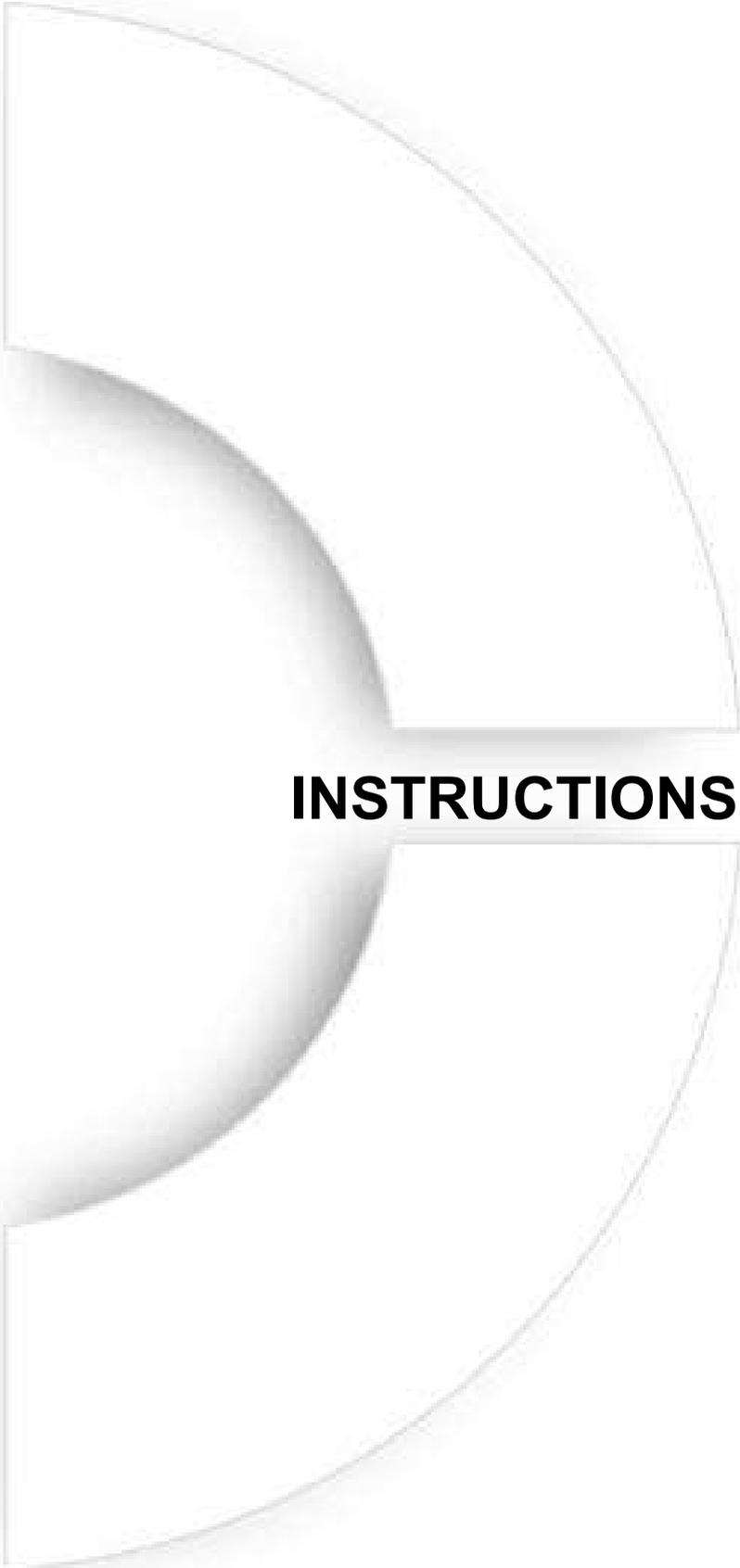




GY-G Series

A large, stylized, light gray 'S' shape is positioned on the left side of the page. It has a 3D effect with a shadow and a gradient, giving it a metallic or plastic appearance. The 'S' is centered vertically and partially overlaps the 'INSTRUCTIONS MANUAL' text.

INSTRUCTIONS MANUAL

IMPORTANT



The tool delivered with this manual may have been modified for specific needs.

In that case, please give us the tool code number written on our shipping note or the approximate tool delivery date when you place an order for a new similar tool or for spare parts.

In that way, you will be sure to get the required tool and/or spare part.

WARNING



This information has to be kept in a location known by all users.



Each operator has to read carefully this manual before installing, using, and mending the product.

Be sure that the operator has understood using recommendations and the meaning of signs put on the product.

Most accidents could be avoided respecting this Manual Instructions. As a matter of fact, they were created according to European laws and norms regarding products.

