HIWIN

Electric Gripper

Software Operation Manual

Original Instruction

GOOD DESIGN AWARD 2017   TAIWAN EXCELLENCE 2017   CE   RoHS

HIWIN®   *INDUSTRIE 4.0 Best Partner*

Multi-Axis Robot

Pick-and-Place / Assembly /
Array and Packaging / Semiconductor /
Electro-Optical Industry /
Automotive Industry / Food Industry
- Articulated Robot
- Delta Robot
- SCARA Robot
- Wafer Robot
- Electric Gripper
- Integrated Electric Gripper
- Rotary Joint

Single-Axis Robot

Precision / Semiconductor /
Medical / FPD
- KK, SK
- KS, KA
- KU, KE, KC

Torque Motor
Rotary Table

Aerospace / Medical / Automotive Industry /
Machine Tools / Machinery Industry
- RAB Series
- RAS Series
- RCV Series
- RCH Series

Ballscrew

Precision Ground / Rolled
- Super S Series
- Super T Series
- Mini Roller
- Ecological & Economical
  Lubrication Module E2
- Rotating Nut (R1)
- Energy-Saving & Thermal-
  Controlling (Cool Type)
- Heavy Load Series (RD)
- Ball Spline

Linear Guideway

Automation / Semiconductor / Medical
- Ball Type--HG, EG, WE, MG, CG
- Quiet Type--QH, QE, QW, QR
- Other--RG, E2, PG, SE, RC

Bearing

Machine Tools / Robot
- Crossed Roller Bearing
- Ballscrew Bearing
- Linear Bearing
- Support Unit

DATORKER® Robot Reducer

Robot / Automation Equipment /
Semiconductor Equipment / Machine Tools
- WUT-PO Type
- WUI-CO Type
- WTI-PH Type
- WTI-AH Type

AC Servo Motor & Drive

Semiconductor / Packaging Machine
/ SMT / Food Industry / LCD
- Drives--D1, D1-N, D2T/D2T-LM
- Motors--50W~2000W

Medical Equipment

Hospital / Rehabilitation Centers /
Nursing Homes
- Robotic Gait Training System
- Robotic Endoscope Holder

Linear Motor

Automated Transport /
AOI Application / Precision /
Semiconductor
- Iron-core Linear Motor
- Coreless Linear Motor
- Linear Turbo Motor LMT
- Planar Servo Motor
- Air Bearing Platform
- X-Y Stage
- Gantry Systems

Torque Motor &
Direct Drive Motor

Machine Tools
- Torque Motor--
  TMRW Series

Inspection / Testing Equipment / Robot
- Direct Drive Motor--
  DMS, DMY, DMN Series

Contents

1 Introduction

Thank you for purchasing the HIWIN XEG series of electric gripper. The [XEG-W2] human-machine interface is a software that allows to set the control parameters of the gripper XEG-C2. With this software, users can easily set up complex instructions, such as gripper position, adjusting gripper speed, switching object recognition. At the same time, users can save the parameters that have been set, simplifying the work procedure for each startup. In addition, the human-machine interface allows users to monitor the status of gripper. With these features, the [XEG-W2] human-machine interface enables users to use HIWIN XEG series of electric gripper easily.

2 Safety statements

Safety instructions in this manual enable users to properly use the product, and avoid accidental injury to the user, surrounding people and equipment. Please read this manual before use, and strictly comply with the relevant specifications to ensure safety.

3 System Requirements

✓   Windows XP, Vista, 7, 8, 10 operating system.

✓   Personal computer with RS232 or USB port.

✓   .NET Framework 4 Client Profile or above edition must be installed.
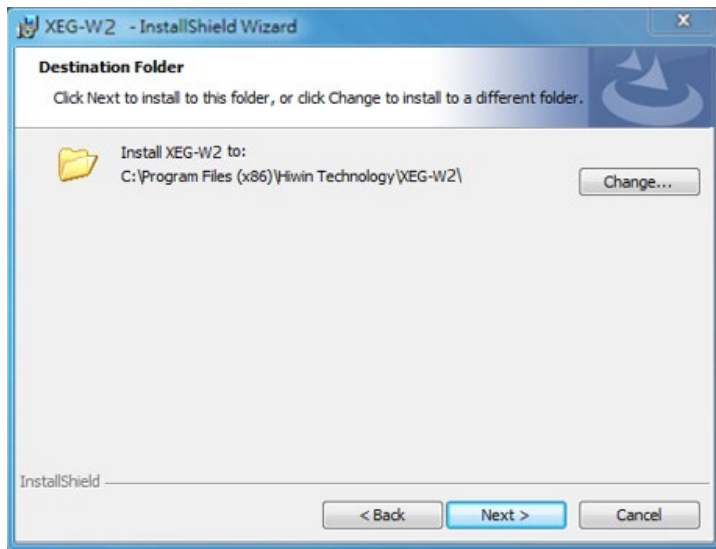
4 Installation Instructions

4.1 Installation

If users need to use a computer to set the controller, please install [XEG-W2] first. Start installer file. The installation window will pop up, as shown below.
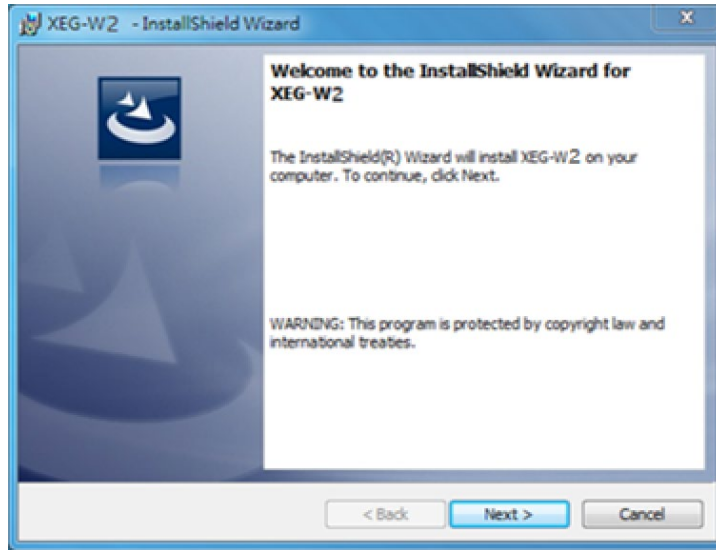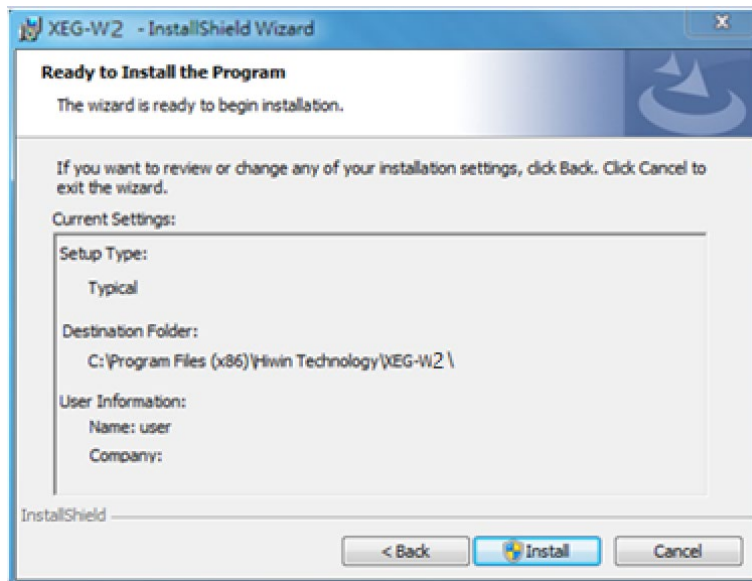
Installation Window

After reading, click [Next] and enter the installation path.

