ControlLogix Drive Module (v1.20)

(Cat. No. DMF30)

These release notes correspond to major revision 1, minor revision 2 of the SF3000 Interface (1756-DMF30) firmware. Use this firmware release with:

| Software Product:	Compatible Version:
RSLogix 5000 programming software	8.02.00 or later
RSLinx software	2.30 or later
RSNetWorx for ControlNet software	3.00 or later
DriveExecutive programming software	1.01 or later

Changes

Alternator Power Selection, P2200 [PMI Drive Config], B14 "AltrnatorPwr"

For cases where alternator power is used instead of utility power, this option has been added to allow the drive to better track the AC Line Frequency. The trade off is that the line frequency filtering is reduced when the Alternator Power option is selected.

The program defaults to selecting "Alternator Power," to provide the best frequency tracking, whether connected to the Utility power or Alternator power. It is recommended to have "Alternator Power" selected.
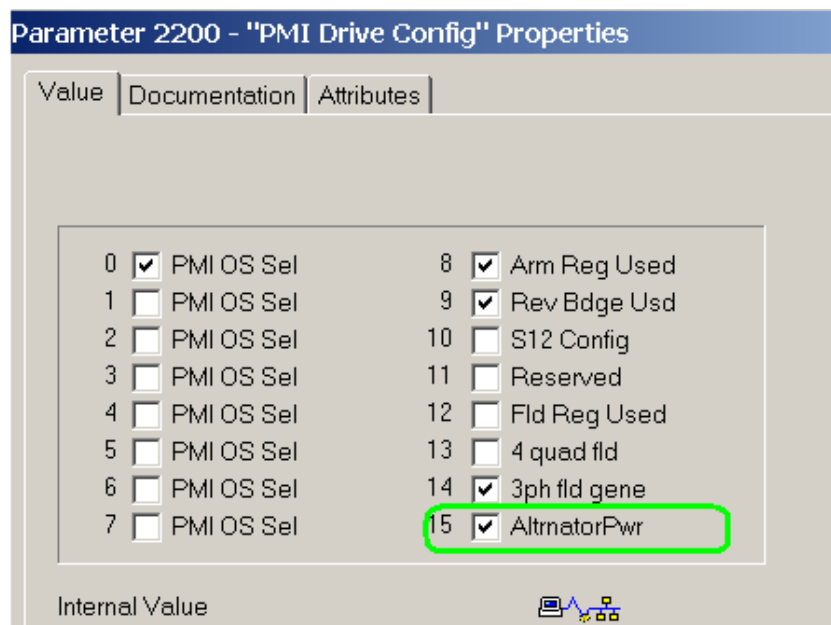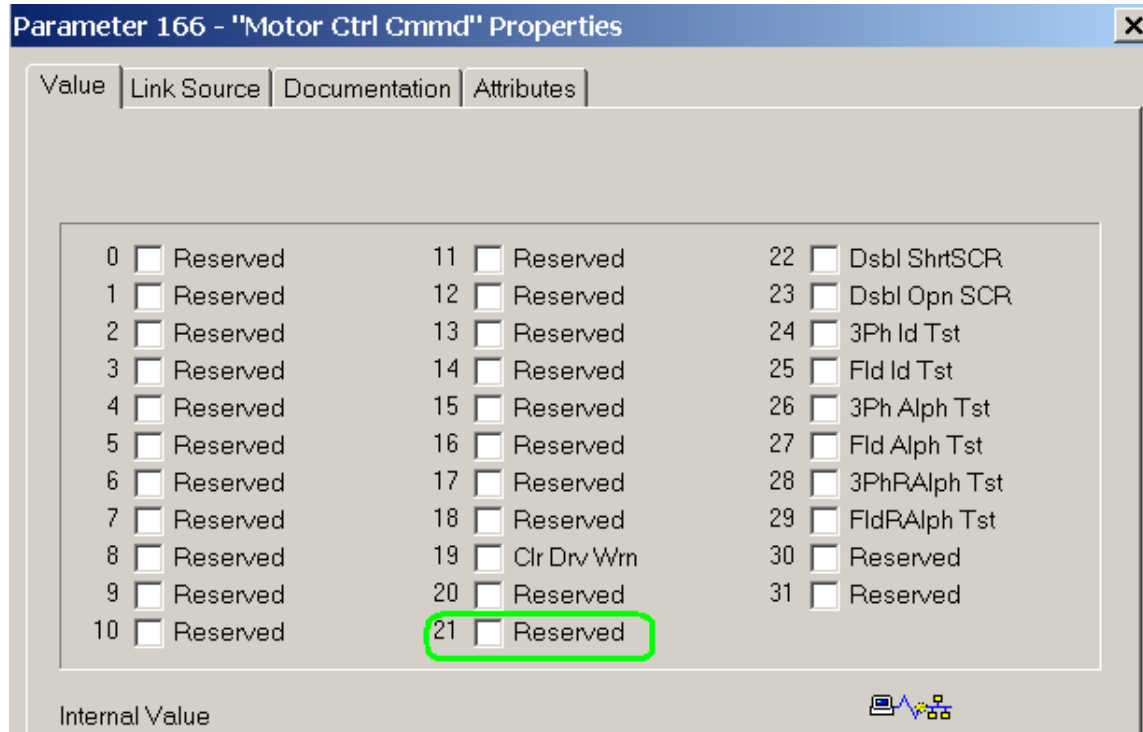

