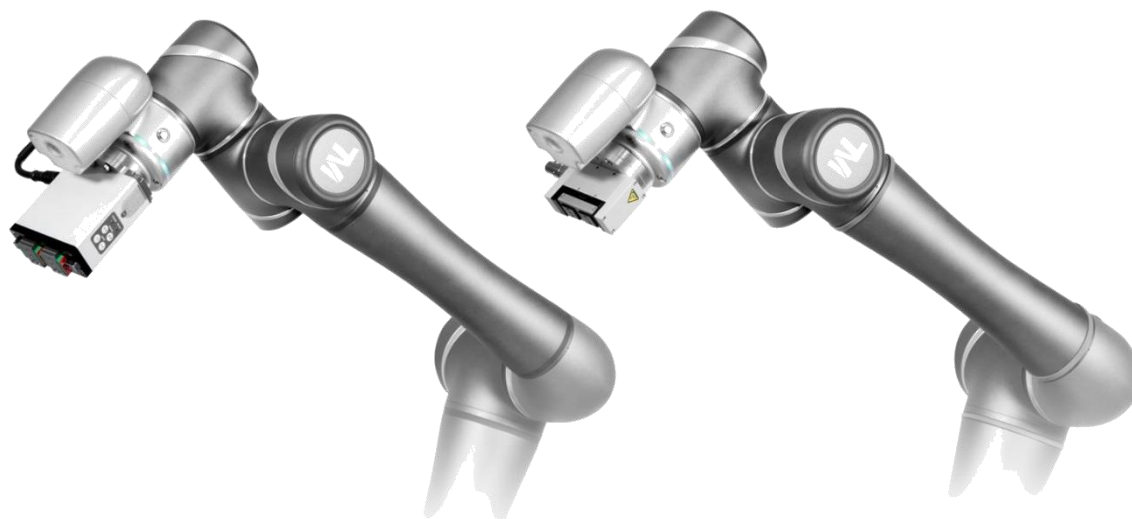


TM Plug&Play Version

快速安裝指南
Quick Installation Guide



上銀科技股份有限公司
HIWIN TECHNOLOGIES CORP.

<p>TM Plug & Play Version</p>	<p>Date: 2019.03.08</p>	<p>C27TE001_1903 Page: 01</p>
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1. 前言 | Introduction

● 前言

本操作手冊目的在使操作人員，除了可以更快速瞭解機台特性外，更可經由閱讀操作手冊後，可以獨立進行機台的操作，並且避免因不熟悉機台特性，而造成工作傷害，所以操作機台前，請詳細閱讀操作相關說明，以確保機台順利運行及人員操作安全。

本操作手冊適用於電動夾爪X系列與S系列結合 TM5 / TM12 / TM14 使用。

● Introduction

After reading this manual thoroughly, operator can not only familiar with product, but also can operate product completely independently. While operating product, use the method recommended in this manual to avoid product damage or personal injury.

This manual is applied to electric gripper X-series and S-series with TM5 / TM12 / TM14.

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2. TM Plug & Play Version: Electric gripper X-series

