

MY-SAVER User Manual



Model : MY-SAVER



Model : MY-SAVER MEGA

SAING EI CORP.

<https://www.mylorqtools.com>

Table of Contents

<u>1.</u> Product specification introduction.....	2
<u>2.</u> Appearance introduction.....	3
<u>2.1</u> Panel.....	3
<u>2.2</u> Bottom.....	4
<u>2.3</u> Upper case.....	4
<u>2.4</u> LCM display function introduction.....	5
<u>3.</u> System setting method introduction	5
<u>3.1</u> Hot key function introduction	5
<u>3.2</u> Enter setting function page	5
<u>4.</u> Control setting	6
<u>5.</u> Program setting.....	7
<u>6.</u> Screw setting	8
<u>7.</u> Extra function	8
<u>8.</u> CONFIRM mode.....	9
<u>9.</u> External output control function description.....	10
<u>10.</u> External input control function description	11
<u>11.</u> Data transmission description and flow control suggestion.....	12
<u>12.</u> EXPLODED VIEW DRAWING & PARTS LIST.....	16

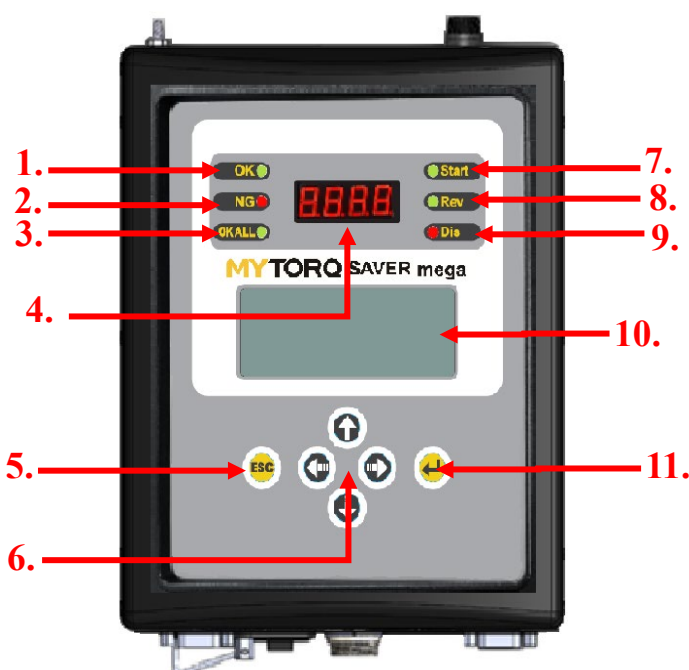
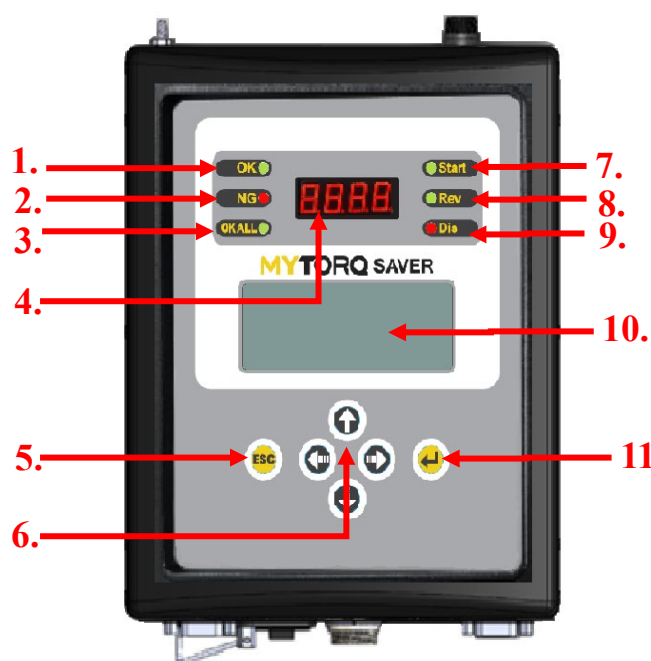
1. Product specification introduction

Model	MY-SAVER	MY-SAVER MEGA
Input Voltage	AC 115V / 230V	
Input Frequency	50 - 60Hz	
Input Current	6.3A	
Output Voltage	DC 40V	
Output Current	Max 9A	
Output Power	360W	
Function Period	1s ON / 3s OFF	
Size	241 x 185 x 127(mm)	
Weight	3.4Kg	
DC screwdriver model:	MY-SAVER3/5/7series MY-SAVER3 MINI series MY-SAVER3/5/7RA series	MY-SAVER12 series

2. Appearance introduction

2.1 Panel

- | | |
|--|---------------------------------------|
| 1. OK signal LED | 7. Start signal LED |
| 2. NG signal LED | 8. Reverse signal LED |
| 3. OKALL signal LED | 9. Disable signal LED |
| 4. Four-digit-seven-segment display for torque value | 10. 16X4 LCM display setting function |
| 5. ESC button (Return/Leave/Enter setting mode) | 11. Enter button (Select/Confirm) |
| 6. Up、Down、Left、Right buttons | |



Job: Job project

JS: Job sequence

TP: Tightening program

TR: Tightening repeat

Time: Display screws

Torque: Display torque value

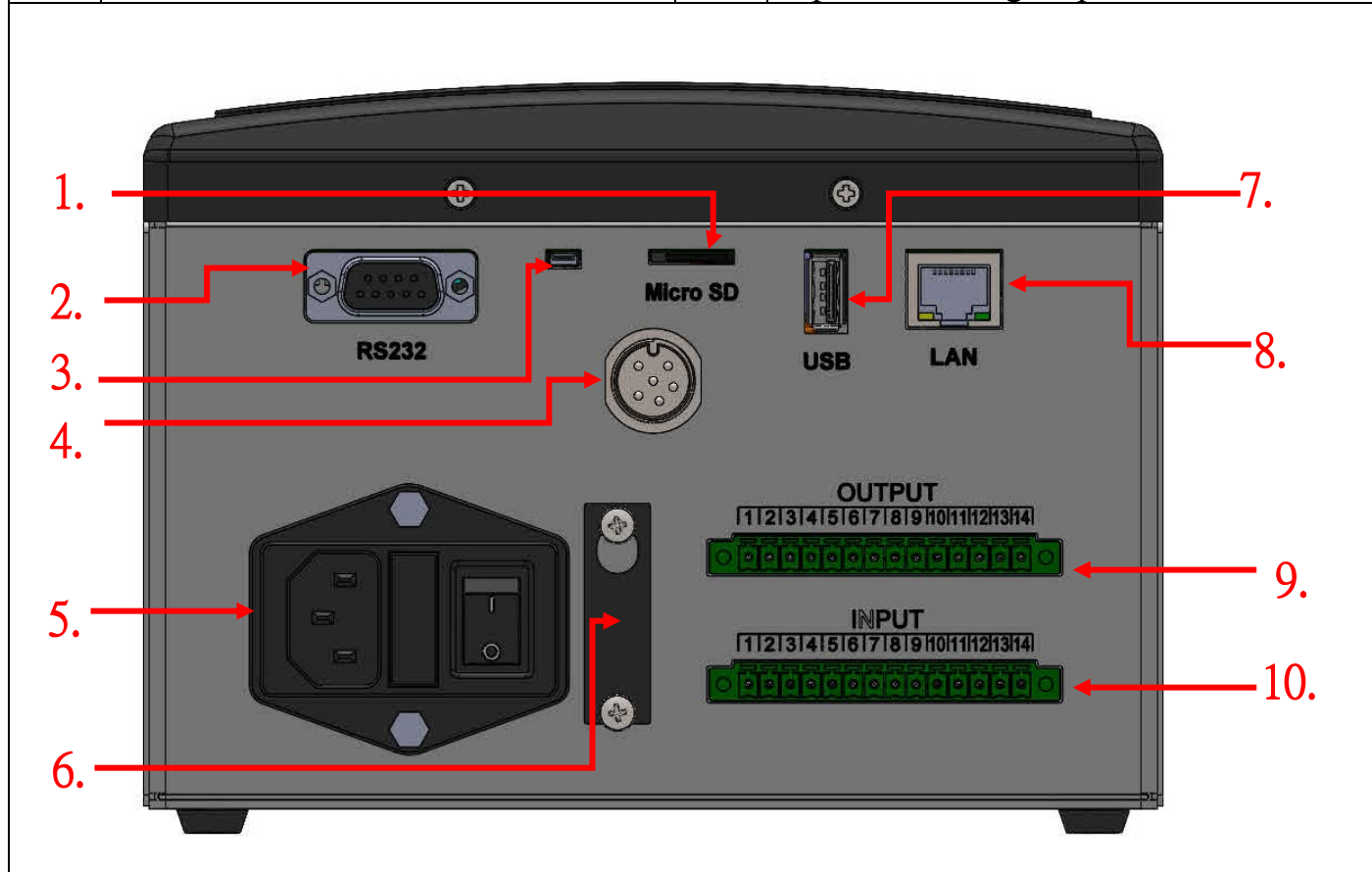
Status: Display status (OK,NGQ,NGC,OKALL....)

