Supplement CW-GFC-IS
Part Number: D301646X012
November, 2009

Supplement to: CI-ControlWave GFC / CI-ControlWave Corrector

Intrinsically Safe (IS) Gas Flow Computer / Corrector

ControlWave

EMERSON Process Management

IMPORTANT! READ INSTRUCTIONS BEFORE STARTING!

Be sure that these instructions are carefully read and understood before any operation is attempted. Improper use of this device in some applications may result in damage or injury. The user is urged to keep this book filed in a convenient location for future reference.

These instructions may not cover all details or variations in equipment or cover every possible situation to be met in connection with installation, operation or maintenance. Should problems arise that are not covered sufficiently in the text, the purchaser is advised to contact Emerson Process Management, Remote Automation Solutions division (RAS) for further information.

EQUIPMENT APPLICATION WARNING

The customer should note that a failure of this instrument or system, for whatever reason, may leave an operating process without protection. Depending upon the application, this could result in possible damage to property or injury to persons. It is suggested that the purchaser review the need for additional backup equipment or provide alternate means of protection such as alarm devices, output limiting, fail-safe valves, relief valves, emergency shutoffs, emergency switches, etc. If additional information is required, the purchaser is advised to contact RAS.

RETURNED EQUIPMENT WARNING

When returning any equipment to RAS for repairs or evaluation, please note the following: The party sending such materials is responsible to ensure that the materials returned to RAS are clean to safe levels, as such levels are defined and/or determined by applicable federal, state and/or local law regulations or codes. Such party agrees to indemnify RAS and save RAS harmless from any liability or damage which RAS may incur or suffer due to such party's failure to so act.

ELECTRICAL GROUNDING

Metal enclosures and exposed metal parts of electrical instruments must be grounded in accordance with OSHA rules and regulations pertaining to "Design Safety Standards for Electrical Systems," 29 CFR, Part 1910, Subpart S, dated: April 16, 1981 (OSHA rulings are in agreement with the National Electrical Code).

The grounding requirement is also applicable to mechanical or pneumatic instruments that include electrically operated devices such as lights, switches, relays, alarms, or chart drives.

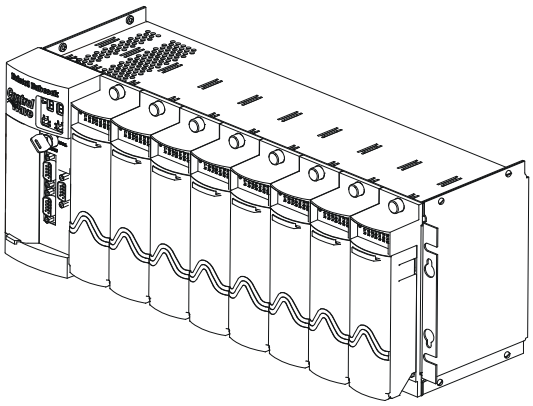
EQUIPMENT DAMAGE FROM ELECTROSTATIC DISCHARGE VOLTAGE

This product contains sensitive electronic components that can be damaged by exposure to an electrostatic discharge (ESD) voltage. Depending on the magnitude and duration of the ESD, this can result in erratic operation or complete failure of the equipment. Read supplemental document S14006 for proper care and handling of ESD-sensitive components.

Remote Automation Solutions
A Division of Emerson Process Management
1100 Buckingham Street, Watertown, CT 06795
Telephone (860) 945-2200

Emerson Process Management
Training

GET THE MOST FROM YOUR EMERSON INSTRUMENT OR SYSTEM



- Avoid Delays and problems in getting your system on-line
- Minimize installation, start-up and maintenance costs.
- Make the most effective use of our hardware and software.
- Know your system.

As you know, a well-trained staff is essential to your operation. Emerson offers a full schedule of classes conducted by full-time, professional instructors. Classes are offered throughout the year at various locations. By participating in our training, your personnel can learn how to install, calibrate, configure, program and maintain your Emerson products and realize the full potential of your system.

For information or to enroll in any class, go to http://www.EmersonProcess.com/Remote and click on "Training" or contact our training department in Watertown at (860) 945-2200.

Introduction

This supplement describes the differences in installation and setup between the intrinsically safe (IS) versions of the ControlWave Gas Flow Computer (GFC) / ControlWave Corrector and the standard versions of these devices.

Overview

The intrinsically safe features of the ControlWave GFC-IS / ControlWave Corrector-IS are designed to prevent sparks or release of energy that could ignite a hazardous atmosphere and cause an explosion.

