Modbus Master Interface Set up on cc200 Touch Screen Engineering Manual

System Rev 18.6.1-135 Modbus Displayed Rev 7.4 Compatible with cc200 Rev : 18.6.0-53 and beyond

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CC200 Modbus New Features : cc200 Rev : 18.6.1-106

MODBUS Rev 7.1 (Zone Offset changed from 20 to 25 to enable more modifications) (Previous Rev 6)

MODBUS Master –Dakin: Register Off set by 1
Modbus Master Mitsubishi MelcoBEMS MINI Added
Modbus - Read Relays Reg 33000
Modbus - Ability to run Modbus Master & Slave at the same time
Modbus – AV Remote Access Control (DLL for John Corbin -4/5 Queen St)
Modbus DLL FOR Token Ring Sharing - Compass House
MODBUS Salve: Fault tolerant (Software Watchdog) If comms lost after 1 min close & re-opens port
MODBUS Master & Slave: Ability to adjust Parity, databits and Stop Bits
Modbus Monitor – Selectable Running in Background (Daedalus)
Modbus Master Token Ring Error Correction Improved
18.6.01.67 (Modbus Master Correct Reading 03 Results)
18.6.01.106 (Modbus error checking Added: Close Port 60 Sec & Watchdog Reset after 1hr)



1.1 Access Engineering Menu







1.2 Select Modbus Master Module



Intelligent Control Systems

1.3 Enter the number of register required:

Modbus Master	
Setup Registers	
Monitor Create Registers	<u>*</u>

Step: 2

a) Enter the number of register required:

(Saves having to press NEW and awaiting for system to compile data each time) b) Select Set Up



1.4 Modbus Setup

Overview:				
Type:	RTU (Rs485) or TCPIP			
	RTU Port (Remote Terminal Unit)			
ID :	Set to 1			
1	Console ID Console number : As this console will be the Modus Master , the ID is set to 1			
CRC :	Ask if required for client's modbus			
	CRC Enable Included crc (cyclic redundancy check)			
	in the transmissions			
Port:	Use 0 for USB			
	Assign which port on the console used to link with the BMS			
	Typically assigned to 0 = USB Port			
Data Bits :	Option 7, 8(Default) , 9			
Parity:	None(Default) , ODD, Even, Mark, Space.			
Stop Bits:	One (Default) 2, 1.5			
	'			

Modbus Setup

Туре	RTU Enable
Id	
CRC	
Com Port	
Data Bits	Bits_8(default)
Parity	None(default)
Stop Bits	One(default)
Rev 1.0.6179.25398	

Win CE6

If USB-RS485 Adaptor fitted, use Comm Port 0 If RS232-RS485 Adaptor fitted, use Comm Port 1

Win CE7 (up t0 2019)

If USB-RS485 Adaptor fitted, use Comm Port 6 If RS232-RS485 Adaptor fitted, use Comm Port 1

Win CE7 (up t0 2020)

If USB-RS485 Adaptor fitted, use Comm Port 0 If USB-RS485 Adaptor fitted, use Comm Port 5



1.5 Modbus Port (2 x USB-RS485 Ports attached)



Win CE6

If USB-RS485 Adaptor fitted, use Comm Port 0 If RS232-RS485 Adaptor fitted, use Comm Port 1

Win CE7 (up t0 2019)

If USB-RS485 Adaptor fitted, use Comm Port 6 If RS232-RS485 Adaptor fitted, use Comm Port 1

Win CE7 (up t0 2020)

If USB-RS485 Adaptor fitted, use Comm Port 0 If USB-RS485 Adaptor fitted, use Comm Port 5

Steps to check the port Number

- 1. Both USB need to be plug in , then the cc200 will assign the port
- 2. Press START Icon(Hidden at the bottom left of screen) (Use flat head to trigger display)
- 3. Select : Run
- 4. Enter "Regedit"
- 5. Select: HKEY_LOCAL_MACHINE
- 6. Select: Drivers
- 7. Select: Active
- 8. Go to the last two files e.g. 78 and 79