Notice:

Bar code scanner: There will be a waiting time of 20 seconds when the controller is turned on, the controller has no scanner function during this time

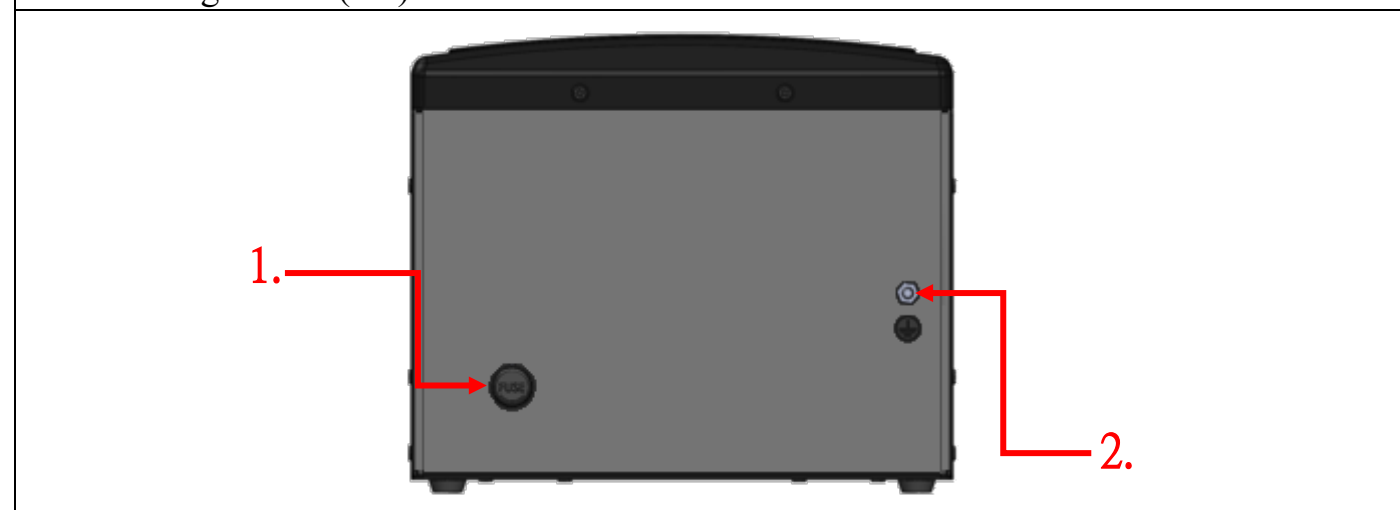
2.2 Bottom

1.	Micro SD card slot (Data Storage)	6.	Voltage Choice Switch
2.	External wireless module port	7.	Barcode scanner USB type-A port
3.	Software update port	8.	Wired communication port
4.	Tool connector	9.	Output signal port
5.	Socket and switch	10.	Input control signal port



2.3 Upper case

- 1.DC fuse station (Content 10A/250V)
- 2.Grounding station (FG)



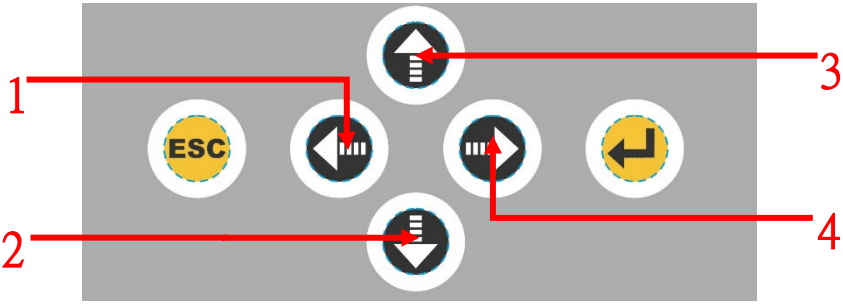
2.4 LCM display function introduction

1. Display job	1. → Job : 1	JS : 1	Time : 0.267	← 6.
2. Display sequence	2. → TP : 1	TR : 5	Thread : 1.5	← 7
3. Display system status	3. → Status: OK			
4. Display job sequence				
5. Display repeat times				
6. Display action time				
7. Display number of turns				
8. Display the target torque/ display the tightening torque			Torque:11.27kgc	← 8

3 System setting method introduction

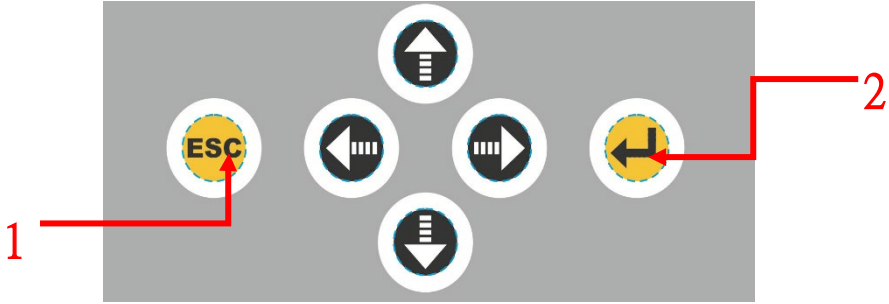
3.1 Hot key function introduction

1. Left button: Press 3 seconds to return to the first job sequence after beep sound.
2. Down button: Press 3 seconds to return to the last job sequence after beep sound.
3. Up button: Press up and down button and release to view tool setting.
4. Right button: Press for 3 seconds to go to the next job sequence.



3.2 Enter setting function page

1. Press “ESC” button for 3 seconds to enter settings after beep sound
2. Input password and press Enter to enter settings
3. Follow below image to enter Control setting 、 Program setting 、 Screw setting 、 File management ;
Press 『ESC』 and back to status display page. Choose one of program and press 『Enter』 to the next page.



