



# A700332 VMAC CAN Bus Module Instruction Manual

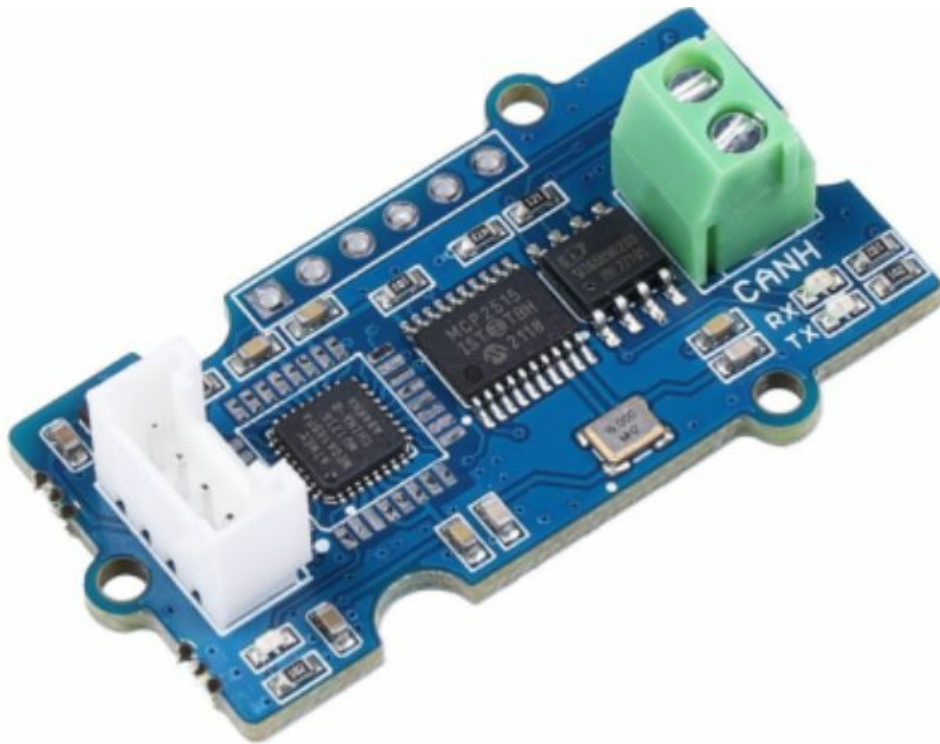
[Home](#) » [VMAC](#) » A700332 VMAC CAN Bus Module Instruction Manual 

## Contents

- [1 A700332 VMAC CAN Bus Module](#)
- [2 Product Information](#)
- [3 Product Usage Instructions](#)
- [4 Safety](#)
- [5 Warranty](#)
- [6 VMAC Warranty Claim Process](#)
- [7 General Information](#)
- [8 Special Tools Required](#)
- [9 Electrical System Best Practices](#)
- [10 Electrical Schematic](#)
- [11 CAN Bus Installation](#)
- [12 Documents / Resources](#)
  - [12.1 References](#)



**A700332 VMAC CAN Bus Module**



## Product Information

The product is an installation manual for the VMAC Accessory A700332, designed for vehicles equipped with electronic park brakes. The manual provides technical support for the installation and usage of the VMAC vehicle-mounted air compressors.

- **Manufacturer:** VMAC
- **Model:** Accessory A700332
- **Compatibility:** Vehicles equipped with electronic park brake

## Product Usage Instructions

Before using the VMAC Accessory A700332, please read the following important information:

- Ensure that you follow the specific instructions provided in the manual to ensure your safety and the safety of others.
- If you have any questions regarding the installation or usage of the product, please contact VMAC Technical Support prior to beginning work.
- Observe all safety messages in the manual to reduce the risk of personal injury during installation, service or repair.
- Refer to the warranty information located at [www.vmacair.com/warranty](http://www.vmacair.com/warranty) for complete warranty requirements.

**Document:** 1930465 Changes and Revisions

Revision	Revision Details	Revised by	Check		d by		Implemented
			Eng.		Tech.	Qual.	
			Mech.	Elec.			
A	Initial release	MSP	N/A	TDF	MSP	LPH	17 Jan. 2023

## Additional Application Information

- For use with 2023+ Ford F-250 – F-600 Super Duty vehicles equipped with electronic park brake.