In each case, please respect and follow safety national norms. Do not take off nor damage the stickers or advise put on the product and above all the details imposed by the law.

INDEX

1. General safety rules.....	p.4
2. Specific safety rules.....	p.5
3. Screwdriver set composition and features.....	p.6
4. Screwdriver.....	p.7
4.1 Specification.....	p.7
4.2 Available bit size.....	p.7
4.3 Torque curve at Max. Speed.....	p.7
4.4 Information by LED display.....	p.8
4.5 Dimensions.....	p.9
5. Controller.....	p.11
5.1 Specification.....	p.11
5.2 Over current protection/overload over heat protection details.....	p.11
5.3 Dimensions.....	p.12
6. Operations.....	p.12
6.1 Key buttons.....	p.12-14
6.2 Driver model selecting (Model) P1.....	p.14
6.2.2 Fastening speed (F_SPD) P2.....	p.14
6.2.3 Loosing speed (L_SPD) P3.....	p.14
6.2.4 Soft start (F_Acc) P4.....	p.14
6.2.5 Soft start for reverse.....	p.14
6.2.6 Multi-hit setting (M_hit) P6.....	p.15
6.2.7 Multi-sequence (P7).....	p.15
6.2.8 Multi_1 : first angle in turn (P8).....	p.15
6.2.9 Multi_2 : second reverse angle for next step of operation (P2).....	p.15
6.2.10 Multi_3 : holding time for next step of operation (P10).....	p.15
6.2.11 Display setting (P11).....	p.15
6.2.12 External I/O for remote control (P12).....	p.15
6.2.13 Reverse torque control setting (P13).....	p.15
6.2.14 Password setting (P14).....	p.15
6.2.15 Parameter initialization to factory setting (P14).....	p.16
6.2.16 Firmware version display (P15).....	p.16
7. I/O details.....	p.16
7.1 Port on back panel.....	p.16
7.2 I/O interface port details on back panel.....	p.17
7.3 I/O interface diagram.....	p.17

1. General safety rules

WARNING ! Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

SAVE THIS INSTRUCTIONS

1.1 Work Area

- **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

1.2 Electrical Safety

- **Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
- **Avoid body contact with grounded surface ad pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
- **Don't expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.
- **When operating a power tool outside, use an outdoor extension cord marked W-A or W.** These cords are rated for outdoor use and reduce the risk of electric shock.

1.3 Personal Safety

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
- **Avoid accidental starting. Be sure switch is off before plugging in.** Carrying tools with your finger on the switch or plugging in tools may result in personal injury.
- **Remove adjusting keys or switches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

- **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.

- **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

1.4 Tool use and Care

- **Use clamps or other practical way to secure and support the workplace to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.

- **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.

- **Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.

- **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety.

- **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.

- **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.

- **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.

- **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool, may become hazardous when used on another tool.

1.5 Service

- **Tool service must be performed only by qualified personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.

- **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow. Maintenance instructions may create a risk of electric shock or injury.

2. SPECIFIC SAFETY RULES

2.1 Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.

2.2 Never lubricate aerosol oil on to the electrical part.

3. Screwdriver set composition and features

Screwdriver set contains screwdriver, controller and cable.



GY-14P Cable



Standard controller XT-35D

Electric specification

- Input : 35VDC, 3A max

Main Feature

- Long life time of BLDC motor (No Carbon brush)
- Programmable speed, angle, auto-reverse feature
- Torque repeatability $\pm 3\%$
- 250-1500 rpm (3 models)
- Motor efficiency 85%
- Low noise, heat
- Over heat, Overload, Over voltage protection circuit & LED display
- ESD free with conductive plastic body (less than 10,000 ohm)

