

D5 MFT1 Programming Guide



Step 1) First Connect D5 MFT1 to Computer. The connections are mentioned below.

RS 485 Communication Connections :

RS 485 Half Duplex Connections D(+) and D(-) are provided on the Transducer. Ensure that following connection scheme is followed.



- Step 2) Copy the PowerSoft Application Software from CD to your Laptop or Desktop Computer. Note : The application will work with Windows Operating System Windows XP or less.
- Step 3) Double Click on the PowerSoft Application Icon. Please make sure that Transducer and Converter are powered on.

Step 4) You will see the screen as under.

) 6	3 😣			
Phase 1	Phase 2	Phase 3	Average	Sum
Fwd KWh			_	
Fwd KWh Rev KWh			=	
Fwd KWh Rev KWh Fwd KVARh (Ind)				
Fwd KWh Rev KWh Fwd KVARh (Ind) Fwd KVARh (Cap)				
Fwd KWh Rev KWh Fwd KVARh (Ind) Fwd KVARh (Cap) Rev KVARh (Ind)				
Fwd KWh Rev KWh Fwd KVARh (Ind) Fwd KVARh (Cap) Rev KVARh (Cap)				
Fwd KWh Rev KWh Fwd KVARh (Ind) Rev KVARh (Ind) Rev KVARh (Cap) Fwd KVAh				
Fwd KWh Rev KWh Fwd KVARh (Ind) Fwd KVARh (Cap) Rev KVARh (Cap) Rev KVARh (Cap) Fwd KVAh Rev KVAh				

Step 5) Click on ComPort under Settings Tab.

ile Settings Help				
ComPort				
Phase 1	Phase 2	Phase 3	Average	Sum
		· · · · · · · · · · · · · · · · · · ·		
			iid ii	
			T	
Fwd KWh			_	
Rev KWh				
Fwd KVARh (Ind)				
Fwd KVARh (Ind) Fwd KVARh (Cap)				
Fwd KVARh (Ind) Fwd KVARh (Cap) Rev KVARh (Ind)				
Fwd KVARh (Ind) Fwd KVARh (Cap) Rev KVARh (Ind) Rev KVARh (Cap)				
Fwd KVARh (Ind) Fwd KVARh (Cap) Rev KVARh (Ind) Rev KVARh (Cap) Fwd KVAh				
Fwd KVARh (Ind) Fwd KVARh (Cap) Rev KVARh (Ind) Rev KVARh (Cap) Fwd KVAh Rev KVAh				

Step 6) Please select the options as under. All MFTs are assigned address (ID) as 1 at the time of shipment. The Serial Port Address is same as the COM Port Address. Please check the existing Com Port Address using Windows Device Manager. Please note that for USB – RS 485 Converter, it is listed as Bridge.

PowerSoft				
ile Settings Help				
760	×			
Phase 1 F	P Com Port Settings		×	Sum
	Serial Port	1 -] -	
	Slave ID	1		
	Baud Rate	9600 🝷]	
	Data Bits	8		
	Parity	None -]	
Fwd KWh	Stop Bits	1]	
Rev KWh				
Fwd KVARh (Ind)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	· · · · · · · · · · · · · · · · · · ·		
Fwd KVARh (Cap)	Load	Okay		
Rev KVARh (Ind)	Defaults	,		
Rev KVARh (Cap)				
-wd KVAh				
Revikivah				

Step 7) Now read configuration from the MFT to further change any settings if required. Go to Configuration icon marked as C and click on it.

PowerSoft				2
File Settings Help)			
) d (
Phase 1	Phase 2	Phase 3	Average	Sum
			<i>R.</i>	
[90.			
Fwd KWh				
Rev KWh				
Fwd KVARh (Ind)				
Fwd KVARh (Cap)				
Rev KVARh (Ind)				
Rev KVARh (Cap)				
Fwd KVAh				
Rev KVAh				
	- 0(00, 0, N, 4			
ave ID : 1, Serial Port 1	: 9600-8-N-1	MB OK : U, MB ERR : U	1	

Step 8) Click on the Green Down icon as shown below.