Note: The program will not allow the Alternator bit to be changed unless both the FML and the CML are not running. The error message shown below displays if an attempt is made to change the state of the Alternator Bit with the FML or the CML active.
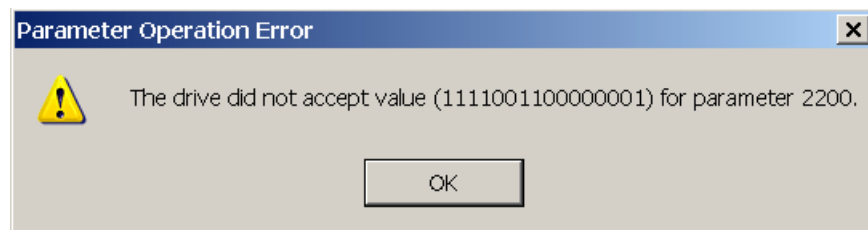
Parameter 166 [Motor Cntrl Cmmd], Bit 21 Changed to "Reserved"

Lgx00045101

Parameter 166 [Motor Ctrl Cmmd], bit 21 "Dsbl Fld Wk" should have bene defined as "Reserved". Because CEMF regulator is not available in the DMF30 drive module, this bit has been changed to "Reserved".

Parameter 166 - "Motor Ctrl Cmmd" Properties

Value | Link Source | Documentation | Attributes

0 ☐ Reserved	11 ☐ Reserved	22 ☐ Dsbl ShrtSCR
1 ☐ Reserved	12 ☐ Reserved	23 ☐ Dsbl Opn SCR
2 ☐ Reserved	13 ☐ Reserved	24 ☐ 3Ph Id Tst
3 ☐ Reserved	14 ☐ Reserved	25 ☐ Fld Id Tst
4 ☐ Reserved	15 ☐ Reserved	26 ☐ 3Ph Alph Tst
5 ☐ Reserved	16 ☐ Reserved	27 ☐ Fld Alph Tst
6 ☐ Reserved	17 ☐ Reserved	28 ☐ 3PhRAlph Tst
7 ☐ Reserved	18 ☐ Reserved	29 ☐ FldRAlph Tst
8 ☐ Reserved	19 ☐ Clr Drv Wrn	30 ☐ Reserved
9 ☐ Reserved	20 ☐ Reserved	31 ☐ Reserved
10 ☐ Reserved	21 ☐ Reserved	

Internal Value

## Corrected CT Reversed Nuisance Warning

The CT Imbalance Detection Threshold was increased.

