

# ControlLogix Drive Module (v1.20)

(Cat. No. DMF30)



**Allen-Bradley**

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

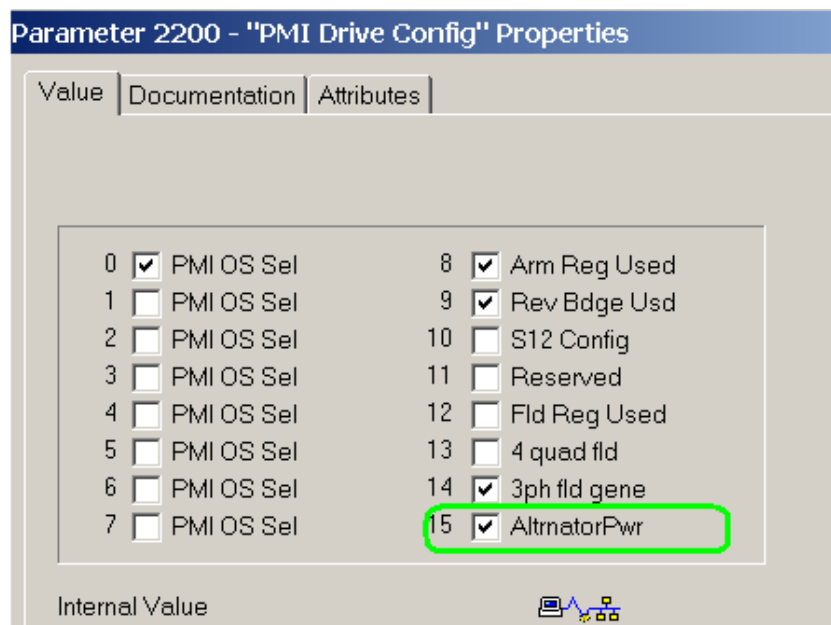
<b>Software Product:</b>	<b>Compatible Version:</b>
RSLogix 5000 programming software	8.02.00 or later
RSLinx software	2.30 or later
RSNetWorx for ControlNet software	3.00 or later
DriveExecutive programming software	1.01 or later

## Changes

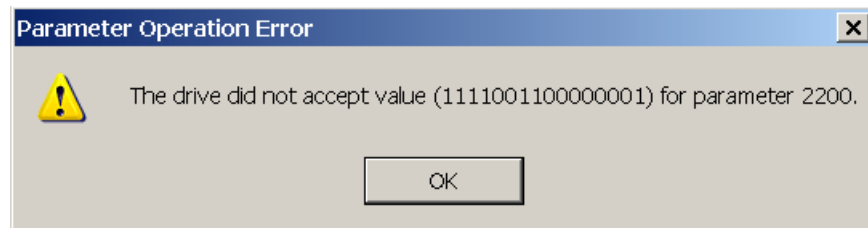
### Alternator Power Selection, P2200 [PMI Drive Config], B14 "AltrnatorPwr"

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.



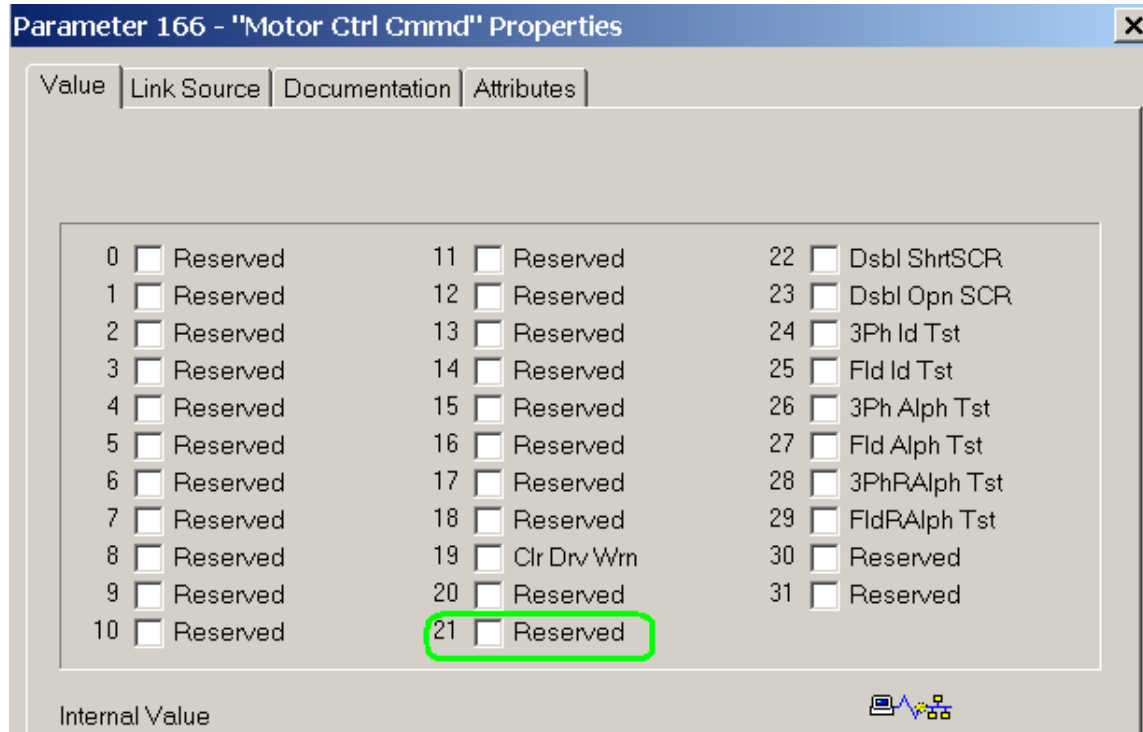
Note: The program will not allow the Alternator bit to be changed unless both the FML and the CML are not running. The error message shown below displays if an attempt is made to change the state of the Alternator Bit with the FML or the CML active.



