			(1) Custom(U)
			Max. motor speed(S) 6000.00 min-1
			Max. motor torque(T) 350.00 %
			Slave detailed setting(D)
			OK Cancel

轴构成设定 控制周期的设定



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最后设定控制周期。

①设定控制周期。请务必选择250µs、500µs、1ms或2ms。如果设定了其他控制周期,则无法通信。

本手册**选择**"500µs"。

②点击"OK"。至此完成轴构成设定。

[1] Axis configuration setting		×
KV-XH16EC Set up max. number of axes Control period(L)	16 axes 500us Help	Search
		Axis No.(A) 1 Product name(N) AZD-KED rev0000 Vendor(V) ORIENTAL MOTOR CO.,LTD. Axis comment(C)



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在上一页点击"OK"后,会显示如下信息,请点击"Yes"。







①将机械配置设定为" Other"。
 ②输入"10000",将坐标单位设定为"PLS"。
 ③点击执行计算。
 ④确认计算结果后,点击"OK"。
 ⑤点击"Yes"完成设定。

Х Coordinate transformation calculation [Axis 1 :] X Coordinate transformation calculation [Axis 1 :] Coordinate transformation setting value fitted in the operation environment is calculated. Coordinate transformation setting value fitted in the operation environment is calculated. Operation environment Operation environment (2)Movement per 1 revolution of output axi Movement per 1 revolution of output axis Machanic configuration/M Mechanic configuration(M) 10000.000 Other н. Other \sim н 10000.000 Coordinate unit(V) PLS Coordinate unit(V) PLS \sim Gear ratio Gear ratio 1 n [output axis side](O) n [output axis side](O) Gear ratio ____ Gear ratio _____ m [motor axis side](I) m [motor axis side](I) 1 Axis control common setting Axis control common setting Decimal place(A) \sim Decimal place(A) \sim Slave device setting Slave device setting Movement per output Movement per output 10000 10000 Encoder resolution(S) Encoder resolution(S) axis revolution axis revolution [PLS/rev] [PLS/rev] Servo electronic gear numerator(U) Servo electronic gear numerator(U) 1 Servo electronic gear denominator(D) Servo electronic gear denominator(D) 1 3 Execute calculation(E) Execute calculation(E) Calculation result Calculation result ***** In operation environment, Number of PLS required for moving In operation environment, Number of PLS required for moving 1PLS ***** is is Set up coordinate transformation ratio of axis control common setting as follows. soordinate transformation ratio of axis control common setting as follows. Set ***** Coordinate transform ation denominator Coordinate transformation denominator ***** Error info(R).. Coordinate transformation numerator Coordinate transformation nu KV STUDIO OK(W) Cancel(C) OK(W) Cancel(C) (4)Map setting? 5