In the field there have problems with nuisance "CT Reversed" warnings even though the CT is wired properly. The tolerance related to this warning was changed from 5% to 10%. The new tolerance value was tested with a wide range of CT ratios to ensure that the internal gain range is covered.

Power Code Corrections

The power code selections were updated to reflect that there is only an S2R Field Power Module available as well the default parameters appropriate with the power code selected.

Figure 1 - Case 1, 3 Phase (Non-Regen), 2 Quad with Field
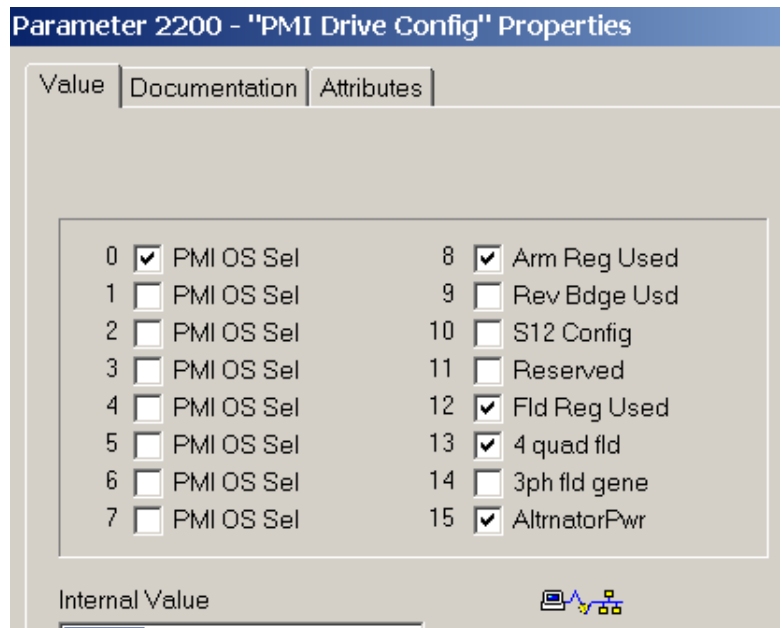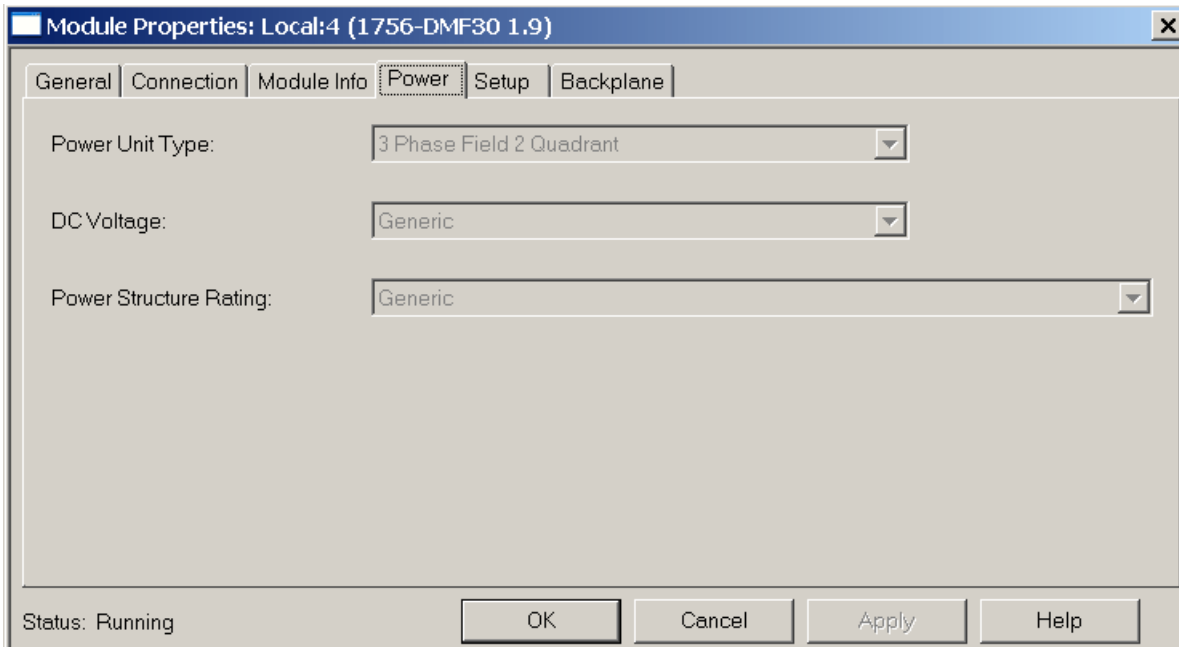
