

MY-SAVER User Manual



Model : MY-SAVER

ANLIDAR INDUSTRIAL CO., LTD.

<http://www.anlidar.com>

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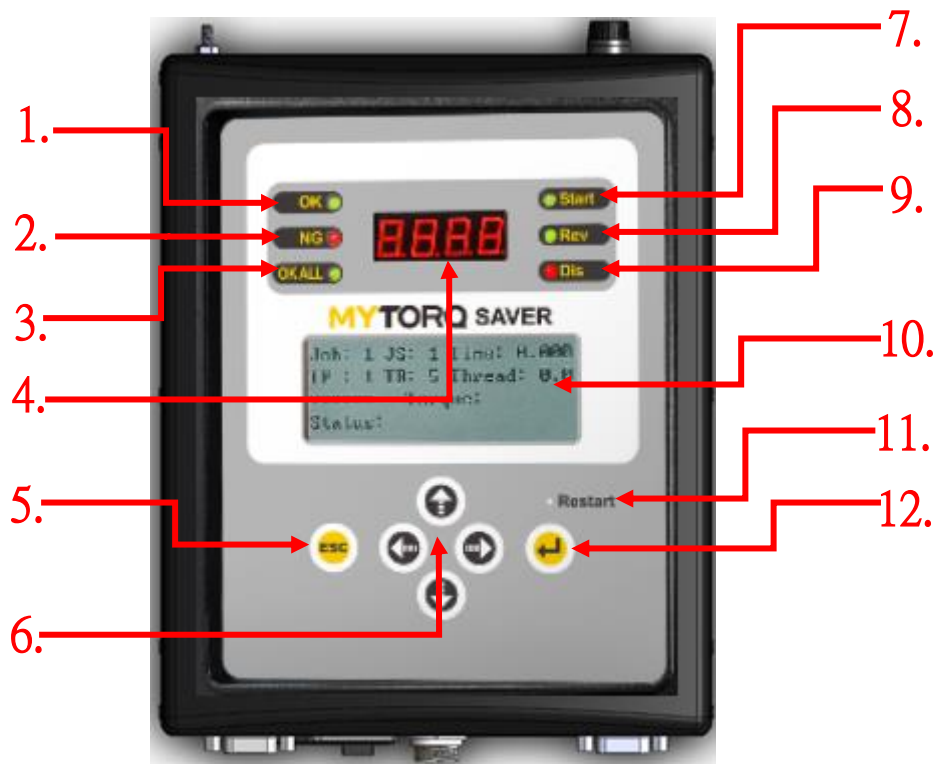
1. Product specification introduction

Model	MY-SAVER
Input Voltage	AC 110V / 240V
Input Frequency	50 - 60Hz
Input Current	6.3A
Input Voltage	DC 40V
Output Current	Max 9A
Output Power	360W
Function Period	1s ON / 3s OFF
Size	185 x 241.4 x 146.8(mm)
Weight	3.7Kg
DC screwdriver model:	MY-SAVER3/5/7series