Standard Bit type



A



B

4. Screwdriver

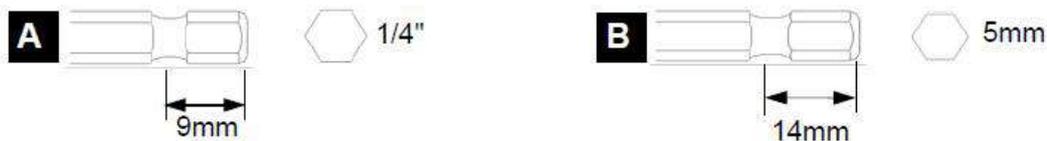
4.1 Specification

Model	Screw	Start	Torque Kgf.m	Speed (rpm)	Weight (Kg)	Controller	Bit
GY35-G	M2.6~M5	Lever	1 - 3,4	500 - 1500	0,8	XT-35D	Hex 1/4" Hex 5mm A B
GY50-G	M3~M6		2 - 4,9	400 - 1100	0,8		
GY100-G	M4~M8		4 - 9,8	250 - 500	0,85		
GY35P-G	M3~M6	PUSH	1 - 3,4	500 - 1500	0,8		
GY50P-G	M4~M8		2 - 4,9	400 - 1100	0,8		
PGY35-G	M2.6~M5		Pistol grip	1 - 3,4	500 - 1500		
PGY50-G	M3~M6	2 - 4,9		400 - 1100	0,9		
PGY100-G	M4~M8	4 - 9,8		250 - 500	0,95		
GYA35	M2.6~M5	Flange / Auto	1 - 3,4	500 - 1500	0,95		Hex 1/4" A
GYA50	M3~M6		2 - 4,9	400 - 1100			
GYA100	M4~M8		4 - 9,8	250 - 500			

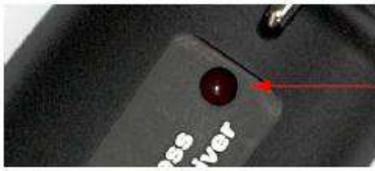
- Torque data are obtained at hard joint condition
- Standard packing – Screwdrivers, Cable, Two demo bits, Manual
- The different speed can make different torque reading
- * Standard GY-14P driver cable length = 3 m

4.2 Available bit size

The hexagonal bit size should be selected between A and B as below.



4.3 Information by LED display

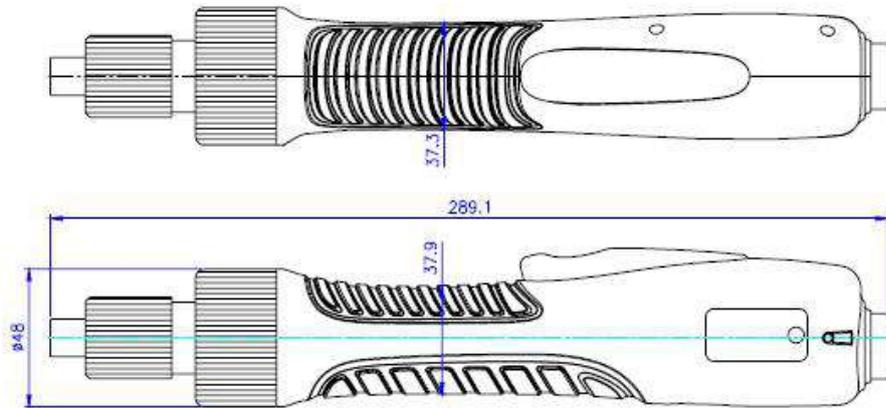


LED display

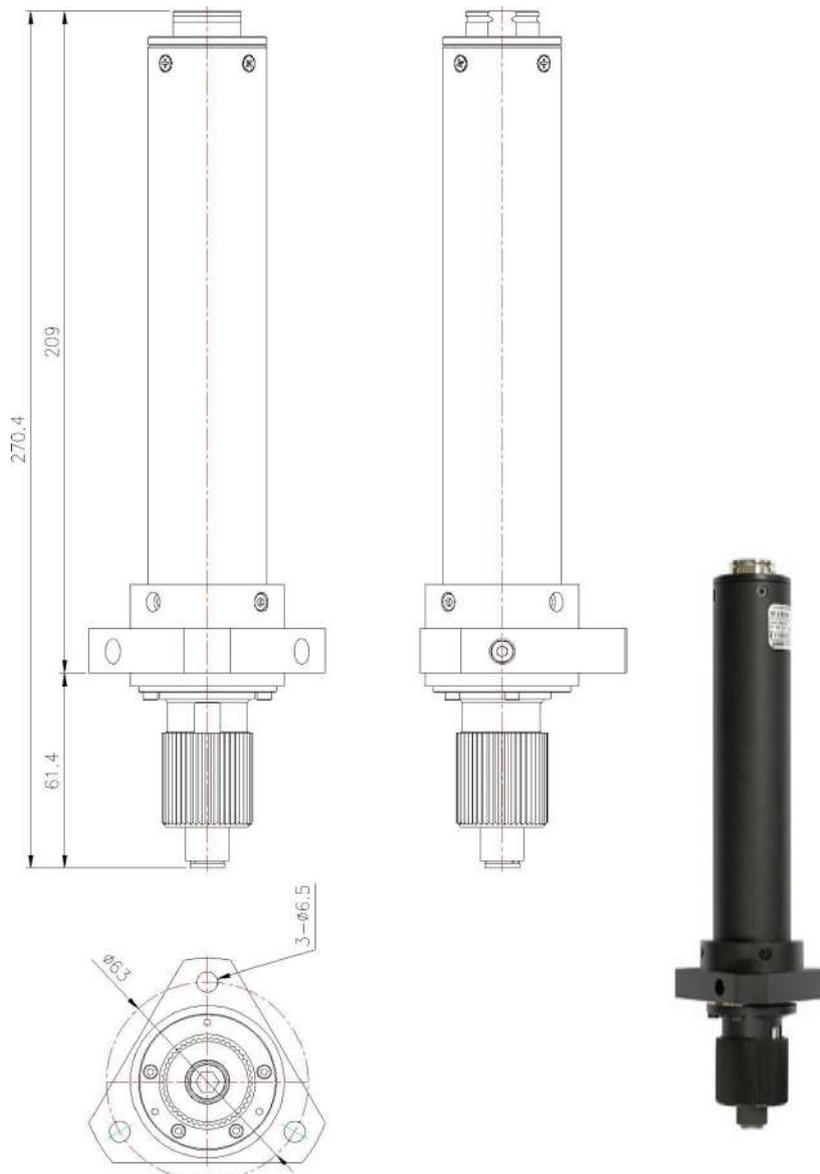
no	Alarm	Description	Reset
1	Over Voltage (over 37V)	● RED Light On-Off blink (0.5s)	Auto reset under 37V
2	Overload (8A / 0.5s)	● RED Light On-Off blink (0.5s)	Auto reset after 5s
3	Overheat (over 80°C of motor)	● RED Light On-Off blink (0.5s)	Auto reset lower than 80°C
4	Driver Lock by external signal	● RED Light On continuously	Reset by signal off
※	Torque Up	● RED Pulse light 	

