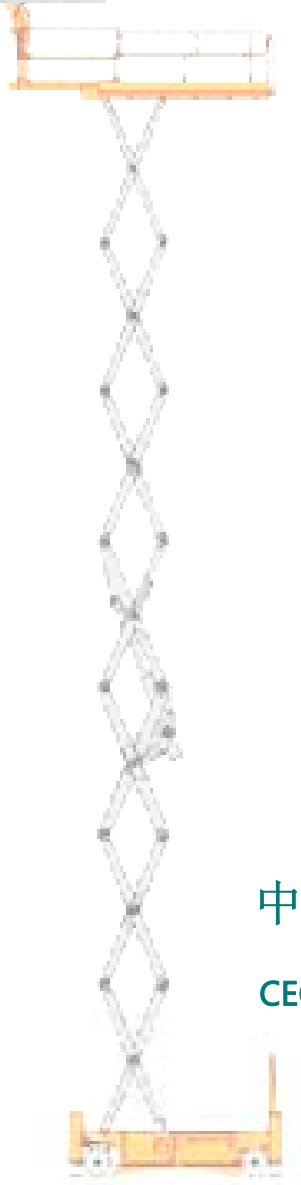
车联网

CAN PLUS®

CAN-S87/88 MEWP
Electronic Control &Info. System
Operating Instruction V4.3



IPAF

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CEC 中电·传动与控制技术中心
远程管理云平台

车辆监控 | 车辆管理 | 系统管理

主监控

车辆编号	车辆型号
剪叉车	
test_003	TXS14
canplus_tx042_870	TXS10
canplus_tx051_870	TXS10
test002	TXS10
canplus_tx014_870	TXS10
canplus_tx028_870	TXS10
canplus_tx040_870	TXS10
canplus_tx037_870	TXS10
canplus_tx010_870	TXS10
canplus_SB03.0012	TXS10
canplus_tx055_870	TXS10
canplus_tx056_870	TXS10
canplus_tx058_870	TXS10
canplus_tx046_870	TXS10
canplus_tx049_870	TXS10
canplus_tx048_870	TXS10
canplus_tx039_870	TXS10
canplus_tx020_870	TXS10
canplus_tx043_870	TXS10
canplus_tx026_870	TXS10
canplus_tx053_870	TXS10
canplus_tx022_870	TXS10
canplus_tx052_870	TXS10
canplus_tx034_870	TXS10
canplus_tx031_870	TXS10
canplus_tx027_870	TXS10
canplus_tx047_870	TXS10
canplus_tx029_870	TXS10
canplus_tx012_870	TXS10

系统日志

日期	时间	事件来源	事件类型	处理结果	事件描述
2015-04-25	15:55:51	远程	WebSocket	位置信息通知	151400000001 - 0x0200
2015-04-25	15:55:47	远程	WebSocket	位置信息通知	151400000001 - 0x0200
2015-04-25	15:55:44	远程	WebSocket	位置信息通知	151400000001 - 0x0200
2015-04-25	15:55:41	远程	WebSocket	位置信息通知	151400000001 - 0x0200

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Introduction

Scissor lift electronic system mainly consist of elevated control unit ECU, platform control unit PCU, driver, M-Prog multi-function programmer and remote control management APP/PC icloud platform via WIFI. Telescopic boom lift / articulating boom lift electronic system mainly consist of platform unit G-PCU, turntable unit G-ECU/ chassis unit G-CCU and multi-function debugging unit.

Self-defined code, Chinese-English alarming system ,double debugging mode system(analogue, PWM output, standard CAN debugging),double sensors and double electric drive systems.

With additional specific functions of its own,compatible with international mainstream control system and original V1,V2 systems.Optional functions available upon customers' request.

Our Advantages:

1) open system design, compatible with the third party

2) standard equipment and additional optional functions

3) general solution and customized solution

4) mass production and economic needs

Warning:

1）Vehicle operators should follow safety operation instructions no matter when and where what for.

2）when vehicle is in enforcing mode/ maintenance state, operators should be responsible for any accidents caused for any reason unconditionally.

MEWP Elec.Control&Info. System

一. Summary

CAN-S87/88 scissor lift electronic system is consist of elevated control unit ECU and platform control unit PCU. PCU display which does not included in standard configuration is optional.

System is compatible with the original V1,V2 control systems with additional remote control management function optional. Please see the following product list for more information.

CANPLUS-S/C8x.MEWP升降作业平台电控系统.
剪叉式-配置型谱表

—— CEC.CANPLUS DRIVE&CONTROL CENTRE

品名	套件名	部件名	零件名	类型	产品型号
	S/C88	A88	P86	PCU	CANPLUS-MPC8606
			E88	ECU	CANPLUS-MC8808
			D84	DRV	Curtis 1204
	S/C87	A87	P87	PCU	CANPLUS-MPC8706
			E88	ECU	CANPLUS-MC8808
			D84	DRV	Curtis 1204
	S/C86	A86	P86	PCU	CANPLUS-MPC8606
			E68	ECU	CANPLUS-MC8608
			D84	DRV	Curtis 1204
	S/C85	A85	P85	PCU	CANPLUS-MPC8506
			E88	ECU	CANPLUS-MC8808
			D84	DRV	Curtis 1204

CANPLUS-MC8606

CANPLUS-MC8506

Curtis 1204

CANPLUS-MC8608

CANPLUS-MC8808

Operating Instructions (1-1)