● **型號表示範例:**

XEG-32-C15L5-W1-TM

● **標準配件:**

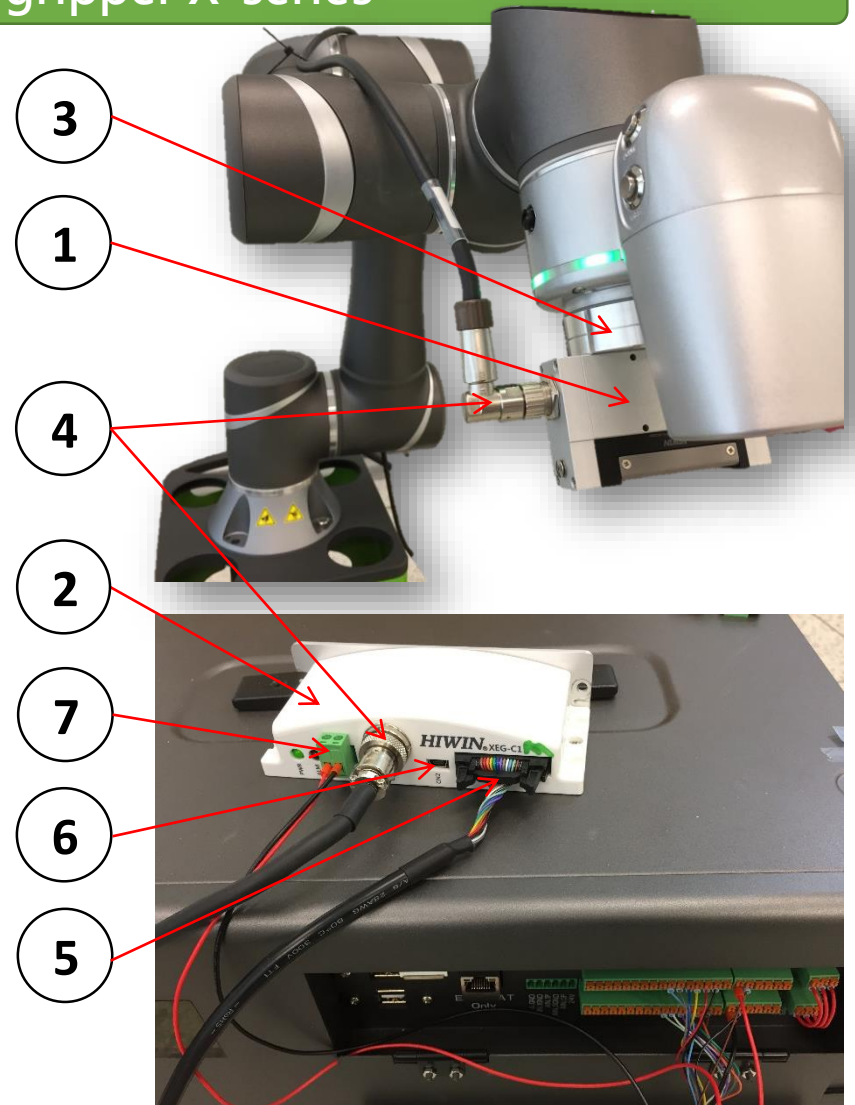
1. 電動夾爪 x 1 pcs
2. 電動夾爪控制器 x 1 pcs
3. TM Robot轉接法蘭板組 x 1 set
4. 驅控線 (5m-L) x 1 pcs
5. I/O訊號線 (5m) x 1 pcs
6. USB 傳輸線 (1.5m) x 1 pcs
7. 電源連接器 x 1 pcs

● **Model number example:**

XEG-32-C15L5-W1-TM

● **Standard shipping items:**

1. Electric gripper x 1 pcs
2. Electric gripper controller x 1 pcs
3. TM Robot adapter x 1 set
4. Actuator cable (5m-L) x 1 pcs
5. I/O signal cable (5m) x 1 pcs
6. USB cable (1.5m) x 1 pcs
7. Power plug x 1 pcs



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2-1. 系統架構圖 | System Construction



TM 機器手臂
TM robot arm



TM 電控箱
TM controller box

電源線 (DC24V)
Power cable (DC24V)