## Registered Trademarks

- All trademarks mentioned in this manual are the property of their respective owners. VMAC's use of manufacturers' trademarks in this manual is for identification of the products only and does not imply any affiliation to, or endorsement of said companies.
- Loctite®, Loctite® 242 is a registered trademark of Henkel AG & Company KGaA.

## Important Information

- The information in this manual is intended for certified VMAC installers who have been trained in installation and service procedures and/or for anyone with mechanical trade certification who has the tools and equipment to properly and safely perform the installation or service. Do not attempt installation or service without the appropriate mechanical training, knowledge and experience.
- Follow all safety precautions. Any fabrication for correct fit in modified vehicles must follow industry standard "best practices".

## Notice

- Copyright © 2023 VMAC Global Technology Inc. All Rights Reserved. These materials are provided by VMAC for informational purposes only, without representation or warranty of any kind, and VMAC shall not be liable for errors or omissions with respect to the materials. The only warranties for VMAC products and services are those set forth in the express warranty statements accompanying such products and services, if any, and nothing herein shall be construed as constituting an additional warranty.
- Printing or copying of any page in this document in whole or in part is only permitted for personal use. All other use, copying or reproduction in both print and electronic form of any part of this document without the written consent of VMAC is prohibited.
- The information contained herein may be changed without prior notice.
- Printed in Canada

## Safety

### Important Safety Notice

- The information contained in this manual is based on sound engineering principles, research, extensive field experience and technical information. Information is constantly changing with the addition of new models, assemblies, service techniques and running OEM changes. If a discrepancy is found in this manual, contact VMAC Technical Support prior to initiating or proceeding with installation, service or repair.
  - Current information may clarify the issue. Anyone with knowledge of such discrepancies, who proceeds to perform service and repair, assumes all risks.
  - Only proven service procedures are recommended. Anyone who departs from the specific instructions provided in this manual must first ensure that their safety and that of others is not being compromised, and that there will be no adverse effects on the operational safety or performance of the equipment.
  - VMAC will not be held responsible for any liability, consequential damages, injuries, loss or damage to individuals or to equipment as a result of the failure of anyone to properly adhere to the procedures set out in this manual or standard safety practices.
- Safety should be the first consideration when performing any service operations. If there are any questions concerning the procedures in this manual, or more information is required, please contact VMAC Technical Support prior to beginning work.

## Safety Messages

- This manual contains various warnings, cautions and notices that must be observed to reduce the risk of personal injury during installation, service or repair and the possibility that improper installation, service or repair may damage the equipment or render it unsafe.

	<p><b><i>This symbol is used to call attention to instructions concerning personal safety. Watch for this symbol; it points out important safety precautions, it means, "Attention, become alert! Your personal safety is involved". Read the message that follows and be aware of the possibility of personal injury or death. As it is impossible to warn of every conceivable hazard, common sense, and industry-standard safety practices must be observed.</i></b></p>
	<p><b><i>This symbol is used to call attention to instructions on a specific procedure that if not followed may damage or reduce the useful life of the compressor or other equipment.</i></b></p>
	<p><b><i>This symbol is used to call attention to additional instructions or special emphasis on a specific procedure.</i></b></p>

## Warranty

### VMAC Standard Warranty (Limited)

- For complete warranty information, including both VMAC Standard Warranty (Limited) and VMAC Lifetime Warranty (Limited) requirements, please refer to our current published warranty located at: [www.vmacair.com/warranty](http://www.vmacair.com/warranty)
- If you do not have access to a computer, please contact us and we will be happy to send you our warranty.

- VMAC's warranty is subject to change without notice.



### **VMAC Lifetime Warranty (Limited)**

- A VMAC Lifetime Limited Warranty is offered on the base air compressor only and only on UNDERHOOD, Hydraulic Driven, Transmission Mounted, Gas and Diesel Engine Driven Air Compressors, Multifunction Power Systems, and other products as defined by VMAC, provided that (i) the purchaser fully completes and submits a warranty registration form within 3 months of purchase, or 200 hours of operation, whichever occurs first; (ii) services are completed in accordance with the Owner's Manual;
- proof of purchase of applicable service kits are made available to VMAC upon request.
- The VMAC Lifetime Warranty is applicable to new products shipped on or after 1 October, 2015.