No

Yes

轴控制设定

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进行轴控制设定。

①双击" Axis control setting "。

②将绝对位置检测系统设定为"ABS"。

KV STUDIO -[Editor: KV-7500] - [sample *]				- C	ı x
File(F) Edit(E) View(V) Program(M) ST/Script(S)	Convert(A) Monitor/9	imulator(N) Debug(D) Tool(T) Window(W) Help(H)			
i 🗋 🤒 🗟 📸 🛤 🛤 🖶 🗟 🥝 i 😭 USE	-	🖻 📲 📲 🖝 😥 🗹 🏭 🏛 🚔 💷 🔛 💷 🗄 부가 부가 부가 주는 부가 다	SF8 <u>F9</u> SF9		
i 🕼 🏣 📰 🜌 🔤 🎬 🖷 🍈 💀 💁 🔍 🌒		() ▼) > ○	mments Comment 1	-	
Project II ¥	[1] Axis control setting	X Main X			
					•
	View filter(F) [Dis	play level] Ali 🛛 🗸 😨 😲			
[0] KV-XH16EC R34000 DM10300			Axis1:		^
Avia configuration cotting		Unit of coord	PLS		
The second second		Place of decimal point			
D Unit common Setting	Unit coordinate	360 degree display			
Axis control setting	transformation	Rotate angle near selection			
Point narameter		Coordinate transformation numerator			
🖬 🐴 Sync control setting		Coordinate transformation denominator			
📑 Unit Program		Soft limit coordinate sysetm	Logic system		
👘 Option setting	Coffware limit coord	Soft limit (+)	Disable		
🕼 Unit configuration switching	Software limit coord	Soft limit (+) coordinate OPES			
Device comment		Soft limit (-)	Disable		
- Label	Axis orror	Limit switch error setting	Fror		
CPU system setting	7003 61101	Absolute position detection system	ABS -		
E Program: sample		Stop method (operation enable relay OFE)	Deceleration ston		
Fvery-scap execution		Stop method (soft limit)	Deceleration stop		
Main		Stop method (external limit)	Immediate stop		
Triticline module		Stop method (other errors)	Deceleration stop		
	Axis control function	Motor rotate direction	(+) operation forward pulse		
		Servo OFF timing	Servo OFF after axis stop		
Fixed-period module		Servo end check time	0 ms		
Inter-unit sync module		Servo end range	0 PLS		
Function Block		Backlash compensation movement	0 PLS		
🔲 🔜 Macro		Speed threshold value at the time of switching the positioning control mode	50 rpm		
🚽 🛃 Subroutine macro 🗸 🗸	Common in	Speed switching selection	Continuous (Current point s		
< >	position control	Select acceleration/deceleration setting	Ratio		
Project Library		Select linear interpolation speed	Synthesized speed		~
Ready					🗢 USB 🔡

■注意

作为绝对系统(ABS)使用时,请在以下坐标范围内使用。

- ・电动机的安装尺寸为□42mm以上:-9,000,000~8,999,999 PLS
- ・电动机的安装尺寸为□28mm以下:-4, 500, 000~4, 499, 999 PLS

确认PLC传输与通讯建立



KEYENCE_EtherCAT +AZD-DED

将设定的内容传输到PLC。请事先确认PLC和PC已通过USB电缆连接,且PLC的电源为ON。

①点击"Transfer to PLC"。

②点击" Select all ". 然后点击"Execute"。



③PLC传输结束后,关闭PLC电源。 ④通讨以太网电缆连接PLC和AZ驱动器。然后、打开PLC和AZ驱动器的电源。 ⑤建立EtherCAT通讯。KV-XH16EC及AZ驱动器的LED状态如下。





RUN LED: 绿灯亮

试运转



使用KV STUDIO的试运转功能进行试运转。电动机动作。请确保周围的安全之后再进行。 ①将模式切换到"Monitor"。 ②右键单击"KV-XH16EC",然后单击" Trial run > Positioning control > Axis1 "。

③将显示安全确认信息,请在确认安全的基础上单击"OK"。



Be aware of the following before performing a trial run to ensure safety.

- Make sure that it is possible to perform an emergency stop during trial runs.

- Install a limit switch, etc., to limit the amount of movement.

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①**单击**" Cancel OP Enable "和" Cancel servo ON "。这时, "Operation ready"和"Servo ready"将亮起**绿**灯。 ②执行JOG运行或Inching运行。当指令坐标变化10000PLS时, 电机将旋转360°。

- ・JOG…仅在持续点击"负方向"或"正方向"时,电动机才会旋转。
- ・Inching…只要点击"负方向"或"正方向",电动机就会以"JOG寸动移动量"中设定的移动量旋转。







本**节**介绍"Data set type"的原点返回。无需使用外部**传**感器等即可确定原点。 ①将模式切**换**到"Editor"。 ②双击" Axis control setting "。 ③**选择**"Data set type"。