4. Control setting

Name	Set Up Time and Value	Function Description	Default setting
Operation mode	STD/ADV	Connection mode. STD: Standalone mode. ADV: KL-AMS network system. (STD/ADV) connection mode.	STD
Device ID	001~250	Equipment No.	01
Tool Start Mode	Both/Push/Lever	Choose tool start mode.	Lever
Tool LED Mode	START/ON/OFF	Set tool LED on or off.	OFF
Edit Job's Seq	J : 01~50 JS : 01~50 TP : 00~99 TR : 00~99 Reverse button : CW/CCW Force level:0~9 RPM :	Setup screw sequence and repeat. time in job project, save up to 50 projects. JS: display job sequence. TP: display tightening program. TR: display repeat times. Remove the screw button settings: Forward (CW) and reverse (CCW) can be set Force Level : Number of force segments Force0(disable) 、 1~9(10%~100%) RPM : set to remove the screw speed	Job : 00 JS : 01 TP : 00 TR : 00 Reverse button setting : 1. Direction: CCW 2. Force Level:5 3. RPM : the lowest rpm (please refer to the specification of screwdriver)
Call Job	01~50	Select program	00
Factory Default	N/Y	Return to default status and remove all memory data.	N
Torque Unit	Kgf.cm/N.m /kgf.m /lbf.in	Set up torque display unit.	Kgf.cm
Gate Mode	None/Once/Twice	None: Function off. Once: Workpiece in position (Short signal.) Twice: Workpiece in/out position (Open signal).	None
OKALL Signal	ONCE/EACH	OKALL signal output method Once: Output OKALL signal after all sequences completed. OKALL signal output time depends on At setting. Each: Output OKALL signal after each sequence completed. OKALL signal output time depends on At setting.	ONCE
Save Job Barcode	1~50	“Scan job barcode “will show after pressing. After using scanner to scan barcode, it will save barcode into controller automatically. Setup sequence 1 to 50, it will switch to barcode sequence. Barcode length should not exceed 54 bits.	01
Barcode Setting	01~50 From : 01~54 Count : 01~54	Below steps will show you how to use certain section of a barcode to select/switch Job. Step 1. Determine the initial point of the section (01-20) Step 2. Determine section size (01-20) Step 3. Assign selected section to Job (01-50)	01 From : 01 Count : 01
Batch Mode	Decrease/Increase	Select count up or count down	Decrease

Controller Time	YYYY/MM/DD HH : MM : SS	Set up controller time Year/Month/Day/Hour/Minute /Second.	2018/01/01 01 : 01 : 01
Product Serial Number	S/N	Display device product serial number.	S/N
Change Password	0000~9999	Set up password lock	0000
Output Select	WIFI/LAN/RS-232	Select data output from offline to online	RS-232
Buzzer Mode	ON/OFF	Setup buzzer.	ON
Language Select	Chinese/ English	Select language	English
Barcode Enable	OFF/ON	Turn on the barcode enable function and scan the barcode before starting to work or turn off the function to start work without scan barcode.	OFF
IP Address	LAN (STATIC/DHCP) IP Mask Gateway	STATIC: User can set a static IP address manually. DHCP: An IP address assigned by network server via router automatically. Select manual setting and fill out an available IP address. IP : IP address Mask : Subnet mask Gateway : Default Gateway	LAN : STATIC IP : 192.168.0.7 Mask : 255.255.255.0 Gateway : 192.168.0.1
Start Signal Mode	Motor/Trigger	Duration of start signal when screwdriver is stopped. Motor : The start signal disappears when screwdriver is stopped. Start signal : When the driver is stopped, the start switch (press lever plate/ push down/ external signal) is released. The start signal disappears.	Motor

5. Program setting

Name	Set Up Value	Function Description	Default setting
Tightening Step	001~250	Step can set the speed, target value (torque / time / number of turns)...	01
Step Name	*****	Setup program name, it can choose number 、 capitals and lower case letters 、 number for program name.	*****
RPM		Setup rotation speed (According to screwdriver type	Please refer to the specification of screwdrivers
Option	Q/C	Setup tightening target	Force
Direction	CW/CCW	Setup rotation direction	CW
Delay Time	0.0~9.9	Setup interval time between screws	0.8
Target Thread	000.1~999.9	Setup target no. of thread	005.0
Target Torque		Setup target torque	Please refer to the specification of screwdrivers
Hi Torque	000.01~499.99	Setup max. torque value	Please refer to the specification of screwdrivers
Lo Torque	000.00~499.98	Setup min. torque value	000.00
Hi Thread	000.1~999.9	Setup max. thread value	999.9
Lo Thread	000.0~999.8	Setup min. thread value	000.0

6. Screw setting

Name	Set Up Value	Function Description	Default setting
Tightening Program	01~99	Setup screw parameter.	01
Screw Name	*****	Setup screw parameter name. It can choose number 、 capitals and lower case letters 、 number.	*****
Step 1	001~250	Setup 1 st sequence	01
Step 2	000~250	Setup 2 nd sequence	00
Step 3	000~250	Setup 3 rd sequence	00
Step 4	000~250	Setup 4 th sequence	00
Step 5	000~250	Setup 5 th sequence	00
OKALL Alarm Time	0.0~9.9	AT : OKALL signal holding time	1.0
OK Time	0.0~9.9	OT : OK signal holding time	9.9
NG Stop	OFF 1~9	Disable screwdriver when error occurred. 1~9 Setting value “1” means the screwdriver will be locked when an error occurs. Setting value “2” means when two consecutive errors occurs will lock the screwdriver. Setting value “3” means when three consecutive errors occurs will lock the screwdriver...and so on. If the tightening status is OK once, it will be recalculated ° ON: When malfunction signal 『NS』 happens, it will disable screwdriver immediately ; User need to press 『ENTER』 button to deactivate rotation(For I/O part. But screwdriver can reverse.) OFF: When malfunction 『NG』 happen, screwdriver will not stop ; it will not affect next activation. It will provide a warning	OFF
OKALL Stop	OFF/ON	Disable screwdriver when batch completed ON: Stop screwdriver after batch completed. Users need to press 『ENTER』 (For I/O part, it is confirm signal) OFF: Screwdriver is normal after batch completed.	OFF

7. Extra function

Name	Function Description
Export to SD Card	Export to controller internal setting value(Controller setting 、 Program setting 、 Screw setting)
Calibrate Tool	Calibration mode