### **Warranty Registration**

- Warranty registration for VMAC systems can be completed online or by filling in the form at the back of each system installation manual. Warranty registration must be completed and sent to VMAC at the time the system is put into service for any subsequent warranty claim to be considered valid.
- There are 4 ways the warranty can be registered with VMAC:
- [www.vmacair.com/warranty](http://www.vmacair.com/warranty)
- [warranty@vmacair.com](mailto:warranty@vmacair.com)
- (877) 740-3202
- VMAC – Vehicle Mounted Air Compressors 1333 Kipp Road, Nanaimo, BC, Canada V9X 1R3LIFETIME

### **VMAC Warranty Claim Process**

**VMAC warranty work must be pre-authorized by VMAC. Claims are processed via our dealer network. If you are not a VMAC dealer, please select one to work with via our Dealer Locator: <https://www.vmacair.com/dealer-locator/>**



1. Communicate with VMAC Technical Support at 1-888-241-2289 or [tech@vmacair.com](mailto:tech@vmacair.com) to help diagnose/troubleshoot the problem prior to repair. VMAC technical support will require the VMAC System ID, hours on the compressor.
2. VMAC will provide direction for repair or replacement of the failed components.
3. If requested, failed parts must be returned to VMAC for evaluation.
4. Dealers may login to the VMAC website to view the “VMAC Labour Time Guide” (under “Agreements”) to see the allowable warranty labour times.
5. Warranty invoices must include the Service Ticket number, VMAC System ID#, hours on the compressor, and a detailed description of the work performed.
6. VMAC Warranty does not cover consequential damages, overtime charges, mileage, travel time, towing/recovery, cleaning or shop supplies.
7. Dealers submit warranty claims on behalf of the Vehicle Owner/End User affected by the defective part(s). The dealer ensures that all warranty credits are refunded back to the Vehicle Owner/End User who made the initial warranty claim.

	<ul style="list-style-type: none"> <li>• <i>In order to qualify for Lifetime Warranty (Limited), the completed warranty registration form must be received by VMAC within 3 months of the buyer receiving the Product(s), or 200 hours of operation, whichever occurs first.</i></li> <li>• <i>If the completed warranty registration form has not been received by VMAC within 3 months of the buyer receiving the Product(s),</i></li> <li>• <i>or 200 hours of operation, the “Standard” warranty period will be deemed to commence 30 days from the date of shipment from VMAC.</i></li> <li>• <i>Failure to follow the warranty claim process may result in denial of the warranty claim.</i></li> </ul>
--	---

VMAC Product Warranty Policies & Warranty Registration can be found on the VMAC website (see previous page for URL).

## General Information

### Optional Equipment Compatibility

- While VMAC strives to design systems compatible with optional OEM equipment (such as running boards), it is impractical to develop systems that accommodate every OEM and aftermarket option or add-on. Whenever possible, VMAC endeavors to advise of compatibility issues in the “Additional Application Information” section of the manual. Even when specific optional equipment is determined by VMAC to be incompatible, it does not preclude the vehicle upfitter or end user from modifying the optional equipment to make it compatible with the installed VMAC system. VMAC does not warrant or accept responsibility or liability for the fitment, function, or safety of any products modified in any way not expressly outlined in the installation manual.

### Before Starting

- Read this manual prior to beginning the installation to ensure familiarity with the components and how they will fit on the vehicle. Identify any variations from the application list such as vehicle model, engines, or optional equipment (e.g., dual alternator, active steering assist, etc.).
- Open the package, unpack the components and identify them using the Illustrated Parts List (IPL) included in the Fastener Pack.

### Hose Information

- Depending on other installed equipment, it might be necessary to move the air/oil separation tank from its intended location. The hoses used in VMAC compressor systems have a specific inner liner that is compatible with VMAC compressor oil. Use of hoses other than those supplied or recommended by VMAC may cause compressor damage and may void your warranty. Please contact VMAC for replacement hoses and further information.