④执行PLC传输。

File(F) Edit(E) View(V) Program(M) ST/Script(S)	Convert(A) Mor	nitor/Simulator(N) Debug(D) Tool(T) Windov	w(W) Help(H)
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Unit configuration	View filter(F)	[Display level] All	- 🛤 🖳 🔄 🕸 🕗
[0] KV-7500			Axis1:
- [1] RV-ANIOLC R34000 DAT0300	100	JOG deceleration SIN ratio	100 %
Init common setting	100	JOG inching movement	3 1 PLS
A lyin control cotting		Origin return method	Data set type 💌
AXIS CONCLOI Secting		Origin return starting speed	0 PLS/s
Point parameter		Origin return creep speed	500 PLS/s
H M Sync control setting		Origin return operation speed	5000 PLS/s
Unit Program		Origin return accel rate/time	10 PLS/s/ms
💭 Option setting		Origin return acceleration curve	SIN
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Tabel	Origin return	Origin return deceleration curve	SIN
CPU system setting		Origin return deceleration SIN ratio	100 %
Program: sample		Origin return direction	(-) direction
Fverv-scan execution		Origin coordinate	0 PLS
White Main		Movement after DOG ON	0PLS
+ din Main		Origin return awell time	0 ms





⑤启动试运转画面。

⑥点击" Cancel OP Enable "和" Cancel servo ON "。这时, "Operation ready "和" Servo ready "将亮起绿灯。 ⑦使用JOG或Inching将电动机旋转至想要设定为原点的位置* ⑧定位后,点击"Origin return"。指令坐标被预设为"0"。

* **电动**机也可用手**动**来定位。在这种情况下,请关闭"强制伺服ON"。 定位后,请打开" Cancel OP Enable "和" Cancel servo ON ",点击" Origin return "。

Trial run [Positioning control]- Unit1 - Axis	1: - KV-XH16EC	6	×	Trial run [Positioning control]- Unit1 - Axis	:1: - KV-XH16EC	×
Axis1 Command coordinate	Ax ctrl in progress 🌑 🖣	Operation ready Cancel O	DP. Enable	Axis1 Command coordinate	Ax ctrl in progress	Operation ready Cancel OP. Enable
	1732 _{PLS}	Servo ready Cancel s	servo ON	_	0 PLS	Servo ready Cancel servo ON
	Current point no: 0	Axis error Error	r clear		Current point no: 0	Axis error Error clear
JOG - direction + direction 0%	speed 10 € % 100% - direc	tion + direction	estimation of the second secon	JOC - direction + direction 10%	ipeed 10 € %	i in + direction
Teaching	Trial run		Repeat	Teaching	Trial run	-
Point number 1 Coord. 0 PLS Speed 1000 PLS/s Mode Single/Position/INC Acquire	Point number 1 Coord. 0 PLS	1 Wait: None Image: Wait: Wone Image: Wait: Wone	Force Stop	Point number 1 Coord. 0 PLS Speed 1000 PLS/s Mode Single/Position/INC	1 point operation Point number Coord. 0 PLS Start	Cont operation Repeat



⑨使用监控功能确认位置信息。右键单击"[1]KV-XH16EC"并选择"Unit monitor "。 ⑩确认当前坐标、指令坐标、机械坐标为"0"*。至此,原点返回完成。

*如果有摩擦**负载**等外力施加到电机轴上或电机在伺服ON状态时的励磁状态发生变化等,有时可能不为"0"。

File(F) Edit(E) View(V) Progra	am(M) ST/Script(S)	Convert(A)	Monitor/Sir
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Project	д х	[1] Axis cont	trol setting
Unit configuration	9	View filter(F) [Displ
 [1] KV-XH16EC Axis configuration Unit common set Axis control set Point parametes 	Unit Editor(U) Device assignme	ent display(D)	
Dit configuratio	Unit tracing(A) Trial run(T) Synchronous co	ntrol(S)	
Device comment Label CPU system setting	Station alias setu	ıр(H)	

Unit Monitor	
	1:KV-XH16
Operation enable Operation ready Unit error	
Name of connected equipment Mode 10	Axis1: Servo Wait Monitor disabled
Current coordinate Command coordinate	0 PLS 0 PLS
Feedback position	1//5 PLS
Mechanical coordinate	0 PLS
Current speed	0 PLS/s
Command sneed	0 PL S/s

"Feedback Position"是AZ内部的位置信息。因此,有可能 与PLC的位置信息不一致。AZ内部的位置信息可以通过支 援**软**件MEXE02进行确认。



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