4.4 Dimensions

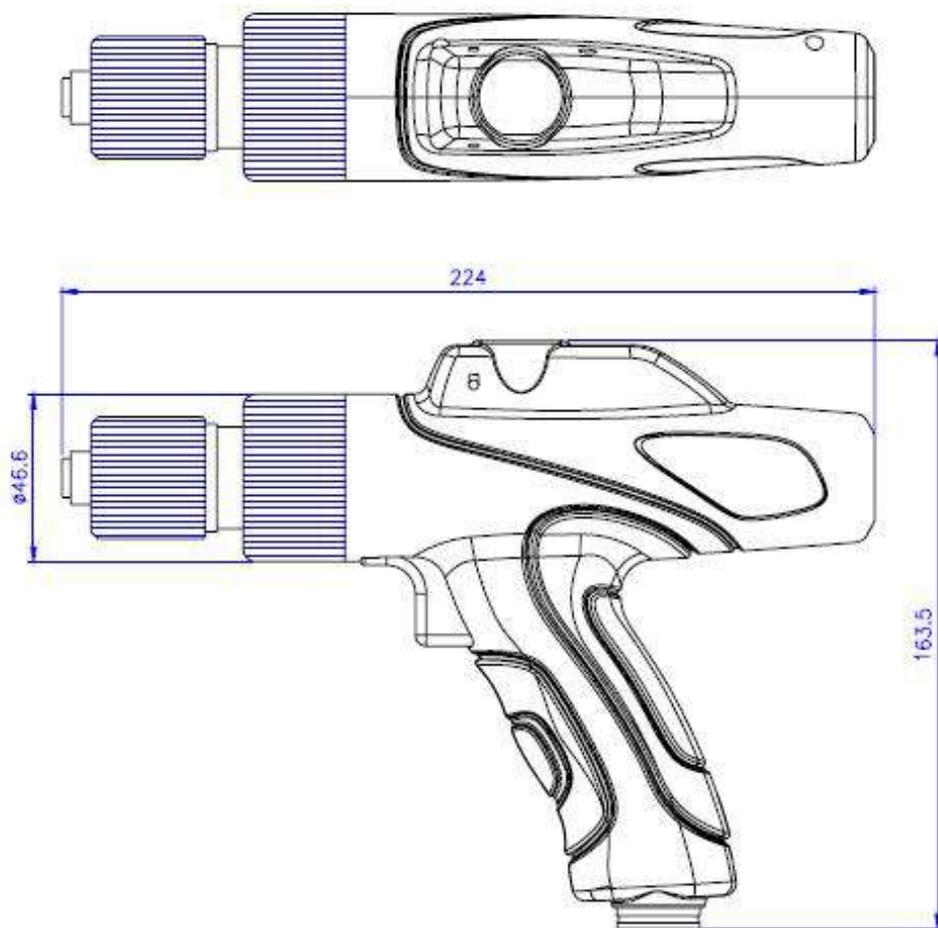
GY35-G, GY50-G, GY100-G, GY35P-G, GY50P-G