2. Appearance introduction

2.1 Panel

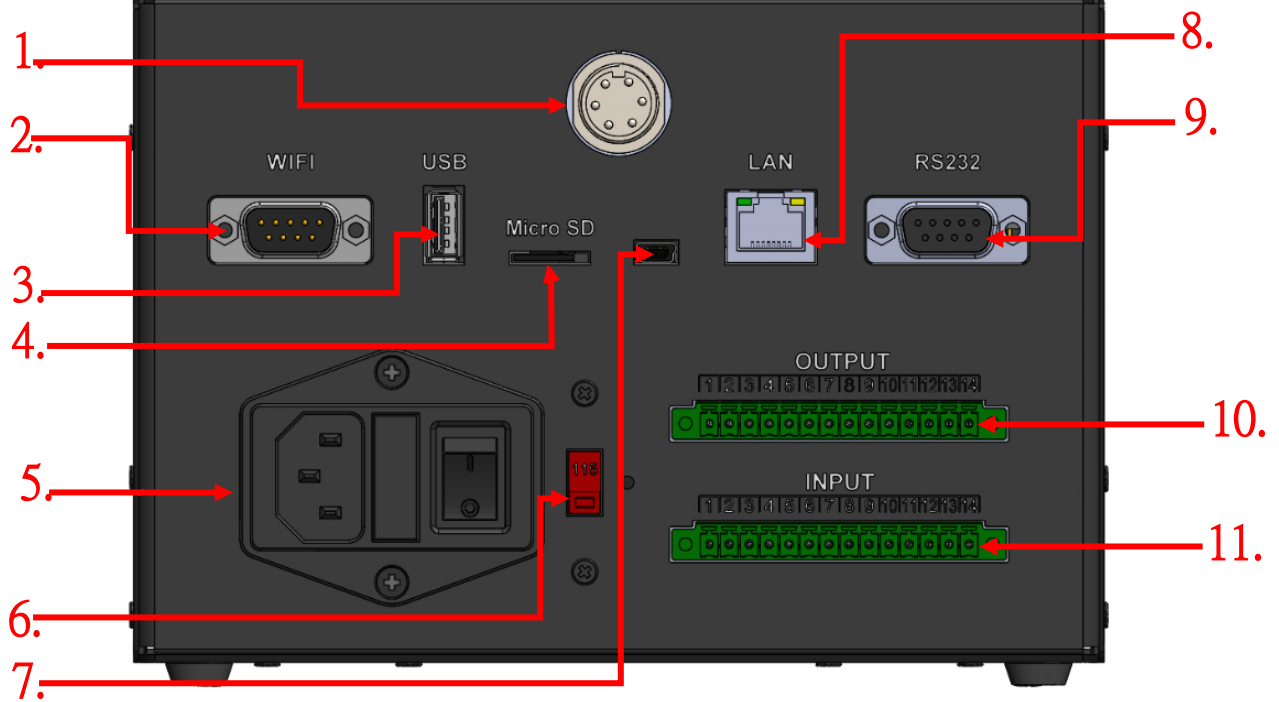
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|--|---------------------------------------|
| 1. OK signal LED | 7. Start signal LED |
| 2. NG signal LED | 8. Reverse signal LED |
| 3. OKALL signal LED | 9. Disable signal LED |
| 4. Four-digit-seven-segment display for torque value | 10. 16X4 LCM display setting function |
| 5. ESC button (Return/Leave/Enter setting mode) | 11. Restart button |
| 6. Up、Down、Left、Right buttons | 12. Enter button (Select/Confirm) |



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....)

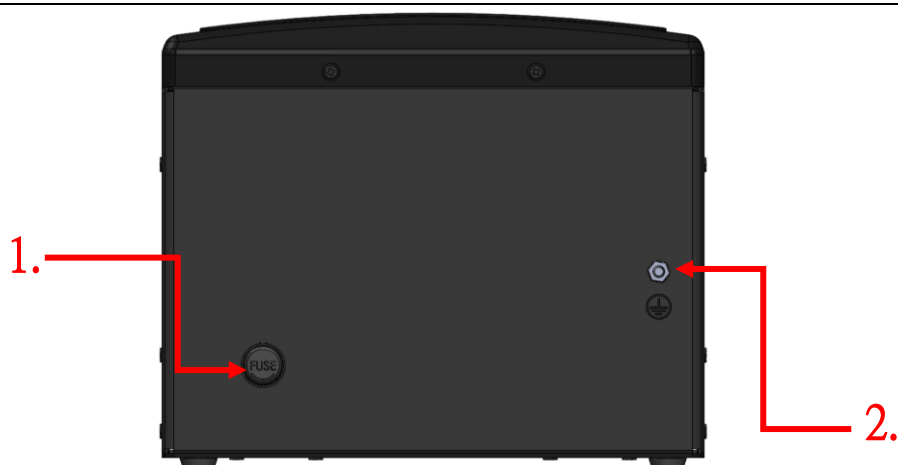
2.2 Bottom

1.	Tool connector	7.	Software update port
2.	External wireless module port	8.	Wired communication port
3.	Barcode scanner USB type-A port	9.	Protocol output port
4.	Micro SD card slot (Data Storage)	10.	Output signal port
5.	Socket and switch	11.	Input control signal port
6.	Voltage Choice Switch		