Note: Parameter 2214 reflects an earlier build of the software during the program updates. The number that appears in parameter 2214 for the final build is "18".
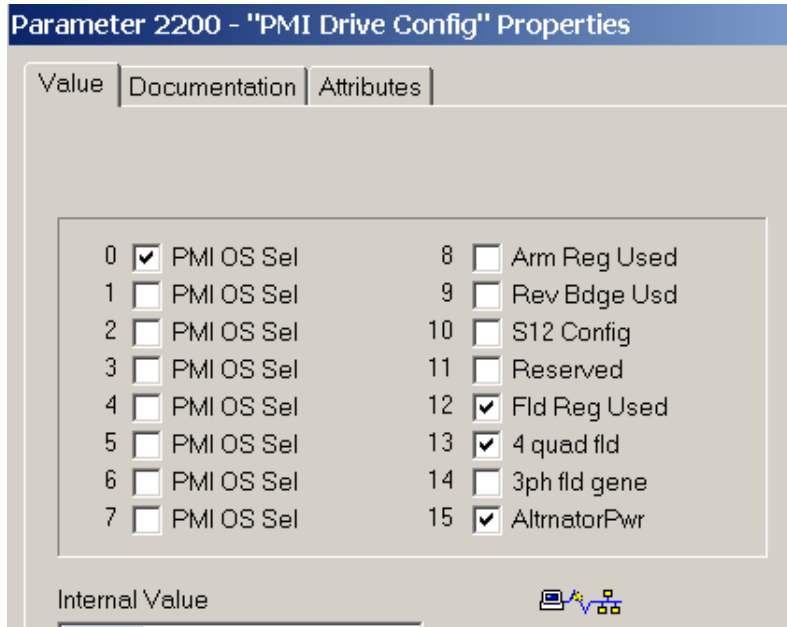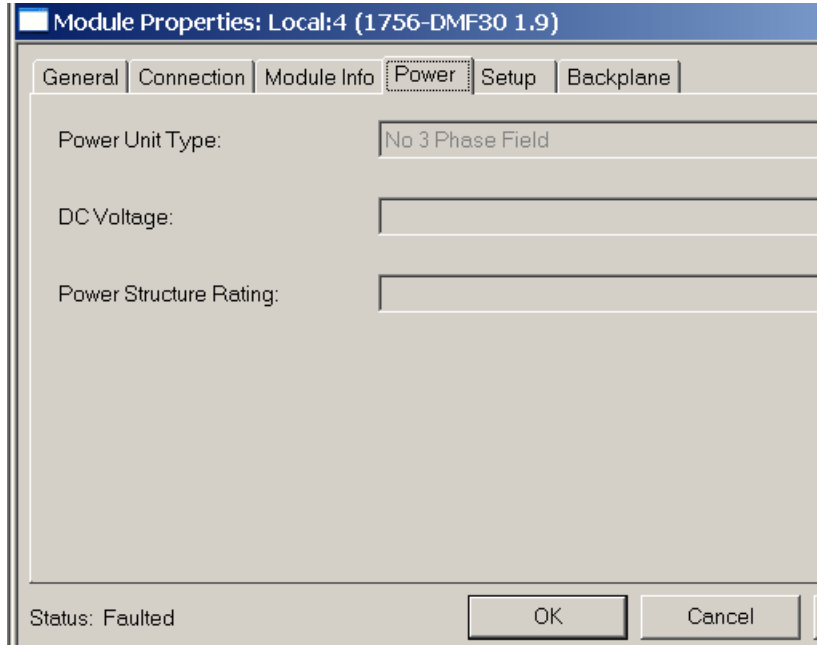
2200	PMI Drive Config	1011000100000001		45313
2201	PMI I/O Config	0000000000000000		0
2202	AC LineVolt(RMS)	1	Volt	1
2203	Out Volt Rating	1	Volt	1
2204	Out Curr Rating	1	Amps	1
2205	Curr Xfmr Ratio	1		1
2206	Field AC In Volt	1	Volt	1
2207	Fld OutCurrRatng	20.00	Amps	2000
2208	Anlg Tach Volts	5.00	Volt	500
2209	Ph Xfmr In Volt	1	Volt	1
2210	Tick Per Scan	0		0
2211	Config Flag	0		0
2212	Per Unit Curr	0.00		0x80000000
2213	Pwr Config Code	201		201
2214	PMI OS Version	16		16