二. MC8606 PCU operation buttons and indicators

H：operation enable/ menu confirmation

L3：chassis heavily tilt alarm

L2：overload alarm

L1：power/commucation/ alarm

E：emergency stop

A：lift/fall

C：high/low speed

F/G：left/right turn lift/fall

L4：lift/fall state

L5/6：high/low speed

L7：drive state

B：drive

D：horn & multi-function

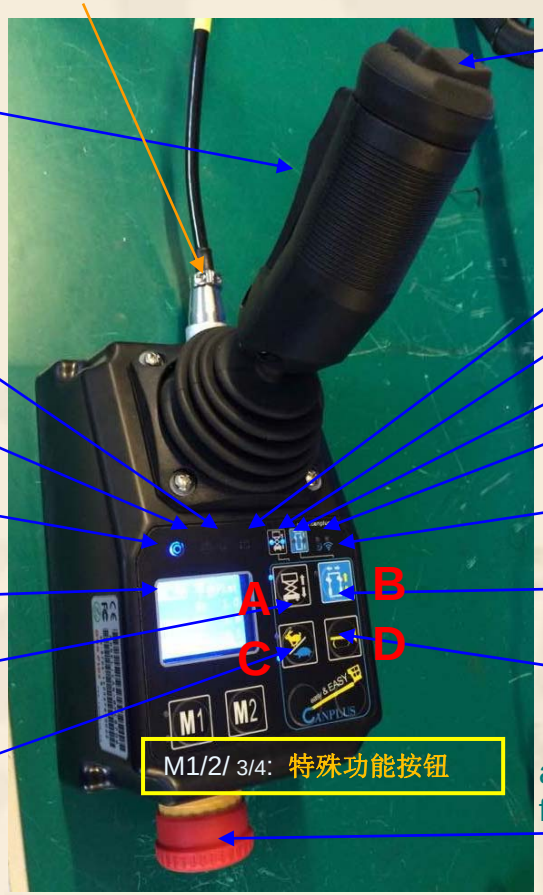
mornitoring & debugging LED/LCD

Operating Instructions (1-2)

二. MC8706 PCU operation buttons and indicators

spiral line, plug in/ out connnector is forbidden,
for maitenance / system updatel usage only.

螺旋线，禁止插拔此连接器 (仅供维护及更换使用)！



H：operation enable/ menu confirmation

L3：chassis heavily tilt alarm

L2：overload alarm

L1：power/commucation/ alarm

mornitoring & debugging LED/LCD

A：lift/fall

C：high/low speed

F/G：left/right turn lift/fall

L4：low voltage

L5：drive state

L6：lift/fall state

L7：platform function

L8：Wi-fi

B：drive

D： horn & multi-function

alternate function

E：emergency stop

Operating Instructions (1-3)

三. S88 Control Mode

1. Calibration setting ——press xxxx buttton for 1 second and release,enter working state mode. Press “D” , switch to "operation/setting"mode ; double click “H” (enable key) , exit this mode.

2. Auxiliary test —— press both "A"and "C" for 1 second and release,enter auziliary test mode; double click "H"(enable key) / press both "A"and "C" to exit. Display the latest 3 testing times of vehicle under this mode.

3. Enforcing Mode —— Press"E",system power off; press xxxx buttton and re-press "E" ,system power on and enter enforcing mode seconds later,then release xxxx button. Restart system to exit this mode.

Attention:safety restrictions blocked，please operate with extreme caution.

Operating Instructions (1-4)

Attention:Operation instructions in this manual must be conducted on the premise of comply with the vehicle operation safety regulations.

Scissor lift electronic system is consist of elevated control unit ECU and platform control unit PCU. PCU display which does not included in standard configuration is optional. System is compatible with the original V1,V2 control systems with additional remote control management function optional.

—. Power on

Enter system self-checking mode, indicators flash one by one,then buzzer beep 3 times to enter normal operation.

PCU mode differs with/ whithout load sensor.

Customer information and working time display alternatively in homepage.

Revise working time---- press B and C, current working timing cleared.

L1 indicator :

1) blue light flash once every 2 seconds—— normal operation

2) red light flash once every 1 second, buzzer beep once every 1 second —— communication fault

3) red light & blue light flash once every 2 seconds, buzzer beep once every 2 sec enter enforcing mode, safety restriction function blocked, only for maintenance usage.

4) red light keep flashng, buzzer beep four times in 1 **second**—— low voltage alarm

二. Operation Mode

Operation mode and functions of CAN-S8X series products are basically the same, the following functions are introduced by taking MC8600 as example.

Operating Instructions (1-5)

三. Function Introduction

1. ECU Operation

ECU (MC8708) Digital tube display code: - - CH. ECU unit only control vehicle lift/fall function by switch

2. PCU Operation---- PCU emergency stop control vehicle power. Release emergency stop to start operation, control vehicle actions by joystick.

Press "H" enable key to confirm action. PCU (MC8708) Digital tube display code: - - PL.

Select lift/fall function: : push joystick to control lift/fall function,speed can be controlled by adjusting joystick driving range.

Select drive function : : push joystick to control drive and steering function,drive speed can be controlled by adjusting joystick driving range.

Select high/low speed function : select high / low speed function to control vehicle speed.

3. Enforcing Function -----various safety protection functions. All restriction function parameters of S87xx series products can be customized.

a) vehicle unfold---------only drive with low speed available

b) pothole guard ------lift with alertor alarms ; drive and steering function invalid

c) tilt ------only fall function available; lift, drive and steering function invalid

d) overload----------fall,drive and steering function available, lift function invalid.