## Parameter 166 [Motor Cntrl Cmmd], Bit 21 Changed to “Reserved”

*Lgx00045101*

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



## Corrected CT Reversed Nuisance Warning

The CT Imbalance Detection Threshold was increased.

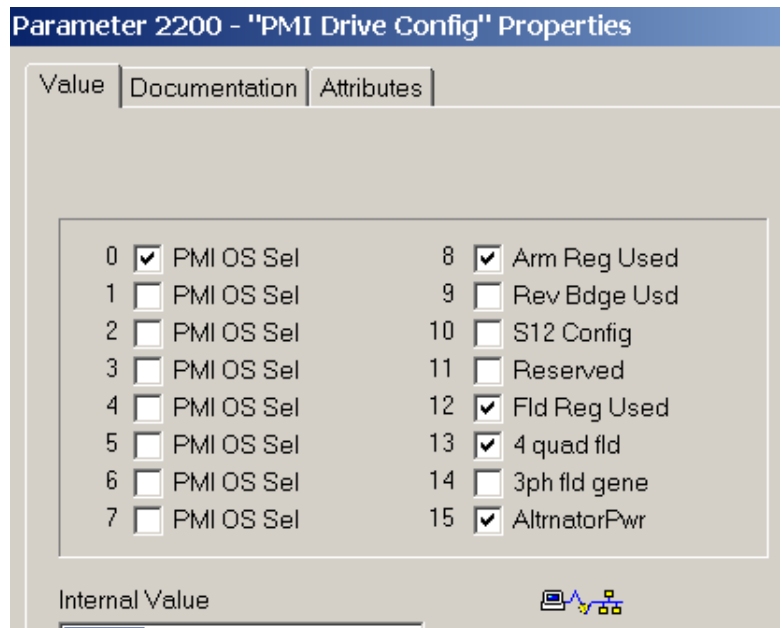
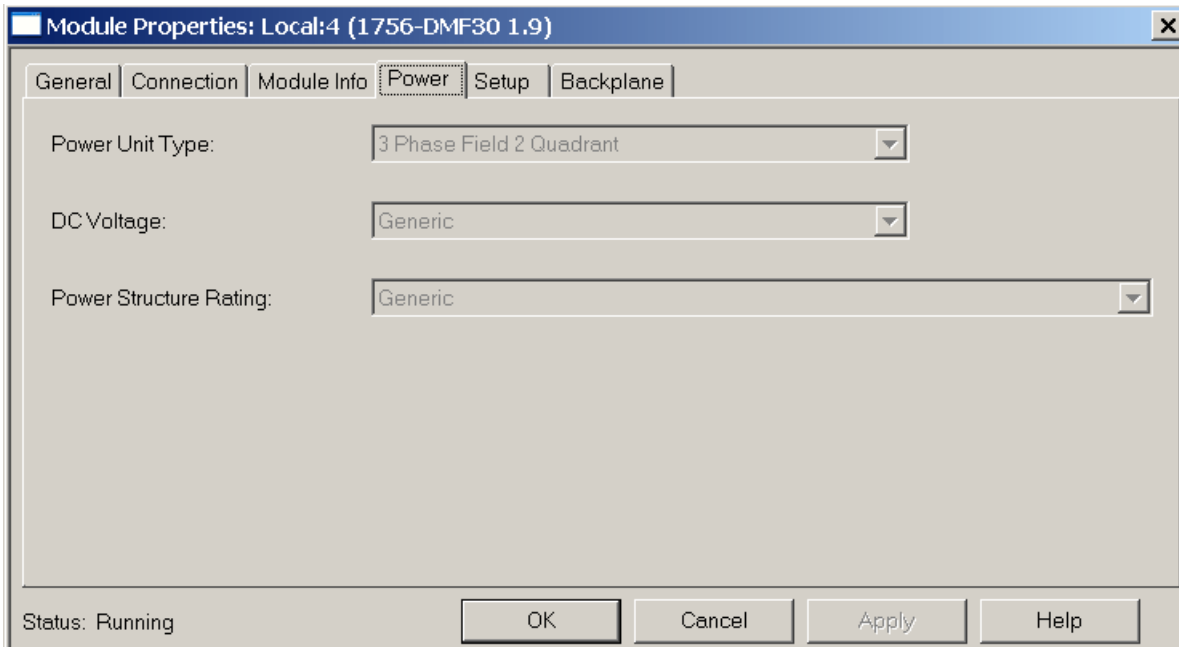
In the field there have problems with nuisance “CT Reversed” warnings even though the CT is wired properly. The tolerance related to this warning was changed from 5% to 10%. The new tolerance value was tested with a wide range of CT ratios to ensure that the internal gain range is covered.