P Configuration	
SyRead Configuration from Slave Device	Clear Control
System Type	Clear
Primary Voltage	Energy Hours
Secondary Voltage	Analog Output Settings
Primary Current	0
Secondary Current	Analog Outputs
Communication Settings	
Slave ID 🗾 🚽	
Baud Rate	
Parity 🗾	
Stop Bits	
Write Pass/Fail will not appear if communication settings are changed	Jed Exit
MB OK : 0, MB ERR : 0	

P Configuration		
💊 🂊 😣		
System Settings System Type Primary Voltage	3P4W - 415.7	Clear Control Clear Clear Energy Hours
Secondary Voltage	415.7	Analog Output Settings
Primary Current Secondary Current	1.000 1.000	Configure Analog Outputs
Communication Settings]
Slave ID Baud Rate	1 • 9600 •	
Parity	None 💌	
Stop Bits	1	
Write Pass/Fail will not appear if co	ommunication settings are chan	ged
MB OK : 2, MB ERR : 0		.::

Step 9) This will read the existing Transducer configuration.

Step 10) Now System Settings like System Type 3 Phase 4 Wire or 3 Wire, PT Ratio, CT Ratio, Device ID and Baud Rate can be changed in this screen. Please note that Primary Voltage or Current Rating are to be entered in units place e.g. 11KV = 11000, 220KV = 220000 etc. Once the changes are done. Click on the icon as shown.

P Configuration		
Write Configuration	n to Slave Device	- Class Control
System Settings	3P4W 💌	Clear Clear
Primary Voltage	415.7	Energy Hours
Secondary Voltage	415.7	Analog Output Settings
Primary Current	1.000	
Secondary Current	1.000 💌	Configure Analog Outputs
Communication Settings —		1
Slave ID	1 🔹	
Baud Rate	9600 🔽	
Parity	None 🝷	
Stop Bits	1 💌	
Write Pass/Fail will not appear if o	communication settings are char	nged
		Exit
MB OK : 2, MB ERR : 0		.::

P Configuration			// _□×
System Settings		Clear Control	
System Type	3P4W 💌	Ølear	Clear
Primary Voltage	415.7	Energy	Hours
Secondary Voltage	418.7	Analog Output Settings	
Primary Current	1.000	Config	
Secondary Current	1.000 💌	Analog C	utputs
Write Pass			
Communication Settings			
Slave ID			
Baud Rate	9600 🔽		
Parity	None 🔹		
Stop Bits	1		
¥ Write Pass			
Write Pass/Fail will not appear if co	mmunication settings are chang	jed	
			Exit
MBOK: 4, MBERR: 0			

Step 11) If the settings are successfully uploaded, the below message will be displayed.

Step 12) To configure Analog Outputs, click on the tab as shown below.

P Configuration		
System Settings		Clear Control
System Type	3P4W 🔹	Clear Clear
Primary Voltage	415.7	Energy Hours
Secondary Voltage	415.7	Analog Output Settings
Primary Current	1.000	Configure
Secondary Current	1.000 💌	Analog Outputs
Communication Settings —		
Slave ID	1 🔹	I
Baud Rate	9600 💌	
Parity	None 💌	
Stop Bits	1 🔹	
Write Pass/Fail will not appear if c	ommunication settings are cha	Exit
MB OK : 2, MB ERR : 0		

Step 13) It will show the following window. Click on Down Green icon to read current configuration.

🔜 Configure Analog	j Outputs				- 🗆 🗵
	\otimes				
Read Analog O	utput Configuration from :	ilave Device			
	Parameter	Minimum	Maximum	PF Range	
Output 1					~
Output 2	-				~
Output 3	_				~
Output 4	-				~
					Exit
MBIOK: 0, MBIERR: 0)				

Step 14) The existing Output Configuration will be displayed in the Window.