Operating Instructions (1-6)

e) Pause while fall ---- optional function with subsection fall time can be set. Vehicle fall to 2.5 meters will pause for a while, release joystick for seconds and repress joystick to continue falling; When in ECU control mode, release ECU fall switch for seconds and pull ECU fall switch to restore operation.

f) low-voltage ----- high speed drive limit function, re-press hight/low speed button to restore high speed mode.

g) subsection fall into place — when PCU height is lower than subsection fall height, all limit functions cancealed.

4. Basic Configuration

a) Non load measuring mode ——install lift into place switch, subsection fall switch, unfold into place switch.

b) Load measuring mode ——install lift into place switch, subsection fall switch, unfold into place switch, height sensor, pressor sensor.

General Fault Alarm Introduction

Alarm:

alarm self-checking page auto pop-up, see the following picture.

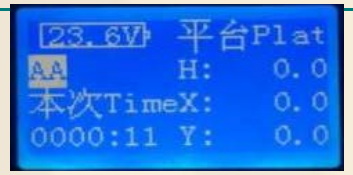
press "D"(horn key) back to homepage, display alarm codes.When multiple fault occur, display the highest priority one in hompage, others display in alarm page.

Main fault alarm code and description

01 system initialization fault	38 internal battery fault alarm	58 break coil short-circuit fault	65 oil pump fault
02 system communication fault	39 current fault alarm	59 forward coil open-circuit fault	66 stroboflash fault
03 invalid setting	40 battery temperature alarm	5A reverse coil open-circuit fault	68 low voltage fault
0A PCU overload alarm	42 platform let turn switch ON at power-up message	5B lift up coil open-circuit fault	80 over 80% load warning
12 chassis switch on at power-up fault	43 platform right turn switch ON at power-up message	5C lift down coil open-circuit fault	90 over 90% load warning
18 pothole guard fault	46 platform joystick enable swithc ON at power-up message	5D right turn coil open-circuit fault	99 over 99% load warning
31 pressure sensor 01 fault	47 platform joystick enable swithch pushed at power-up message	5E left turn coil open-circuit fault	A1 over high limit drive limit
32 angle sensor 01 fau	52 forward coil short-circuit fault	5F break coil open-circuit fault	A2 tile pothole drive limit
33 level sensor fault	53 reverse coil short-circuit fault	60 motor enable fault	LL tilt fault
34 pressure sensor 02 fault	54 lift up coil short-circuit fault	61 alarm coil fault	C1 sbusection fal
35 angle sensor 02 fault	55 lift down coil short-circuit fault	62 horn fault	D1 lift to limit
36 angle sensor 02 fault	56 right turn coil short-circuit fault	63 high speed coilfault	
37 power fault alarm	57 left turn coil short-circuit fault	64 motor enable 2 fault	

Debugging— Setting & Calibration (2-1)

- S87 operation steps : ---------- power on

NO	Operation	Operating Steps	Notice
1	Enter homepage/alarm page		
2	Press xxxx button for 1 second and release	Enter password page, drive and lift/fall indicators keep flashing	Keep pressing , then action invalid.
3	Input password	xxxx (Press “B、A “to adjust speed)	
4	Press "H" (enable key)	Enter parameter in adjustment page	
5	Double click "H "(enable key) twice within 1 second	Back to homepage	

Debugging— Setting & Calibration (2-2)

General debugging operation —— both drive and lift/fall indicators flash indicates vehicle is in debugging mode.

only lift/fall or drive indicators keep flashing indicates normal operation mode.

NO	Operation	Operating Steps	Notice
1	Selec "F" left turn	Selec up menu	Menu and option display alternatively
2	Select "G" right turn	Select down menu	
3	Click "H" enable key (once in 1 second)	Enter/exit option	Selected menu or option is highlighted
4	Click and hold H"enable key" for more than 1 second	Save parameter	Every page can be saved
5	Double click "H" enable key (twce in 1 second)	Back to previous page	
6	Press "D" horn to switch mode	Enter normal operation mode, drive or lift/fall indicator falsh.	
7	Re-press "D" horn to switch mode	Back to debugging mode, drive & lift/fall indicators keep flashing.	

Note: Check whether paramerer is appropriate when operate scissor lift after parameter saved.
Press "horn"----- drive or lift/fall indicator flashes, enter normal operation mode.
Re-pess "horn"-----back to parameter debugging mode, drive & lift/fall indicators keep flashing.

Debugging—Speed Adjustment (3-1)

- —. Enter scissor lift debugging mode, parameters can be revised according to actual need.
- speed adjustment----- select "0 speed set". If fail to select, press joystick "F/G" to select.
- when revise,click joystick left(F)/right(G) once, parameter decrease/increase 1; double click, parameter decrease/increase 10. Click and hold joystick left button(F), parameter keep decreasing; Click and hold joystick right button(G), parameter keep increasing.