Installation path selection

The system has a default installation path. Click [Change] to set a different path. After confirming the installation path, click [Next] to enter the confirmation page.
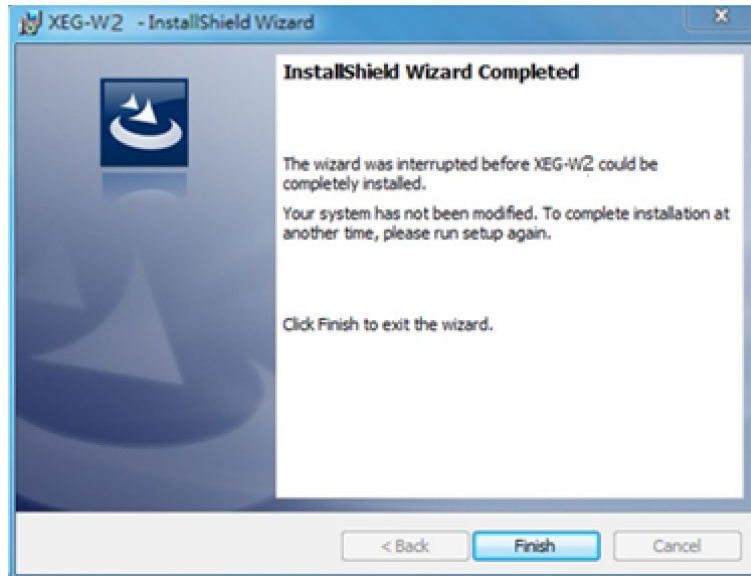
Confirmation page

This page lists installation contents and settings. Click [Back] to previous to modify or click [Install] for installation.
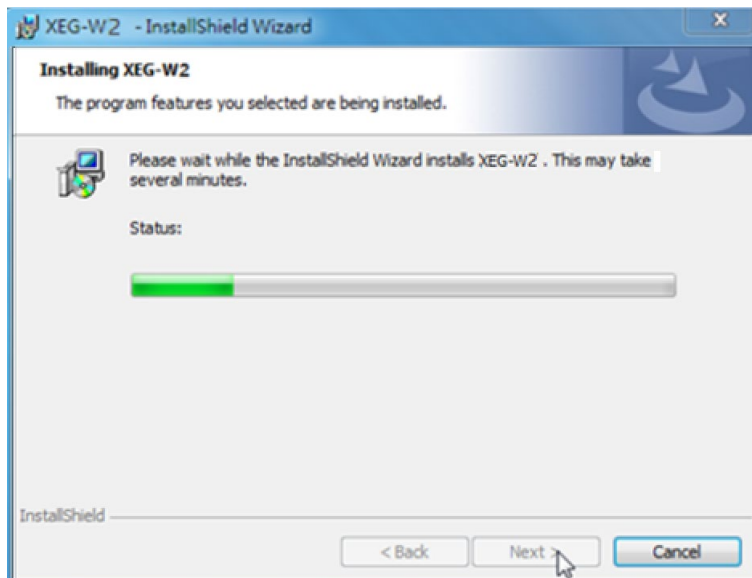
Installation

The installation wizard will install the program on the computer. This process can take several minutes.

Installation is completed

After program installation is complete, select [Launch the program] to start [XEG-W2] immediately. Click [Finish] to complete the installation process.

4.2 Uninstall

When a user wants to uninstall, go to [Start] to select [HIWIN TECHNOLOGIES CORP] →Click [Uninstall].
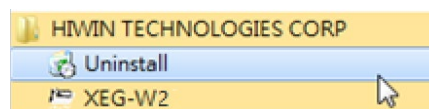
Uninstall

5 Operating procedures and precautions
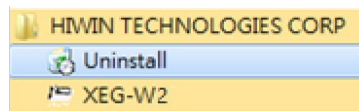
5.1 Start program

After the program is installed, select the shortcut [XEG-W2] application on desktop or [HIWIN TECHNOLOGIES CORP] in [Start] icon → click [XEG-W2] to execute XEG-W2.
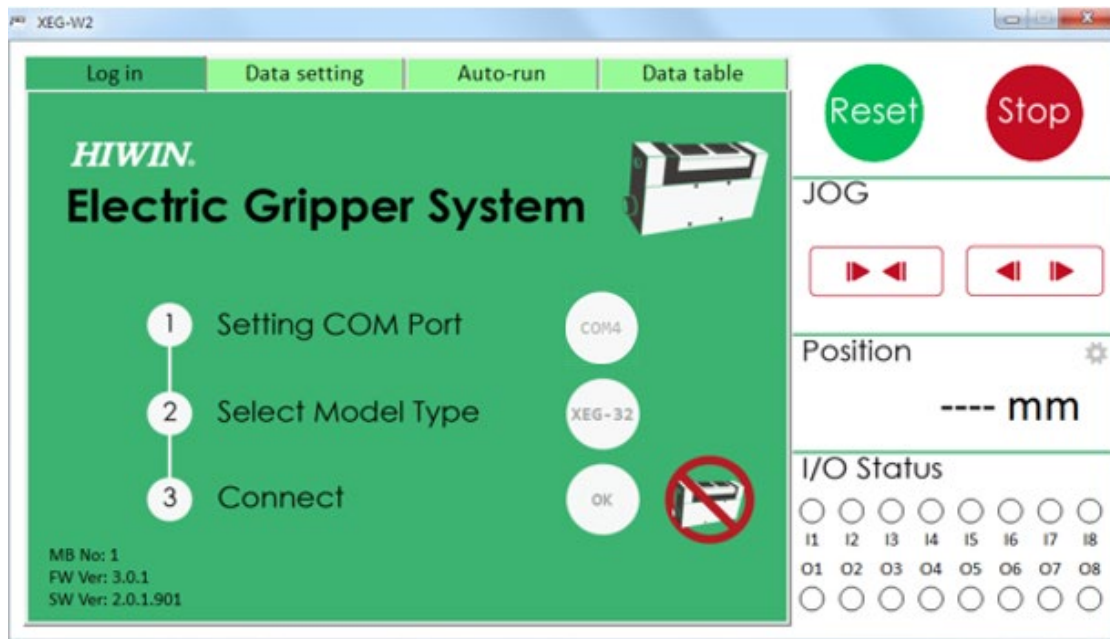

Desktop application shortcuts

All program shortcuts in [Start] icon

After execution, the main XEG-W2 window appears. All settings will be executed in this window.


XEG-W2 Main screen

The main window allows users to set COM port, to select gripper model and connect. After connection, users can operate [Reset], [Stop] and [Jog] from the upper right of the top panel. The bottom right-hand panel displays the current position of gripper and controller I/O status immediately.

If the user wants to close the program, click XEG-W2 Close icon on top right corner.

## 5.2 Connection and Initialization

● **Select connection port**

To transmit signals between the computer and controller, it is necessary to establish connection between these two. First, select the connection port used. Start the program. Select [Click] next to [Setting COM Port], expand the drop-down list in the window to see if the controller port is available as shown below.
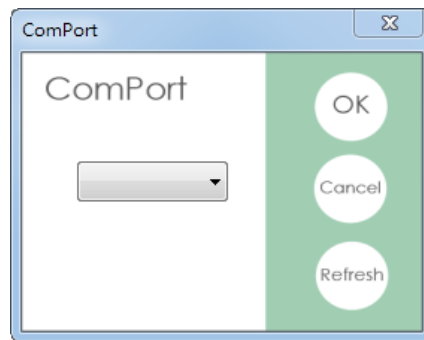
Connection port selection

The port number of the connected controller can be identified by the [Device Manager], as shown in Fig [USB Serial Port (COM4)] in the connection diagram [COM, LPT] is the port connected to the controller.
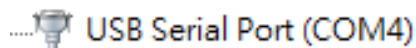

Device Manager

Assume that the current port connected to the controller is the 4th (Com Port 4), and then select [COM4] to transmit signals. Once selected, click [OK], [Setting COM Port] in main screen will display the currently selected port. The computer will receive and transmit signals from this port.

● **Model Specifications**

Since XEG-W2 can correspond to XEG series electric gripper, to allow controller to receive signals correctly, the gripper model must be selected before connection. This step relates to the parameters sent by computer. If the selection is wrong, the gripper will behave abnormally, such as an inability to reach set movements.