76	Name	Data
77	設 Hnd	B1254F64 (-1322954908)
- 28	ab Name	'COMO:"
	abKey	Drivers\USB\ClientDrivers\FTDI_DEVICE
Console Console Fiters Fiters ProcGroup_0002 ProcGroup_0003 RegisteredDevice SDCARD	PullName SerialNumber Description ChipType UsbSpeed WendorId WProductId	COMU "AK04OV38" "FT232R USB UART" "FT232R" "Full-Speed" 00000403 (1027) 000006001 (24577)

Example: Active Diver # 78 Look for FTDI



Example: Active Diver # 79 Look for FTDI



2.1 Setup Modbus New Registries

Reg Idx	g <i>isters</i> Label	Data	Units	Err	Id	FC	Addr	Cm	Val	En
						Ne	w/			
									2	

Select New Module



Example



2.2 Setup Modbus Registries

Slave Address	1 .	Device	Procon Mod IP50 🗨
Function Code	06 💌	Parameter	Mode 💌
Address	5 🕂	Zone	Zone 8
Compare	< 🗸		
FCU Mode Ht Delay (Min) 180 🚊		
Enable	2		
Label			
Units		•	
Cours.		cal	

Slave Address:	Check with Slave unit manufacture
Function Code :	6 = Write
Address:	Register Address
`	



Example Layout



Shenfield Mill Mitsubishi MODBUS setup Example ON-OFF

Slave Address 1 Function Code 06 Address 9 Address 9 Compare Image: Compare Delay FCU Ht (Min) 180 Enable Image: Compare Label FCU1-220 Units ON/OFF	Device Procon Mod IPS() Parameter Im_Off) Zone Imode IPS()	Device: Procon Mod IP or MelcoBEMS (Mitsubishi Interface kit) Parameter ON / OFF Zone The Zone number where FCU is fitted
Slave Address:1 (FCU Group address)Function Code :6 (Write Command)Address:9 (Register Address for ON /CCompare:n/aDelay FCU Ht-min180 : (3 Hr Delay) (Max settingEnable✓ Enable this MODBUS striLabelFCU 1 – Z20 (Just a label so enginUnitsON/OFF(Just a label so engin		Check with Slave unit manufacture DFF control for Procon Mod IP (Mitsubishi) g is 333min) To avoid Heating set value to 400 ufh after 180 min , then switch ON FCU ing to be output engineer will know which FCU & ZONE) heer will know it's purpose)



Shenfield Mill Mitsubishi MODBUS setup Example MODE

Register Edit			
Slave Address	1	Device	Procon Mod IP50
Function Code	06	Parameter	Mode
Address	6	Zone	Zone 20
Compare	<		
Delay FCU Ht (Min)	180		
Enable			
Label	FCU1-Z20]	
Units	Mode Cool		
Saye	Cancel		

	Procon Mod IP or MolcoPEMS	
I Device.	/ Mitaukiaki lataufa as kit)	
I	(MItsubishi Interface Kit)	
Parameter	Mode	
I Zone	The Zone number where FCU is fitted	
I		, i

Slave Address: Function Code :	1 (FCU Group address) 6 (Write Command)	Check with Slave unit manufacture
Address:	6 (Register Address for MODE co	ontrol for Procon Mod IP (Mitsubishi)
Compare:	n/a	
Delay FCU Ht-min	180 : (3 Hr Delay) (Max setting is	333min) To avoid Heating set value to 400
	If Heating SP not achieve by ufh	after 180 min , then witch FCU MODE to Heating
Enable	Enable this MODBUS string	to be output
Label	FCU 1 – Z20 (Just a label so eng	ineer will know which FCU & ZONE)
Units	MODE(Just a label so engineer w	<i>v</i> ill know it's purpose)



Shenfield Mill Mitsubishi MODBUS setup Example SP

Register Edit			
Slave Address	15	Device	Procon Mod IP50
Function Code	06	Parameter	Set_Point
Address	5	Zone	Zone 4
Compare	<		
	0		
Enable			
Label	FCU15-Z4		
Units	SP		
Save	Can	cel .	