GYA35, GYA50, GYA100



PGY35-G, PGY50-G, PGY100-G



5. Controller

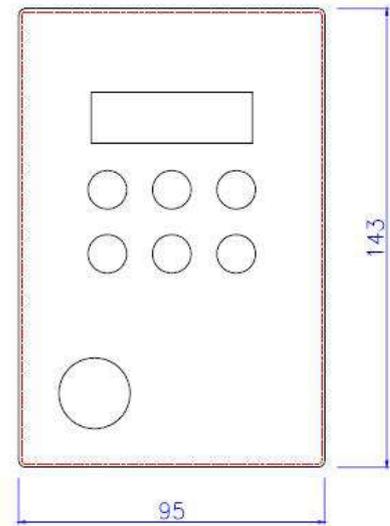
5.1 Specification

Model	XT-35D
Safety certificate	CE by MET (EC countries)
Rated Input	230 VAC 50~60Hz, 2.5A
Rated Output	35 VDC \pm 5%, 140W
Maximum output current	10 A
Intermittent operation	10s On / 30s Off
Dimensions	95(W) x 221(D) x 143(H) mm
Weight	2.4 Kg
Connectable screwdrivers	GY/PGY Series

5.2 Over Current Protection (Overload), Over Heat Protection Details

Description		Over Current Protection	Over Heat Protection
Detection	Limit	8 A current	90°C
	Time duration	immediately	
Protection		Whole power shut down permanently	
Protection signal	LED	No power	
	Buzzer	No power	
Recovery		Turn off the power switch and on after 1 min.	Turn the power switch off and on at lower than 90°C temperature.

5.3 Dimensions

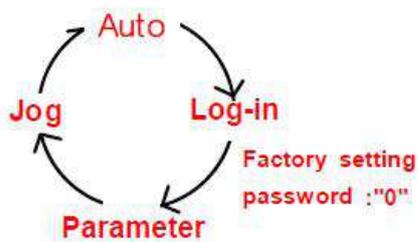


6. Operation

6.1 Key buttons



There are 3 modes circulation by pressing MODE button. Once it is logged in, it is effective until the power OFF.



MODE button :

By pressing the MODE button, it circulates auto. Log-in and Parameter mode. Auto means operating. Before parameter mode, password required. Every settings are possible in Parameter mode.



button

Log-in Mode	Log-in is required for parameter setting with password Initial password "0" can be changed on P89
Parameter Mode	Cursor shift up to left at the Parameter mode



button

Auto(Work) Mode	Select the next preset number
Log-in & Password	It increases the number up



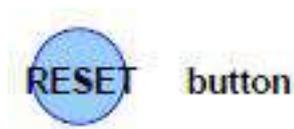
button

	time	FND Display	Description
Auto (Operation) Mode	Initial	0A000	Initial display at the Auto(Work) mode
	1st	t	Display the temperature of driver inside (unit : 0.1℃)
	2nd	F	The latest Fastening time (unit: mS)
	3rd	L	The latest Loosening time (unit: mS)
	4th	Pc	The latest current value (unit : 0.1A)
	5th	tu	The latest Fastening turns (unit: 0.1 turn)
	6th	SF Lo	Status of Start & Torque up sensor (F:off, o:on) Initial status : SF LF
	7th	r 0	Real-time rotation speed
Parameter Mode	It decreases the number down		
Jog Mode	Manual stop by button		



Enter button

Parameter Mode	It selects or saves the chosen display
Jog Mode	Manual start by button



It returns to the previous mode. Also it resets the error.

6.2 Parameter setting

6.2.1 Driver model selecting (Model) P1

Choose one of the right model number between the connected screwdriver as below :

Model	GY35-G, GY35P-G	GY50-G, GY50P-G	GY100-G	PGY35-G, GYA35	PGY50-G, GYA50	PGY100-G, GYA100
Number	35n	50n	100n	35n	50n	100n

[Caution] If wrong model selected, speed and torque can be different with its spec.

6.2.2 Fastening speed (F_SPD) P2

Change rotation speed for forward fastening.

Depending on the selected model, the min. and max. speed is automatically limited according to the specification.

6.2.3 Loosing speed (L_SPD) P3

Change rotation speed for reverse loosening.

Depending the selected model, the min. and max. speed is automatically limited according to the specification.

6.2.4 Soft start (F_Acc) P4

The motor acceleration time to the target speed can be adjusted from 30 to 2000 seconds. It works as like soft start. The factory setting is 50 mS.

[Caution] soft start feature can make different tightening torque for short screw or re-tightening if already tightened screw.

6.2.5 Soft start for Reverse (L_Acc) P5

The motor acceleration time to the target speed in Reverse rotation can be adjusted from 30 to 2000 seconds. The factory setting is 50 mS.

6.2.6 Multi-hit setting (M_hit) P6

Number of torque up by clutch can be selected from 1 to 10 times.
Factory setting is 1 time.