# Spare Allen-Bradley Parts

## 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**

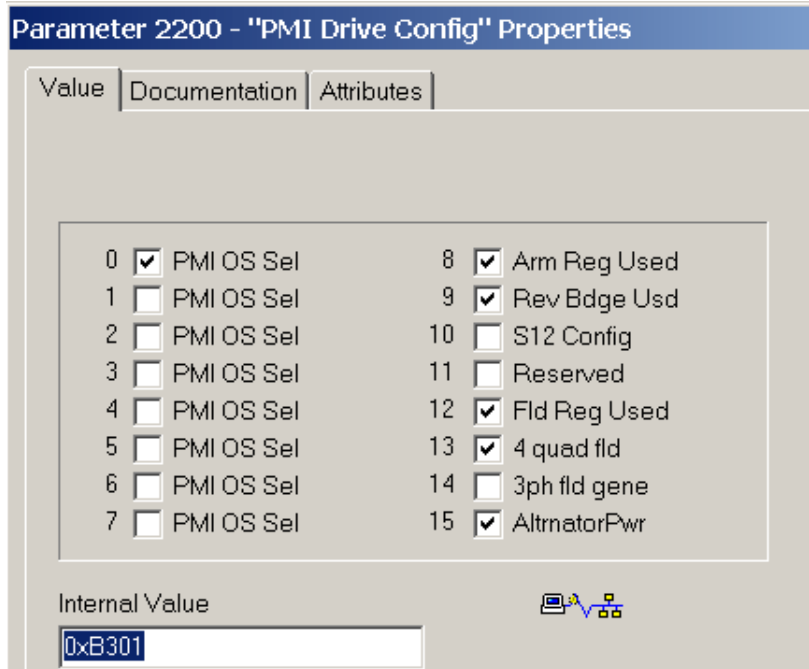
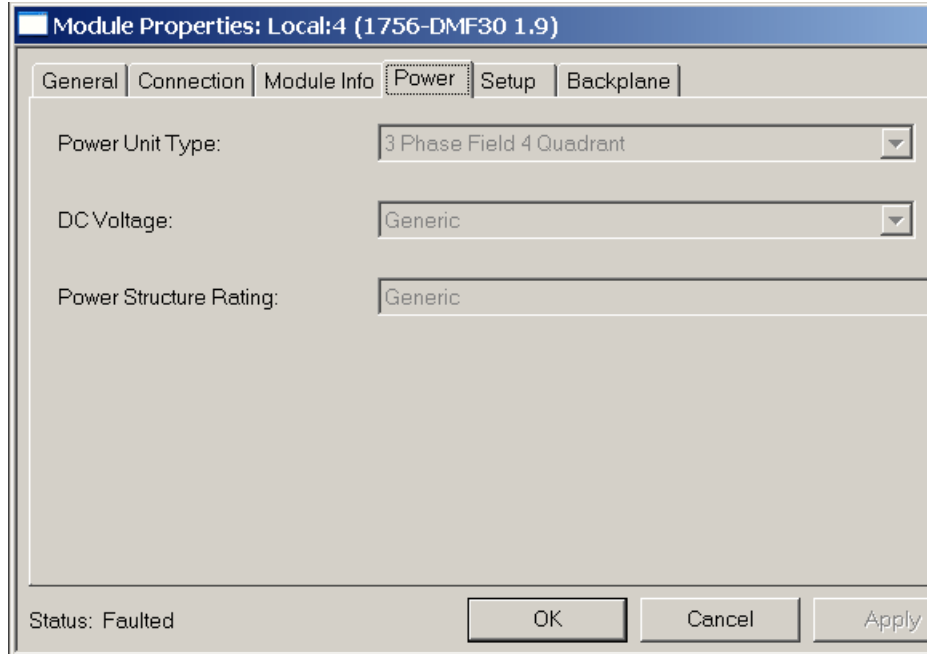