Select the [Click] beside [Select Model Type] and click to select the right model. If the gripper model is XEG-32, then select [XEG-32]. After selection, the gripper model will be displayed beside [Select Model Type].
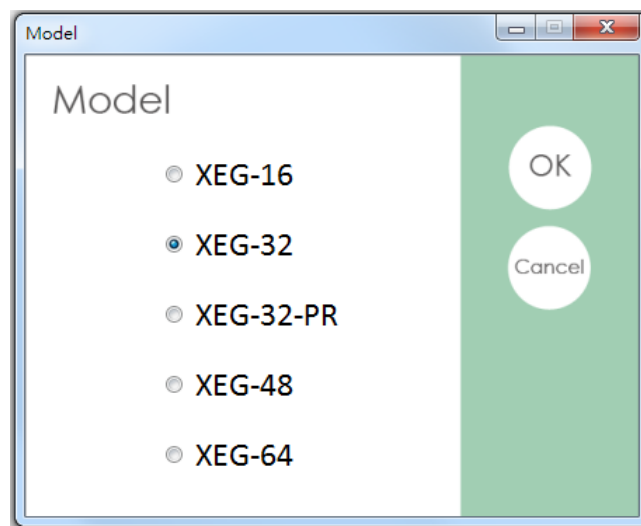
Model specifications selection

● **Start connection**

Users can start the connection after select COM port setting and model specifications. Select [Click] beside [Connect] to exit out of the window and to confirm again. After confirmation, click [Yes]. The computer will send out signals and wait for the controller to respond. If handshaking signals are correct at both ends, the [Reset] the window will pop up and ask if the user want to initialize the gripper. If handshaking fails, there will be no reaction.
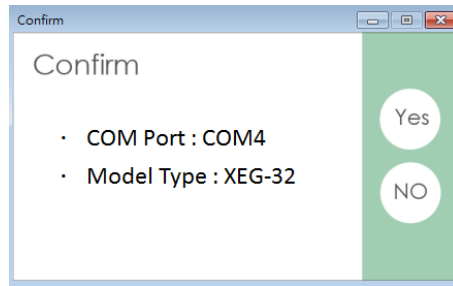
Confirmation screen

Return to the previous page

After connection, the main screen displays an offline diagram, if a user wants to disconnect, click on the icon. When offline, the XEG-W2 does not allow users to send signals. All operating commands are invalid and the user cannot switch screens. In general, users are recommended to disconnect the XEG-W2 and XEG-C2 connection after use, to prevent inadvertent changes by others.

Offline icon

● **RESET**

To ensure correct gripper location information, initialize after connection is completed. After a successful connection, the [Reset] screen will pop up and ask if initialization is needed.
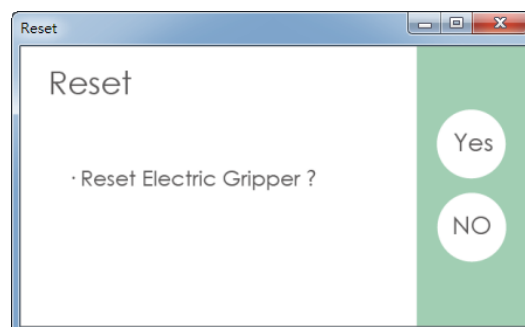
Initialization screen

Users can also click on [Reset] button on right side to start the initialization. This process will take some time, but it only needs to be started once after connecting or booting.


Reset button

5.3 Action commands

To support the needs of different users, the XEG-W2 offers a variety of operations, such as jog, move, gripping, object recognition, advanced settings, initialization specified settings, write and read of electronic erase rewritable type memory (EEPROM). Users may set the appropriate parameters to their needs. This section explains how to set the parameters and processes.

● **Jog**

[JOG] mode allows users to move a fixed amount of movement every time. When a user clicks [On] or [Close] once, the gripper will move in fixed segment strokes chosen on the right side. When user presses firmly [On] or [Close], the gripper will move continuously in fixed segment strokes chosen on the right side until the user releases [On] or [closed].
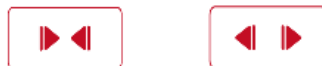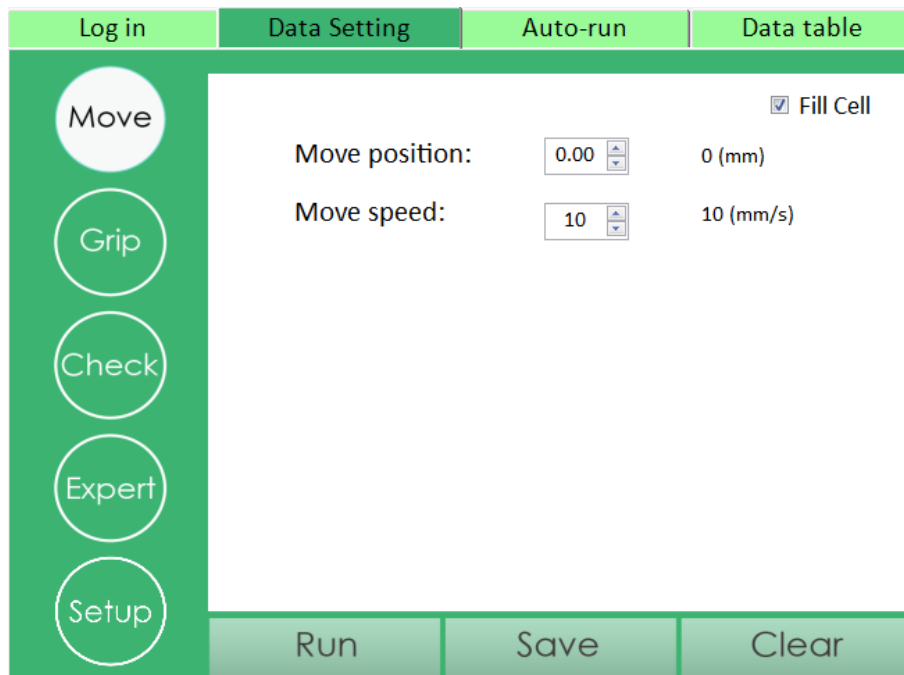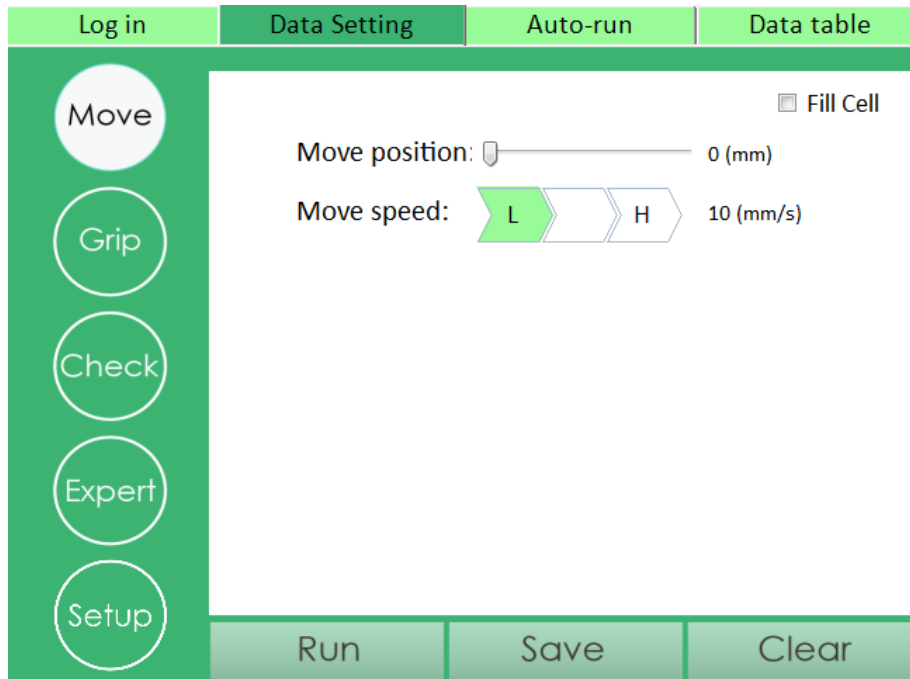

Jog Button

● **Operation settings**

[Data Setting] screen is for users to set operation instructions to be executed. In accordance with the different modes, instructions are divided into only movement [Move], only gripping [Grip] and [Expert] mixed with movement and gripping.

Selection of Data Setting screen

When the mode does not have a direction option, the movement of this mode is in absolute position. The gripper will be fixed at the position on the [Move position] bar. In addition, [Move stroke] and [Gripping stroke] are two different concepts, [Move stroke] represents gripper action range in movement state, and [Gripping stroke] represents gripper movement range in gripping state. Gripping status is after moving state. For example, when a user sets the [Move stroke] to off 10.00mm, [Gripping

capacity] to 1.00mm, the gripper moves inwardly in moving state for 10.00mm, and then moves inward in gripping state for 1.00mm. The total movement is 11.00mm, and only when gripper grips object is in a gripping state, then it will send out gripping signals. Similar to [Move speed] and [Gripping speed] respectively correspond to moving speed in movement state and gripping state. [Gripping force] represents gripping force. The value is the ratio of the full gripping force and detailed gripping force range. Please refer to the electric gripper and controller specification.

