Configuration Instructions TEC2-LOAD-1001 Rev. 1 September 2015

Loading Configuration from TEC2000 to TEC2 using DCMLink



BETTIS

Table of Contents

Section 1: Configuration Instructions Using DCMLink Software and B&B RS485 Probe

Section 1: Configuration Instructions Using DCMLink Software and B&B RS485 Probe







- 1. Connect the USB RS485 probe to the computer.
- 2. Connect the USB RS485 probe to the correct STC pins. See Table 1.

Table 1.

Modbus Card Installed	No Modbus Card Installed					
Pin 43(+)	Pin 36(+)					
Pin 44(-)	Pin 38(-)					
9600 BAUD	115200 BAUD					





- 3. Ensure that the Actuator and the computer are powered up.
- 4. Using the mouse, double click on the DCMLink Icon. See Figure 1.

5. DCMLink should start running.



Open up Windows Device Manger and get the COM port number for the B&B 6. RS485 probe.



7. In DCMLink, click on Preferences under DCMlink Setup.

Figure 6					
Tag Network Actuator Setup Calibratic	n Diagnostics S	opec Sheet	Tools	DCMlink Setup	Help
🗢 👩 🜨 🎽 🛐 🗛 🤇	2 17			Preferences	
Protocol « DCMlink Solo Version 1.0	DCM			Security Gr Users	oups
ល Modbus 👯 HART	User ID Security Group	: TESTER : TESTER			

8. In the Preferences window, Click on the Communications Tab. Then select Modbus. Then click on Add.

Preference	es					×
Audit Log	Communication	E-mail General	Language	Reports	Scheduler	
- 🔺 🕻	CMlink Solo Versio	on 1.0	1. Co	Select ommuni	cations	
			2. to	Click or select it	n Modbus	
			3.	Click or	n Add	
Add	Remove	Properties				
				ОК	Cancel	Help

9. In the Modbus Configuration screen, select "Modbus Master", select the Com port for the RS485 probe, 9600 (see Table 1 for correct BAUD rates), None, 1 and 100 millisecond Timeout Delay. Then click save.

udit Log Communication	E-mail Genera	I Language Repo	orts Scheduler	
DCMlink Solo	Modbus Modbus Settings			Select correct
HART	Mode Com Port	: Modbus Master : COM4		RS485 probe
	Baud Rate Parity	: 9600	•	
	Stop Bits	:[1	•	
	Timeout Delay	: 100 (0 - 5000 miliseco	onds)	
	Save	Cancel He	elp	

10. You should now see configuration information under the Modbus channel. Click OK.



11. In the main screen, you should now see the RS485 port under Modbus. Right click on the COM port and select "Scan For New Devices".



12. In the Modbus Network Scan window, scan for the TEC1A actuators.

Scan – Polling	g Range		1	4				ange					Start
Note:	Polling	range f	or Mod	lbus pro	otocol i	s 1 - 25	3		2	rt	Stop		
Addres	s Statu	s/Selec	tion -						_				Key
1	21	41	61	81	101	121	141	161	181	201	221	241	TEC2000
2		42	-	- 22	100	122	142	162	182	202	222	242	M2CP
3	23		3.	Shou	ld	123	143	163	183	203	223	243	Mizer
4	24	44	Tu	rn Pu	rple	124	144	164	184	204	224	244	TEC1A
5	25	45			20	125	145	165	185	205	225	245	EHO
6	26	46	66	86	106	126	146	166	186	206	226	246	
7	27	47	67	87	107	127	147	167	187	207	227	247	МРА
8	28	48	68	88	108	128	148	168	188	208	228	248	Unknown
9	29	49	69	89	109	129	149	169	189	209	229	249	No Reply
10	30	50	70	90	110	130	150	170	190	210	230	250	
11	31	51	71	91	111	131	151	171	191	211	231	251	
12	32	52	72	92	112	132	152	172	192	212	232	252	
13	33	53	73	93	113	133	153	173	193	213	233	253	
14	34	54	74	94	114	134	154	174	194	214	234		
15	35	55	75	95	115	135	155	175	195	215	235		
16	36	56	76	96	116	136	156	176	196	216	236		
17	37	57	77	97	117	137	157	177	197	217	237		
18	38	58	78	98	118	138	158	178	198	218	238		
19	39	59	79	99	119	139	159	179	199	219	239		
20	40	60	80	100	120	140	160	180	200	220	240		Негр
													Close

Click Stop, and then click Close. 13.