Note: Parameter 2214 reflects an earlier build of the software during the program updates. The number that appears in parameter 2214 for the final build is “18”.

2200	PMI Drive Config	<b>1011000100000001</b>		<b>45313</b>
2201	PMI I/O Config	<b>0000000000000000</b>		<b>0</b>
2202	AC LineVolt(RMS)	<b>1</b>	Volt	<b>1</b>
2203	Out Volt Rating	<b>1</b>	Volt	<b>1</b>
2204	Out Curr Rating	<b>1</b>	Amps	<b>1</b>
2205	Curr Xfmr Ratio	<b>1</b>		<b>1</b>
2206	Field AC In Volt	<b>1</b>	Volt	<b>1</b>
2207	Fld OutCurrRatng	<b>20.00</b>	Amps	<b>2000</b>
2208	Anlg Tach Volts	<b>5.00</b>	Volt	<b>500</b>
2209	Ph Xfmr In Volt	<b>1</b>	Volt	<b>1</b>
2210	Tick Per Scan	<b>0</b>		<b>0</b>
2211	Config Flag	<b>0</b>		<b>0</b>
2212	Per Unit Curr	<b>0.00</b>		<b>0x80000000</b>
2213	Pwr Config Code	<b>201</b>		<b>201</b>
2214	PMI OS Version	<b>16</b>		<b>16</b>

# Spare Allen-Bradley Parts

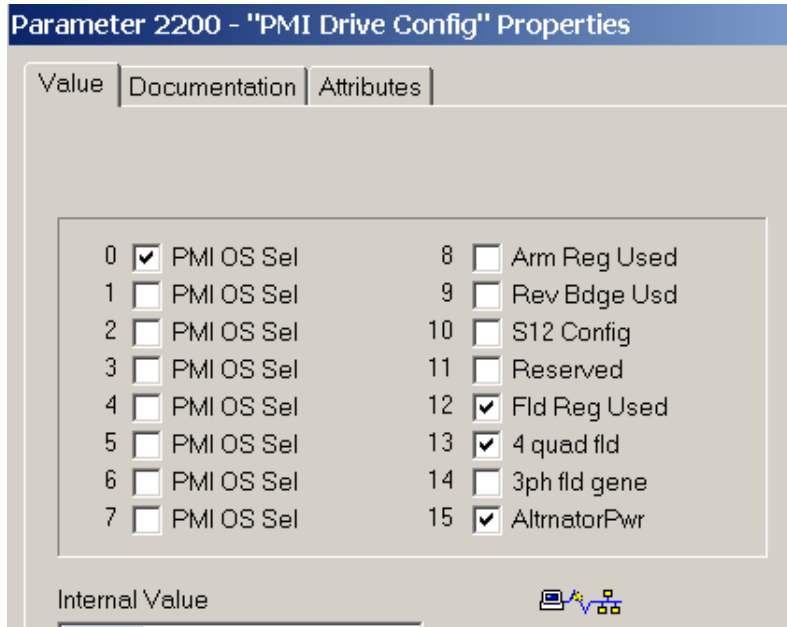
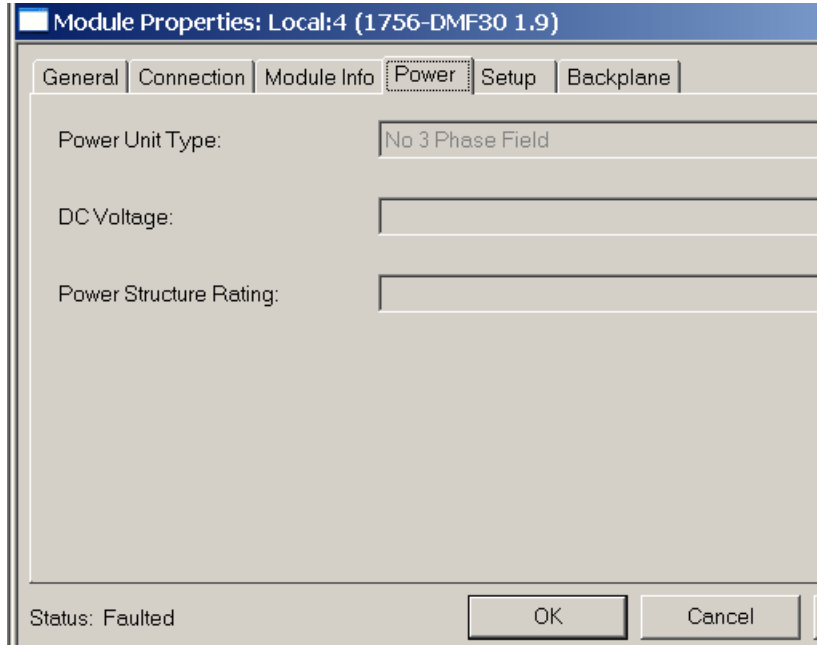
**Figure 2 - Case 2, 3 Phase (Regen), 4 Quad with Field**