6.2.7 Mult-sequence (m_FSt) P7

Available to program multi step operation in sequence.
0 : Disable 1 : Enable

6.2.8 Multi_1 : First angle in turn (Frt.ag) P8

Angle setting for angle stop in turn from 0 to 9999 (unit = 0,1 turn)

6.2.9 Multi_2 : Second reverse angle for next step of operation (rEV.Ag) P9

Angle setting for angle stop in turn from 0 to 9999 (unit = 0,1 turn)

6.2.10 Multi_3 : Holding time for next step of operation (hLd.ti) P10

Time setting of holding to next step from 0 to 99 (unit = 0,1 sec)

6.2.11 Display setting (dSP.Md) P11

Display setting between two ;
0 : number of speed setting 1 : real time speed

6.2.12 External I/O for remote control (Plc.Md) P12

Available to use I/O for remote control.
0 : Disable 1 : Enable

6.2.13 Reverse torque control setting (RevMd) P13

Reverse torque control can be selected between ON/OFF. Factory setting password is "on".
On : Stop by torque up Off : Slip

6.2.14 Screw type (Scr.tP) P14

Screw type between two
0 : CW 1 : CCW

6.2.15 Password setting (Pyord) P15

Setting new password. Factory setting password is "0".

6.2.16 Parameter initialization to factory setting (Pinit) P16

All parameter will be changed to its original torque setting.
Password is "77",

6.2.17 Display type (dSP.ty) P17

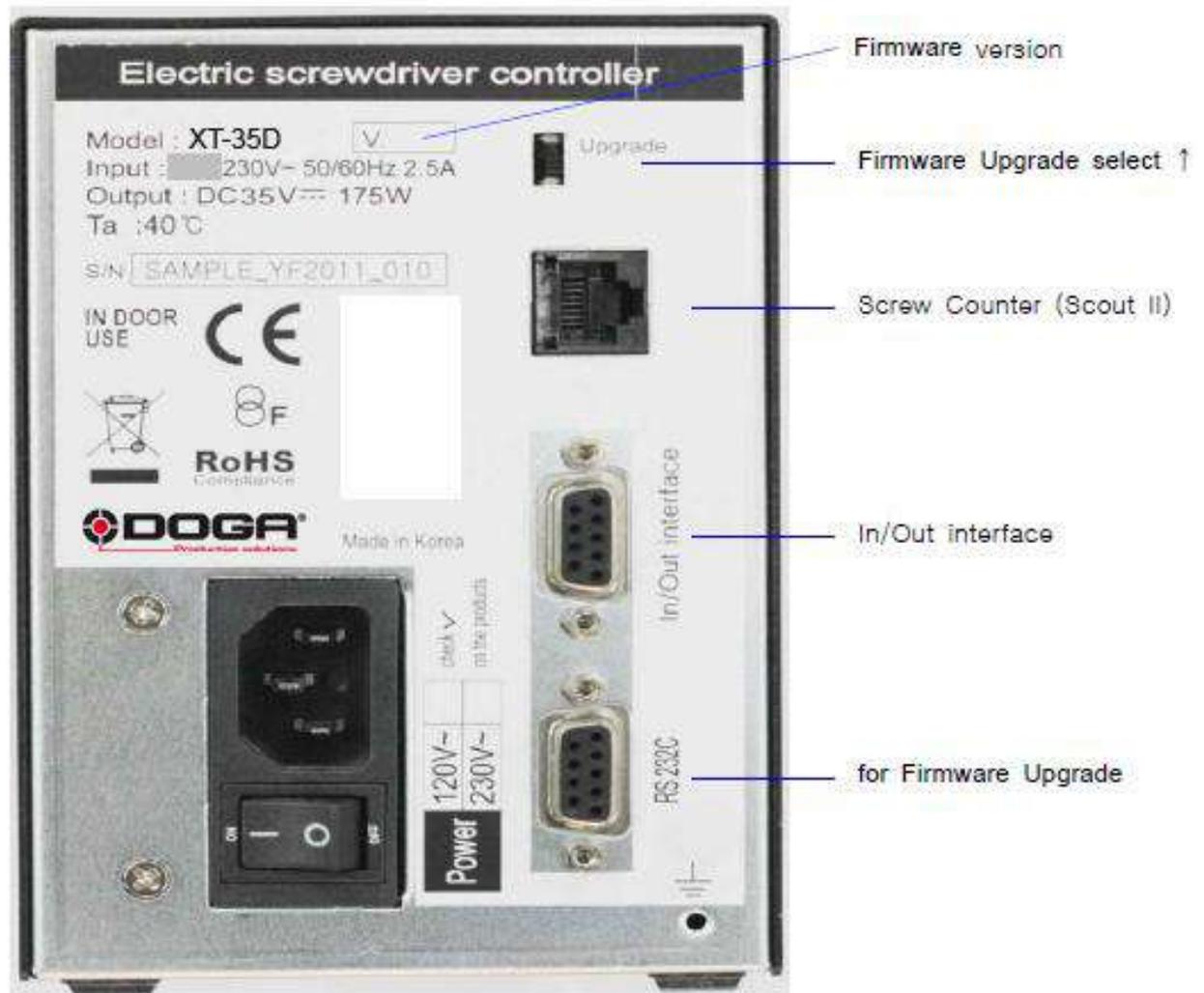
Display type in parameter mode

0 : by character display 1 : Parameter no. (P1 - P18)