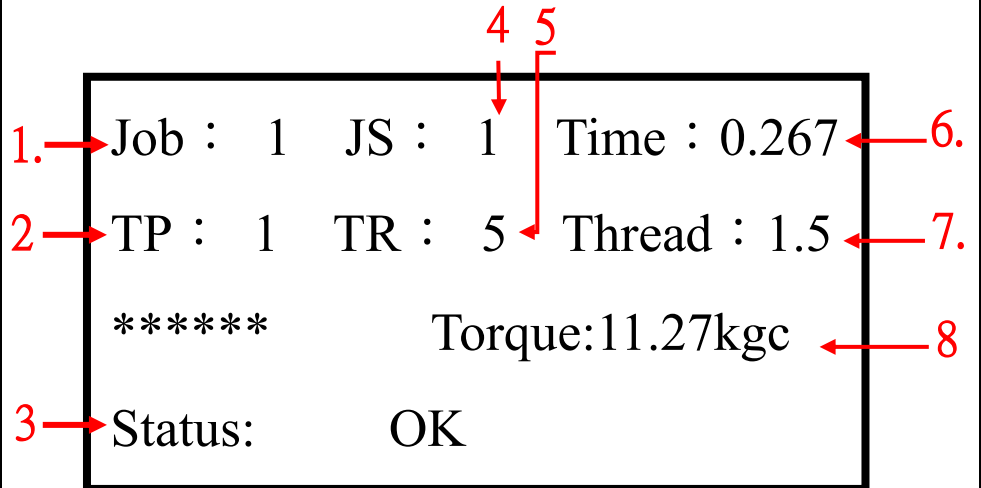
2.3 Upper case

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



2.4 LCM display function introduction

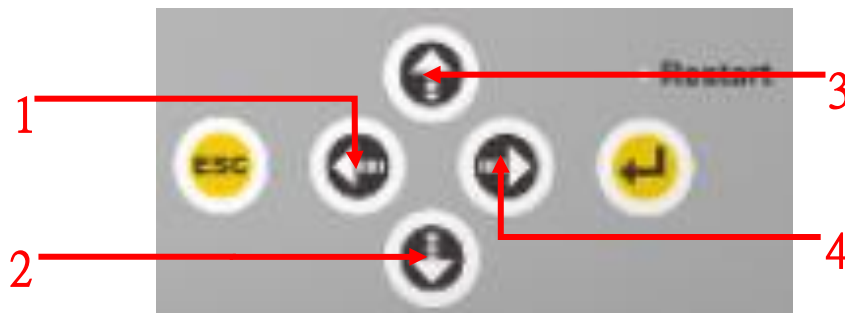
1. Display job
2. Display sequence
3. Display system status
4. Display job sequence
5. Display repeat times
6. Display action time
7. Display number of turns
8. Display the target torque/
display the tightening
torque