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

# Spare Allen-Bradley Parts

**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	

# Spare Allen-Bradley Parts

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

**Parameter 2200 - "PMI Drive Config" Properties**

Value | Documentation | Attributes

0	<input checked="" type="checkbox"/> PMI OS Sel	8	<input type="checkbox"/> Arm Reg Used
1	<input type="checkbox"/> PMI OS Sel	9	<input type="checkbox"/> Rev Bdge Usd
2	<input type="checkbox"/> PMI OS Sel	10	<input type="checkbox"/> S12 Config
3	<input type="checkbox"/> PMI OS Sel	11	<input type="checkbox"/> Reserved
4	<input type="checkbox"/> PMI OS Sel	12	<input type="checkbox"/> Fld Reg Used
5	<input type="checkbox"/> PMI OS Sel	13	<input type="checkbox"/> 4 quad fld
6	<input type="checkbox"/> PMI OS Sel	14	<input type="checkbox"/> 3ph fld gene
7	<input type="checkbox"/> PMI OS Sel	15	<input checked="" type="checkbox"/> AltrnatorPwr

Internal Value

2200	PMI Drive Config	<b>1000000000000001</b>	
2201	PMI I/O Config	<b>0000000000000000</b>	
2202	AC LineVolt(RMS)	<b>230</b>	Volt
2203	Out Volt Rating	<b>10</b>	Volt
2204	Out Curr Rating	<b>1</b>	Amps
2205	Curr Xfmr Ratio	<b>1</b>	
2206	Field AC In Volt	<b>1</b>	Volt
2207	Fld OutCurrRatng	<b>20.00</b>	Amps
2208	Anlg Tach Volts	<b>5.00</b>	Volt
2209	Ph Xfmr In Volt	<b>230</b>	Volt
2210	Tick Per Scan	<b>0</b>	
2211	Config Flag	<b>0</b>	
2212	Per Unit Curr	<b>0.00</b>	
2213	Pwr Config Code	<b>79</b>	
2214	PMI OS Version	<b>16</b>	

## 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 <a href="#">Worldwide Locator</a> at <a href="http://www.rockwellautomation.com/support/americas/phone_en.html">http://www.rockwellautomation.com/support/americas/phone_en.html</a> , or contact your local Rockwell Automation representative.

## New Product Satisfaction Return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (call the phone number above to obtain one) to your distributor to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

## Documentation Feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete this form, publication [RA-DU002](#), available at <http://www.rockwellautomation.com/literature/>.

Allen-Bradley, Rockwell Software, Rockwell Automation, and TechConnect are trademarks of Rockwell Automation, Inc.

Trademarks not belonging to Rockwell Automation are property of their respective companies.

Rockwell Otomasyon Ticaret A.Ş., Kar Plaza İş Merkezi E Blok Kat:6 34752 İçerenköy, İstanbul, Tel: +90 (216) 5698400

**[www.rockwellautomation.com](http://www.rockwellautomation.com)**

### Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

Europe/Middle East/Africa: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Publication 1756-RN685A-EN-P - September 2010