🔜 Configure Analo	og Outputs				_ 🗆 🗙
	8				
	Parameter	Minimum	Maximum	PF Range	
Output 1	VPN -	0	300		~
Output 2	VRN -	0	300		Ţ
Output 3	VYN -	0	300		~
Output 4	VBN -	0	300		~
				Exi	it
					·
MB OK: 1, MB ERR:	0				:

Step 15) You can select the Parameter per Output and define its minimum (4 mA) and maximum range (20 mA)

🔛 Configure Analo	og Outputs			
	Parameter	Minimum	Maximum	PF Range
Output 1	VPN -	0	300	▼
Output 2		0	300	
Output 3		0	300	T
Output 4	VBR VRN	0	300	_
	VYN VBN T			
				Exit
MB OK : 1, MB ERR :	0			.::

Step 16) Similar Steps needs to be followed for other outputs.

🔛 Configure Analo	og Outputs			
	8			
Output 1	Parameter	Minimum 0	Maximum	PF Range
Output 2	VRN -	0	300	•
Output 3	VPP -	0	300	
Output 4	A VRY VYB VBR VRN VRN VYN	0	300	Exit
MB OK : 1, MB ERR :	0			.:i

Step 17) Third Output

🔜 Configure Anal	og Outputs					
	8					
Output 1	Paramete	r 🔹 🔽	Minimum 0	Maximum	PF Range	_
Output 2	A	•	0	1		-
Output 3	VYN		0	300		~
Output 4	VYN VBN		0	300		_
	IR IY					
	IB WATT					
	VAR VA	•				
					Exi	t
MB OK : 1, MB ERR :	: 0					.::

Step 18) Fourth Output

🔜 Configure Anal	og Outputs			
	8			
	Parameter	Minimum	Maximum	PF Range
Output 1	VPP 💌	0	110	_
Output 2	A	0	1	
Output 3	WATT -	0	200	
Output 4	VBN 💌	0	300	
	VBN IR IY IB WATT VAR VA VA WATT R			Exit
MB OK : 1, MB ERR	: 0			

Step 19) Now all the outputs are redefined.

🔡 Configure Analo	og Outputs				X
	8				
Output 1	Parameter	Minimum 0	Maximum	PF Range	-
Output 2	A	0	1		- -
Output 3	WATT -	0	200		7
Output 4	FREQ -	45	55		~
				Exi	t
MB OK : 1, MB ERR :	0				.::

Step 20) Now we need to upload this new configuration to the Transducer. Click on the icon as shown below.

Configure Analo	og Outputs			_	
س Output 1	rite Analog Output Cor Parameter ∨PP _	nfiguration from Slave Devic Minimum 0	e Maximum 110	PF Range	
Output 2 Output 3	A •		1		
Output 4	FREQ •	45	55		
					1
MB OK : 1, MB ERR :	0			Exit	 :

Step 21) If the settings are successfully uploaded, the below message will be displayed.

🚂 Configure Analog	Outputs				
	\otimes				
o	Parameter	Minimum	Maximum	PF Range	
Ουτρυτ Ι Γ	VPP I		110		<u> </u>
Output 2	A 🔤	0	1		~
Output 3	WATT	0	200		~
Output 4	FREQ 🖸	45	55		~
Write Pass					
				Exi	t
MB OK : 2, MB ERR : 0					

🔜 Configure Analo	og Outputs				
	Exit				
	Parameter	Minimum	Maximum	PF Range	
Output 1	VPP	0	110		-
Output 2	A	0	1		-
Output 3	WATT 🔽	0	200		-
Output 4	FREQ 🧾	45	55		-
Write Pas	S				
				Exit	
MB OK : 2, MB ERR :	0				.::

Step 22) Click on Exit to return to previous mode.

Step 23) Now Click on Exit to exit from Config	guration.
--	-----------

P Configuration			_ 🗆 ×
System Settings Exit System Type	3P4W 💌	Clear Control	Clear
Primary Voltage	415.7	Energy	Hours
Secondary Voltage	415.7	Analog Output Settings	
Primary Current	1.000	Config	gure
Secondary Current	1.000 -	Analog	Dutputs
Write Pass			
Communication Settings —			
Slave ID	1 •		
Baud Rate	9600 🔽		
Parity	None 💌		
Stop Bits	1 -		
Write Pass			
Write Pass/Fail will not appear if c	ommunication settings are cha	nged	1
			Exit
MB OK : 4, MB ERR : 0			.:

Step 24) You will return to Home Screen.