NO	Operation	Operating Steps	Notice
1	Press F/G	Select “0 speed set” menu	
2	Click joystick H "enable key"	Enter "unfold speed" option, “01unfold speed: 49” is hightlighted	
3	Click joystick H "enable key"	Enter speed revise mode. “49" is highlighted	
4	Click "left turn -" or "right turn +"	Revise percentage	
5	Click joystick H "enable key"	Exit revise, “01 unfold speed: XXXX” is highlighted	
6	Press F/G	Select the next option (02 low speed) or the last option (06 unfold steering)	

Debugging—Speed Adjustment (3-2)

NO	Operation	Operating Steps	Notice
7	Press and hold H "enable key"	Enter save page, display "save done" after saving.Then back to previous page automatically.	All speed parameters (01-06 option) can be adjusted and saved together.
8	Double click H "enable key"	Back to previous page --- debugging homepage.	
	Note: every option must be conducted by the above method.		
	02 Low speed	Set up "low speed drive speed" percentage	
	03 Lift speed	Set up "lift speed" percentage	
	04 High speed	Set up "high speed drive speed" percentage	
	05 Steering speed	Set up "steering speed" percentage	
	06 Unfold steering speed	Set up "unfold steering speed " percentage	

- Note: Check whether paramerer is appropriate when operate scissor lift after parameter saved.
- Press "horn"----- drive or lift/fall indicator flashes, enter normal operation mode.
- Re-pess "horn"-----back to parameter debugging mode, drive & lift/fall indicators keep flashing.

Debugging—Functions (4-1)

- 2) **Functions Modify** ---- Select "**1车型配置Type**" .If fail to select, press joystick "F/G" to select

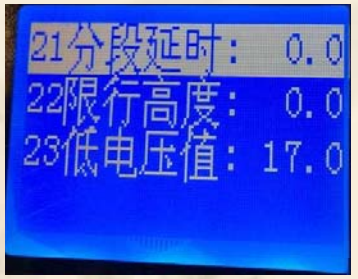
NO	Operation	Operating Steps	Notice
1	Press **F/G**	Select "1车型配置 Type"	
2	Click joystick "**H**" enable key	Enter setting select option, "11称重功能:无" is highlighted.	
3	Click joystick "**H**" enable key	Enter vehicle type revise, "无" is highlighted.	
4	Press **F/G**	Select "有无称重功能" of vehicle according to actual state.	
5	Click joystick "**H**" enable key	Exit revise, "11称重 xxxx" is highlighted.	
6	Press **F/G**	Select the next option (12 height function) or the last option (height Select).	

Debugging—Setting (4-2)

NO	Operation	Operating Steps	Notice
7	Press and hold H “enable key	Enter save page, display "save done" after saving.Then back to previous page automatically.	
8	Double click H “enable key	Back to previous page ---debugging homepage.	
		The following revise step is the same as vehicle type revise.	
	15 Subsection height	Height of hand clamping prevention function setting	 Height sensor and weight sensor must be installed to make load detection system take effect.
	16 Pothole height	Pothole baffle plate height when put down according to vehicle acctual setting	
	17 Maximum load	When load detection function is valid, set up the maximum weight of load limit. At least 50kg load difference is required between maximum load and weight auto calibration.	
	18 Weight auto calibration function	Whe load detection function is valid, set up load value of weight auto calibration.	

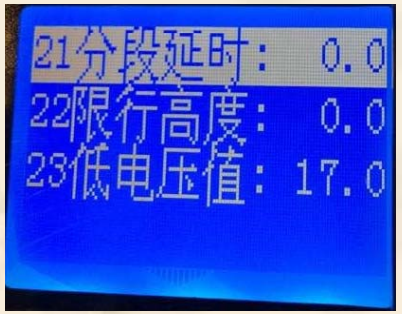
Debugging— Alarm Setting (5-1)

- —. Enter scissor lift debugging mode,
- parameters can be revised according to actual need.
- alarm set up---- select "2 报警配置Alarm". If fail to select, press joystick "F/G" to select.

NO	Operation	Operating Steps	Notice
1	Press F/G	Select “2报警配置Alarm”	
2	Click joystick H “enable key	Enter alarm revise, “21分段延时：0.0” is highlighted	Set up pause time for hand clamping prevention function
3	Click joystick H “enable key	Enter delay time revise, “0.0” is highlighted	
4	Click "left turn -" or "right turn +"	Revise delay time according to actual need	
5	Click joystick H “enable key	Exit revise, “21分段延时：0.0” is highlighted	
6	Press F/G	Select the next option (22 height restriction) or the last option (23 low voltage value).	

Debugging— Alarm Setting (5-2)

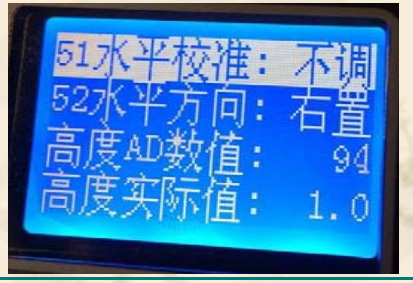
NO	Operation	Operating Steps	Notice
7	Press and hold “H “enable key	Enter save page, display "save done" after saving.Then back to previous page automatically.	All speed adjustment (11-17 option) can be adjusted and saved together.
8	Double click “H “enable key	Back to previous page ---debugging homepage.	
	The following revise method is the same as the above revise method.		
	22 Height limit	Set up height limit according to actual need	
	23 Low voltage value	Set up battery voltage alarm value	



- Note: Check whether paramerer is appropriate when operate scissor lift after parameter saved.
- Press "horn"----- drive or lift/fall indicator flashes, enter normal operation mode.
- Re-pess "horn"-----back to parameter debugging mode, drive & lift/fall indicators keep flashing.