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 METHOD SETTING	Both/Push /Lever	Choose tool start mode.	Both
TOOL LED SETTING	Start on/Always on/Off	Set tool LED on or off.	Off
EDIT JOB SEQUENCE SETTING	Job : 01~50 JS : 01~50 TP : 00~99 TR : 00~99 Reverse button setting : 1. Direction: CW/CCW 2. Force Level:0~9 3. RPM : Please refer to the specification of screwdrivers	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 (CCE) can be set Force Level : Number of force segments Force0(disable) 、 1~9(10%~100%) RPM : set to remove the screw speed	Job : 01 JS : 01 TP : 00 TR : 00
PROGRAM	00~50	Select program	00
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).	OFF
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
STORE 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 How to select/switch Job by barcode scanning	Define a valid barcode range From : 01~54 Bits : 01~54 To Binding JOB (01~50)	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)	Job : 01 From : 01 Bits : 01
BATCH MODE	INC/DEC	Select count up or count down	DEC
TIME SETTING	YYYY/MM/DD HH : MM : SS	Set up controller time Year/Month/Day/Hour/Minute /Second.	2018/01/01 01 : 01 : 01
SETUP PRODUCT serial number	Serial Number	Display device product serial number.	Product Barcode
PASSWORD	0000~9999	Set up password lock	0000
INTERNET SETTING	Offline/Online/RS-232	Select data output from offline to online	RS-232
ACOUSTIC MODE	On/Off	Setup buzzer.	On
LANGUAGE	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
Start signal setting	Motor/Start Signal	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
Screw step	001~250	Step can set the speed, target value (torque / time / number of turns)...	01
Program Name	*****	Setup program name, it can choose number 、 capitals and lower case letters 、 number for program name.	*****
RPM	Please refer to the specification of screwdrivers	Setup rotation speed (According to screwdriver type	Please refer to the specification of screwdrivers
Option	Q/C	Setup tightening target	Q
Direction	CW/CCW	Setup rotation direction	CW
Delay Time	0.0~9.9	Setup interval time between screws	0.8
Target Thread	000.0~999.9	Setup target no. of thread	005.0
Target Torque	Please refer to the specification of screwdrivers	Setup target torque	Please refer to the specification of screwdrivers
Hi Torque Kg.cm	000.01~99.99	Setup max. torque value	005.00
Lo Torque Kg.cm	000.00~99.98	Setup min. torque value	000.00
Hi Thread	000.1~499.9	Setup max. thread value	499.9
Lo Thread	000.0~499.8	Setup min. thread value	000.0

6. Screw setting

Name	Set Up Value	Function Description	Default setting
Screw Sequence	01~99	Setup screw parameter.	01
Screw Name	*****	Setup screw parameter name. It can choose number 、 capitals and lower case letters 、 number.	*****
Screw Reverse	001~250	Setup screw reverse strategy	01
Sequence 1	001~250	Setup 1 st sequence	01
Sequence 2	000~250	Setup 2 nd sequence	00
Sequence 3	000~250	Setup 3 rd sequence	00
Sequence 4	000~250	Setup 4 th sequence	00
Sequence 5	000~250	Setup 5 th sequence	00
OKALL Holding Time	0.0~9.9	AT : OKALL signal holding time	1.0
OK One Holding Time	0.0~9.9	OT : OK signal holding time	0.0
NOK Disable Screwdriver	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 Disable Screwdriver	ON/OFF	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)
Calibration Tool	Calibration mode