I/O訊號線
I/O signal cable



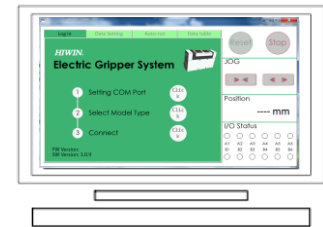
電動夾爪X系列
Electric gripper X-series

驅控線
Actuator cable



電動夾爪控制器
Electric gripper controller

USB傳輸線
USB cable

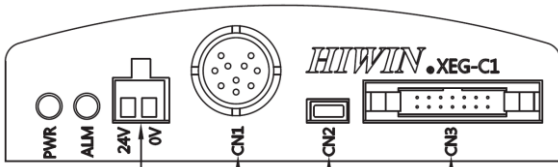


電動夾爪設定軟體
Electric gripper software

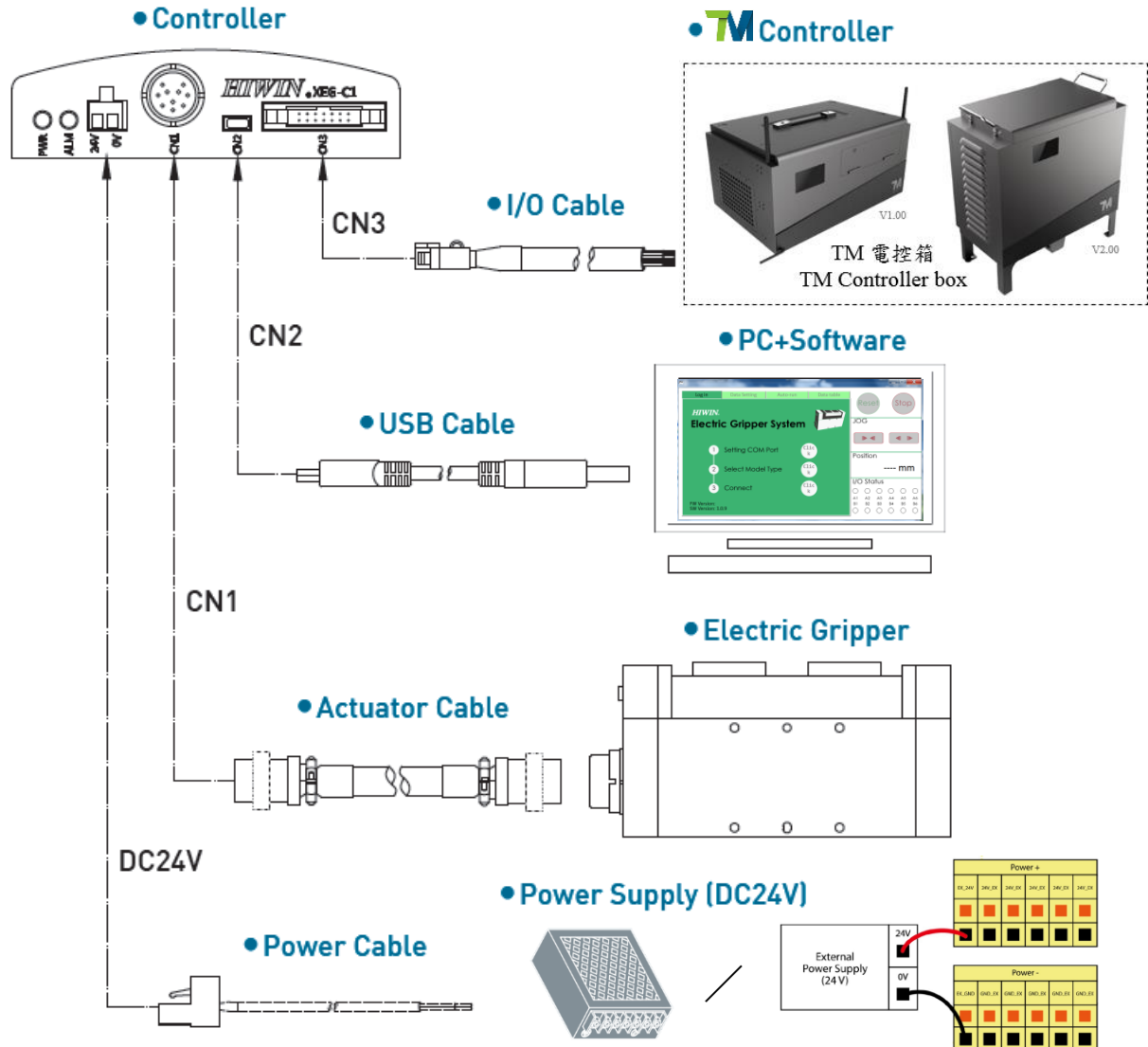
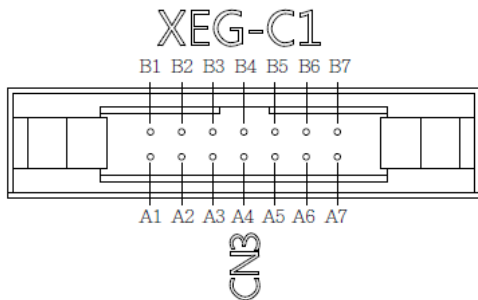
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2-2. 電路圖 | Current Diagram



Name	Illustration
PWR	Power supply lamp (Green)
ALM	Error status lamp (Red)
24V/0V	Power supply terminal
CN1	Actuator terminal
CN2	Communication terminal
CN3	I/O connector



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2-3. I/O訊號線(CN3)腳位定義 | I/O Signal Cable (CN3) Pin Define