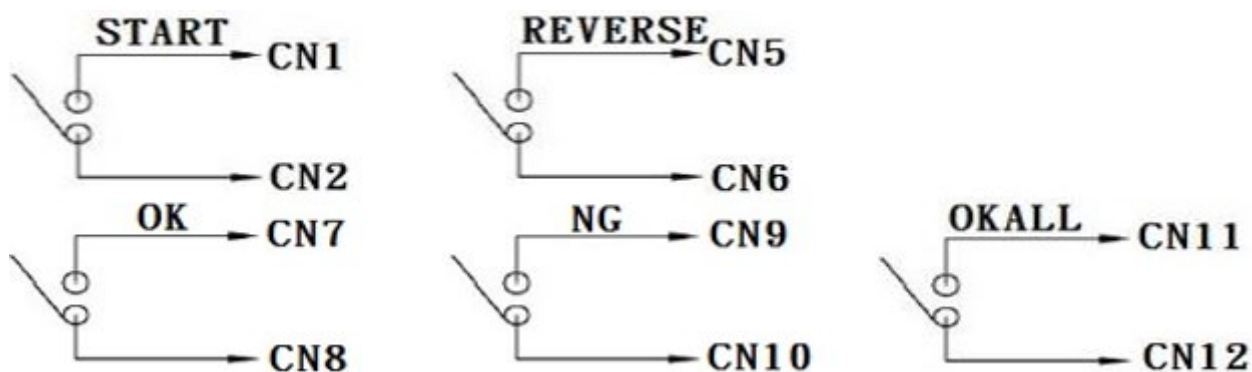
8. CONFIRM mode

Code	Description	Disable method
C1	Once external confirmation “GATE”	External GATE Signal Trigger once
C2	Twice external confirmation “GATE”	External GATE Signal Trigger twice
C3	When 『OKALL disable screwdriver』 function is on, LCM will display 『C3』 after a batch completed.	Panel Enter button/ External CONFIRM
C4	When 『OKALL disable screwdriver』 & 『Gate mode_ trigger once』 functions are on LCM will display 『C4』 after a batch completed.	External GATE Signal Trigger once +Panel Enter /External CONFIRM
C5	When 『OKALL disable screwdriver』 & 『Gate Mode_ trigger twice』 functions are on ; LCM will display 『C5』 after a batch completed.	External GATE Signal Trigger twice +Panel Enter/External CONFIRM
NS	When error occurs, LCM will display 『NS』	Panel Enter button/ External CONFIRM
BS	When turn on the Barcode Enable, "BS" will be displayed before the job is executed.	Barcode scan function
OK	When screwdriver shut off, LCM will display 『OK』	NA
OKALL	When a batch is completed , LCM will display 『OK ALL』	NA
NG	NG-F : Sequence incomplete NS-F : Press Confirm/Enter for next action. NGQ: When output torque isn't inside set torque range. Output torque could be lower than “LQ” or higher than ”HQ” NGC: When number of output shaft rotation isn't inside set range. No. of rotation could be lower than “LC” or higher than ”HC”. Sequence incomplete: 1NG-F means <u>sequence 1</u> is not completed properly, 2NG-F means <u>sequence 2</u> is not completed properly... and so on.	NA
E3	Voltage-drop protection : When the voltage of the electric screwdriver drops instantly, the electric screwdriver will be stopped, and the LCM displays this symbol, representing that the screwdriver is currently under low-voltage protection.	NA
E4	Over-temperature protection : When the internal temperature of the electric screwdriver is too high, the electric screwdriver will be stopped, and the LCM displays E4, representing that the screwdriver is currently under over-temperature protection.	NA
E5	Stall protection : When the startup of the electric screwdriver motor is abnormal, the electric screwdriver will be stopped, and the LCM displays E5, representing that the screwdriver is currently under motor stall protection.	NA
E7	Torque abnormal: When sensor received the abnormal parameters form screwdriver, it will stop the actions of the screwdriver and display E7 symbol on the LCM.	NA
E8	Temp cooling down state: When the screwdriver enters the temperature protection, it will stop the action of the screwdriver and display E8 symbol on the LCM.	NA
E9	Abnormal operation: When the screwdriver runs continuously for more than 20 seconds, it will stop the action of the screwdriver and display E9 symbol on the LCM.	NA
Er	GATE function abnormal : When the GATE function is on and function abnormal, the buzzer will alarm, and LCM displays this Er.	Please confirm GATE phase and setting mode
ES	Screwdriver end communication error : When the electric screwdriver communication error occurs, the electric screwdriver will be stopped, and the LCM displays this ES.	NA

EOC	Calibration is required when EOC is stated on LCM display. [Note]: When numbers of tightening are reached one million time, the EOC warning comes up on display panel each time as machine turning on.	NA
ELS	When LCM displays the word ELS, it indicates that the SD card capacity is less than 100MB, and it will stop the operation of the screwdriver. Which need to press the Enter key to release the screwdriver freeze state.	NA
EPC	ADV MODE communication abnormal °	NA

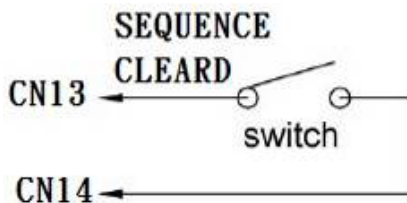
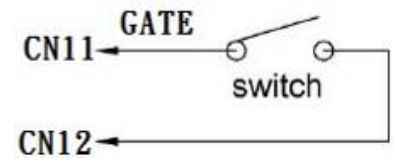
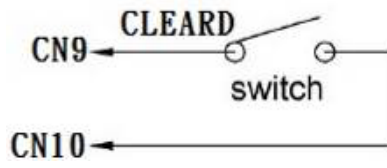
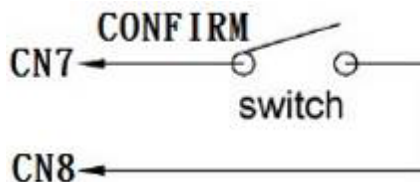
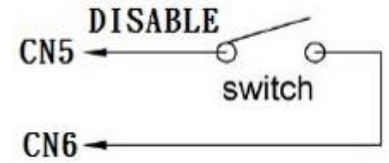
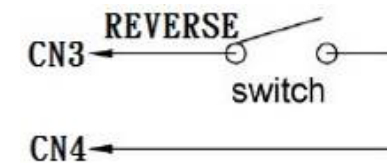
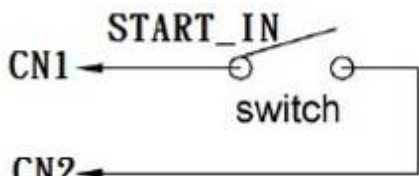
9. External output control function description

Connector No	Symbol Definition	Function Description
CN 1	START	RUN FWD: When the screwdriver is on,CN1 、 2 short. When it short, CN1+CN2 short. When it open, CN1+CN2 open.
CN 2	COM	
CN 3	-	-
CN 4	-	
CN 5	REVERSE	RUN BWD: When the screwdriver reverse,CN5 、 6 short. When it short, CN5+CN6 short. When it open, CN5+CN6 open.
CN 6	COM	
CN 7	OK	OK: When a screw is fastened,CN7 、 8 short. When it short, CN7+CN8 short. When it open, CN7+CN8 open.
CN 8	COM	
CN 9	NG	NOK: When there is malfunction,CN9 、 10 short When it short, CN9+CN10 short. When it open, CN9+CN10 open.
CN 10	COM	
CN 11	OKALL	OK SEQUENCE: When it completed sequence setting screw,CN11 、 12 short. When it short, CN11+CN12 short. When it open, CN11+CN12 open.
CN 12	COM	
CN 13	Vdc	Controller output voltage: DC+12V/100mA or +24V/50mA Default value: +24V/50mA (+12V/100mA can be customized).
CN 14	GND	Output voltage GND



10. External input control function description

Connector No	Symbol Definition	Function Description
CN 1	External start signal input START_IN	1. When CN1+CN2 short (CLOSE), screwdriver start functioning.
CN 2	GND	2. When CN1+CN2 open (OPEN) , screwdriver stop functioning.
CN 3	External reverses signal input REVERSE	1. When external reverse signal CN3+CN4 short (CLOSE) first and activate signal CN1+CN2 short (CLOSE), screwdriver start reversing.
CN 4	GND	2. When external reverse signal CN3+CN4 open (OPEN) first and activate signal CN1+CN2 short (CLOSE), screwdriver start forwarding.
CN 5	External disable signal input DISABLE	1. When CN5+CN6 short (CLOSE), screwdriver cannot be activated.
CN 6	GND	2. When CN5+CN6 open (OPEN), screwdriver can be activated.
CN 7	External confirm signal input CONFIRM	1. When system requests to press confirm button, we can short CN7+CN8 (CLOSE) instead.
CN 8	GND	2. After CONFIRM is executed, the NG signal is also cleared.
CN 9	External clear signal input CLEARED	1. To clear sequence/program, it can be activated by shorting CN9+CN10 (CLOSE)
CN 10	GND	
CN 11	External sensor switch GATE	1. By inputting a confirm signal, it makes machine to judge it effective value.
CN 12	GND	2. Sensor switch : Switch in process can be one or two.
CN 13	External confirm SEQUENCE CLEARED	When we need to clean sequence, it can be activated by shorting CN13+CN14 (CLOSE).
CN 14	GND	



11. MY-SAVER Data transmission description and flow control suggestion

VER:2020060201

1. Controller power on and time synchronization

After controller is power on, it will send data {REQ100...} each second to inform external device such as computer、PLC、AMS. The external device needs to reply {CMD100,} that to sync the external device time to the controller.

If the controller does not receive {CMD100,}, {REQ100, ...} will be sent again after 10 seconds.