Device:	Procon Mod IP or MelcoBEMS (Mitsubishi Interface kit)
Parameter	Set Point
I Zone	The Zone number where FCU is fitted
I L	

Slave Address: Function Code : Address: Compare:	 15 (FCU Group address) 06 (Write Command) 5 (Register Address for SP con/a n/a (Value has no function) 	Check with Slave unit manufacture	
Enable Label Units	 ✓ Enable this MODBUS stri FCU 5 – Z24 (Just a label so SP(Just a label so engineer w 	ing to be output engineer will know which FCU & ZONE) /ill know it's purpose)	



Shenfield Mill Mitsubishi MODBUS setup Example Fan Speed

Slave Address	15	Device	Procon Mod IP5(
Function Code	06	Parameter	Fan_speed
Address	7	Zone	Zone 4
Compare	<		
	0		
Enable			
Label	FCU15-Z4		
Units	SPEED		
Save		Cancel	

Device:	Procon Mod IP or MelcoBEMS (Mitsubishi Interface kit)
Parameter	Fan Speed
I Zone	The Zone number where FCU is fitted

Slave Address: Function Code : Address: Compare:	15 (FCU Group address) 06 (Write Command) 7 (Register Address for Fan Sj n/a n/a (Value has no function)	Check with Slave unit manufacture peed control for Procon Mod IP (Mitsubishi)
Enable Label Units	 ✓ Enable this MODBUS strip FCU 5 – Z24 (Just a label so e SPEED (Just a label so engine 	ng to be output engineer will know which FCU & ZONE) eer will know it's purpose)



Tower Walk **Fujitsu** MODBUS setup Example **ON-OFF**

Kegister Lont Slave Address Function Code Address Compare Value Enable Label Units	1 06 0 0 0 0 0 0 0 0 0 0 0 0 0	Device Parameter Zone	IntersisBoxFJ_RC_MBS-1	Device: Parameter Zone	IntesisBox_FJ-RC-MBS-1 (Fujitsu Interface kit ON / OFF The Zone number where FCU is fitted
Save	Cancel				





Tower Walk **Fujitsu** MODBUS setup Example MODE

Register Edit Slave Address Function Code Address Compare		Device Parameter Zone	IntersisBoxFJ_RC_MBS-1	Device: Parameter Zone	IntesisBox_FJ-RC-MBS-1 (<u>Fujitsu</u> Interface kit) Mode The Zone number where FCU is fitted
Enable Label	FCU1-25				
Save	Mode <u>P</u> Cance		9 2		





Tower Walk **Fujitsu** MODBUS setup Example SP

Register Edit Slave Address Function Code Address Compare Value Enable Label Units	1	Device Parameter Zone	[IntersisBoxF [AC_SP [Zone 5	J.RC./MBS-1	Device: Parameter Zone	IntesisBox_FJ-RC-MBS-1 (Fujitsu Interface kit)) Set Point The Zone number where FCU is fitted
Save	Cancel			9 2		





Tower Walk Fujitsu MODBUS setup Example Fan Speed



Slave Address: Function Code : Address: Compare:	1 (FCU Group address) 06 (Write Command) 2 (Register Address for Fan n/a n/a (Value has no function)	Check with Slave unit manufacture Speed control for IntesisBox_FJ-RC-MBS-1
Enable	✓ Enable this MODBUS s	tring to be output
Label	FCU 1 – Z5 (Just a label so	engineer will know which FCU & ZONE)
Units	FAN SPEED (Just a label so	o engineer will know it's purpose)



Charlotte Street **Dakin** MODBUS setup Example SP

Slave Address	1		Device	RTD-10 - D	Jakin	
Function Code	06		Parameter	AC_SP		
Register	1		Zone	Zone 8		
Compare	< -					
Value	0					
Enable						
Label	FCU1-Z8					
Units	SP					
				State State		
		Consol			0	-



Slave Address: Function Code :	1 (FCU Group address) 06 (Write Command)	Check with Slave unit manufacture	
Address: Compare: Valve	1(Register Address for SP n/a n/a (Value has no function)	control for RTD-10 (Dakin Interface kit)	
Enable Label Units	 ✓ Enable this MODBUS FCU 1 – Z8 (Just a label so SP(Just a label so enginee 	string to be output o engineer will know which FCU & ZONE) r will know it's purpose)	



Charlotte Street **Dakin** MODBUS setup Example Fan Speed

Slave Address Function Code Register Compare Value Enable Label		Device Parameter Zone	RTD-10 - Dakin	Device: Parameter Zone	RTD-10 (Dakin Interface kit) Fan Speed The Zone number where FCU is fitted
Save	Can	cel			