編號 No.	線色 Wire color	腳位定義 Pin define	TM控制箱 TM Control Box
A1	黑 Black	指令編碼 bit0 IN0	DO.1
A2	紅 Red	指令編碼 bit1 IN1	DO.2
A3	黃 Yellow	指令編碼 bit2 IN2	DO.3
A4	藍 Blue	指令編碼 bit3 IN3	DO.4
A5	灰 Grey	指令編碼 bit4 IN4	DO.5
A6	淡藍 Light Blue	執行命令 START	DO.6
A7	棕/黑 Brown/Black	共點(+) COM+	24V
B1	棕 Brown	命令動作中 BUSY	DI.1
B2	橙 Orange	夾持範圍確認 HOLD	DI.2
B3	綠 Green	異常狀態代碼 ALM-CODE1	DI.3
B4	紫 Purple	異常狀態代碼 ALM-CODE2	DI.4
B5	白 White	物件辨識代碼 CHK-CODE1	DI.5
B6	淡綠 Light Green	物件辨識代碼 CHK-CODE2	DI.6
B7	白/黑 White/Black	共點(-) COM-	GND

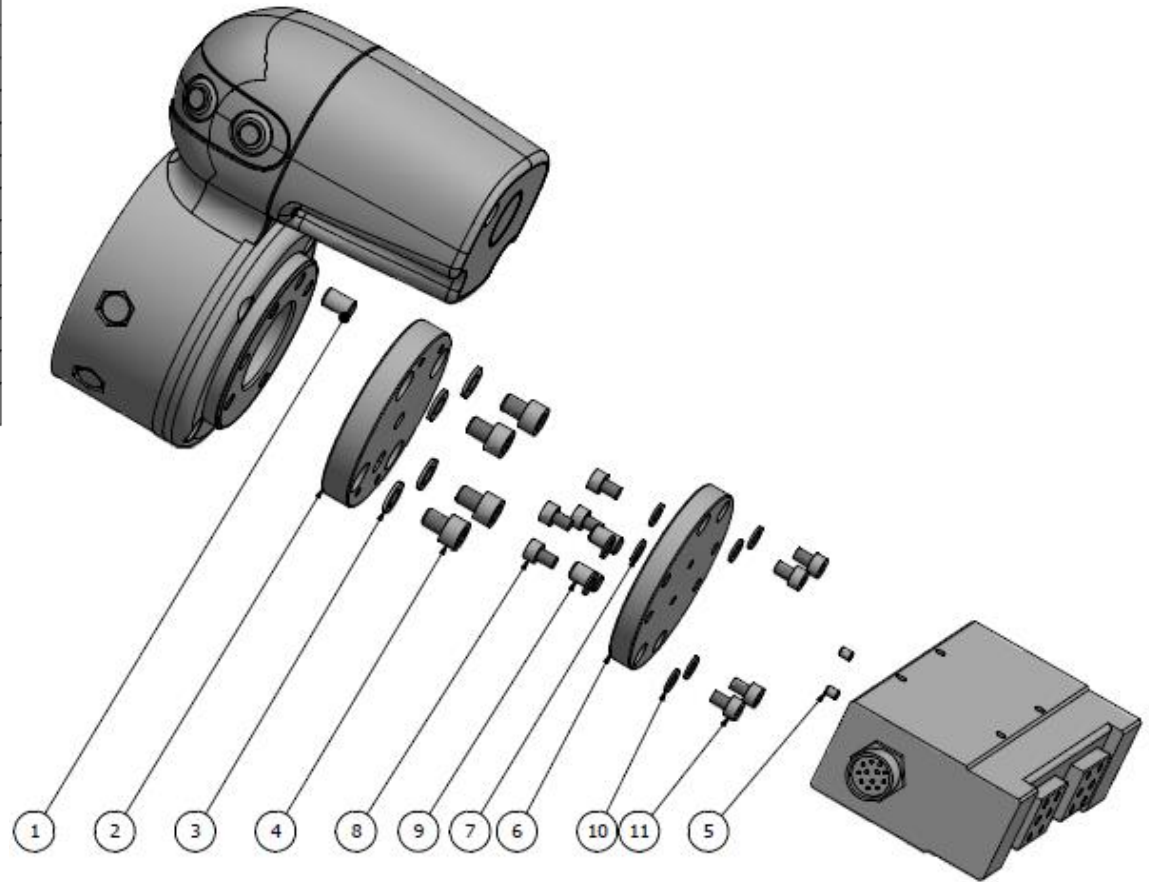
- 實際連接至TM Robot電控箱之腳位位置，請依您裝用之TM Robot硬體版本及其相對應之硬體說明書為準。
- Please follow your TM Robot' s User Manual in accordance with the hardware version to have the correct connector location of each pin.