Operation parameters

After the user enters each parameter, click [Run] to make gripper move. To clear all parameters fields, click [Clear].

If the user wants to write operation into memory for I/O operations during offline, click [Save] on the bottom. After clicking and, screen pops up, select desired action and click [OK] to store.
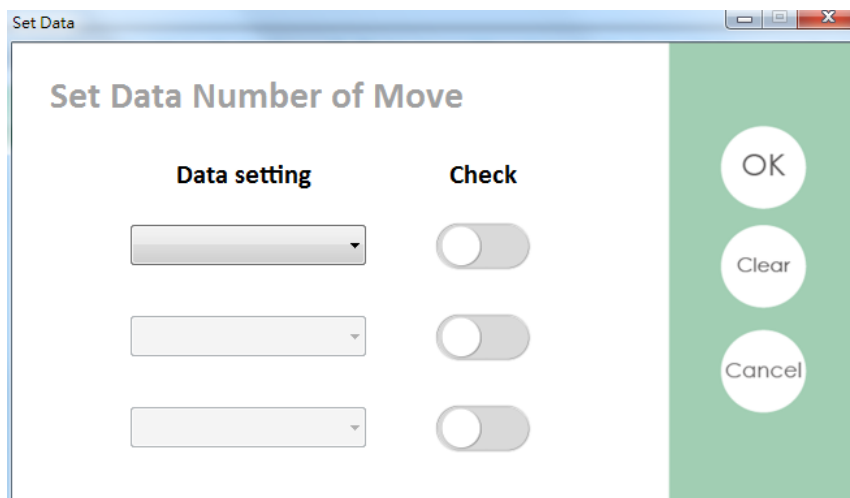
Action store screen

For example, the user has entered the following parameters in [Expert] of XEG-W2:

[Direction]: open
[Move stroke]: 10.00
[Move speed]: 10
[Gripping stroke]: 5.00
[Gripping speed]: 2
[Gripping force]: 40 %

Click [Save] and select [Data3], then click [OK]. The operation will be written into the action number 3 position.
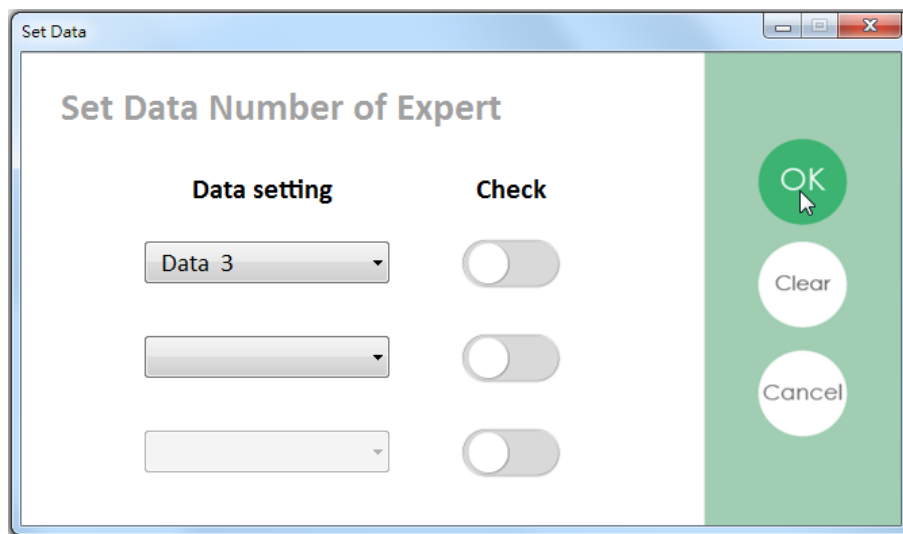
Written into the action number 3 position

Maybe, the user entered the following parameters in [GRIP] of WEG-W2.

[Direction]：Close

[Gripping stroke]：10.00

[Gripping speed]：2

[Gripping force]：40 %

After click [Save], select [Data4] and click [OK], then the operation will be written into the action number 4 position.
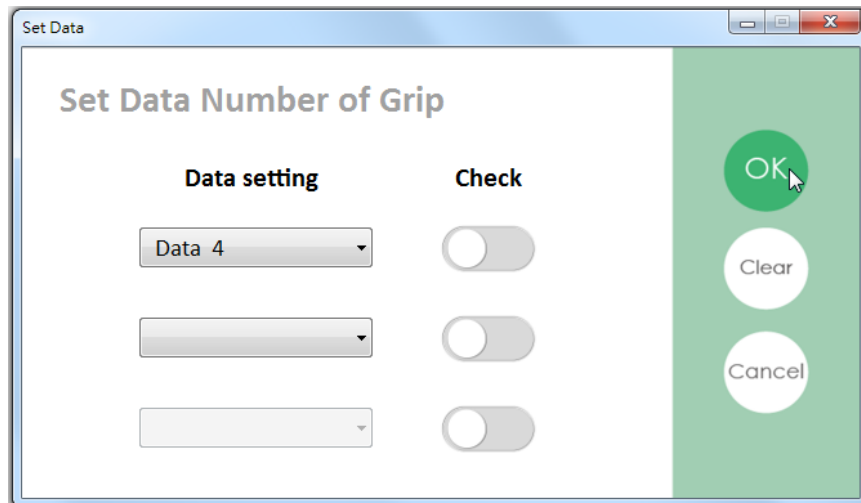
Written into the action number 4 position

If the user consider to enable object check and set action in [Grip], he or she can click [Save] and select [Data4], click [Check] and click [OK], then the action number 4 will be added in object recognition. Notice that the object recognition function can be enable only in both of [Grip] and [Expert] mode except [Move] mode.
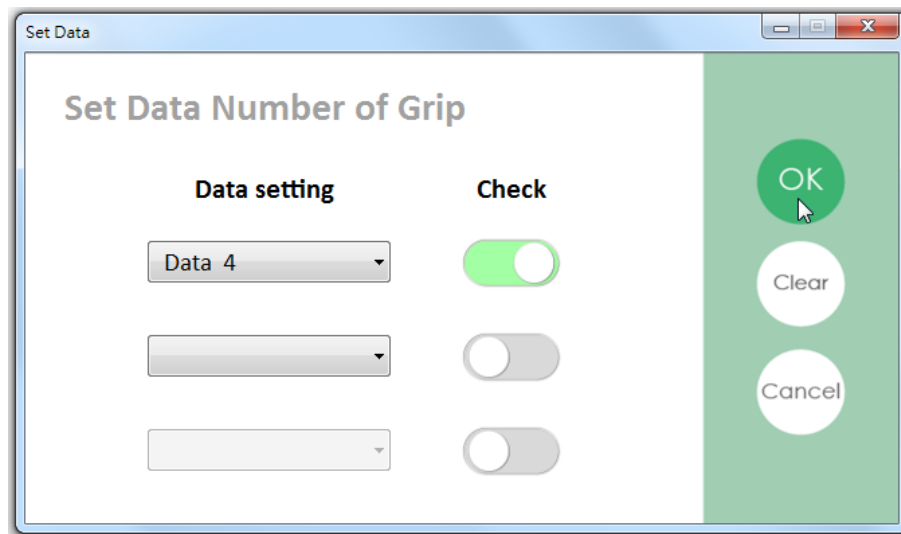
Add action number 4 in object recognition