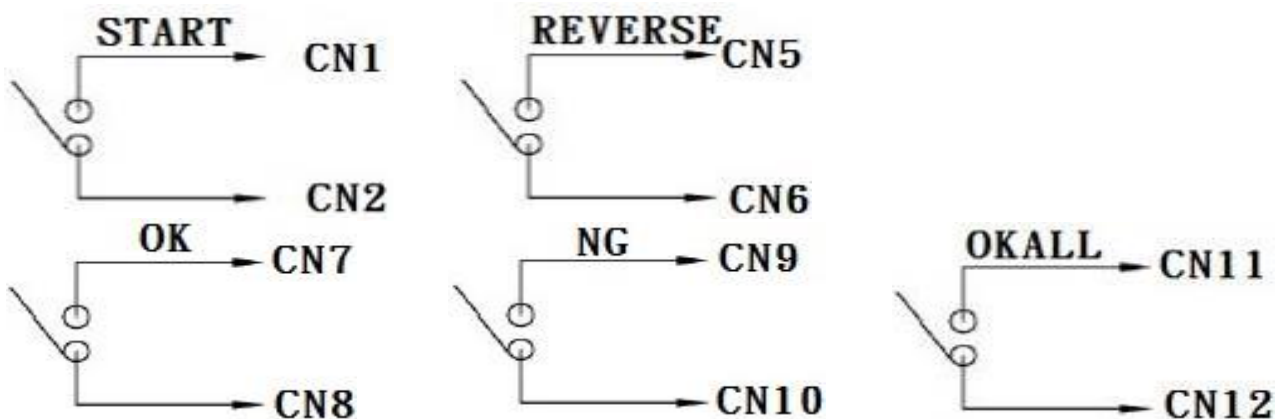
8. CONFIRM mode

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.	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

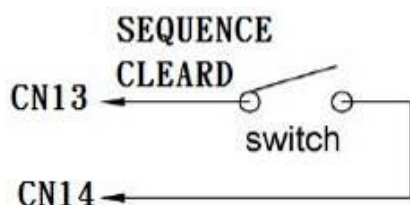
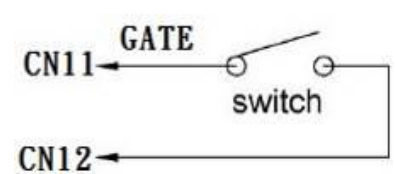
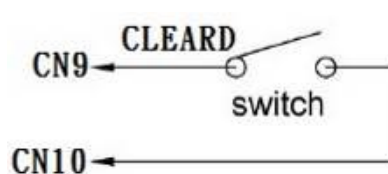
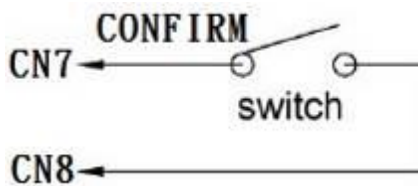
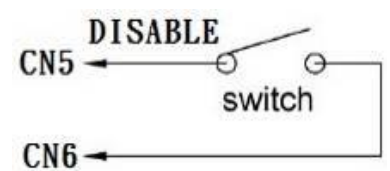
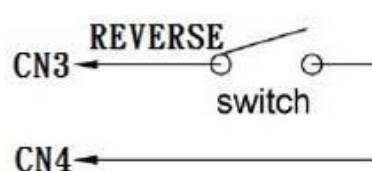
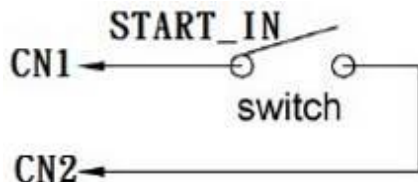
9. External output control function description

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. 2. When CN1+CN2 open (OPEN) , screwdriver stop functioning.
CN 2	GND	
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. 2. When external reverse signal CN3+CN4 open (OPEN) first and activate signal CN1+CN2 short (CLOSE), screwdriver start forwarding.
CN 4	GND	
CN 5	External disable signal input DISABLE	1. When CN5+CN6 short (CLOSE), screwdriver cannot be activated. 2. When CN5+CN6 open (OPEN), screwdriver can be activated.
CN 6	GND	
CN 7	External confirm signal input CONFIRM	1. When system requests to press confirm button, we can short CN7+CN8 (CLOSE) instead. 2. After CONFIRM is executed, the NG signal is also cleared.
CN 8	GND	
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. 2. Sensor switch : Switch in process can be one or two.
CN 12	GND	
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)