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2-4. XEG-16轉接板組裝流程 | XEG-16 Adapter Assemble Flow

11	Bolt	M4X0.7PX6L SUS304	4
10	Spring washer	M4 SUS304	4
9	Pin	φ6X10L	2
8	Bolt	M3X0.5PX5L SUS304	4
7	Spring washer	M3 SUS304	4
6	XEG-16 adapter	—	1
5	Pin	φ2X4.4L	2
4	Bolt	M6X1PX8L SUS304	4
3	Spring washer	M6 SUS304	4
2	TM5 adapter	—	1
1	Pin	φ6X10L	1
Items	Parts	Description	Amount
XEG-16 & TM5/12/14			

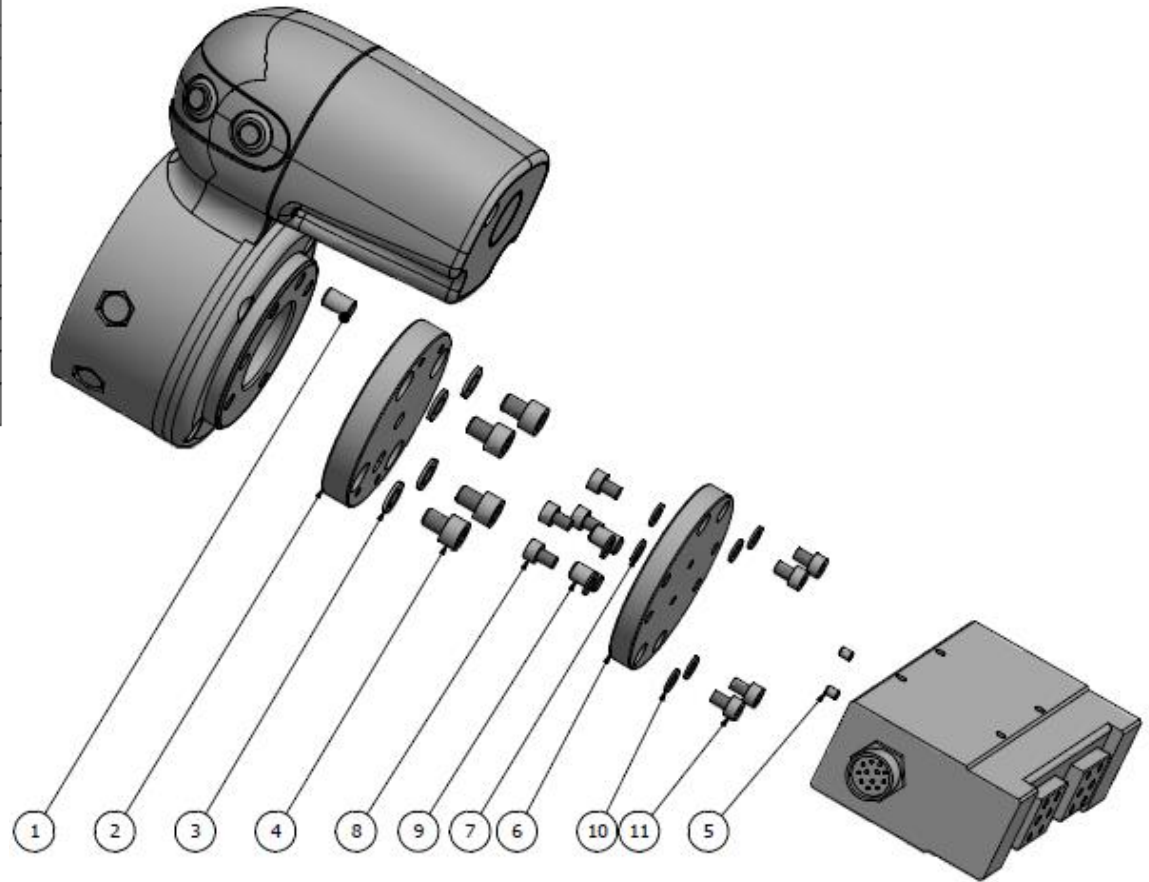


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2-5. XEG-32轉接板組裝流程 | XEG-32 Adapter Assemble Flow

11	Bolt	M4X0.7PX6L SUS304	4
10	Spring washer	M4 SUS304	4
9	Pin	φ6X10L	2
8	Bolt	M4X0.7PX6L SUS304	4
7	Spring washer	M4 SUS304	4
6	XEG-32 adapter	—	1
5	Pin	φ3X4L	2
4	Bolt	M6X1PX8L SUS304	4
3	Spring washer	M6 SUS304	4
2	TM5 adapter	—	1
1	Pin	φ6X10L	1
Items	Parts	Description	Amount
XEG-32 & TM5/12/14			