Now the suffix will display "_M_C", means that it has action in data and the object recognition function is enable. Furthermore, the other action number will display "_M", means that it has action in data and the object recognition function is disable. In last, the suffix will display nothing if there is no action in data.
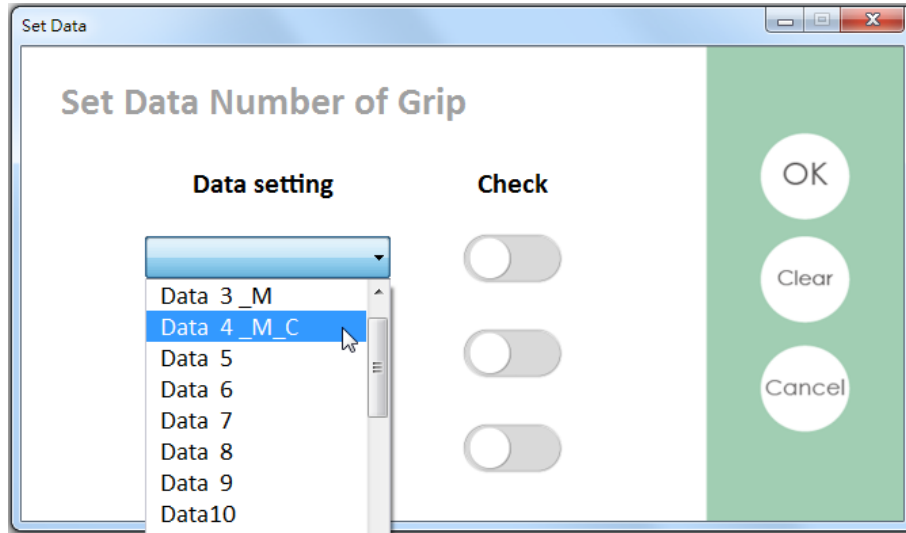
[Data4] suffix display "_M_C"

● **Reset assigned action location**

XEG-C2 offers initializing operation specification functions, allowing users to use it with fewer I/O Ports. To set gripper initializing operation numbering, click sidebar [Setup] of [Data Setting], select specified motion, then click [OK].

[Reset] button

If you need to cancel the Reset action, deselect data number after click on [Reset].

Don't choose any number to cancel the action

5.4 Object recognition setting

● **Object Identification**

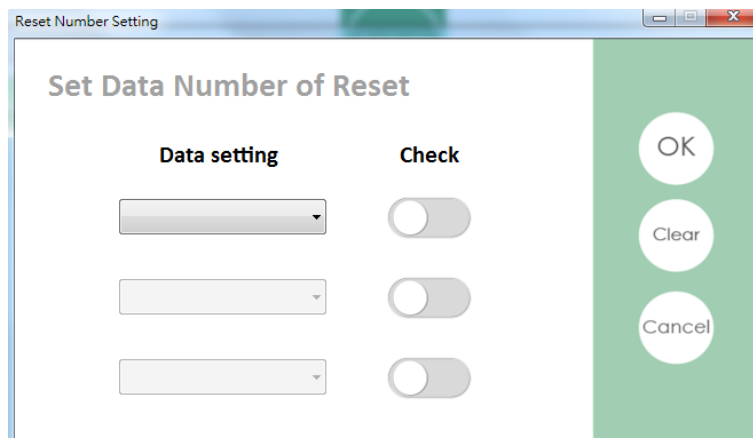The XEG series electric gripper has an object recognition function that can determine the type of object it is gripping. A user can click on [Check] to set object identification parameters, which have three groups, to specify the upper and lower limits of object width. Once gripping stops, the gripper stroke stays within set range, and then determines the object, outputs signals. Once the parameters are set, click [Save] below, and save parameters into a specified action. Actions without saved parameters, will not output the corresponding signals even if gripper grips the object.

Object 1:	0.00 ~ 0.00 (mm)
Object 2:	0.00 ~ 0.00 (mm)
Object 3:	0.00 ~ 0.00 (mm)
Object 4:	0.00 ~ 0.00 (mm)
Object 5:	0.00 ~ 0.00 (mm)
Object 6:	0.00 ~ 0.00 (mm)
Object 7:	0.00 ~ 0.00 (mm)

Setting object identification parameters

● **Check store setting**

Fill in up and down boundary based on the object length and click [Save] button to store or overwrite the data. In the meanwhile, the warning window that display "Do you want to rewrite data into controller" will pop-up. Click [Y] to complete CHK store.
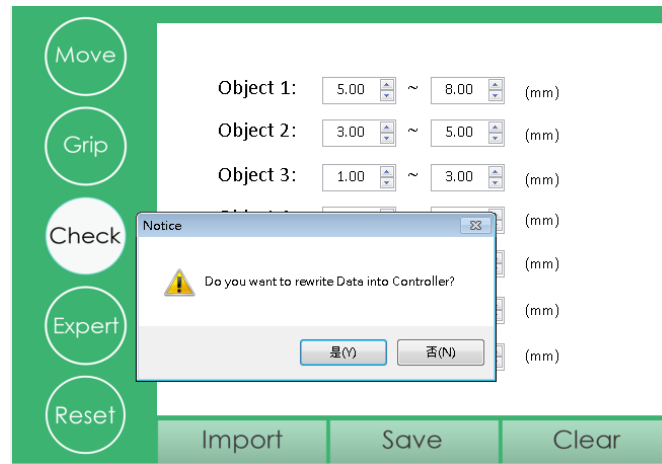
Rewrite data warning window

5.5 Automatic operation

Automatic operation screen allows users to schedule the gripper to carry out actions written in memory. The screen provides action, execution and wait instructions through proper combination to achieve complex automation procedures. If users plan to use I/O ports to control gripper movements, the automatic operation screen also allows users to test if the operation flow is correct. In terms of settings, users can select a number of actions and loop execution repetitions. This section describes the setting modes of the automatic operation screen.

Automatic operation screen

● **Auto-run data settings**

The [Auto-run] screen is mainly action lists. The first column of the list is [NO.] and represents the numbered sequence of actions. The actions will be executed in order; when No. 1 operation is completed, No. 2 operation will be implemented, and so on, until all executions are completed; there is a maximum of 30 numbers, allowing up to 30 movements.

The second column is [Motion Type]. Motion type is divided into two categories. [Motion] represents operations has been written to memory. [Delay] represents staying duration in the present position. The third column of the list is [Motion] which represents action content, when the second column is [Motion], the third column selects operation in memory, when the second column is [Delay], the third column is the delay time. For example, when memory [Data1] action is open 1.00mm, [Data2] action is off 1.00mm, then when number 1, 2, 3, is respectively [Motion] → [Data1], [Delay] → [10ms], [Motion] → [Data2], gripper will be open 1.00mm, and wait 10ms, then off 1.00mm.

NO.	Motion Type	Motion
1	Motion	Data1
2	Delay	1 sec
3	Motion	Data2
4		

Auto-run action list

● **Advanced Settings**

[Setup] on bottom of [Auto-run] screen allows users to set operation number and number of execution times. [Auto-Run Number] represents operation number in single loop; [Cycle Times] represents loop numbers, if it is 0, which means infinite loop.

Setup

Setup

Auto-Run Number : 1 ~ 1   OK

Cycle Times : 0   Cancel
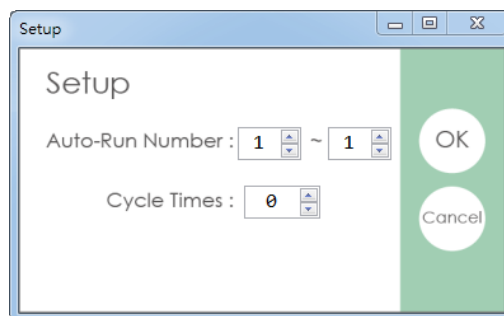
Advanced Settings

● **Execute [Auto-run]**

When the user sets operations, clicking [Run] on the bottom of screen and will begin the operations in accordance with the set list. To clear all operations in the action list, click [Clear]. During [Auto-run] operation, clicking [Stop] will discontinue current operation of gripper. When the user clicks [Run] again, the operation will start from the beginning.

Total Cycle Counts	Total Cycle Time	Setup	Run	Stop	Clear
0	0D 0H 0m 0s				

Auto-run buttons

[Total Cycle Counts] and [Total Cycle Time] on left bottom corner of [Auto-run] screen, [Total Cycle Counts] represent the number of execution loops. [Total Cycle Time] represents the total duration since the start of operation.

5.6 Data table

NO.	Motion name	Direction	Move stroke	Move speed	Grip stroke	Grip speed	Grip force	Check function
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								

| Run | Import | Export | Clear | Save |

Data table

The [Data table] screen allows users to read current operation settings. When switching to this screen, the program will automatically read stored operations from controller memory. [No.] represents the number of operations. [Motion Name] represents name of operation. [Direction] indicates the direction of movement. [Move stroke] shows movement stroke or position of the operation. [Move speed] indicates the moving speed of the operation. [Gripping stroke] indicates gripping stroke movement. [Gripping

speed] indicates the speed of gripping movement. [Gripping force] represents movement gripping force. [Check function] represents if the object recognition function has been turned on. If the number has been written, the operation will be displayed on [Data table] screen.