Debugging—Calibration (6-1)

- —. Enter scissor lift debugging mode,parameters can be revised according to actual need.
- 1) Calibration---select "3标定Setup". If fail to select, press joystick "F/G" to select.
-

NO	Operation	Operating Steps	Notice
1	Press F/G	Select "3标定Setup"	
2	Click joystick H "enable key	Enter horizon calibration adjustment option, "51水平校准: 不调" is highlighted	
3	Click joystick H "enable key	Enter speed revise, "不调" is highlighted	
4	Click "left turn -" or "right turn +"	Revise calibration level according to actual need	
5	Click joystick H "enable key	Exit revise, "51水平校准: xxxx" is highlighted	
6	Press F/G	Select the next option (52 horizon direction)	

Debugging—Calibration（6-2）

NO	Operation	Operating Steps	Note
7	Press and hold H “enable key	Enter save page, display "save done" after saving.Then back to previous page automatically	
8	Double click H “enable key	Back to previous page --- debugging homepage	
	The following revise method is the same as the above revise method.		
	52 Horizon direction	The default forward direction is vehicle 's driving direction. Select directions acccording to actual installation direction.	
	If weight auto calibration function has been set up, the following 53 and 54 steps are unnecessary.		
	53 Minimum height	Calibrate minimum AD value when vehicle fall to minimum height. Double click left/right turn, assign current height AD value to minimum height AD value.	If vehicle fail to lift to maximum height, click right turn button to increase AD value and save, then recalibrate.
	54 Maximum height	Double click left/right turn, assign current height AD value to maximum height AD value when vehicle lift to maximum height.	

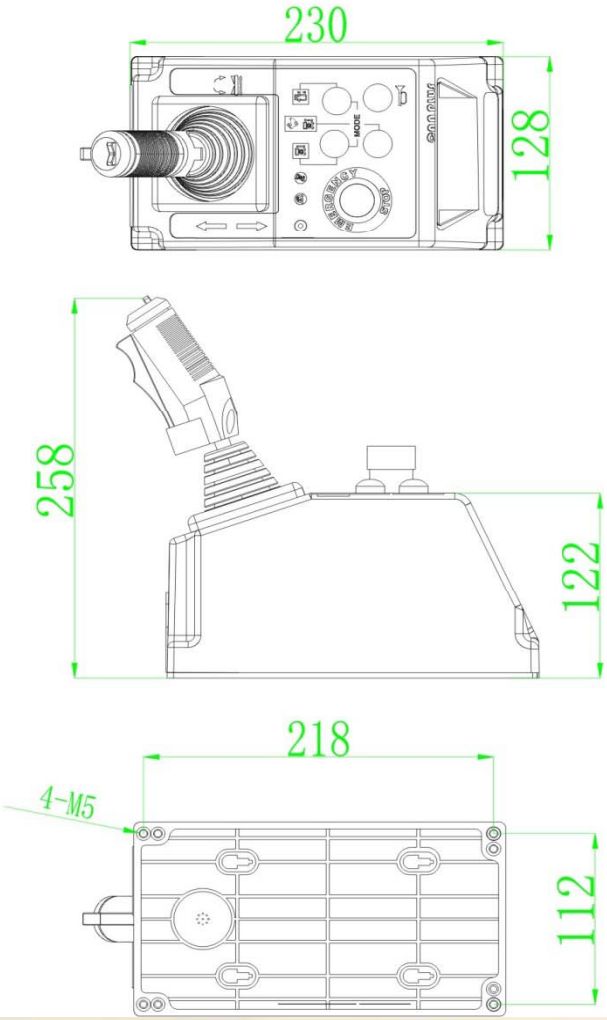
Debugging—Enforcing function

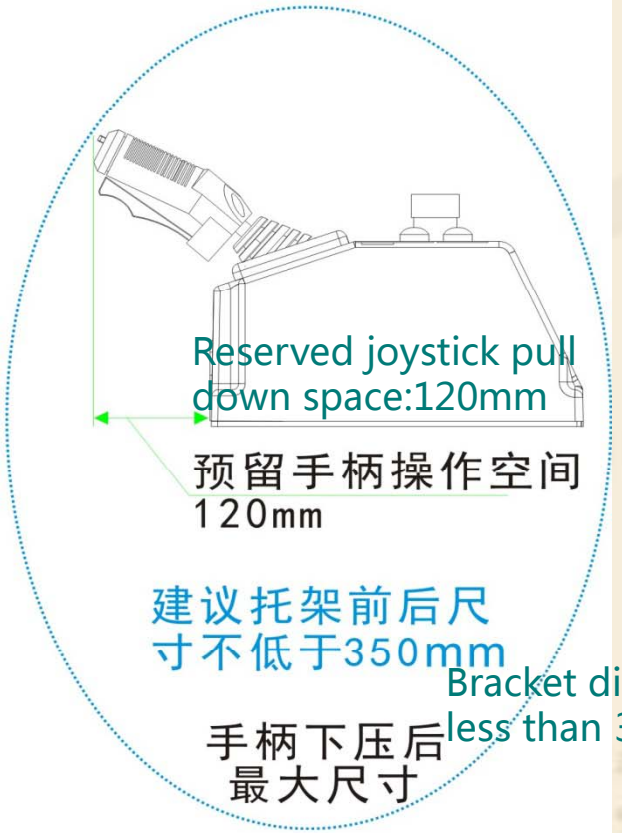
- Enforcing Function :
- All safety restriction functions are cancealed bunder this mode.
- Only drive, lift/fall and steering operation are conductable under this mode.
- Attention: this function is for maitenance and debugging usage only.

NO	Operation	Operating Steps	Note
1	Press Emergency button	Vehicle power off	
2	Press xxxx and release emergency stop, vehicle power on		
3	Release xxxx after buzzer keep beeping.	Green light flash once every 2 seconds, buzzer beep once every 2 seconds, this state continues.	If buzzer fail to beep , then system fail to enter enforcing mode. Repeat step 1-3.
4	Press emergency stop,then restart system	Canceal enforcing function,vehicle enter common operation mode.	