2. When controller received barcode information, it will send scanned data and data format as {REQ101, ...} to external device for control judgement or record saving. External device needs to reply {CMD100,}.
3. After controller is power on and screwdriver shut off, brake signal format as {DATA100,} will be send. Every shut off will cause column 14 (no. of total tightening on controller) to increase by 1. External device needs to reply {CMD100,}, if not replying CMD100, the controller will keep on sending DATA100 (only update date time) and column 14 (no. of total tightening on controller) value will remain unchanged.
4. Shut off data will be sent after each shut off. Use the column 14 (no. of tightening on controller) to judge if there it is a new shut off data or not.
5. When controller receive feedback and format as {CMD100,} from external device, controller will resume to automatically send {REQ100, ...} and be able to configure controller time.
6. Recommended software control flow as below:
P.S: The content of [CMD100] in flow as the below:

{CMD100, YEAR, MONTH, DAY, HOUR, MINUTE, SECOND, 0000, 0000, 0, 1}

Str2 0001~9999 YEAR

Str3 01~12 MONTH

Str4 01~31 DAY

Str5 00~23 HOUR

Str6 00~59 MINUTE

Str7 00~59 SECOND

Str8 0000-9999 Check Sum (YEAR+MONTH+DAY+HOUR+MINUTE+SECOND = Check Sum)

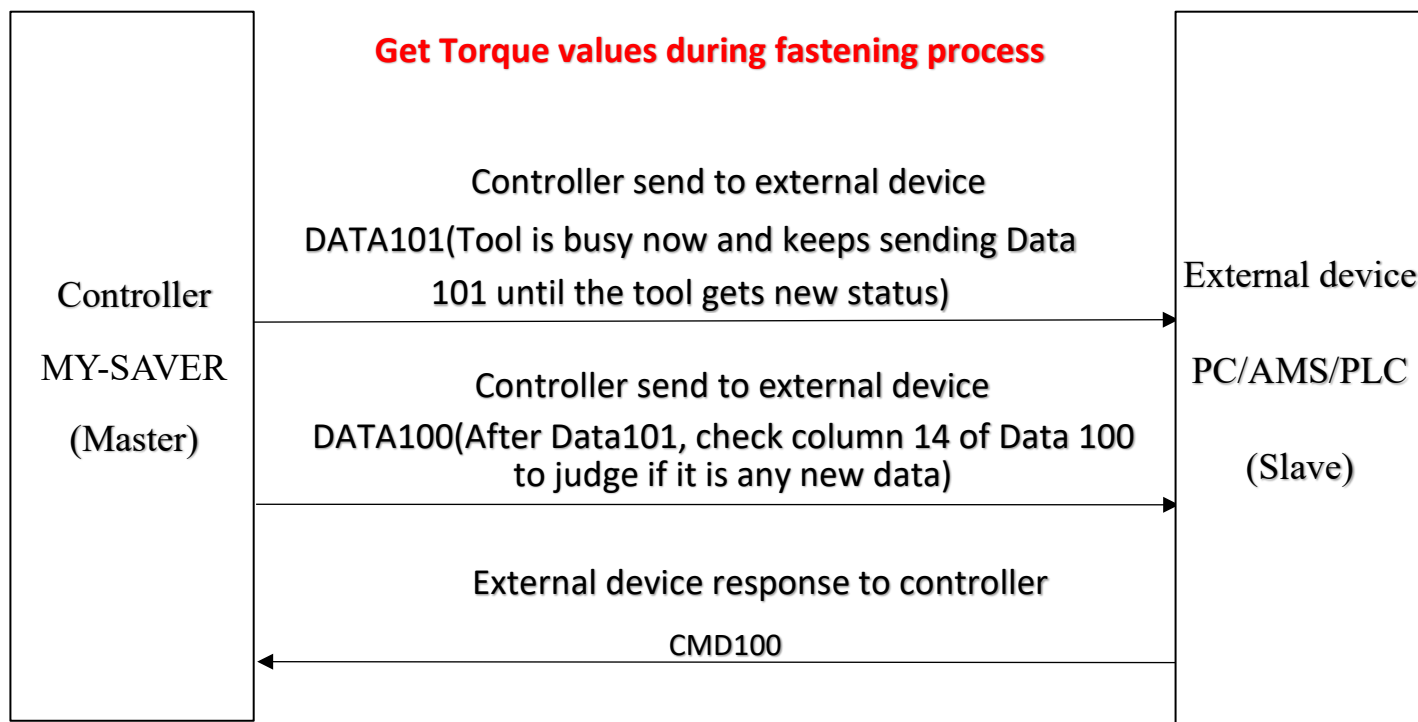
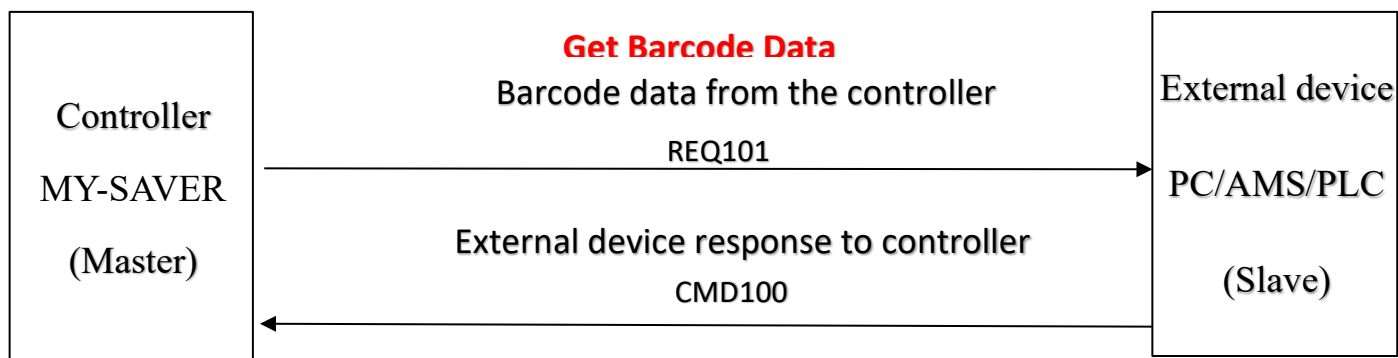
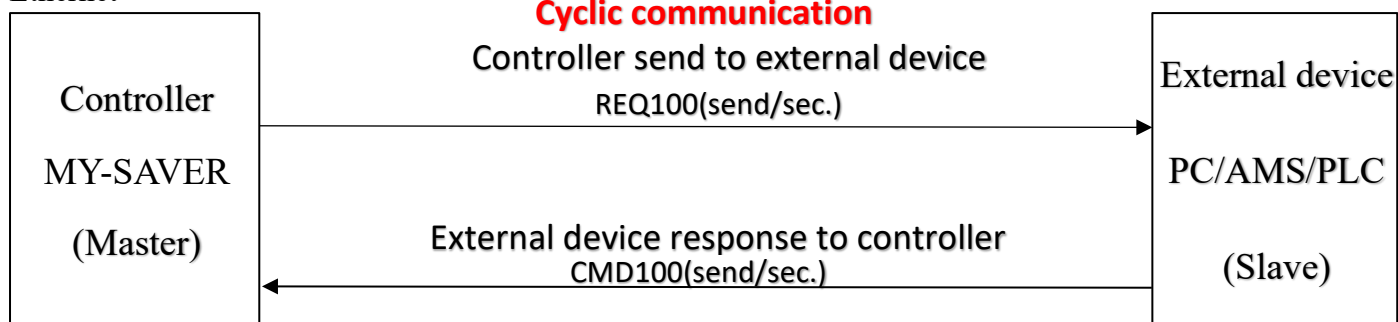
Str9 0000-9999 Key Code (Check Sum + 5438 = Key Code)

Str10 (default: 0)

Str11 Instruction number (Same as the Instruction number of REQ100)

7. When the screwdriver is running, it will start transmitting {DATA101,} until the screwdriver status (for example: NG, OK...) is generated.
PS: WIFI and Ethernet will not output {DATA101, ...} data.