If users want to add a name tag to the specific motion, XEG-W2 version 1.0.8 applied this new function, each motion has a name length up to 8 characters.

Please click on [Import] if you want to import current settings; please click on [Export] and [Save] if you want to export current settings; please click on [Save] if you want to save motion name data into controller. To export and clear all the setting on the controller, please click on [Clear] and [Save].

NO.	Motion name	Direction	Move stroke	Move speed	Grip stroke	Grip speed	Grip force	Check function
1	Gripper_Reset	RESET	0	0	0	0	0	OFF
2		ABS	32	80	0	0	0	OFF
3		←→	10	80	5	2	40	OFF
4		→←	0	0	32	2	40	ON
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								

| Run | Import | Export | Clear | Save |

No.1 Data table with written operations

5.7 Emergency stop

When emergency stop happens and 24V DC is off, the [RESET] button will become inverse grey and light up B4、B5 which represent origin point fault. By this way to reminds the user that the electric gripper is in Emergency stop state.
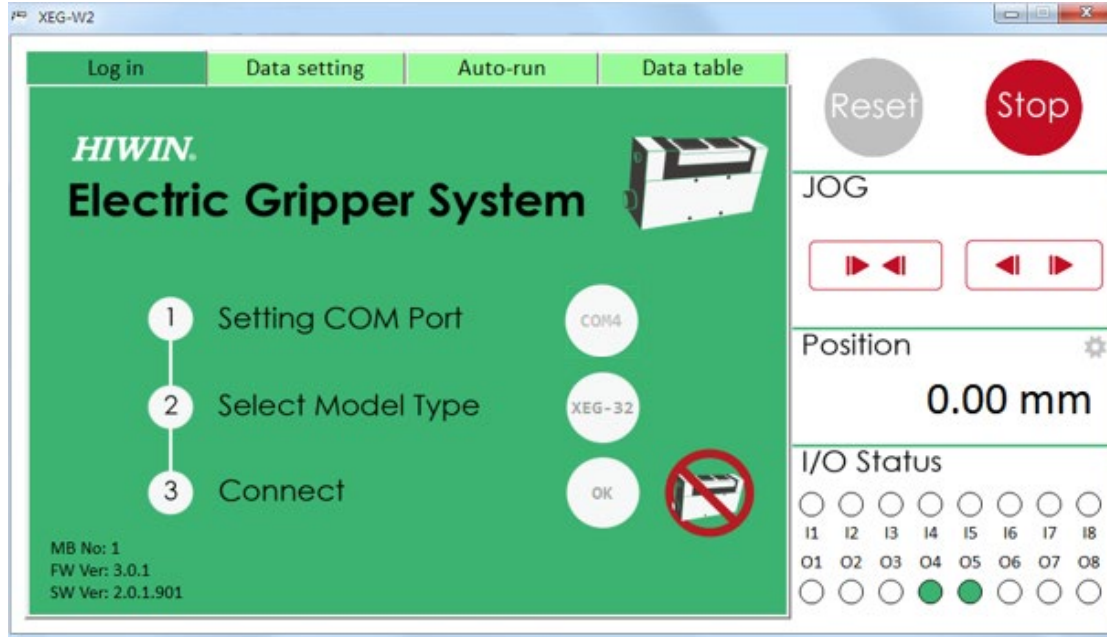
XEG-W2 Emergency stop state

Appendix.1: Quick Start Procedures

The appendix provides users with quick start instructions that can be used until the technical manual can be reviewed. Through the procedures in the appendix, users can operate the electric gripper in an automation application quickly. This appendix provides only brief examples, if applications exceed instructions in the appendix, please refer to related chapters in the technical manuals for more details.

● **Application conditions**

Before operating with this Appendix, users need to confirm that following conditions are met. If not satisfied, please set parameters in accordance with the relevant sections of technical manuals.

☑ System requirements have been met (see P.1).

☑ [XEG-W2] human-machine interface software is installed.

☑ A linked connection among the electric gripper, controller and PC has been established.

● **Application examples**
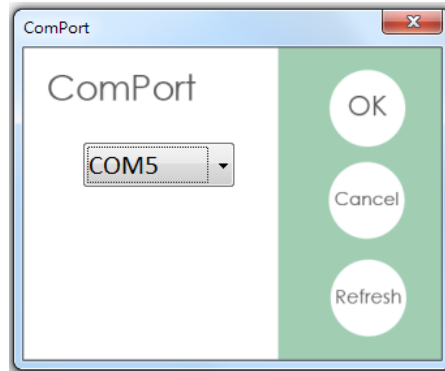
Set up an electric gripper application scenario:

➢ Gripping width is 15.00mm.

➢ Demand operations are two, one open (Move 20mm) and one close (Grip 7mm).

➢ Gripping object inwards.

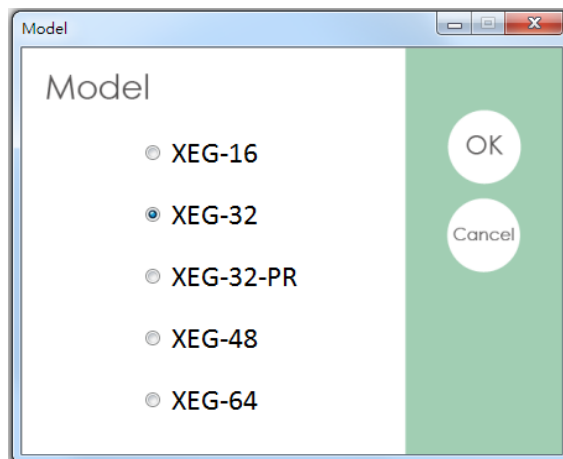Follow underlying operating procedures to complete the setting.

➢ **Operation procedures**

1. Start the program, click [Click] next to [Setting COM Port] to choose connection ports and press [OK].
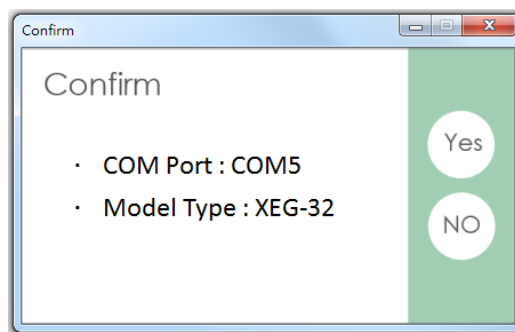
Choose port

2. Select gripper model on [Click] beside [Select Model Type] and click [OK].

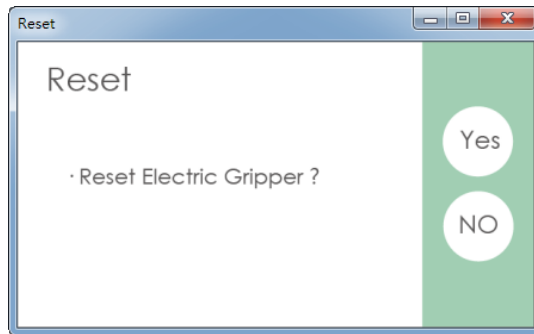Select gripper type

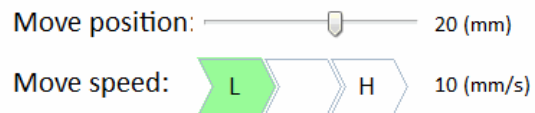3. Click [Click] beside [Connect], then click [Yes].

Start connection

23

4. Click [Yes] on Reset screen.

RESET screen

5. Set up open movement parameters first, switch screen to [Data Setting], pull [Move stroke] to [20]; select [Move speed] to [L], that represents 10mm/s.