Figure 12

scan -									C	-		
Pollin	g Range	•	1						1.	Click		
Note:	Polling	range	for Mod	dbus pr	otocol i	s 1 - 25	3		St	ор		
Addre	ss Statu	s/Selec	tion -						-		_	,
1	21	41	61	81	101	121	141	161	181	201	221	241
2	22	42	62	82	102	122	142	162	182	202	222	242
3	23	43	63	83	103	123	143	163	183	203	223	243
4	24	44	64	84	104	124	144	164	184	204	224	244
5	25	45	65	85	105	125	145	165	185	205	225	245
6	26	46	66	86	106	126	146	166	186	206	226	246
7	27	47	67	87	107	127	147	167	187	207	227	247
8	28	48	68	88	108	128	148	168	188	208	228	248
9	29	49	69	89	109	129	149	169	189	209	229	249
10	30	50	70	90	110	130	150	170	190	210	230	250
11	31	51	71	91	111	131	151	171	191	211	231	251
12	32	52	72	92	112	132	152	172	192	212	232	252
13	33	53	73	93	113	133	153	173	193	213	233	253
14	34	54	74	94	114	134	154	174	194	214	234	
15	35	55	75	95	115	135	155	175	195	215	235	
16	36	56	76	96	116	136	156	176	196	216	236	
17	37	57	77	97	117	137	157	177	197	217	237	
18	38	58	78	98	118	138	158	178	198	218	238	
19	39	59	79	99	119	139	159	179	199	219	239	
20	40	60	80	100	120	140	160	180	200	220	240	

14. In the main screen, the actuator should now show up under the COM port.



15. Click on the Actuator Tag name and you should now see the actuator information.



16. Right click on the Actuator Tag name and then select Detailed Setup.



In the Detailed Setup Screen, Click on Load Configuration. 17.

CMlink ^{re}						
Network Actuator Setup Calibration	Diagnostics Spec Sheet T	pols DCMlink Setup Help				
		0				
DCMEek Sele Versien 1.0	Dataset					- Read -
(M) Modbus	<new></new>					- Entire Configuration
4 🖗 COM4	Control Discrete Inputs	Relays Analog ESD/Inhibits Spee	d Net	vork	Notes	
🔕 TeclaQuarterTurn	Parameter	Actuator	10.		Dataset	
HART	Control Mode	Network			Network	
	Remote Control Signal	Maintained	_ (+		Maintained	
	Local Control Signal	Momentary	(+		Momentary	
	Seating	Position	•		Position	
	Backseat	Position	•		Position	
	LED Color	Open Red/Close Green	•		Open Red/Close Green	
	Close Torque Limit	50	* +		50 % 🗘	
	Open Torque Limit	50	% 🗲		50 % 🗘	
	Enable RDM 1	No	•		No	
	Enable RDM 2	No	•	-	No	
	Enable Log Jam	No	•		No	
	Enable Battery Operation	No	•	-	No •	
	Enable Setpoint Tracking	Yes	•	-	Yes	
	Valve Stall Delay Time	8	iec 🔶		8 Sec	
	 Limit Switch A (LSA) 				1. Click Load	
	Trigger Point	25	% (+		25 Configuration	
	 Limit Switch B (LSB) 					
ay Device Type	Trigger Point	75	% +		75 % 🗘	
rotocol	Г. <u>11</u> г. г.				1	1
	Save Dataset Reset Dat	aset Delete Dataset Copy From Ta	g Loa	Configu	ration	Close Tag Help

18. In the Open window, select the TEC file that you want to load.



19. DCMLink will open the TEC file and fill in the parameter fields with the information from the file. You will have to go through each Dataset parameter and move it to the Actuator. You can tell which ones are different by the BLUE Arrow. Clicking on the BLUE Arrow moves the value to the actuator.