### Ordering Parts

- To order parts, contact a VMAC dealer. The dealer will ask for the VMAC serial number, part number,

description and quantity. Locate the nearest dealer online at [www.vmacair.com/dealer-locator](http://www.vmacair.com/dealer-locator) or call 1-877-912-6605.



### Special Tools Required

None.

- All fasteners must be torqued to specifications. Use manufacturers' torque values for OEM fasteners.
- The torque values supplied in Table 1 are intended for VMAC supplied components, or for use as a guide in the absence of a torque value provided by an OEM.
- Apply Loctite 242 (blue) to all fasteners (except nylon lock nuts) unless otherwise stated. Damage Table
- Torque values are with Loctite applied unless otherwise specified.

Standard Grade 8 National Coarse Thread								
Size (in)	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
Foot pounds (ft•lb)	9	18	35	55	80	110	170	280
Newton meter (N•m)	12	24	47	74	108	149	230	379

Standard Grade 8 National Fine Thread					
Size (in)	3/8	7/16	1/2	5/8	3/4
Foot pounds (ft•lb)	40	60	90	180	320
Newton meter (N•m)	54	81	122	244	434

Metric Class 10.9						
Size (mm)	M6	M8	M10	M12	M14	M16
Foot pounds (ft•lb)	4.5	19	41	69	104	174
Newton meter (N•m)	6	25	55	93	141	236

Table 1 — Torque Table

### Electrical System Best Practices



- To confirm a good ground, use an ohm meter to measure the resistance between the ground point and the negative battery terminal. Resistance should be less than 1  $\Omega$ .
- Route all wires to ensure they will not contact hot, sharp or moving parts (including the park brake mechanism, steering column, and pedals).
- Before drilling any holes ensure there are no OEM wires, hoses, or components that may be damaged.
- Do not use a test light to probe for power on vehicle circuits, the increased current draw of the test light may damage components.
- VMAC recommends using only sealed crimp and solder butt connectors for all electrical connections.
- To ensure a durable connection, use only good quality crimping tools.
- Apply loom to all wiring:
- Use high temperature loom in areas where high temperatures may be expected.
- Use spiral loom in areas with high vibration.