Slave Address:	1 (FCU Group address)	Check with Slave unit manufacture
Function Code :	06 (Write Command)	
Address:	2 (Register Address for Fan Sp	beed control for RTD-10 (Dakin Interface kit)
Compare:	n/a	
Value	n/a (Value has no function)	
Enable	 Enable this MODBUS strin 	g to be output
Label	FCU 1 – Z8 (Just a label so en	gineer will know which FCU & ZONE)
Units	Fan Speed (Just a label so eng	gineer will know it's purpose)



Charlotte Street **Dakin** MODBUS setup Example MODE

Slave Address	4	Device	RTD-10 - Dakin	
Function Code	06	Parameter	AC_Mode	
Register	3	Zone	Zone 9	
Compare				
Delay FCU Ht Min	30			
Enable				
Label	FCU4-Z9			
Units	MODE			
				C



Slave Address:	1 (FCU Group address)	Check with Slave unit manufacture
Function Code :	6 (Write Command)	
Address:	3 (Register Address for MO	DE control for RTD-10 (Dakin Interface kit))
Compare:	n/a	
Delay FCU Ht-min	30 : If Heating SP not achiev	e by ufh after 30 min , then witch FCU MODE to Heating
	(Max setting is 333min) To av	void Heating set value to 400
Enable	✓ Enable this MODBUS st	tring to be output
Label	FCU 1 – Z8 (Just a label so	engineer will know which FCU & ZONE)
Units	MODE(Just a label so engin	eer will know it's purpose)



Charlotte Street **Dakin** MODBUS setup Example On/Off

Register Edit			•
Slave Address	4	Device	RTD-10 - Dakin
Function Code	06	Parameter	AC_On_Off
Register	5	Zone	Zone 9
Compare	<		
Delay-FCU Ht Min	30		
Enable			
Label	FCU4-29		
Units	ON/OFF		
Save		ancel	

Device:	RTD-10 (Dakin Interface kit)	· –
Parameter	On/Off	
Zone	The Zone number where FCU is fitted	
I		

Slave Address: Function Code :	4 (FCU Group address) 6 (Write Command)	Check with Slave unit manufacture
Address:	5 (Register Address for On/Off of	control for RTD-10 (Dakin Interface kit))
Compare:	n/a	
Delay FCU Ht-min	30 : If Heating SP not achieve by	/ ufh after 30 min , then witch FCU MODE to Heating
	(3 Hr Delay) (Max setting is 333r	min) To avoid Heating set value to 400
Enable	 Enable this MODBUS string 	to be output
Label	FCU 4 – Z9 (Just a label so eng	ineer will know which FCU & ZONE)
Units	ON/OFF (Just a label so engine	er will know it's purpose)
Function Code : Address: Compare: Delay FCU Ht-min Enable Label Units	 4 (FCO Group address) 6 (Write Command) 5 (Register Address for On/Off on/a 30 : If Heating SP not achieve by (3 Hr Delay) (Max setting is 333r ✓ Enable this MODBUS string FCU 4 – Z9 (Just a label so engine 	control for RTD-10 (Dakin Interface kit)) / ufh after 30 min , then witch FCU MODE to Heating min) To avoid Heating set value to 400 g to be output ineer will know which FCU & ZONE) er will know it's purpose)



Corn Mill Mitsubishi MODBUS (MelcoBEMS MINI) setup Example ON-OFF



Device:	MelcoBEMS MINI(Mitsubishi Interface kit)	
Parameter	ON / OFF	
Zone	The Zone number where FCU is fitted	

Slave Address: Function Code :	1 (FCU Group address) 6 (Write Command)	Check with Slave unit manufacture
Address:	40008 (Register Address for	ON /OFF control for MelcoBEMS MINI (Mitsubishi)
Compare:	n/a	
Value	0 : Delay FCU Ht-min	
	(Example: If Heating SP not achie	ve by ufh after 180 min , then witch FCU MODE to Heating)
1 1 1	(3 Hr Delay) (Max setting is 333mi	n) To avoid Heating set value to 400
Enable	\checkmark Enable this MODBUS st	ring to be output
Label	FCU 1 – Z16 (Just a label so	engineer will know which FCU & ZONE)
Units	ON/OFF(Just a label so engi	neer will know it's purpose)