Ethernet



MY-SAVER Basic Data Output Protocol Description

(Ver1.0 20210701 01)

COMPORT Setting:Baud rate : 115200/9600(CTDS 1.7X), Data bit : 8 , Stop bit : 1, Parity bit :NON

Serial communication Mode -ASCII (American Standard Code for Information Interchange)

There are three basic data output formats send from device (MY-SAVER) to external system (DAS/AMS/Other System) via the buildin RS232 port on the device :

1.Command (REQ100) : Send from Device to Host (Send device status to host per second after device startup ready)

2.Command (REQ101) : Send from Device to Host (Send barcode data to host immediately after barcode scanned a data)

3.Command (DATA100) : Send from Device to Host (Send last shutoff data to host immediately and repeat per second after screwdriver shutoff)

4.Command (CMD100) : Send from Host to Device (Host respond system time to device)

3.Command (DATA101) : Send from Device to Host (Send the data to the host immediately when the screwdriver is running)

ps : 1.Device will change output data from (DATA100) to (REQ100) after read (CMD100) from external system

2.The character position in the string does not contain a comma

1. (REQ100) Data format/example						
(REQ100,2019,11,26,13,39,57,2165,7603,0,0,003,TMP0005,MY-SAVER-TEST,1,1,10,10,1,10,4,1,1,008,1,09,1,0,99/99,100,)						
Field	Parameter	Value	Data Type	String Length	Position	Description
1	Header+CMD	(REQ100	String	7 Byte	1-7	Header+Command code
2	Year	0001~9999	String	4 Byte	9-12	Year
3	Month	01~12	String	2 Byte	14-15	Month
4	Date	01~31	String	2 Byte	17-18	Date
5	Hour	00~23	String	2 Byte	20-21	Hour(24 hours)
6	Minute	00~59	String	2 Byte	23-24	Minute
7	Second	00~59	String	2 Byte	26-27	Second
8	Check Sum	0000~9999	String	4 Byte	29-32	
9	Key Code	0000~9999	String	4 Byte	34-37	Key Code
10	unused	0	String	1 Byte	39	unused
11	unused	0	String	1 Byte	41	unused
12	Device ID	001~250	String	3 Byte	43-45	Device index number arranged in the same assembly line (or workstation)
13	Tool SN	20 Bytes	String	20 Byte	47-66	Screwdriver serial no.
14	Device SN	20 Bytes	String	20 Byte	68-87	Device serial no.
15	Device Operation Mode	0~3	String	1 Byte	89	Mode : 0 : ADV (Connection mode), 1 : STD (Standalone Mode), 2 : ALI (Alignment mode) , 3 : SET(Setting mode)
16	Sequence Control Mode	0~1	String	1 Byte	91	0 : Sequence control mode 1 : Skip sequence mode
17	Job	01~50	String	2 Byte	93-94	Selected Job
18	Sequence	01~50	String	2 Byte	96-97	Selected Sequence
19	Select Tool	1	String	1 Byte	99	Selected Tool (Current activated screwdriver)
20	Program Unit	01~99	String	2 Byte	101-102	Selected Unit Program
21	Device Type	4	String	1 Byte	104	Device type (4:MY-SAVER)
22	Tool Connect	0~1	String	1 Byte	106	Screwdriver connection status (1: Connect, 0: Not connect)
23	Device Version	0.000~9.999	String	5 Byte	108-112	Device firmware version
24	Tool Version	0.00~9.99	String	4 Byte	114-117	Screwdriver firmware version
25	Tool Enable/Disable Status	0~1	String	1 Byte	119	Screwdriver status (0: Disable, 1: Enable)
26	Tool Stop Status	0~9,A~L	String	1 Byte	121	Tool Stop Status (0: None , 1:NS, 2:AS, 3:E3, 4:E4, 5:E5, 7:E7, 8:E8, 9:E9, A:EPC, B:ESC, C:ES, D:Er, E:C1, F:C2, G:C4, H:C5, I:E0C, J:BS, K:Confirm, L:Clear)
27	Screw count	00~99/00~99	String	5 Byte	123-127	The numbers of remaining screws / Total screws
28	Instruction number	1~255	String	3Byte	129-131	Instruction number
29	Tail	}	String	1 Byte	133	Tail
						ASCII code LF
						ASCII code CR
			(REQ100,...)Total:133 Byte,29 Field			
Remark	Item 1 to 29 are separated by " , " (ASCII 0x2c)					

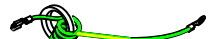
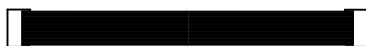
2. (REQ101) Barcode format/example						
(REQ101,2019,11,26,15,56,48,2175,7613,OPID00000001,TMP0005,MY-SAVER-TEST,100,)						
Field	Parameter	Value	Data Type	String Length	Position	Description
1	Header+CMD	(REQ101	String	7 Byte	1-7	Header+Command code
2	Year	0001~9999	String	4 Byte	9-12	Year
3	Month	01~12	String	2 Byte	14-15	Month
4	Date	01~31	String	2 Byte	17-18	Date
5	Hour	00~23	String	2 Byte	20-21	Hour(24 hours)
6	Minute	00~59	String	2 Byte	23-24	Minute
7	Second	00~59	String	2 Byte	26-27	Second
8	Check Sum	0000-9999	String	4 Byte	29-32	
9	Key Code	0000-9999	String	4 Byte	34-37	Key Code
10	Barcode	1~54 Byte	String	54 Byte	39-92	Barcode data
11	Tool SN	20 Bytes	String	20 Byte	94-113	Screwdriver serial no.
12	Device SN	20 Bytes	String	20 Byte	115-134	Device serial no.
13	Instruction number	1~255	String	3 Byte	136-138	Instruction number
14	Tail	)	String	1 Byte	140	Tail
15						ASCII code LF
16						ASCII code CR
			(REQ101,)Total: 140 Byte,14 Field			
Remark	Item 1 to 14 are separated by " , " (ASCII 0x2c)					