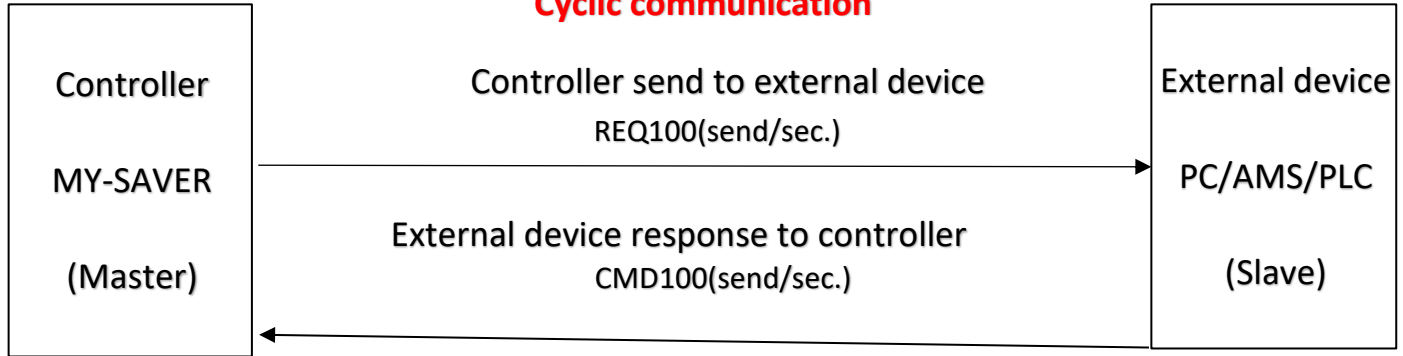
Str10 (default: 0)

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

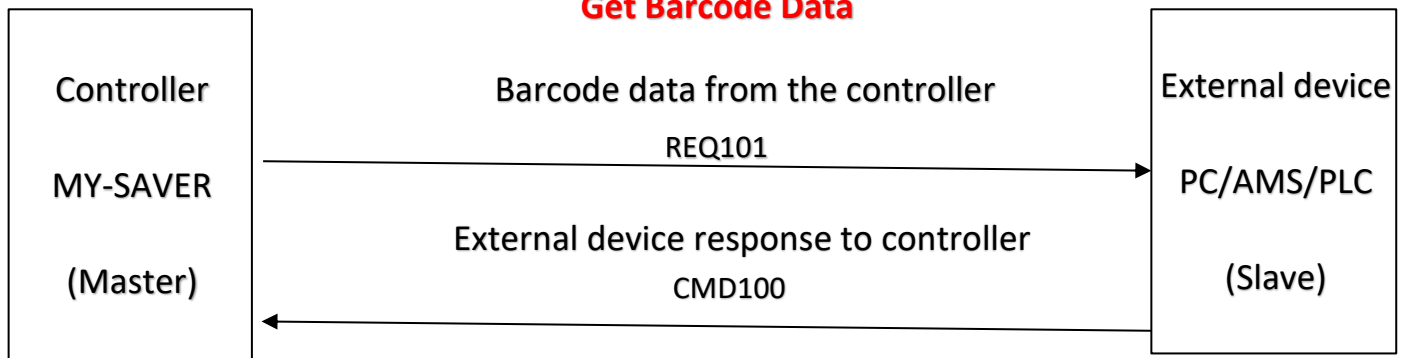
7. When the screwdriver is running, it will start transmitting {DATA101,...} until the screwdriver status (for example: NG, OK...) is generated.

PS: WIFI and Ethernet will not output {DATA101,...} data.