System Installation—PCU (1)

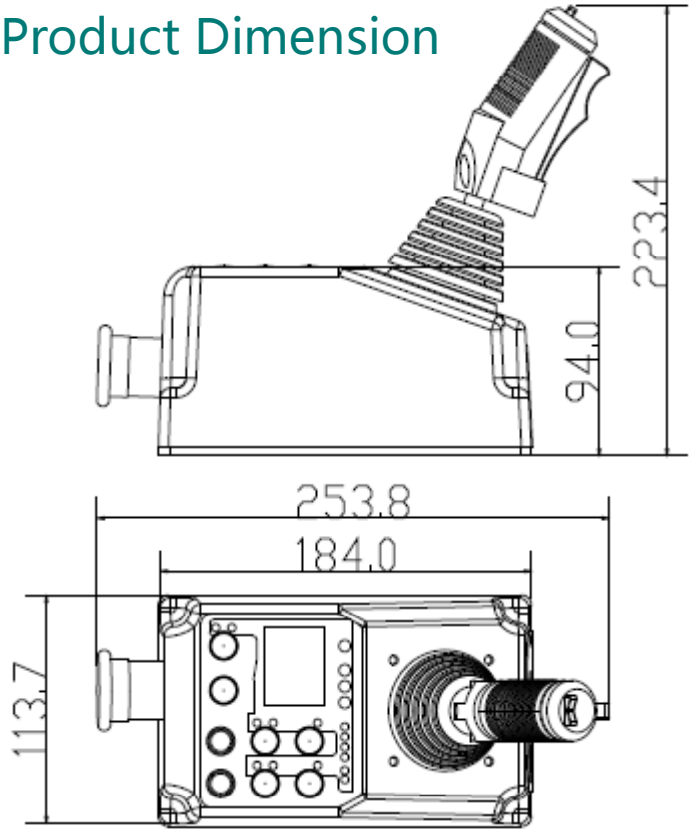
PCU CAN-MC8606

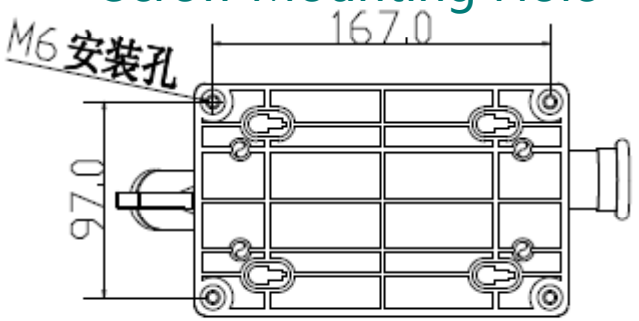




System Installation—PCU(2)

产品尺寸 MC-8706	安装尺寸 Installation Dimension
Product Dimension	Screw Mounting Hole
注：默认尺寸为MM Unit:millimetre	