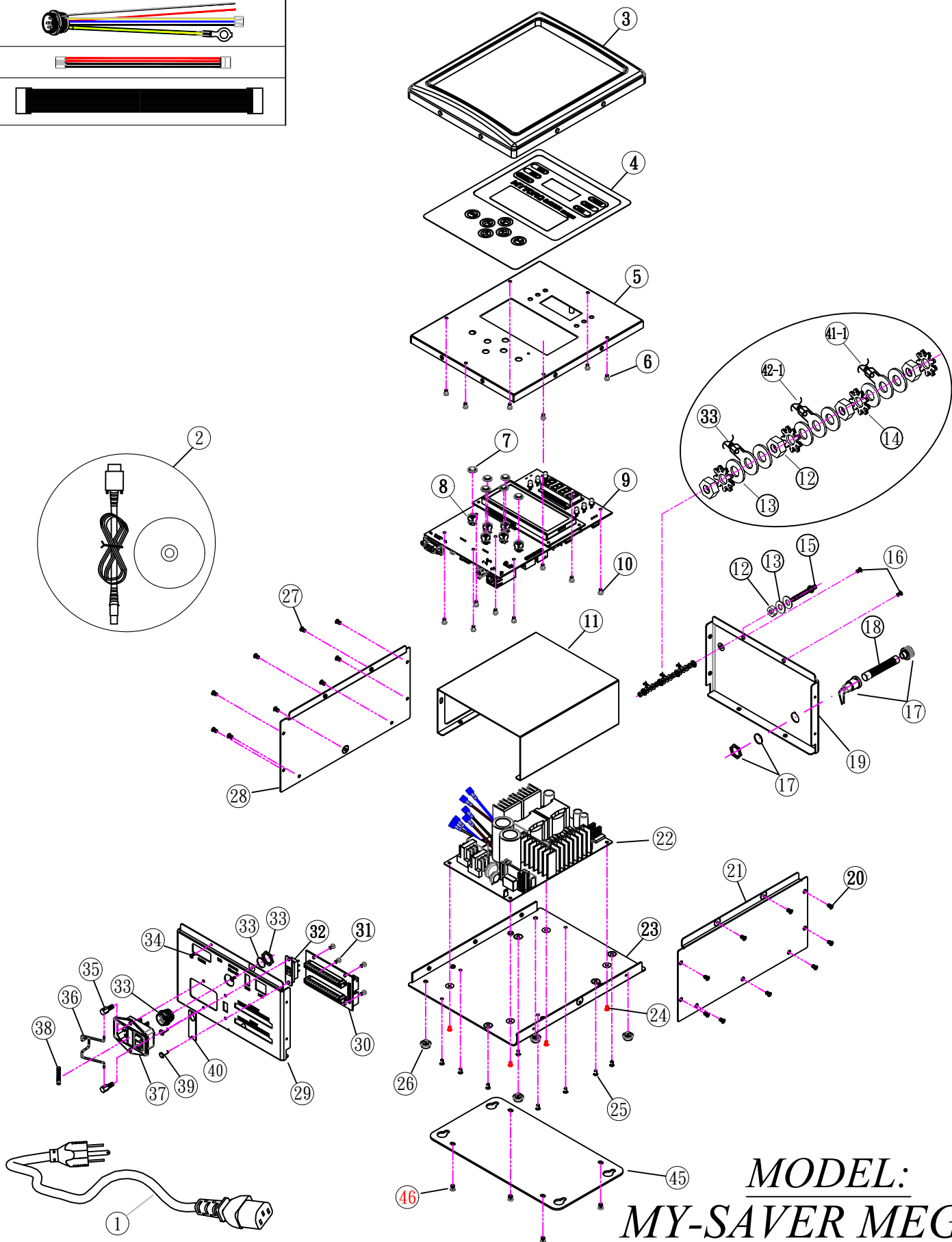
3. (DATA100) Data format/example						
(DATA100,2019,11,26,16,24,48,2144,7582,4,003,TMP0005,MY-SAVER-TEST,0000000001,01,01,01,*****,01,0000,0000,0,0000,4720,0003,0000,99/99,1,1NG-F,0,)						
Field	Parameter	Value	Data Type	String Length	Position	Description
1	Header+CMD	(DATA100	String	8 Byte	1-8	Header+Command code
2	Year	0001~9999	String	4 Byte	10-13	Year
3	Month	01~12	String	2 Byte	15-16	Month
4	Date	01~31	String	2 Byte	18-19	Date
5	Hour	00~23	String	2 Byte	21-22	Hour(24 hours)
6	Minute	00~59	String	2 Byte	24-25	Minute
7	Second	00~59	String	2 Byte	27-28	Second
8	Check Sum	0000~9999	String	4 Byte	30-33	
9	Key Code	0000~9999	String	4 Byte	35-38	Key Code
10	Device Type	4	String	1 Byte	40	Device type (4:MY-SAVER)
11	Device ID	001~250	String	3 Byte	42-44	Device index number arranged in the same assembly line (or workstation)
12	Tool SN	20 Bytes	String	20 Byte	46-65	Screwdriver serial no. Less than 20 Bytes, fill the underline" , "
13	Device SN	20 Bytes	String	20 Byte	67-86	Device serial no. Less than 20 Bytes, fill the underline" , "
14	Device Count	0000000001~9999999999	String	10 Byte	88-97	Device accumulated shutoff count after poweron
15	Job	01~50	String	2 Byte	99-100	Selected Job
16	Sequence	01~50	String	2 Byte	102-103	Selected Sequence

	17	Program unit	01~99	String	2 Byte	105-106	Selected Unit Program
	18	Program Name	1~6 Bytes	String	6 Byte	108-113	Setup program name, it can choose number · capitals and lower case letters · number for program name.
	19	Select Tool	01~09	String	2 Byte	115-116	Selected Tool (Current activated screwdriver)
	20	Torque	Please refer to the specification of screwdrivers	String	9 Byte	118-126	Shutoff torque(example:0000.0000)
	21	Torque unit	0~3	String	1 Byte	128	Torque unit(0: kgf.cm, 1: N.m, 2: lbf.in, 3: kgf.m)
	22	Fastening time	0000.0000~0009.9990	String	9 Byte	130-138	Fastening time(ms)
	23	Fastening thread	0000.0000~9999.9999	String	9 Byte	140-148	Fastening thread
	24	Screw count	00~99/00~99	String	5 Byte	150-154	The numbers of remaining screws / Total screws
	25	INC/DEC	0~1	String	1 Byte	156	INC/DEC(0: INC, 1: DEC)
							Fastening status OK:Each time when the fastening is complete. NGQ: stop torque is less than L/more than H. NGC: stop number of turns is less than L/more than H. OKALL:Each time when a batch is complete. NG-F : Sequence incomplete 1(Number represents step,5 step) NS-F : Press Confirm/Enter for next action. 1(Number represents step,5 step) Less than 5 Bytes, fill the underline" "
	26	Status	OK,NGQ,NGC,OKALL,NG-F,NS-F	String	5 Byte	158-162	Tool Stop Status(0: None , 1:NS, 2:AS, 3:E3, 4:E4, 5:E5, 7:E7, 8:E8, 9:E9, A:EPC, B:ESC, C:ES, D:Er, E:C1, F:C2, G:C4, H:C5)
	27	Tool Stop Status	0~9,A~H	String	1 Byte	164	Tail
	28	Tail	)	String	1 Byte	166	ASCII code LF
	29						ASCII code CR
	30						
				{DATA100, }	Total:166 Byte,28 Field		
	Remark	Item 1 to 28 are separated by "," (ASCII 0x2c)					
4. {CMD100} Data format/example {CMD100,2019,11,26,16,24,48,2144,7582,0,100,}							
	Field	Parameter	Value	Data Type	String Length	Position	Description
	1	Header+CMD	{CMD100	String	7 Byte	1-7	Header+Command code
	2	Year	0001~9999	String	4 Byte	9-12	Year
	3	Month	01~12	String	2 Byte	14-15	Month
	4	Date	01~31	String	2 Byte	17-18	Date
	5	Hour	00~23	String	2 Byte	20-21	Hour(24 hours)
	6	Minute	00~59	String	2 Byte	23-24	Minute
	7	Second	00~59	String	2 Byte	26-27	Second
	8	Check Sum	0000-9999	String	4 Byte	29-32	YEAR+MONTH+DAY+HOUR+MINUTE+SECON D = Check Sum
	9	Key Code	0000-9999	String	4 Byte	34-37	Check Sum+5438=Key Code
	10	Device Name	0~1	String	1 Byte	39	Device Name(0: AMS, 1: DAS)
	11	Instruction number	1~255	String	3 Byte	41-43	Instruction number
	12	Tail	)	String	1 Byte	45	Tail
	13						ASCII code LF
	14						ASCII code CR
				{CMD100, }	Total: 45Byte,12 Filed		
	Remark	1.Item 1 to 12 are separated by "," (ASCII 0x2c) 2.Reply to CMD100 when the time is inconsistent or repeat {DATA100}					
5. {DATA101} Data format/example {DATA101,00.612,000.25}							
	Field	Parameter	Value	Data Type	String Length	Position	Description
	1	Header+CMD	{DATA101	String	8 Byte	1-8	Header+Command code
	2	Fastening time	00.000~99.999	String	6Byte	10-15	Fastening time
	3	Torque	Please refer to the specification of s	String	7Byte	17-23	Torque(Torque value varies according to the torque unit)+Tail
	4						ASCII code LF
	5						ASCII code CR
				{DATA101, }	Total: 23Byte,3 Filed		
	Remark	1.Item 1 to 3 are separated by "," (ASCII 0x2c) 2.WIFI and Ethernet will not output {DATA101,...} data.					
Communication interface : RS-232C 9 Pin Female (DCE) to PC or PLC (DTE)							
Connection :		USB		WIFI			
		1.Barcode scanner		1.WIFI module			
							
		2.Connection method		2.Connection method			
							
Remark		※ The external device can judge the 14th field (Device Count) of response data to check if there is any new update tightening data from DATA100. If the Device Count increased which means there is a new record. ※The communications protocol will be slightly different from the controller version update, please find the contact person to obtain the latest version of the transmission communications protocol					

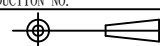
CUSTOMER	DWG NAME			PRODUCTION NO.	
ITEM NO:	DWG NO:				
TITLE:	MATERIAL	SHRINK			
	DES. BY	DATE			
	CHKD. BY	DATE			
	APPD. BY	DATE		THIRD ANGLE PROJECTION.	
				UNIT	SCALE
					SHT NO.
					OF SHITS.