Parameter setting

6. Click [Save], then select [Data1], press [OK].

Select memory location

24
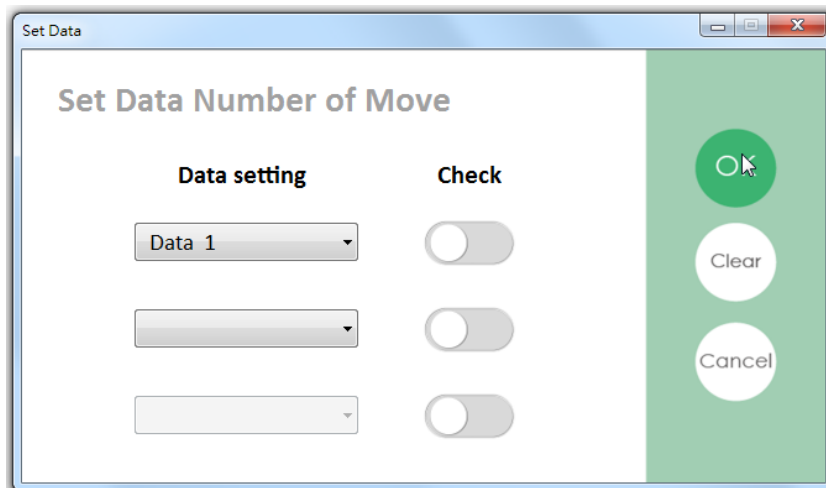
7. Set up gripping movement parameters, click on sidebar [Grip], select [Close] on [Direction]; pull [Gripping stroke] input to 7; set [Gripping speed] to [H], that means 10mm/s; set [Gripping force] to [L], that represents 40%.

Parameter setting

8. Click [Save], then select [Data2], press [OK].
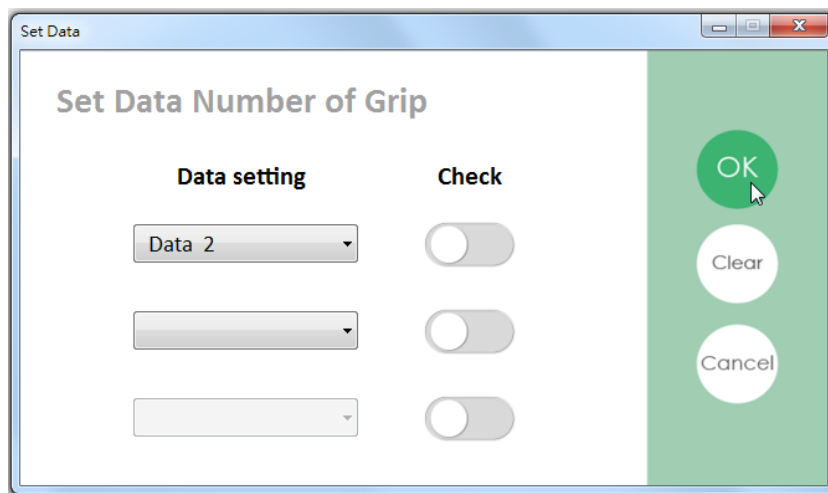
Select memory location

9. Switch to [Auto-run] screen.
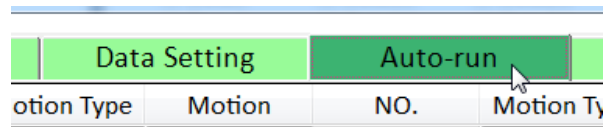
Switch screen

10. Select [Motion] on [Motion Type] of [NO.] 1, select [Data1] on [Motion].

Select motion contents
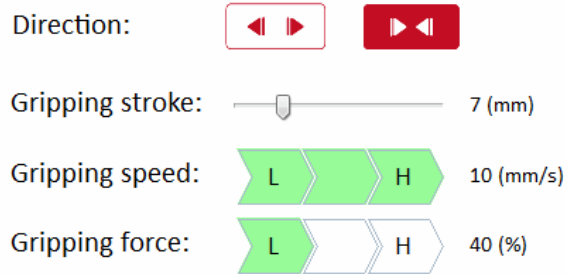
11. Select [Motion] on [Motion Type] of [NO.] 2, select [Data2] on [Motion].

Select motion contents

12. Select [Setup], set [Auto-Run Number] to 1 to 2, and then click [OK].
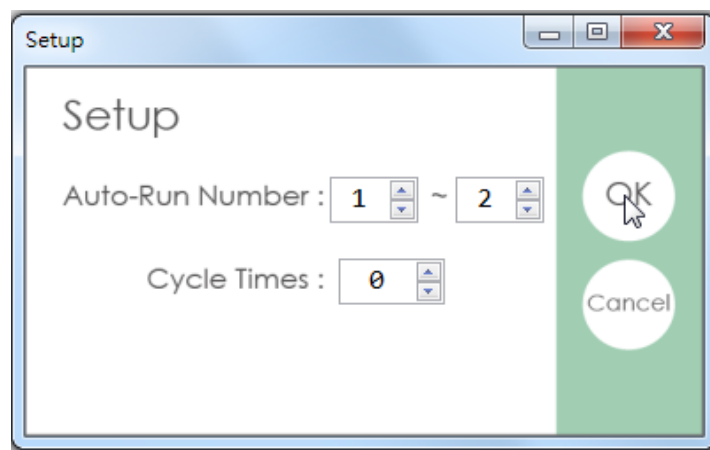
Set motion operation

13. Click [Run], at this time, according to gripper previous setting, repeats operations.

Appendix.2: Connection example (For XEG-C1 only)

Take HIWIN's robot controller RCA605-GB as an example, currently it provides two types of control method for XEG electric gripper, which are via USB communication and Input/Output. This appendix teaches the customer the control pin and wiring during I/O control. It is recommended that the user uses the gripper adaptor plate-GB to save the inconvenience of I/O circuit wiring. The figure below shows the relationship of wiring between the gripper and the controller.
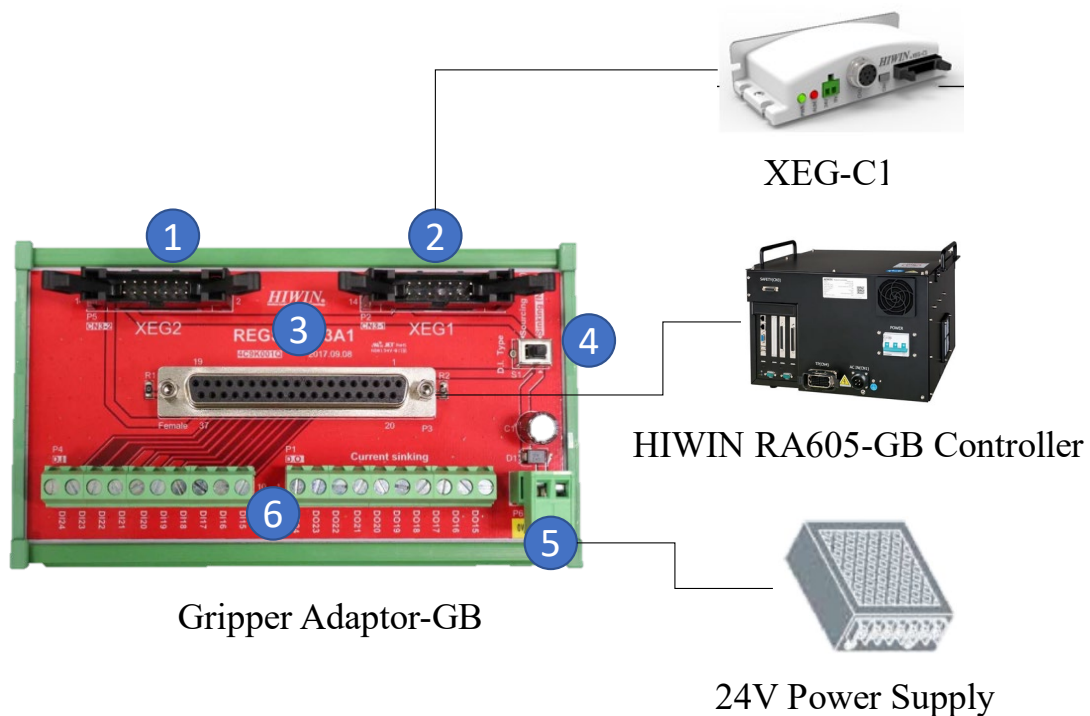

Gripper Adaptor-GB wiring

The gripper adaptor-GB provides user to control the two sets of electric gripper at a time. The wiring is as follows:

1. Channel XEG1- Connect to electric gripper controller XEG-C1

2. Channel XEG2- Connect to electric gripper controller XEG-C1

3. D-SUB – Connect to HIWIN RA605-GB controller input/output (RCA605-GB controller input output pin is located

4. Switch – Switch to XEG-C1 output type

5. Input power – Connect to power supply (MAX. 500mA)

6. Other I/O – Connect to other input and output devices other than the gripper

If the customers have the following gripper adaptor-GB, please refer to the table below to control the electric gripper using DIO pin; If the customer do not have the adaptor plate, please refer to the following table using D-SUB for wiring. After completing the wiring, control according to the DIO pin.