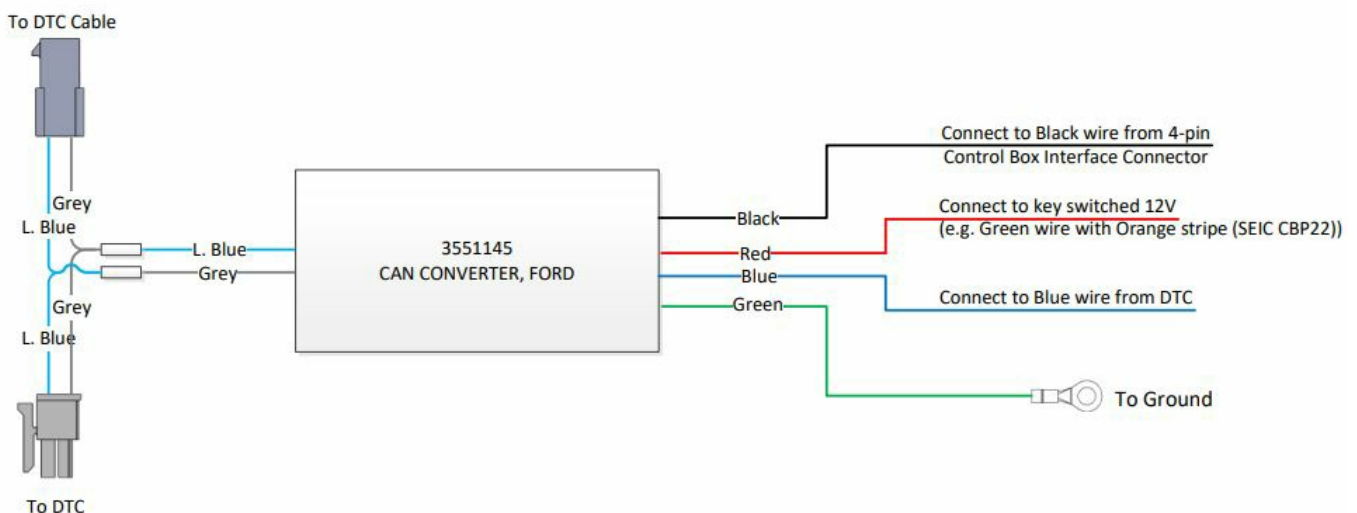
### In-line Butt Splice Connections

- Cut the wire approximately 2 in from the connector.
- Strip approximately 3/8 in from the end of both sides of the cut wire, as well as from the end of the wire being spliced in-line.
- Twist the wire to be spliced in-line, together with the “live” side of the wire (not the wire attached to the connector).
- Slide the butt connector onto the twisted wires and crimp it.
- Insert the “connector side” of the wire into butt connector and crimp it.
- Lightly tug the wires to ensure they are properly crimped.
- Using a heat gun, carefully apply heat to the butt connectors to seal the connection.

### Tying into OEM connectors

- Some OEM connectors may have locking tabs that must be disengaged prior to inserting a crimped connector.

### Electrical Schematic



**Figure 1 — Electrical Schematic**


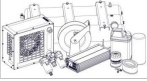
## CAN Bus Installation

- All wires that are installed, rerouted or shifted during the installation must be secure so that they do not contact any hot, sharp or moving parts. Use rubber coated P-clips or cable ties wherever possible.
- Attach the green wire with ring connector from the CAN converter module to a good ground under the dashboard.
- Plug the CAN converter into the Digital Throttle Control (DTC).
- Plug the DTC harness (installed during the main system installation) into the CAN converter.
- Splice the red wire from the CAN converter to the 12 V key switched power (see chapter “Installing the Control Components“ in the VMAC system installation manual for the suggested location).
- Using the supplied butt connector, splice the blue wire running from the CAN converter to the blue wire from the running from the DTC.
- Using the supplied butt connector, splice the black wire running from the CAN converter to the black wire running from the VMAC 4-Pin connector.
- Secure the CAN converter module under the dash. Ensure the module and harnesses are away from any sharp edges or moving parts.






## Testing the Installation

- This testing should be done in conjunction with the system installation testing in the system installation manual.
- Ensure the parking brake is engaged and the transmission is in “PARK”.
- Start the engine.
- Turn on the compressor and allow it to build to full system pressure.
- The VMAC system should operate normally.
- Release the “PARK BRAKE”.
- The VMAC system should turn off.
- Re-engage the “PARK BRAKE”.
- With the brake pedal firmly depressed, shift the vehicle into “NEUTRAL”\*.
- Turn on the compressor.
- The compressor clutch should engage, but the engine speed should not increase.
- Shift the vehicle back into “PARK”.
- Repeat these steps with the asterisks in all gear selector positions to ensure the engine speed does not increase unless the gear selector is in “PARK”.
- VMAC – Vehicle Mounted Air Compressors VMAC Technical Support: 888-241-2289 VMAC Knowledge Base: [kb.vmacair.com](http://kb.vmacair.com)
- 888-241-2289 [tech@vmacair.com](mailto:tech@vmacair.com)
- 877-740-3202 [warranty@vmacair.com](mailto:warranty@vmacair.com)
- [www.vmacair.com](http://www.vmacair.com) [kb.vmacair.com](http://kb.vmacair.com)
- 1333 Kipp Road, Nanaimo, B.C., V9X 1R3 Canada

## Documents / Resources

  <small>Installation Manual for VMAC Accessory A700332 VMAC CAN Bus Module For Use With VMAC 3000 Series 12V - 15000 Series Duty Vehicles Equipped With Electronic Park Brakes <a href="http://www.vmacair.com">www.vmacair.com</a></small>	<p><a href="#">VMAC A700332 VMAC CAN Bus Module</a> [pdf] Instruction Manual A700332, A700332 VMAC CAN Bus Module, A700332 CAN Bus Module, VMAC CAN Bus Mod ule, CAN Bus Module, VMAC Bus Module, Bus Module, Module</p>
--	--

## References

-  [VMAC Knowledge Base](#)
-  [VMAC - Vehicle Mounted Air Compressors | VMACAIR.com](#)
-  [Find A Dealer - VMAC](#)
-  [VMAC Warranty Policies & Warranty Registration](#)
-  [Find A Dealer - VMAC](#)