No.	PARTS NO.	PARTS NAME-E	PARTS NAME-C	Q'ty	No.	PARTS NO.	PARTS NAME-E	PARTS NAME-C	Q'ty
1	AA50002	America Plug	美式電源線	1	23	CBB00014-2	Housing-Underside	下蓋	1
	AA50002-1	Australia Plug	澳式電源線	1	24	CH20537	Srew M3*5L	螺絲 圓頭 M3*5L	4
	AA50002-2	Europe Plug	歐式電源線	1	25	CH30226-1	Srew M3*6	螺絲 M3*6	8
	AA50002-3	British Plug	英式電源線	1	26	CH20103-3	Rubber Shim	腳墊	4
	AA50002-6	India Plug	印式電源線	1	27	CH30226-1	Srew M3*6	螺絲 M3*6	9
2	P11307	USB Converter	USB 轉換器	1	28	C50228-3	Side housing	側蓋	1
3	EC30004-1	Plastic frame	塑膠框	1	29	CAD00003-3	Housing-Front Side	前蓋	1
4	YTM0178-2	Sticker-Model	麥拉貼紙	1	30	EG31550B	PCB-IO	機板成品 IO背板	1
5	CAB00014-2	Housung-Upside	上蓋	1	31	CH20505-6	Srew M3*5mm	螺絲 圓頭 M3*5	4
6	CH20102-5	Srew TP3*6	螺絲 TP3*6	6	32	P11403-2	Selector switch	電壓選擇開關	1
7	CC28028-16	Button	手按鍵開關鈕 黑色	6	33	X10068	Bolt	螺帽	1
8	C50226-1	Button Fixture	按鍵開關蓋 黑色	6	34	X10067	Washer	墊片	2
9	EG31545-4	P.C.B-LCD	機板成品 控制LCD面板	1	35	PZ50165-32	Connector	插座半成品	1
10	CH20505-6	Srew M3*5mm	螺絲 圓頭 M3*5	8	36	CH30226-1	Srew M3*6	螺絲 M3*6	2
11	C50229-3	Plastic frame	防護蓋	1	37	CH20102-33	Srew	六角螺絲 M4	2
12	CH20401	Bolt	螺帽	5	38	E31801-1	Plug fixer	扣環 U型	1
13	CH20301	Washer	華司	8	39	P11400	Socket (with fuse)	搖擺開關加IEC公座	1
14	CH20302	Washer	外齒型華司	4	40	E31501-19	FUSE (10A)	保險絲 (10A)	1
15	CH20535	Srew M4*38L	螺絲 M4*38L	1	41	CH20513	Srew M3*12LT-NI	螺絲 傘頭 M3*12LT-NI	2
16	CH30226-1	Srew M3*6	螺絲 M3*6	2	42	C50216-2	Fixture	保護蓋	1
17	E31502-5	Fuse	保險絲座	1	43	CH50696-7	Grounding Means-350mm	接地線-350mm	1
18	E31501-21	FUSE (15A)	保險絲 (15A)	1	44	E31315	Grounding Means	電感含接地線 3.3mH PVC UL1007#/18AWG(綠滾黃)	1
19	CBD00003-3	Housing-backside	後蓋	1	45	E31711-2	4Pin Plug	4P 雙頭排插含線 220mm 間距3.96mm TCC/TCS用	1
20	CH30226-1	Srew M3*6	螺絲 M3*6	9	46	E31726-4	24Pin Plug	24P 雙排插頭含線 220mm	1
21	C50228-3	Side housing	側蓋	1	47	CJ20015-2	Fixed Plate	固定板	1
22	EG50101-35	PCB	機板成品 AO1160M-40C3A	1	48	CH20519-4	Srew M4*6	螺絲 M4*6	4

41		41-1
42		42-1
33		
43		
44		



MODEL: *MY-SAVER MEGA*

CUSTOMER		DWG NAME		PRODUCTION NO.	
ITEM NO:		DWG NO:		 THIRD ANGLE PROJECTION.	
TITLE:		MATERIAL	SHRINK		
		DES. BY	DATE		
		CHKD. BY	DATE		
		APPD. BY	DATE		
				UNIT	SCALE
				SHT NO. OF SHTS.	

No.	PARTS NO.	PARTS NAME-E	PARTS NAME-C	Q'ty	No.	PARTS NO.	PARTS NAME-E	PARTS NAME-C	Q'ty
1	AA50002	America Plug	美式電源線	1	22	EG50101-35	PCB	機板成品 AO1160M-40C3A	1
	AA50002-1	Australia Plug	澳式電源線	1	23	CBB00014-2	Housing-Underside	下蓋	1
	AA50002-2	Europe Plug	歐式電源線	1	24	CH20537	Srew M3*5L	螺絲 圓頭 M3*5L	4
	AA50002-3	British Plug	英式電源線	1	25	CH30226-1	Srew M3*6	螺絲 M3*6	8
	AA50002-6	India Plug	印式電源線	1	26	CH20103-3	Rubber Shim	腳墊	4
2	P11307	USB Converter	USB 轉換器	1	27	CH30226-1	Srew M3*6	螺絲 M3*6	9
3	EC30004-1	Plastic frame	塑膠框	1	28	C50228-3	Side housing	側蓋	1
4	YTM0178-9	Sticker-Model	麥拉貼紙	1	29	CAD00003-6	Housing-Front Side	前蓋	1
5	CAB00014-2	Housung-Upside	上蓋	1	30	EG31550B	PCB-IO	機板成品 IO背板	1
6	CH20102-5	Srew TP3*6	螺絲 TP3*6	6	31	CH20505-6	Srew M3*5mm	螺絲 圓頭 M3*5	4
7	CC28028-16	Button	手按鍵開關鈕 黑色	6	32	P11403-2	Selector switch	電壓選擇開關	1
8	C50226-1	Button Fixture	按鍵開關蓋 黑色	6	33	PZ50165-33	Connector	插座半成品	1
9	EG31545-4	P.C.B-LCD	機板成品 控制LCD面板	1	34	CH30226-1	Srew M3*6	螺絲 M3*6	2
10	CH20505-6	Srew M3*5mm	螺絲 圓頭 M3*5	8	35	CH20102-33	Srew	六角螺絲 M4	2
11	C50229-3	Plastic frame	防護蓋	1	36	E31801-1	Plug fixer	扣環 U型	1
12	CH20401	Bolt	螺帽	5	37	P11400	Socket (with fuse)	搖擺開關加IEC公座	1
13	CH20301	Washer	華司	8	38	E31501-19	FUSE (10A)	保險絲 (10A)	1
14	CH20302	Washer	外齒型華司	4	39	CH20513	Srew M3*12LT-NI	螺絲 傘頭 M3*12LT-NI	2
15	CH20535	Srew M4*38L	螺絲 M4*38L	1	40	C50216-2	Fixture	保護蓋	1
16	CH30226-1	Srew M3*6	螺絲 M3*6	2	41	CH50696-7	Grounding Means-350mm	接地線-350mm	1
17	E31502-5	Fuse	保險絲座	1	42	E31315	Grounding Means	電感含接地線 3.3mH PVC UL1007#/18AWG(綠滾黃)	1
18	E31501-21	FUSE (15A)	保險絲 (15A)	1	43	E31711-2	4Pin Plug	4P 雙頭排插含線 220mm 間距3.96mm TCC/TCS用	1
19	CBD00003-3	Housing-backside	後蓋	1	44	E31726-4	24Pin Plug	24P 雙排插頭含線 220mm	1
20	CH30226-1	Srew M3*6	螺絲 M3*6	9	45	CJ20015-2	Fixed Plate	固定板	1
21	C50228-3	Side housing	側蓋	1	46	CH20519-4	Srew M4*6	螺絲 M4*6	4