Differences between the Standard and IS Versions

There are several differences between the ControlWave GFC / ControlWave Corrector and the ControlWave GFC-IS / ControlWave Corrector-IS:

- Unlike the standard GFC/Corrector, the GFC-IS/Corrector-IS operates in Class I Division 1 hazardous locations.
- To ensure the integrity of the intrinsically-safe rating, the CPU and I/O boards are located behind a shield in the enclosure and all wiring termination blocks are on a termination panel. When replacing the battery, replace the shield to preserve the intrinsic safety integrity.
- The internal lead acid battery is a special sealed type with internal protection (part number 396924-01-8).
- The GFC-IS/Corrector-IS does not support an internal case-mounted radio or modem.
- The only supported communication methods for the GFC-IS/Corrector-IS are serial RS-232 communication through COM1 and COM2, and serial RS-485 communication through COM3. The RS-485 interface can be connected to a 3808 transmitter for an additional meter run.
- Communication to devices outside the hazardous area requires the ISTRAN (Intrinsically Safe Communication Interface unit). See *CI-CW-GFC-ISTRAN* for more information.
- The only GFC-IS/Corrector-IS CPU speed is 14 MHz.
- The GFC-IS/Corrector-IS power supply only operates from +5.4V to 8V (+6V nominal input power).
- **DO NOT USE** alternate power input connector (P6).
- The GFC-IS/Corrector-IS has no auxiliary power output.
- The GFC-IS/Corrector-IS does not support a polyphaser.
- The GFC-IS/Corrector-IS does not have an analog output (AO) option.
- Digital outputs have a V_{max} of 10Vdc and an I_{max} of 250 mA.
- Analog inputs support 1-5V operation only. They do **not** support 4-20 mA operation.

- Pulse/DI inputs on the CPU board are 10 kHz high speed counter (HSC) inputs.

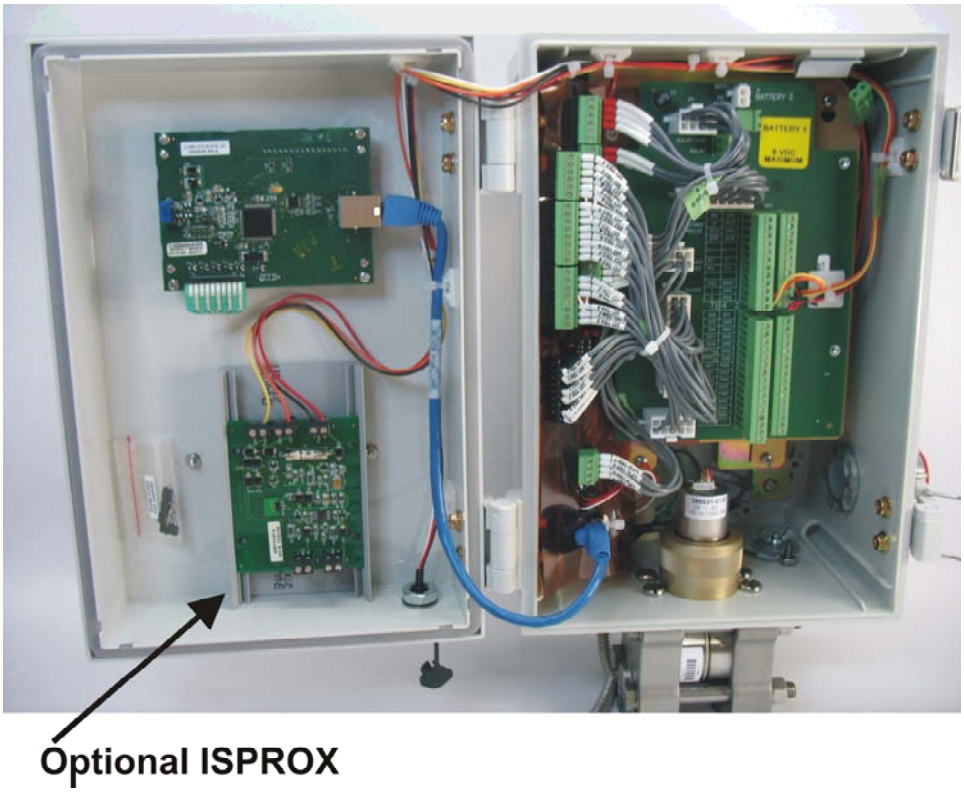


Figure 1. ControlWave GFC-IS / ControlWave Corrector-IS

Installation / Configuration

Warning	**To ensure safe use of this product, please review and follow the instructions in the following supplemental documentation:** ***Supplement Guide - ControlWave Site Considerations for Equipment Installation, Grounding, and Wiring* (S1400CW)** ***ESDS Manual – Care and Handling of PC Boards and ESD Sensitive Components* (S14006)**