Figure 2 - Case 2, 3 Phase (Regen), 4 Quad with Field
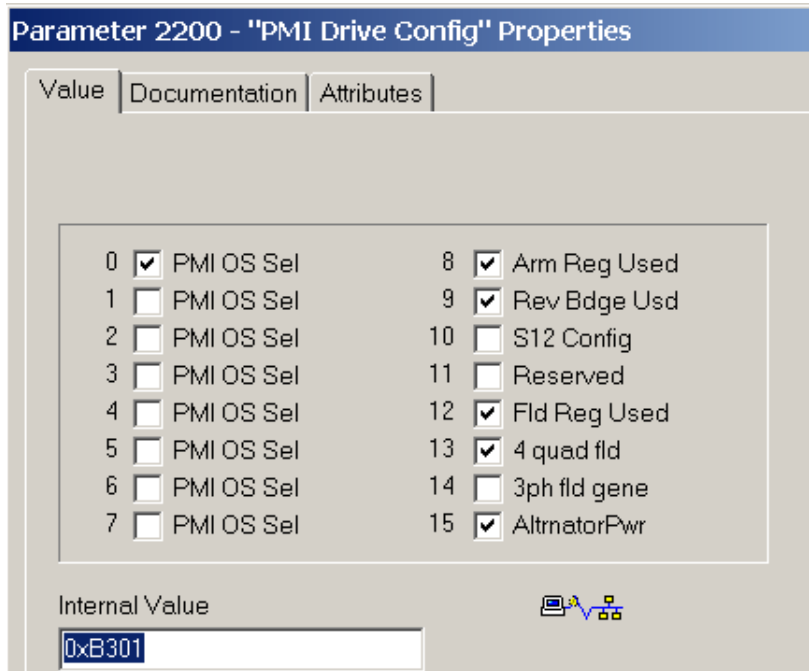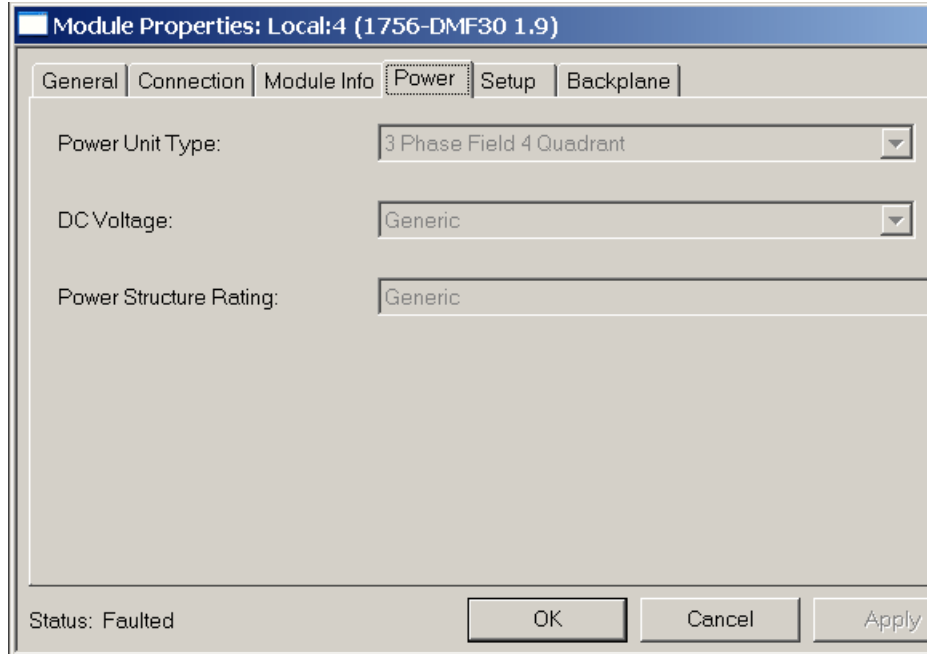
2200	PMI Drive Config	1011001100000001	
2201	PMI I/O Config	0000000000000000	
2202	AC LineVolt(RMS)	1	Volt
2203	Out Volt Rating	1	Volt
2204	Out Curr Rating	1	Amps
2205	Curr Xfmr Ratio	1	
2206	Field AC In Volt	1	Volt
2207	Fld OutCurrRatng	20.00	Amps
2208	Anlg Tach Volts	5.00	Volt
2209	Ph Xfmr In Volt	1	Volt
2210	Tick Per Scan	0	
2211	Config Flag	0	
2212	Per Unit Curr	0.00	
2213	Pwr Config Code	200	
2214	PMI OS Version	16	