=ile Settings Help				
) 6 (
Phase 1	Phase 2	Phase 3	Average	Sum
				97.
			ľ	
				N
i da				
Fwd KWh				
Rev KWh				
Fwa KVARn (Ina)				
ENGLINYABILILIAGU				
Rev KVARh (Ind)				
Rev KVARh (Ind) Bev KVARh (Can)				
Rev KVARh (Ind) Rev KVARh (Cap) Fwd KVAh				
Rev KVARh (Ind) Rev KVARh (Cap) Fwd KVAh Rev KVAh			_	
Rev KVARh (Ind) Rev KVARh (Cap) Fwd KVAh Rev KVAh				
Rev KVARh (Ind) Rev KVARh (Cap) Fwd KVAh Rev KVAh				
Rev KVARh (Ind) Rev KVARh (Cap) Fwd KVAh Rev KVAh				

Step 25) If you wish to see real time data using this Software, click on Online icon as shown below. This application can be used to see real time data of only one Transducer.

Settings Help Settings Help Online Phase 1 Phase 2 Phase 3 Average Sum
Image: Deliver Image: Deliver Phase 1 Phase 2 Phase 3 Average Sum
Online Phase 1 Phase 2 Phase 3 Average Sum
Phase I Phase 2 Phase 3 Average Sum
vd KWh
av KWh
rd KVARh (Ind)
rd KVARh (Cap)
av KVARh (ind)
ev KVARh (Cap)
rd KVAh
/d KWh av KWh /d KVARh (Ind)

Step 26) The readings will be displayed in the below format.

PowerSof	t								_ 🗆
File Setti	ngs Help)							
	P								
	8		2						
~ -									
Pha	se 1	Pha	se 2	Pha	se 3	A	verage	Su	ım
VRY	0.000	VYB	0.000	VBR	0.000	VPP	0.000		
VRN	0.000	VYN	0.000	VBN	0.000	V PN	0.000		
AR	0.000	AY	0.000	AB	0.000	A	0.000		
WR	0.000	WY	0.000	WB	0.000			W	0.000
VARR	0.000	VARY	0.000	VAR B	0.000			VAR	0.000
VAR	0.000	VAY	0.000	VAB	0.000			VA	0.000
PFR		PFY		PF B		PF			
FREQ			0.00						
Ewd K\Wh				0.0					
Rev KWh	I			0.0					
Fwd KVA				0.0					
Fwd KVA	Rh (Cap)			0.0					
Rev KVA	Rh (Ind)			0.0					
Rev KVA	Rh (Cap)			0.0					
Fwd KVAh 0.0									
Rev KVAh				0.0					
						-			

Step 27) Click on Offline icon to exit from the real time data mode.

P PowerSof	t								
File Settings Help									
			3						
		2	Dha	2		A			
Phase 1		Phase 2		Mase J		Average		5	um
	0.000		0.000	VBR	0.000		0.000		
	0.000		0.000		0.000	V PN	0.000		
	0.000	WV	0.000	WB	0.000	~	0.000	Ŵ	0.000
	0.000		0.000		0.000				0.000
	0.000		0.000	VAR	0.000				0.000
PEB		PEY		PEB		PF			0.000
FBEQ			0.00	110					
Fwd KWł	Fwd KWh			0.0					
	Rev KWh			0.0					
	Fwd KVARh (Ind)			0.0					
	Pour KVARn (Cap)			0.0					
	Rev KVARn (inu)			0.0					
Ewd KVA	Ewd KVAh			0.0 0.0					
Bev KVA	Rev KVAh			0.0					
Slave ID : 1, S	ave ID : 1, Serial Port 1 : 9600-8-N-1 MB OK : 113, MB ERR : 0								

Step 28) Click on Exit to close the application.

PowerSoft					
File Settings Help					
2 2 (
e) Eq 🕻	20				
	Exit				
Phase 1	Phase 2	Phase 3	Average	Sum	
				-	
				1	
Fwd KWh					
Rev KWh					
Fwd KVARh (Ind)					
Fwd KVARh (Cap)					
Rev KVARh (Ind)					
Rev KVARh (Cap)					
Fwd KVAh					
Rev KVAh					
025 VI 5 1925/VN	10000020000				