Corn Mill Mitsubishi MODBUS (MelcoBEMS MINI) setup Example MODE

Register Edit					
Slave Address	1	De	vice	Procon Melco	BEMS_Mini_A1M
Function Code	06	Pa	rameter	Mode	
Register	40001	Zo	ne	Zone 16	
Compare	<				
Value	0				
Enable					
Label	FCU1-Z16				
Units	MODE				
Save		Cancel			9



Slave Address: Function Code :	1 (FCU Group address) 6 (Write Command)	Check with Slave unit manufacture
Address:	40001 (Register Address for	MODE control for MelcoBEMS MINI (Mitsubishi)
Compare:	n/a	
Value	0 : Delay FCU Ht-min	
	(Example: If Heating SP not achi (Max setting is 333min) To avoid I	eve by ufh after 180 min , then witch FCU MODE to Heating) Heating set value to 400
Enable	Enable this MODBUS s	tring to be output
Label	FCU 1 – Z16 (Just a label so	o engineer will know which FCU & ZONE)
Units	MODE(Just a label so engin	eer will know it's purpose)



Corn Mill Mitsubishi MODBUS (MelcoBEMS MINI) setup Example SP





Slave Address: Function Code : Address:	1 (FCU Group address) 06 (Write Command) 40002 (Register Address for SP	Check with Slave unit manufacture control for MelcoBEMS MINI (Mitsubishi)
Compare:	n/a n/a (Value has no function)	
Enable Label Units	✓ Enable this MODBUS string FCU 1 – Z16 (Just a label so en SP(Just a label so engineer will	g to be output igineer will know which FCU & ZONE) know it's purpose)



Corn Mill Mitsubishi MODBUS (MelcoBEMS MINI) setup Example Fan Speed

Slave Address	1	Device	Procon MelcoBEMS_Mini_A1M
Function Code	06	Parameter	Fan_Speed
Register	40003	Zone	Zone 16
Compare	<		
Value	Ó 📥		
Enable			
Label	FCU1-Z16		
Units	FAN SPEED		
Save	La	ncel	

Device:	MelcoBEMS MINI(Mitsubishi Interface kit)
Parameter	Fan Speed
Zone	The Zone number where FCU is fitted
I	

Slave Address: Function Code :	1 (FCU Group address) 06 (Write Command)	Check with Slave unit manufacture
Address: Compare:	40003 (Register Address for n/a n/a (Value has no function)	Fan Speed control for MelcoBEMS MINI (Mitsubishi)
Enable Label Units	✓ Enable this MODBUS st FCU 1 – Z16 (Just a label so SPEED (Just a label so engi	ring to be output engineer will know which FCU & ZONE) neer will know it's purpose)



3. 1 Multiple Master Setup using Token Ring - Overview

1 1 1	Modbus Rev 7.2					
1	Zip File Ref:Modbus Rev 18.06.01-59 - 1.0.6485.23063					
111	Modbus.dll					
	_Forms.DLL					
1	Compatible with cc200 Rev : 18.6.0-53 or later					
1	Note: Modbus.Dat must be delete if present on c200					
1	L'					
i i i	Master Token Passing					
1111	1. Each Master must have a unique Id (1,2,3). "0" is undefined					
1						
1	2. Device "1" boots with possession of the Token					
i						
	3. The Token is passed using the "Master Token Passing" Command					
	a. "Master Token Passing" command is setup as follows:					
	- Slave Address 0					
1	 Function Code 6 					
1	– Register 50					
1	 Value ID of the Master to which the Token is being passed. 					
1 1 1 1						
1	For Example, if the loken is being passed to Master Device with ID of "2" then the value is set to "2"					
1 1 1						
1111	b. The "Master Token Passing" command MUST be the LAST programmed register.					
1 1 1 1						
i	4. Two error correction mechanisms are in place to recover token passing in the event of a failure.					
	ComeraahContro	o/s				
	Intelligent Control Sys	stems				