Figure 18 Setup Calibration Diagnostics Spec Sheet Tools DCMlink Setup Help Click on BLUE Arrows to set the 💽 🔒 🔋 🔋 🤇 📈 🖈 🔘 values to the Actuator Parameter Actuator Dataset on 1.0 Hardware 120 V -→ 208 V Voltage arterTurn Freq:50/60 60 Hz -→ 60 Hz -Three Phase Single Phase -Single Phase • Auxiliary Control Module None (+) None • Network Adaptor MODBUS E>NET -• Starter Solid State -→ Solid State -Green -Green Torque Spring -123456 ← → 123456 Motor Horse Power 1/6 ← → 1/6 RPM 3520 ← → 3520 12.50 ← → 12.5 Running Amps 21.20 -21.2 Stalled Amps Worm Gear Right Hand 🔶 🗦 Left Hand -Close CW Close CW Drive Sleeve • ← → No No Enable Auxiliary Relay Module -Actuator Type Quarter Turn 🔶 🔿 Quarter Turn • ← → 1:1 APD Gear Ratio • Software

Version 1.0	Dataset			
	<new></new>	Java Appleo ESD/Jakibita S	need Network N	later
	Parameter	Actuator	peed Network I	Dataset
1aQuarterTurn	Control Mode	Network	•	DI-Three Wire
	Remote Control gnal	Maintained		Maintained
	You must click on	Momentary		Momentany
	s each tab to see the	Position	€ €	Click on Blue
	tab.	Position	(+)	Position.
	LEP-COOF	Open Red/Close Green	+ +	Open Red/Close Green
	Close Torque Limit	50	% 🔶 🔶	50 % 🗘
	Open Torque Limit	50	% 🔶 🔶	50 %
	Enable RDM 1	No	+ +	No
	Enable RDM 2	No	€ →	No
	Enable Log Jam	No		No
	Enable Battery Operation	No	• •	No
	Enable Setpoint Tracking	Yes	← →	Yes

Figure 19

tics Spec Sł	neet To	ols DCMlink Setup	Help	_				
۹ 🗖	Ż	Scheduler Batch Runner Audit Log Viewer Event Log Viewer						
Discrete Inputs er		Database	its	Speed	Network	< Notes		
		Memory Capture	2	Dataset				
		Factory		Factory Se	ettings		DI-Three Wire	
ontrol Signal		Maintained	/	~		•	+	Maintained
rol Signal	Make	sure that you go	to th	e Fac	tory	€ (-	Momentary
	Scree	n to make the cha	anges	the	e too.	•	•	Position
							•	Position
		Open Red/Close	Green			•	•	Open Red/Close Green

20. When all the changes have been written to the actuator, the TEC file should be transferred to the Actuator's configuration.

NOTE:

This document was written using DCMlink Solo Version 1.0.210.0

About DCMlink™ Software	e	×
DCMlink Solo Version 1.0.21	0.0	-
Copyright © Valve Automati	on Inc. All Rights Reserved.	EMERSON
Unauthorized use or distribu	tion of this software is strictly pro	Process Management hibited.
Customer:		
Company:		
Site:		
Serial Number:		
License Status:		
Current License Information:		
DCMlink Feature	Status	
Batch Runner	No	
Database Only	No	
In Service Only	Yes	
		ОК

World Area Configuration Centers (WACC) offer sales support, service, inventory and commissioning to our global customers. Choose the WACC or sales office nearest you:

NORTH & SOUTH AMERICA

19200 Northwest Freeway Houston TX 77065 USA T +1 281 477 4100

Av. Hollingsworth 325 Iporanga Sorocaba SP 18087-105 Brazil T +55 15 3413 8888

ASIA PACIFIC

No. 9 Gul Road #01-02 Singapore 629361 T +65 6777 8211

No. 1 Lai Yuan Road Wuqing Development Area Tianjin 301700 P. R. China T +86 22 8212 3300

MIDDLE EAST & AFRICA

P. O. Box 17033 Jebel Ali Free Zone Dubai T +971 4 811 8100

P. O. Box 10305 Jubail 31961 Saudi Arabia T +966 3 340 8650

24 Angus Crescent Longmeadow Business Estate East P.O. Box 6908 Greenstone 1616 Modderfontein Extension 5 South Africa T +27 11 451 3700

EUROPE

Holland Fasor 6 Székesfehérvár 8000 Hungary T +36 22 53 09 50

Strada Biffi 165 29017 Fiorenzuola d'Arda (PC) Italy T +39 0523 944 411

For complete list of sales and manufacturing sites, please visit <u>www.emerson.com/actuationtechnologieslocations</u> or contact us at info.actuationtechnologies@emerson.com

www.emerson.com/bettis

©2019 Emerson. All rights reserved.

The Emerson logo is a trademark and service mark of Emerson Electric Co. Bettis™ is a mark of one of the Emerson family of companies. All other marks are property of their respective owners.

The contents of this publication are presented for information purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.



