This document will guide you through setting up and commissioning the Veeder-Root TLS-350 (Automatic Tank Gauging System) MODBUS Device in the E2 controller.

Note that this device requires E2 firmware version 3.01 or higher.

STEP 1: Upload the description file to the E2 controller.

- 1. From UltraSite, connect to your E2 controller.
- 2. Right-click the E2 icon and select **Description File Upload**.
- 3. Browse to the location of the description file and click **Upload**.
- 4. After uploading, you will need to reboot the E2 controller.

450.000 858.000 50	
I FILE - Click Browse to select the file to upload	Browse
-	
J	

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STEP 2: Activate the license of the device.

- 5. From the E2 front panel (or via the Terminal Mode), press , 🖗 (System Configuration), and 🖲 (Licensing).
- 6. Press **F1** (ADD FEATURE) and enter your license key.

Activate Feature Enter License key to activate a Feature:
Enter License key to activate a Feature:
16 0
128 9
48 0
16 0
16 U 4 0
16 0 128 0 48 0

STEP 3: Terminate the RS485 communication cable.

- 7. Connect the DB-9 Pin Serial Communication Cable Plug (3)TXD + and (4)TXD as shown in *Figure 3*.
- 8. Ensure that communication polarity is reversed when connecting to the E2.



STEP 4: Configure the MODBUS serial port.

9. From the E2 front panel (or via Terminal Mode), select , 2, 3, 4 then toggle the **F2** key to C3: Serial tab and set up as shown.

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1: General	C2: Eng Units	C3: Serial	C4: TCP/IP	C5: Peer Netwrk
6:	C7: System	C8:	C9:	C0:
	Genera	al Setup: GENER	AL SERV	
Serial	Value			
COM1 Conne	ection: Serial			
COM1 Baud	: 115.2 Kba	aud		
COM2 Conne	ection: IONet			
COM2 Baud	: 9600 bau	d		
COM3 Conne	ection: Modem			
COM3 Baud	: 115.2 Kba	aud		
COM3 Moder	n Port: Internal	Modem		
COM3 Moder	n Type: CPC 33.6	K Internal		
COM3 Moder	n Init: ATS0=1S1	0=40E0V1&D2&Q5\	NØ%C 0&K 0&Y 0&W0	
COM3 Fax 1	Init : ATS0=1S1	0=40V1E0&D2&Q5\	NO&K 0%C 0&Y 0&W0	
COM3 DTMF	Dur : 100			
COM3 Pause	e Dur: 2			
COM4 Conne	ection: MODBUS-1			
COM4 Baud	: 9600 bau	d		
COM4 Data	Size: 8			
COM4 Parit	ty : None			
COM4 Stop	Bits: 1			
Secoll using 1	Novt/Prov Louc	Connection Tu	no for COMb	ż.
scrutt usting i	leac/liev keys	Connection Ty	pe rui com4	
F1. PREIL TAB	E2 NEXT TAR	E3- EDIT	ET- LOOK IID	E5: CANCEL

- COM4 Connection: MODBUS-1
- COM4 Baud: **9600 baud**
- COM4 Data Size: 8
- COM4 Parity: None
- COM4 Stop Bits: 1

STEP 5: Once the license is activated, add the device to the E2 controller.

- 10. Press (System Configuration), (Network Setup), (Connected I/O Boards & Controllers).
- 11. Press **F2** (NEXT TAB) to go to C4: Third Party tab. You should see the device in the list. Enter the number of devices to add and press the button to save your changes.

5-02-12 🌢 🦪 se Ctrl-X to	Select CX Tabs	CX-400 Unit 5 SETUP	<u>ل</u> اً FU	LL		10:28:27 *Alarm*
1: This Unit	C2: IO Network	C3: ECT	C4: Third I	Partu	C5:	Echelon
:6:	C7:	C8:	C9:		C0:	
	Num Net	work Ctrls: Net	Setup			
	Third Party Boar	d Type	Quantity	Max		
	#1 : TLS-	350	1	1		
Cohou 0 ho d	00 Enter desired	number of these	boards			
Enter o to i					F	5 - CONCEL
F1: PREV TA	B F2: NEXT TAB	F3: EDIT	<u> </u>	/	<u> </u>	

KEY POINTS:

- The FieldServer FS-B2510 is a Gateway Protocol Translator that enables data transfer between the E2 controller and the Veeder-Root TLS-350.
- RS485 Network Cable used -> (BELDEN 8641-24 AWG 2 Conductor Shielded Cable) or equivalent.

STEP 6: Commission the device.

- 12. Press 🐠 , 🖻 (System Configuration), 🖻 (Network Setup), 🖥 (Network Summary).
- 13. Press **F4** (COMMISSION) and select the MODBUS port that you will be assigning the device to and then select the MODBUS device address.

95-02-12 🍬 🍘 🔟		CX-400 Unit 5 Network Summary	ß	FULL	11:30:12 *ALARM*
Name	Туре	Network Ad	ddress	Rev	Status
E2 Unit05 TLS-350001	CX400 C-Store TLS-350	Etherne MODBUS-	et: 5 -1: 0	3.02F02 0.00	This Controller No Port
1: DELETE RCRD	F2: STATUS		F4: C	OMMISSION	N F5: SETUP
	Figure 6 -	Commissioning	g the L	Device	



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Once the MODBUS Physical Address is commissioned, this window will appear:

5 OZ 12 🔍 📢		Network Summary	FULL		*ALARM*			
		Unknown Device 11						
Name 	Туре	Notwork Addrocc		Status 				
E2 Unit05	CX400 C-St		3.02F02	This Con	troller			
117-320001	112-320		0.00	NO Port				
					1			
	Setting Phusi	ical Address for: Unkr	own Doui	co 11				
	seccing ruys	tear nutress for . Oliki	Iown Devi					
	Specifu Phusi	ical Address Of Control]	er					
		44						
	Haare	_11						
	MODBUS Device	e Address is set						
5 B								
				F2: I	CHNCEL			
г:		IS Develoal Address C	ammia	ionad				

After the MODBUS Port Address has been initiated, the Network Summary window will appear (*Figure 9*).

15-02-12 🔹 🤭 🎟		CX-400 Unit 5 Network Summary	A	FULL	11:43:19 *ALARM*
Name	Туре	Network Add	iress	Rev	Status
E2 Unit05 TLS-350001	CX400 C-Store TLS-350	Ethernet MODBUS	: 5 I: 11	3.02F02 0.00	This Controller Online
F1: DELETE RCRD	F2: STATUS		F4: C	OMMISSION	F5: SETUP
	Figure 9 -	Network Summ	ary S	Screen	

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Once the device is online, it will display the status screen as shown:

5-07-12 🔹 🧖 🔟	-+) CX-	400 Unit 5 TLS-350	لم FUI	L	15:19:10
Controller Name					
FLS-350001					
Tank1 Status	ß	Tank3	Status.	ß	
Tanki Unlume:	ព	Tank3	Unlume:	G	
Tank1 TC Volume:	ต์	Tank3	TC Unlume:	ĥ	
Tank1 Ullage:	6	Tank3	Ullage:	5	
Tank1 Height:	6	Tank3	Height:	5	
Tank1 Water:	6	Tank3	Water:	6	
Tank2 Status: Tank2 Volume: Tank2 TC Volume: Tank2 Ullage: Tank2 Vilage:	6 6 6				
Tank2 Water:	0				
ress enter for a list of	actions.				
FT: HHU F2: SCHED	ULES F3	: CIRCUITS	<u> </u>		SETUP
	Figure 1() <u>-</u> Status S	creen		
	igure re	- Status S			

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