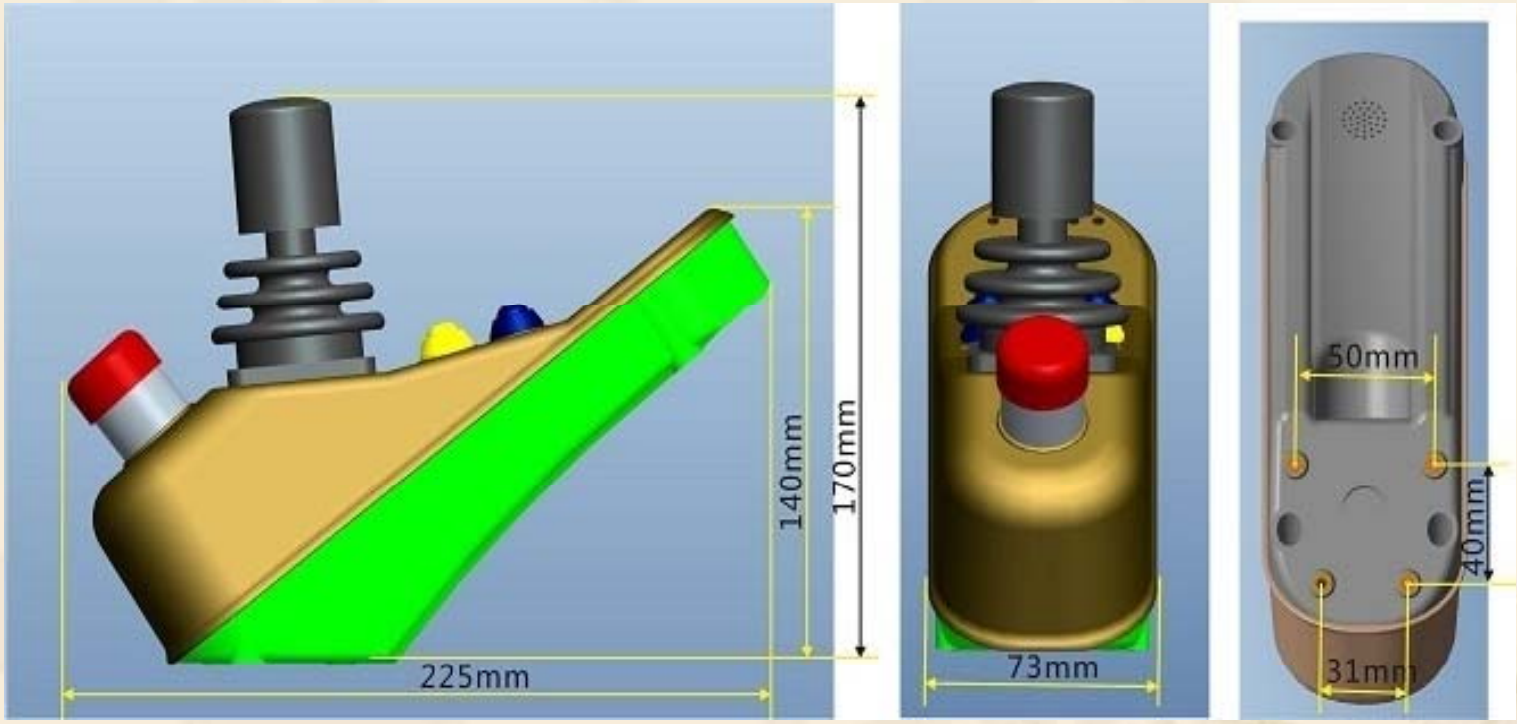




System Installation—PCU(3)

PCU Installation Dimension

Product：CAN-MPC8506



System Installation—ECU(4)

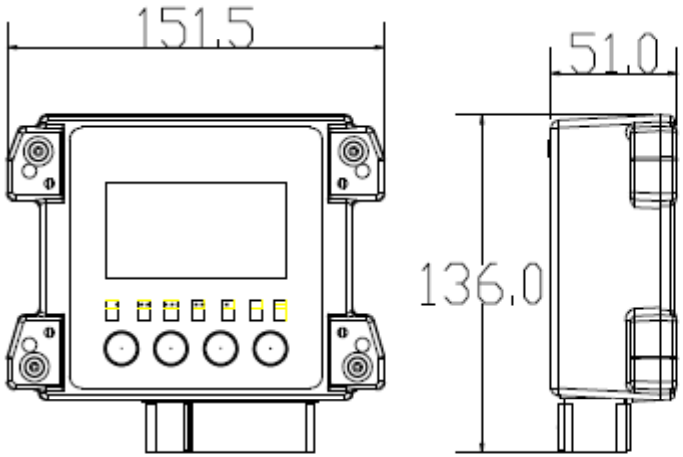
ECU Installation Dimension

Product：CAN-MC8808

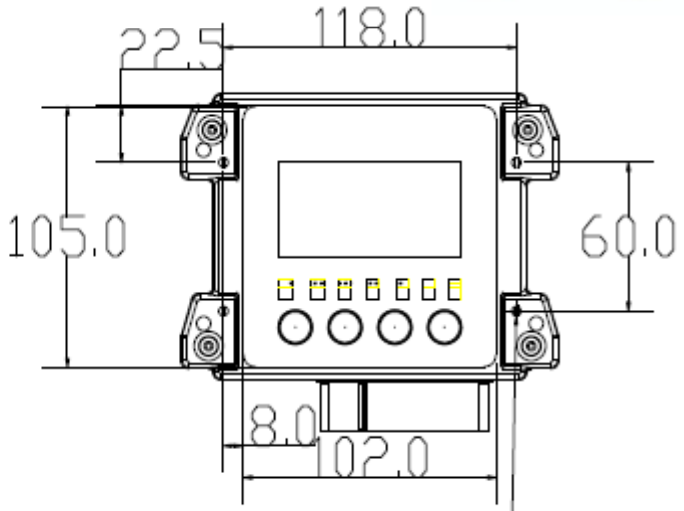
System Installation—ECU(5)