6.2.18 Firmware version display (VEr) P18

7. I/O details

7.1 Port on back panel

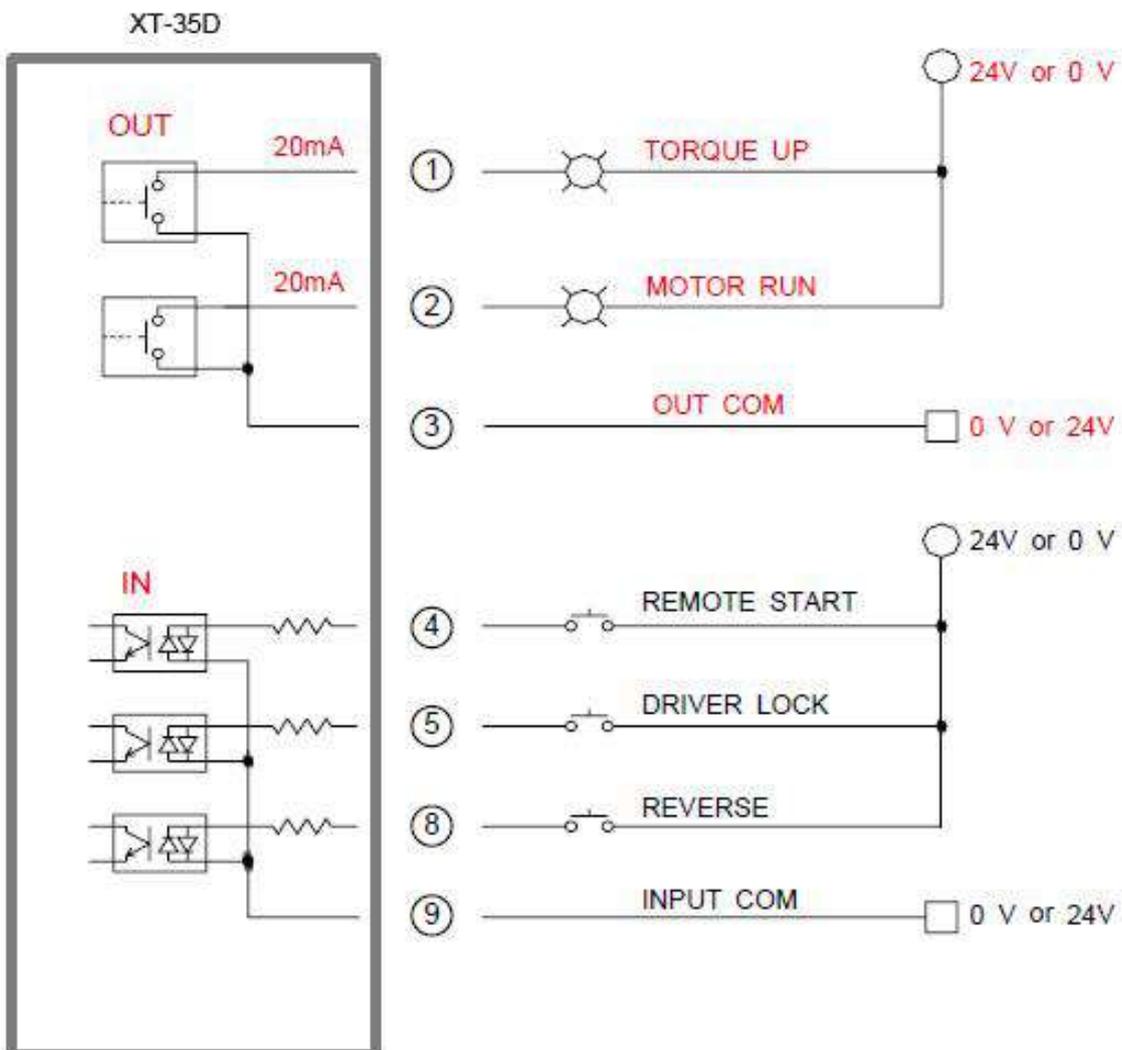


7.2 I/O interface port details on back panel



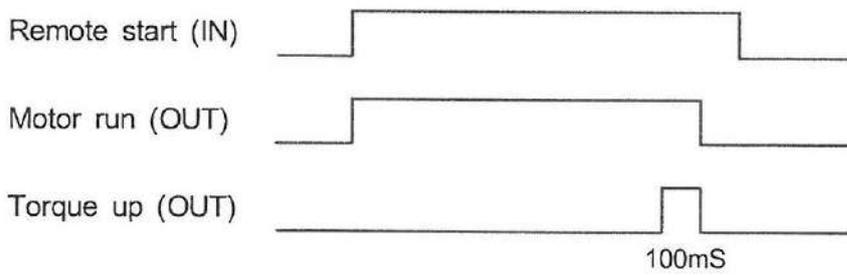
Pin no.	In / Out	Interface
1	OUT	Torque Up
2		Motor Run
3		Out COM
4	IN	Remote Start
5		Driver Lock
6	X	
7		
8	IN	Reverse rotation
9		In COM

7.3 I/O interface diagram

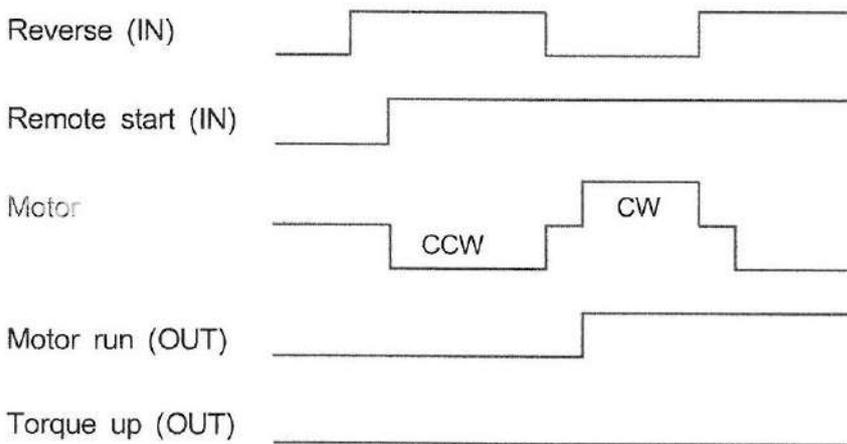


8. I/O timing chart

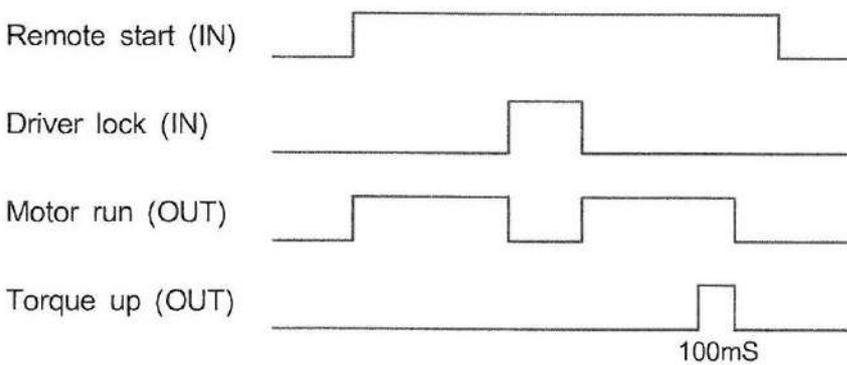
8-1 Fastening OK



8-2 Loosening



8-3 Driver lock



8. Error display

The XT-35D controller shows error code number when it detects any failure during operation.

The error codes are as below

No	Code	Description	Trouble shooting
1	101	Screwdriver not connected	Check the cable connection
2	111	SMPS fault. The power supply system will be shut down by overload	Turn off the power and On again after 1 min.
3	112	Overload protection	Automatic reset. Refer to 5.2 protection
4	113	Over Temperature protection	Automatic reset. Refer to 5.2 protection
5	114	Over Speed error	When the speed monitored over the target, it shows E114. Check motor condition.



8, avenue Gutenberg - CS 50510
78317 Maurepas Cedex - France
Tél. : +33 (0)1 30 66 41 20 • Fax : +33 (0)1 30 66 41 79

export@dogaf.fr



Nous travaillons constamment à l'amélioration de nos produits. De ce fait, les dimensions et indications portées dans cette brochure peuvent parfois ne pas correspondre aux dernières exécutions. De convention expresse, nos ventes sont faites sous bénéfice de réserve de propriété (les dispositions de la loi du 12/5/80 trouvent donc toute leur application).