(N represent NPN，P represent PNP)

XEG-C1			Gripper Adaptor Plate-GB		RCA605-GB		Remark
			DIO		D-SUB		
No.	Colour	Function	XEG1	XEG2	XEG1	XEG2	
A1	Black	IN0	DO9	DO15	21	27	－
A2	Red	IN1	DO10	DO16	22	28	－
A3	Yellow	IN2	DO11	DO17	23	29	－
A4	Blue	IN3	DO12	DO18	24	30	－
A5	Gray	IN4	DO13	DO19	25	31	－
A6	Light Blue	START	DO14	DO20	26	32	－
A7	Brown/Black	COM+	－	－	－	－	XEG-C2: 24V(Limited N)
B1	Brown	BUSY	DI9	DI15	2	8	－
B2	Orange	HOLD	DI10	DI16	3	9	－
B3	Green	ALM1	DI11	DI17	4	10	－
B4	Purple	ALM2	DI12	DI18	5	11	－
B5	White	CHK1	DI13	DI19	6	12	－
B6	Light Green	CHK2	DI14	DI20	7	13	－
B7	Black/White	COM-	－	－	18	18	XEG-C2 DO COM: 0V(N), 24V(P) IPC DI COM: 24V(N),0V(P)
－	－	－	－	－	37	37	D-SUB Power: 24V
－	－	－	－	－	19	19	D-SUB Power: 0V

Appendix.3: Robot arm language example (For XEG-C1 only)

Since end effector are widely used in articulated robot, this section provides examples of robot arm language for basic functions reference.

Articulated robot model: HIWIN RA605-GB
Robot control program: HRSS 3.2.7

Assume that the action has been written into XEG-C2, and corresponding I/O is represented as follows
➢ Data1: Gripper reset (must be reset at least once when power is on)
➢ Data2: Open gripper
➢ Data3: Grip inward

● Digital Output (DO):
   ■ DO[9]: IN1 control output 1；
   ■ DO[10]: IN2 control output 2；
   ■ DO[14]: START trigger the action；
● Digital Input (DI):
   ■ DI[9]: BUSY；
   ■ DI[10]: HOLD；

If required gripper to follow the action below
➢ Gripper reset (reset at least once when power is on)
➢ Open gripper
➢ Robot arm moves to P1
➢ Gripper grip
➢ Robot arm moves to P2 or P3 according to the gripping condition

Refer to the robotic language below

1.   ;Reset XEG
2. $DO[9] = TRUE   ; Select the reset action

```
3.      WAIT SEC 0.03
4.      $DO[14] = TRUE              ; Send start signal
5.      WAIT FOR $DI[9] == TRUE        ; Wait for action starting
6.      $DO[9] = FALSE            ; Clear I/O
7.      $DO[14] = FALSE            ;
8.      WAIT FOR $DI[9] == FALSE      ; Wait for action completion
9.

10.     ;Open
11.     $DO[10] = TRUE             ; Select the open action
12.     WAIT SEC 0.03
13.     $DO[14] = TRUE             ; Send start signal
14.     WAIT FOR $DI[9] == TRUE        ; Wait for action starting
15.     $DO[10] = FALSE            ; Clear I/O
16.     $DO[14] = FALSE
17.     WAIT FOR $DI[9] == FALSE      ; Wait for action completion
18.

19.     ;Move to P1
20.     PTP P1 CONT Vel=100% Acc=50% TOOL[0] BASE[0] \\ Move robot
21.

22.     ;Grip
23.     $DO[9] = TRUE                ; Select the close action
24.     $DO[10] = TRUE                ; Select the close action
25.     WAIT SEC 0.03
26.     $DO[14] = TRUE                ; Send start signal
27.     WAIT FOR $DI[9] == TRUE           ; Wait for action starting
28.     $DO[9] = FALSE               ; Clear I/O
29.     $DO[10] = FALSE              ; Clear I/O
30.     $DO[14] = FALSE
31.     WAIT FOR $DI[9] == FALSE          ; Wait for action completion
32.     IF ($DI[10] == TRUE) THEN          ; Check gripping is success or not
33.          PTP P2 CONT Vel=100% Acc=50% TOOL[0] BASE[0]
34.     ENDIF
33.     IF ($DI[10] == FALSE) THEN          ; Same with Line 21
34.          PTP P3 CONT Vel=100% Acc=50% TOOL[0] BASE[0]
35.     ENDIF
```

Appendix.4: Troubleshooting Manual

Code	Problem Description/Message	Reason	Solution
001-1	Unable to connect	Connection error	Use the device administrator to query the connection
001-2		Installing driver	Wait for installation to complete , or change to manual installation
001-3		When the power supply is 24V or USB is powered on, input terminal START is ON and enters update mode by mistake	Please confirm that the input Start is OFF, and the 24V and USB power supplies are all powered back on, you can enter general action mode.
002-1	Unable to reset (No movement)	No power	Confirm the 24V power supply of XEG-C2
002-2		Gripper not connected	Confirm the connection of gripper and controller
002-3		Controller import error data	Check the correctness of the data of human machine interface Data table
002-4		Low supply current	Confirm the power input specification
002-5		Encoder abnormal	Contact and return to original factory
002-6		Motor drive wire wear	Replace the wire and retest
003-1	Abnormal after reset (With movement)	Selected model and actual model does not match	Select the correct gripper model
003-2		The workpiece in the route is not removed	Check that there are no foreign object in the route
003-3		Finger design interfere route	Modify finger design
004-1	After reset other orders did not respond (No movement)	Exceed electric gripper stroke	Confirm electric gripper stroke command
004-2		Low supply current	Confirm the power input specification
004-3		Encoder abnormal	Contact and return to original factory
004-4		Motor drive wire wear	Replace the wire and retest
005-1	Abnormal movement (With movement)	Low supply current	Confirm the power input specification
005-2		Insufficient lubrication	Lubricate with oil to maintain
005-3		Foreign object interfere in moving mode	Exclude foreign object
006-1	Hold signal not triggered after the Grip action	Target not within gripping range	Confirm target within gripping range

Electric Gripper Software Operation Manual (Original Instruction)

Publication Date：April 2020

HIWIN®

Subsidiaries / Research Center

HIWIN GmbH
OFFENBURG, GERMANY
www.hiwin.de
www.hiwin.eu
info@hiwin.de

HIWIN Schweiz GmbH
JONA, SWITZERLAND
www.hiwin.ch
info@hiwin.ch

HIWIN KOREA
SUWON · CHANGWON, KOREA
www.hiwin.kr
info@hiwin.kr

HIWIN JAPAN
KOBE · TOKYO · NAGOYA · NAGANO ·
TOHOKU · SHIZUOKA · HOKURIKU ·
HIROSHIMA · FUKUOKA · KUMAMOTO,
JAPAN
www.hiwin.co.jp
info@hiwin.co.jp

HIWIN s.r.o.
BRNO, CZECH REPUBLIC
www.hiwin.cz
info@hiwin.cz

HIWIN CHINA
SUZHOU, CHINA
www.hiwin.cn
info@hiwin.cn

HIWIN USA
CHICAGO, U.S.A.
www.hiwin.com
info@hiwin.com

HIWIN SINGAPORE
SINGAPORE
www.hiwin.sg
info@hiwin.sg

Mega-Fabs Motion Systems, Ltd.
HAIFA, ISRAEL
www.mega-fabs.com
info@mega-fabs.com

HIWIN Srl
BRUGHERIO, ITALY
www.hiwin.it
info@hiwin.it

HIWIN TECHNOLOGIES CORP.

No. 7, Jingke Road,
Taichung Precision Machinery Park,
Taichung 40852, Taiwan
Tel: +886-4-23594510
Fax: +886-4-23594420
www.hiwin.tw
business@hiwin.tw

The specifications in this catalog are subject to change without notification.