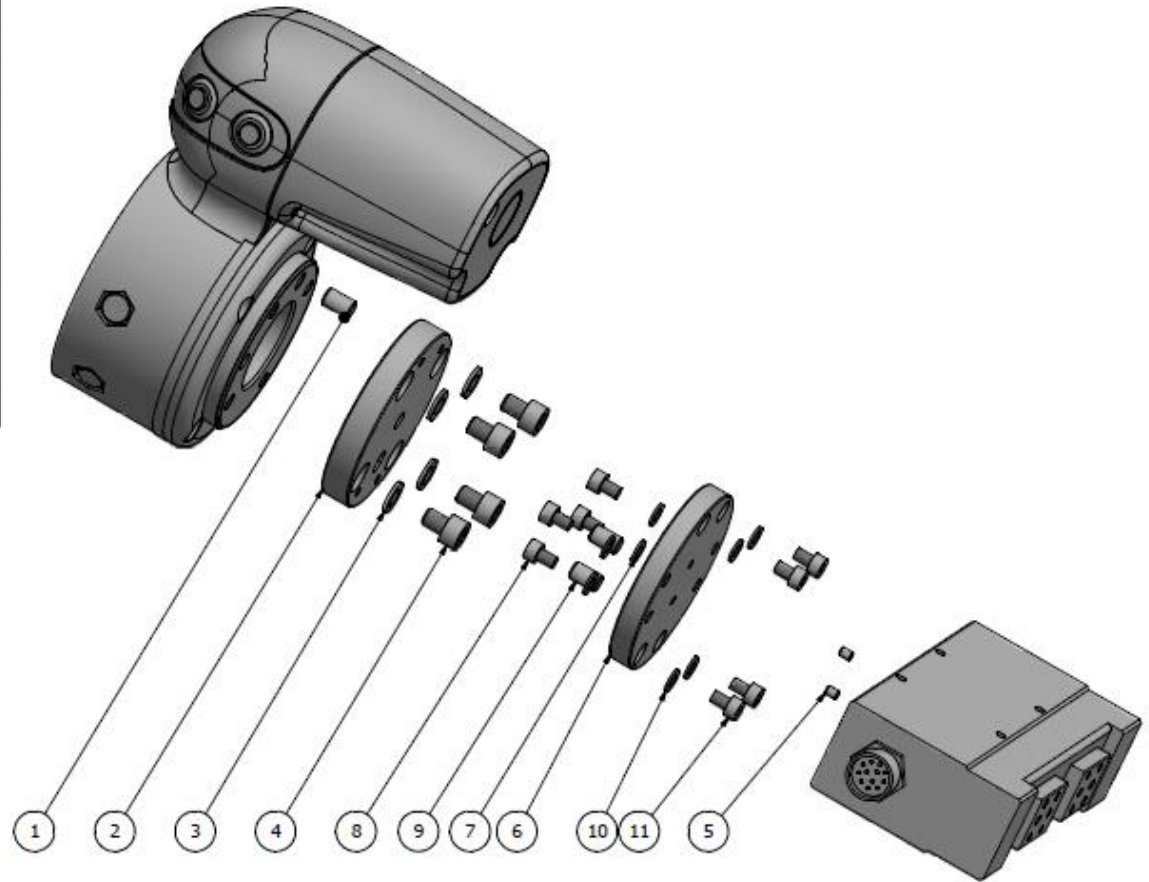


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2-6. XEG-64轉接板組裝流程 | XEG-64 Adapter Assemble Flow

11	Bolt	M6X1PX8L SUS304	4
10	Spring washer	M6 SUS304	4
9	Pin	φ5X6L	2
8	Bolt	M6X1PX8L SUS304	4
7	Spring washer	M6 SUS304	4
6	XEG-64 adapter	—	1
5	Pin	φ5X6L	2
4	Bolt	M6X1PX8L SUS304	4
3	Spring washer	M6 SUS304	4
2	TM5 adapter	—	1
1	Pin	φ6X10L	1
Items	Parts	Description	Amount
XEG-64 & TM5/12/14			



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3. TM Plug & Play Version: Integrated electric gripper S-series

● 型號表示範例:

SEG-24-TM

● 標準配件:

1. 整合型電動夾爪 x 1 pcs
2. TM Robot轉接法蘭板組 x 1 set
3. S-TM驅控線 x 1 pcs

● Model number example:

SEG-24-TM

● Standard shipping items:

1. Integrated electric gripper x 1 pcs
2. TM Robot adapter x 1 set
3. S-TM actuator cable x 1 pcs



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3-1. 系統架構圖 | System Construction



整合型電動夾爪S系列
Integrated electric gripper S-series

S-TM電纜線
S-TM
actuator Cable



TM 機器手臂
TM robot arm



TM 電控箱
TM controller box

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3-2. 腳位定義 | Pin Define

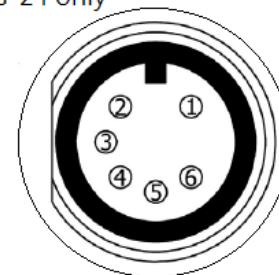
- 8-pin digital I/O connector of robot
- 6-pin I/O connector of gripper

Pin	Pin Define	
1	+24v	24 OUTPUT
2	DI_0	Digital Input0
3	DI_1	Digital Input1
4	DI_2	Digital Input2
5	DO_0	Digital Output0
6	DO_1	Digital Output1
7	DO_2	Digital Output2
8	+0v	+0v



Pin definition		
Pin	I/O	Function
1	IN1	Ready
2	IN2	DIR (O/C)
3	OUT1	Busy
4	VCC	24V/0.5A
5	GND	0V
6	OUT2	Alarm [Note 1]
7	---	Shielding

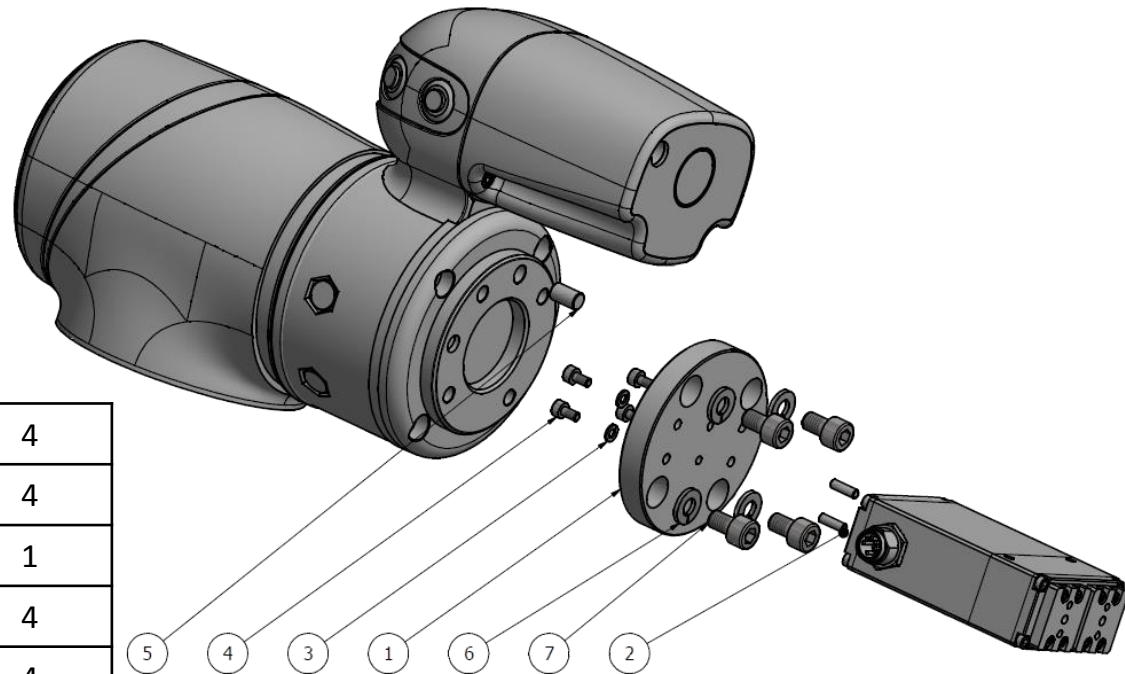
[Note 1] SEG-24 only



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3-3. SEG-04轉接板組裝流程 | SEG-04 Adapter Assemble Flow