产品尺寸 Product Dimension

MC-8708



安装尺寸 Installation Dimension



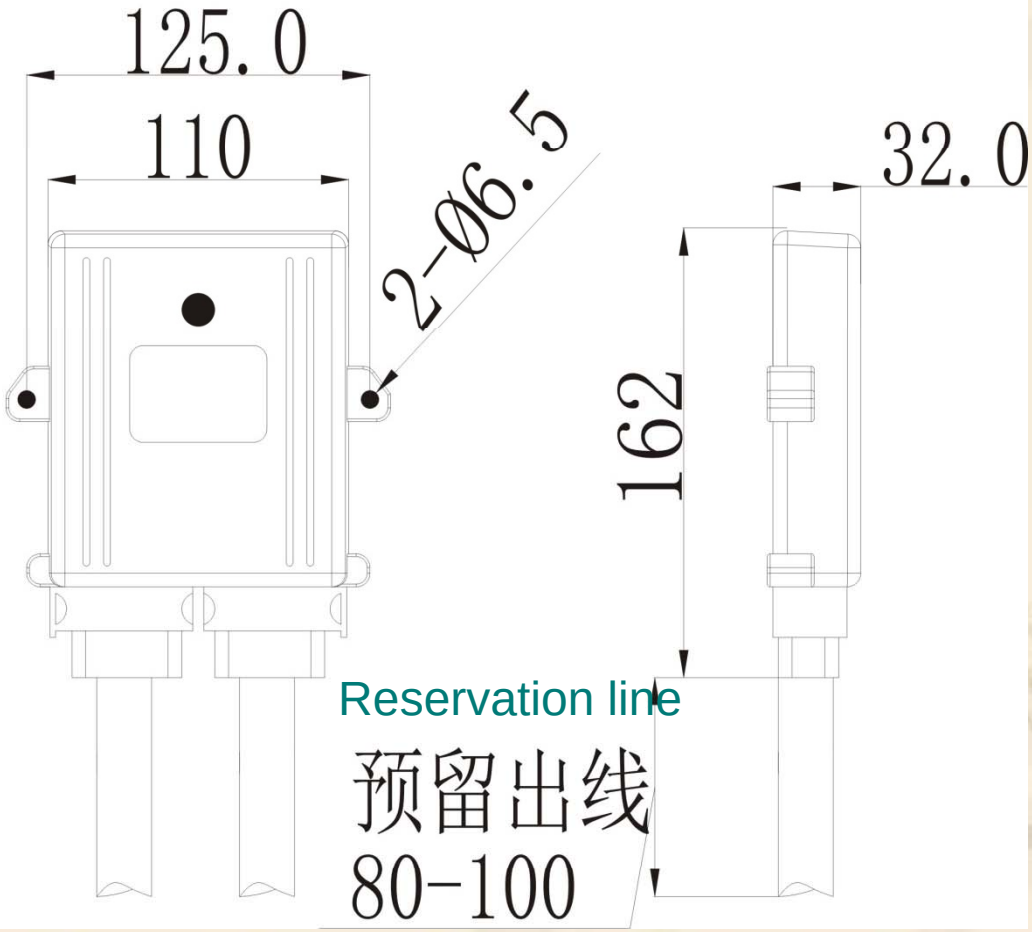
M5螺丝安装孔
Screw Mounting Hole

注：默认尺寸为MM Unit:millimetre

System Installation—ECU(6)

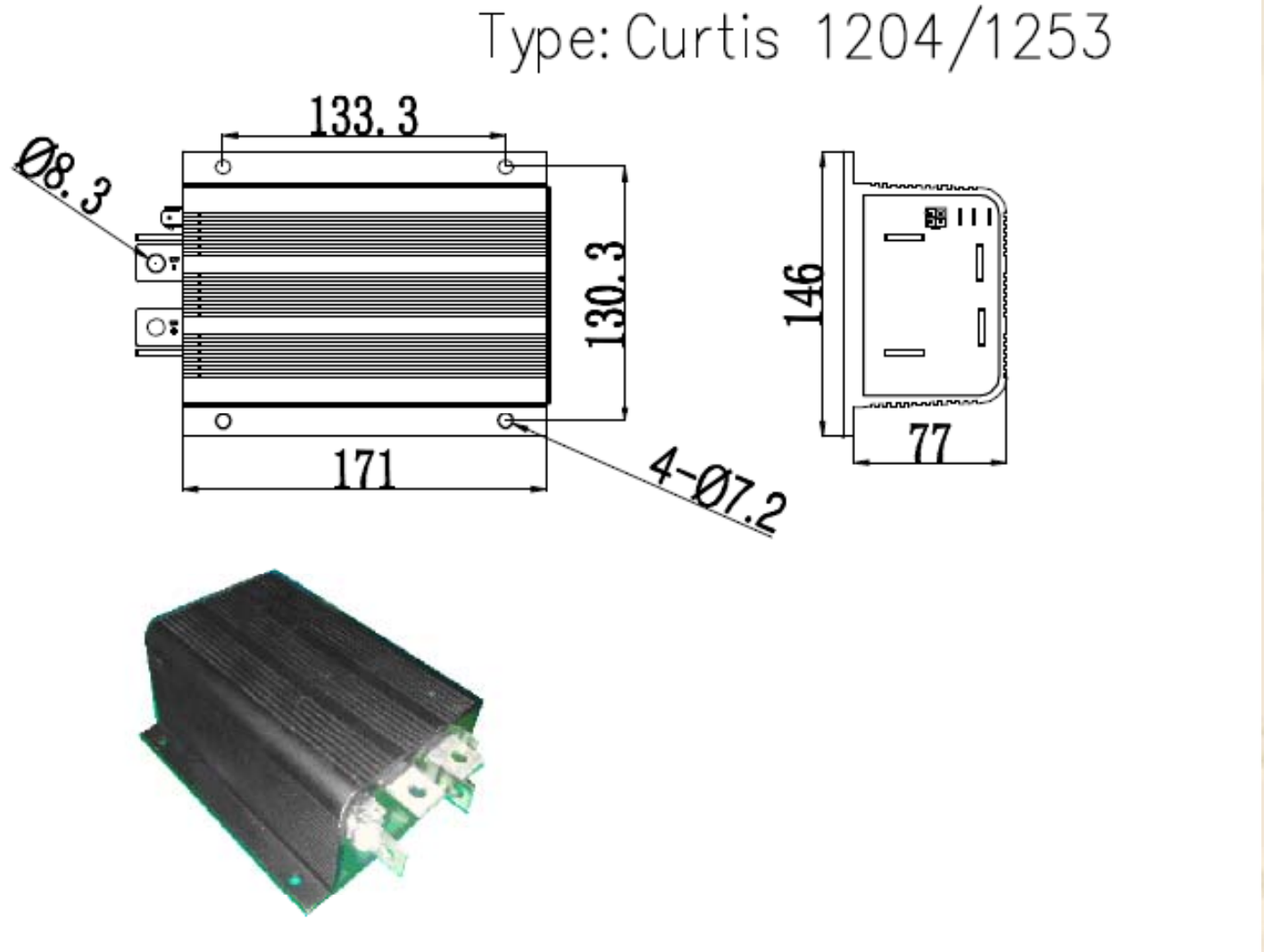
ECU Installation Dimension

CAN- MC8608C



System Installation—Driver(7)

Driver Installation Dimension



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