Wiring the I/O

There are certain differences between I/O in the standard ControlWave GFC / ControlWave Corrector and the intrinsically safe version:

- Digital outputs have a V_{max} of 10Vdc and an I_{max} of 250 mA.
- Analog inputs support 1-5V operation only. They do **not** support 4-20 mA operation.
- There are no analog outputs.

Note: Wire all I/O to connectors TB3 and TB4 (see *Figure 3* and *Figure 4*). Consult the wiring diagram at the end of this document for terminal connections.

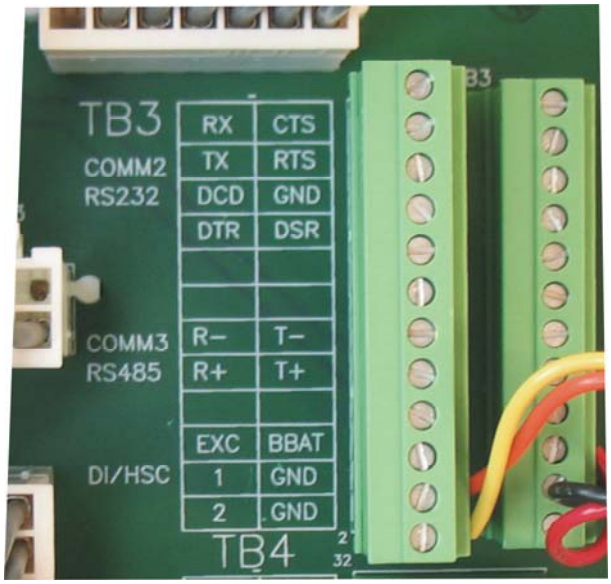


Figure 2. Terminal Block TB3

Figure 3. Terminal Block TB4

Notes:

- You must wire all connections from the terminal panel out through a conduit on the right side of the GFC-IS / Corrector-IS enclosure (see *Figure 4*).
- The ControlWave GFC-IS/Corrector-IS supports an optional intrinsically safe proximity sensor interface board (ISPROX). For details on the ISPROX, see *PIP-CW ISPROX*.

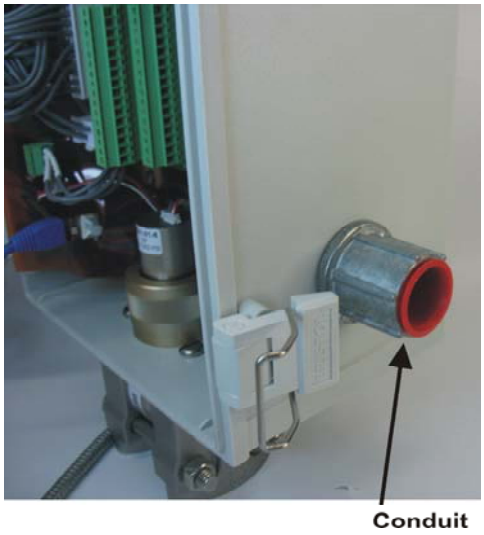


Figure 4. Conduit for Wiring

Wiring the Communication Ports

COM1 is pre-wired to a connector with a plug-type cover on the bottom of the door of the enclosure (see *Figure 5*). **Use COM1 only in an area known to be non-hazardous to connect a laptop for local access to the unit.**

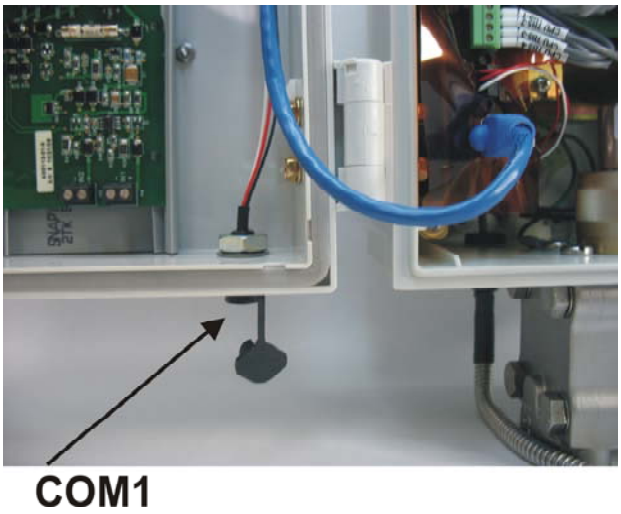


Figure 5. COM1 Connector (in Door) for Local Communication Access

COM2 and COM3 wiring connections are located on terminal block TB3 (*See Figure 2*). Wiring for these ports routes out of the unit through the conduit to the ISTRAN. See *CI-CW-GFC-ISTRAN* for details on the interface.