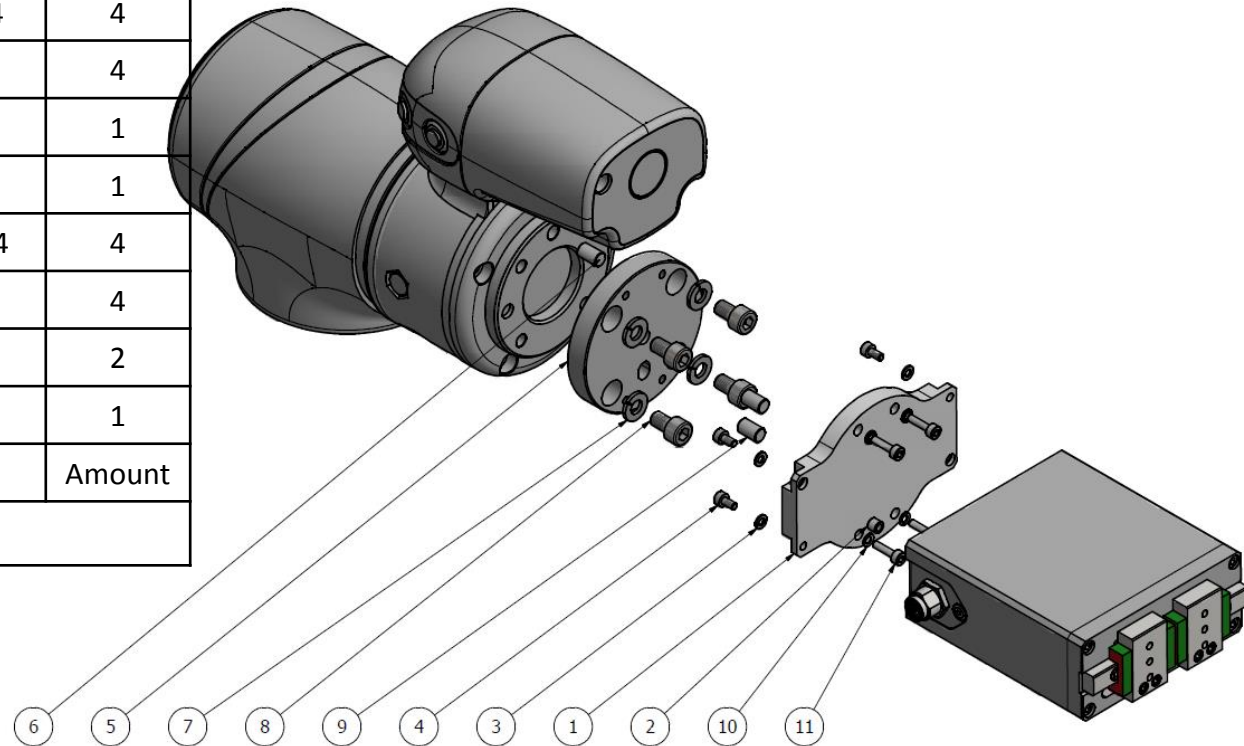
7	Bolt	M6X1PX8L SUS304	4
6	Spring washer	M6 SUS304	4
5	Pin	ø6X10L	1
4	Bolt	M3X0.5PX6L US304	4
3	Spring washer	M3 SUS304	4
2	Pin	ø3X10L	2
1	SEG-04 adapter	–	1
No.	Parts	Description	Amount
SEG-04 & TM5/12/14			

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3-4. SEG-24轉接板組裝流程 | SEG-24 Adapter Assemble Flow

11	Bolt	M4X0.7PX16L SUS304	4
10	Spring washer	M4 SUS304	4
9	Pin	ø6X10L	2
8	Bolt	M6X1PX8L SUS304	4
7	Spring washer	M6 SUS304	4
6	Pin	ø6X10L	1
5	TM adapter	—	1
4	Bolt	M3X0.5PX8L US304	4
3	Spring washer	M3 SUS304	4
2	Centering sleeve	ø5Xø3X4L	2
1	SEG-24 adapter	—	1
No.	Parts	Description	Amount
SEG-24 & TM5/12/14			



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3-5. STG-16轉接板組裝流程 | STG-16 Adapter Assemble Flow

11	Bolt	M5X0.8PX12L SUS304	3
10	Spring washer	M5 SUS304	3
9	Pin	∅4X6L	2
8	Bolt	M5X0.8PX12L SUS304	3
7	Spring washer	M5 SUS304	3
6	Pin	∅6X10L	2
5	STG-16 adapter	–	1
4	Bolt	M6X1PX8L SUS304	4
3	Spring washer	M6 SUS304	4
2	Pin	∅6X10L	1
1	TM adapter	–	1
No.	Parts	Description	Amount
STG-16 & TM5/12/14			