3.2 Multiple Master Setup using Token Ring – Error Correction Mechanisms

5.	Error correcti	on mechanism A: If a Master fails to pass the token.
	a.	Each Master monitors the duration of the preceding Master's Modbus transaction.
	This is labelle	d the "Monitored Duration" = Tick (Qty of Transmissions).
	b.	A valid communication is required in order to establish this duration.
	The duration	is recalculated after every transaction.
	c. then the Mas	If the token from the preceding Master is not received after a "Failed Token passing Timeout," ter will take control of the token.
	d.	The "Failed Token passing Timeout" is set as follows
•	Failed Token r	passing Timeout = Monitored Duration + 20 seconds (e.g. 2 FCU = 8 Tx + Token 1Tx = 9) (9+20=29)
	P	The mechanism is limited to a single Master failure in a sequence. Recover is possible for the following:
	i. 123x467	
	ii. 1 x 3 x 4 x 7	,
	Recover is not	t possible for
	i. 12xx467	7
	ii. 1xxx4x7	7
6.	Error correcti	on mechanism B:
	If NO token p	assing has taken place for an extended period of time then each Master will attempt
	to regain con	trol of the token.
	a. This is a m	echanism to recover from the loss of token passing for an extended period of time (greater than 5 minutes)
	b.	Each Master has a different timeout.
	С.	The timeout is for a Mater is set by:
		Timeout = 5 minutes + Master Id*1 minutes
		Example: With Master ID set to 3
		Timeout = 5 + 3 *1
		= 8 minutes
	d.	The monitor for "loss of token" is reset each time token passing is detected.
Note if the last therefore the they delay wi	st Touch Screen token is lost) Il be always 6 m	Master Fails, Error correction mechanism B is always applied (Because it passes the token back to the start, and all the master Time Out will start , but since Master #1 will kick in the fastest at 360sec (5+1*1=6 Min) nin until the last master has been fixed.
		ComeraghContro

Intelligent Control Systems

3.4 Multiple Master Setup using Token Ring – Error Correction Image

Overview:

Err Normal : Monitor communications Errors E.g. Framing Error = RS485 Collisions

Tick=9 Relates to the previous Touch Screen Master Record the number of Tx (Transmissions) (e.g 2 FCU = 8 Tx + Token 1Tx = 9) Note Transmissions are very 1 Second



Max = 29

This take the Qty Tick (e.g 9) and add 20 seconds = 29 Seconds If the proceeding TS fails , this value is use as a time tout to restart the token from here.

Failsafe:

An absolute max time out beyond which a Master will re-enable acquire of the token. This is 5 min=300seconds + Master.Id * 60 (seconds). = 300+60 = 360 seconds (6 Min) Token starts again at master no 1 All following Masters will see the token being passed from #1 and resent their Failsafe to 0

Holder Identifies which Master currently holds the Token

Max Masters Display the total number of master in the system after one complete token ring operation

Open

If the comms port fails (e.g. from a Framing Error= Collision), the port resents it self and this will record the number of times the Port re=opens



3.5 Multiple Master Setup using Token Ring – Buttons





3.6 Multiple Master Setup using Token Ring – Sample Wiring





3.7 Multiple Master Setup using Token Ring – Master ID

Modbus Setup Type Id CRC	RTU Enable
Com Port	
Rev 1.0.6078.1	536

Each Master must have a unique Id (1,2,3...). "0" is undefined

Note:

- Device "1" boots with possession of the Token
- The Token is passed using the "Master Token Passing" Command

Note: Only One Master If Token Ring Not required set the ID to "0"



3.8 Multiple Master Setup using Token Ring – Last Register

Register Edit					I act Pagist	ЛК
Slave Address	0	Device	Generic		Last Negist	<u>CI</u>
Function Code	06					
Register	50					
Compare	<					
Value	2					
Enable						
Label						
Units						
		Carca				
Overview:						
The last Registe	er Must be	e set up a s follo	ow on each To	uch Screen Ma	aster	
Slave Addre	ess	0				
Function Co	ode	6				
Register		50				
Value		ID of the Mas	ter to which th	ie Token is beii	ng passed.	
		Note at last r	naster, set th	is value to 1,	so it returns to the start	
Device :		Generic				