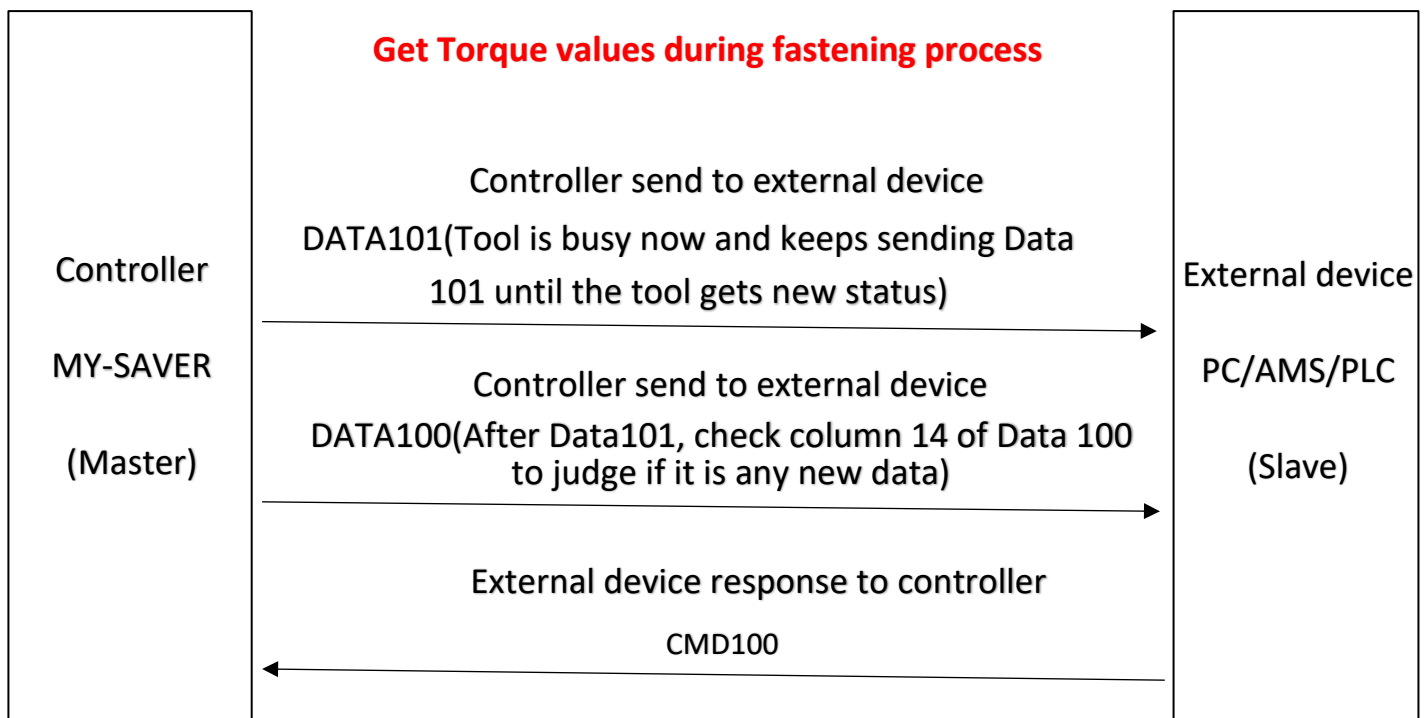
Cyclic communication



Get Barcode Data



Get Torque values during fastening process



MY-SAVER Basic Data Output Protocol Description

(Ver1.0 20200519_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
	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	001~99	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~J	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:EOC J:BS)
	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)
26	Status	OK,NGQ,NGC,OKALL,NG-F,NS-F	String	5 Byte	158-162	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".
27	Tool Stop Status	0~9,A~H	String	1 Byte	164	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)
28	Tail	}	String	1 Byte	166	Tail
29						ASCII code LF
30						ASCII code CR
Remark			(DATA100,)Total:166 Byte,28 Field			
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+SECOND = 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
Remark			(CMD100,)Total: 45Byte,12 Filed			
1.Item 1 to 12 are separated by "," (ASCII 0x2c) 2.Reply to CMD100 when the time is inconsistent or repeat (DATA100)						
4. (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 screwdrivers	String	7Byte	17-23	Torque(Torque value varies according to the torque unit)+Tail
4						ASCII code LF
5						ASCII code CR
Remark			(DATA101,)Total: 23Byte,3 Filed			
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.						