Figure 3 - Case 3, No 3 Phase, Field Only

2200	PMI Drive Config	1011000000000001	
2201	PMI I/O Config	0000000000000000	
2202	AC LineVolt(RMS)	1	Volt
2203	Out Volt Rating	1	Volt
2204	Out Curr Rating	1	Amps
2205	Curr Xfmr Ratio	1	
2206	Field AC In Volt	1	Volt
2207	Fld OutCurrRatng	20.00	Amps
2208	Anlg Tach Volts	5.00	Volt
2209	Ph Xfmr In Volt	1	Volt
2210	Tick Per Scan	0	
2211	Config Flag	0	
2212	Per Unit Curr	0.00	
2213	Pwr Config Code	0	
2214	PMI OS Version	16	

Figure 4 - Case 4, No Power Code Configuration, DMF not "owned" by Processor

Eliminate Rollover when Resolver Feedback is Not Selected

This was showing up as spikes in the resolver data waveform when resolver feedback is not selected for feedback, but is used for monitoring purposes. For example when Motor Voltage is used as the feedback and the Resolver Feedback is monitored.

NVS Function for Autotuning Parameters, 2151, 2152, 2155 and 2156 Not Working

The NVS function for Autotuning parameters, 2151, 2152, 2155 and 2156 was not working.

After Autotuning the drive (CML and FML) then power cycling the ControlLogix Rack, the resistance and time constant values were not saved properly.

This has been corrected. Parameters 2151, 2152, 2155 and 2156 now save properly if power is lost to the ControlLogix Rack.

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At http://www.rockwellautomation.com/support/, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit http://www.rockwellautomation.com/support/.

Installation Assistance

If you experience a problem within the first 24 hours of installation, review the information that is contained in this manual. You can contact Customer Support for initial help in getting your product up and running.

United States or Canada	1.440.646.3434
Outside United States or Canada	Use the Worldwide Locator at http://www.rockwellautomation.com/support/americas/phone_en.html, or contact your local Rockwell Automation representative.

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Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

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