4.1 Master & Slave (Port Settings)

Environment Aux Sensor Comms System Environment Aux Sensor Comms Installer Manual Zone Control Zone Selpoints Modulus Slave Archive Service History Zone Default T Modulus Master Zone Status Calibration Relay Config	Environment Aux Sensor Comms System Zone Control Installer Manual Modules Zone Setpoints Modus Slave Archive Zone Default T Modus Master Zone Status Relay Config Timer, Cycle Cuit	Overview: Master & Sa Example	alve can op cc200 M cc200 SI	perate at the laster Contro lave to BMS	same time Illing VRF – or AV system
Environment Aux Sensor Comms Installer Manual Zone Control Nodules Zone Setpoints Modules Service History Zone Default T Module Master Zone Status Calibration Quit Relay Config	Environment Aux Sensor Comms Installer Manual Zone Control IO Status, Emulation Modules Zone Setpoints Modbus Slave Archive Service History Zone Default T Modbus Master Zone Status Calibration Quit Relay Config Timar, Cycle Input Config	Engineering Configuration		Diagnostics	System
Zone Control Zone Setpoints Modbus Slave Archive Service History Zone Default T Modbus Master Quit Relay Config Timer, Cycle	Zone Control Zone Setponts Zone Default T Modbus Slave Archive Service History Zone Status Calibration Quit Relay Config Timer, Cycle Irput Config	Environment	Aux Sensor	Comms	Installer Manual
Zone Sepoints Modbus Slave Archive Service History Zone Default T Modbus Master Zone Status Calibration Quit	Zone Selpoints Modbus Slave Archive Service History Zone Default T Modbus Master Zone Status Calibration Quit Relay Config Times, Cycle	Zone Control		IO Status, Emulation	Modules
Zone Default T Modbus Master Zone Status Calibration Quit Relay Config	Zone Default T Modbus Master Zone Status Calibration Quit Relay Config Times, Cycle	Zone Setpoints	Modbus Slave	Archive	Service History
Calibration Quit Timer, Cycle	Calibration Quit Relay Config Timar, Cycle Jipput Config	Zone Default T	Modbus Master		Zone Status
Quit Relay Config Timer, Cycle	Quit Relay Config Timar, Cycle Input Config		and the second second		Calibration
Relay Config Timer, Cycle	Relay Config Times, Cycle Joput Config	the state of the s			Quit
Timer, Cycle	Trimar, Cycle Input Config	Relay Config			
	InputContrg	Timer, Cycle			

Comm Port 6

The cc200 Touch Screen will assign the next available port on the system when a USB-RS485 adaptor is attached. ie. Comm Port 6 . This used the driver FTDI

To check if the post assigned is port 6, Access: Start / Run Regedit / HKEY_LOCAL_MACHINE/ Drivers/Active (Check the last file e.g. no 53or 54 and see which comport has the FTDI file assigned



Ignore Error	
Err: Comms	
Data: 65024	
This anomaly is display when Mater and slave is in operation	
simultaneously. The system still operates correctly	



4.1 Hardware / Wiring

Modbus Interface Overview

Touch Screen HV2 (Housing Ver 2)



Communication: Sensor & I/O Network : BMS (Modbus) Interface:

RS485 Direct USB- RS485 Adaptor or RS232- RS485 Adaptor



4.2 Touch Screen – Wiring Detail





RS485 Port Direct



Technical Note: Set Toggle switch inside back of Unit to RS485 Toggle internal switch location : (Remove battery Cover)] Note TS Port 2 can be used for a) RS232 Port 2 or b) RS485 Port



Toggle Switch

ComeradhCon



Warning !!! Power off Unit before Disconnection USB Cable







5.1 Modbus Slave Setup

Modbus Setu	1p		
Type Id CRC Com Port Data Bits Parity Stop Bits	RTU Image: Constraint of the second of th		
Rev 1.0.6179.2	25398		
Overview: Type:	RTU (Rs485) or TCPIP Select: RTU Port (Remote Terminal Unit)		
ID :	Console ID Console number : As this console will be the Modus Master , the ID is set to 1 Set to 1		
CRC :	CRC Enable Included crc (cyclic redundancy check) in the transmissions Ask if required for client's Modbus Typically set to 0		
Port:	Assign which port on the console used to link with the BMS Use 0 for USB , Use 1 for RS232, Use 2 for RS485 If RS232-RS485 Adaptors supplied : Use 1 for RS232		
Data Bits : Parity: Stop Bits:	Option 7, 8(Default) , 9 None(Default) , ODD, Even, Mark, Space. One (Default) 2, 1.5		