Note: Consult the diagram on the next page for terminal connections.

Wiring the Power Connections

You must connect power using both the solar panel connector (TB1) on the termination panel and the battery 1 connector (TB2). You can connect TB2 to an intrinsically safe communication interface (ISTRAN) or an internal 6V 7AH lead acid battery**. DO NOT USE the battery 2 connector (P6).**

Warning **Only use battery and solar panels shipped from the factory with the unit according to the model specification. Using batteries or solar panels from third parties violates the intrinsically safe certification for the system.**

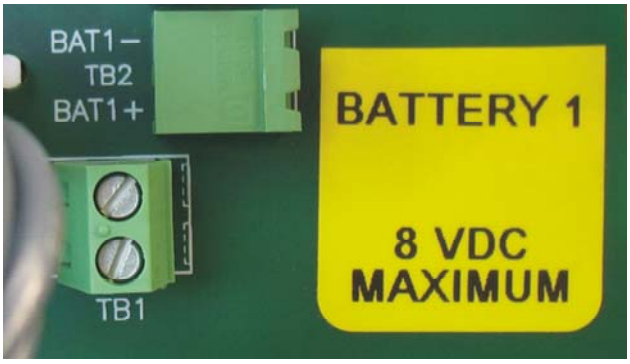
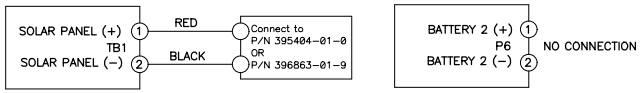
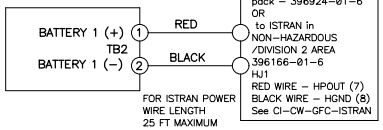
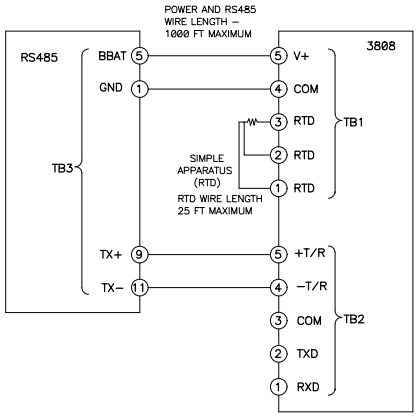


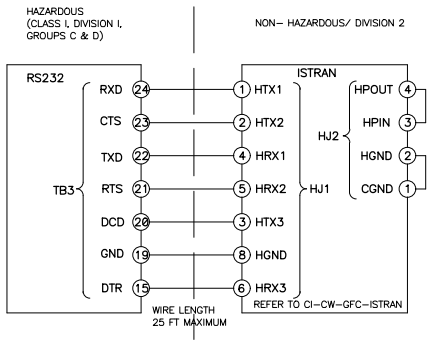
Figure 6. Power Connectors for Solar Panel and Battery 1

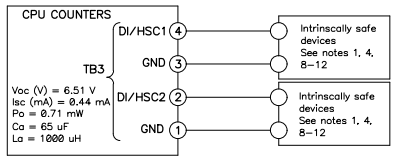
Note: Consult the wiring diagram on the next page for terminal connections.

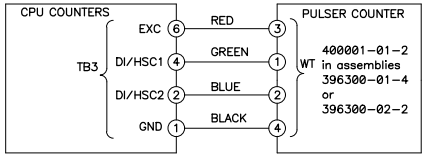


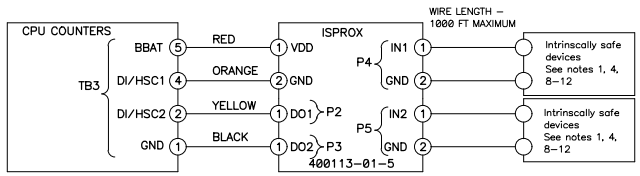


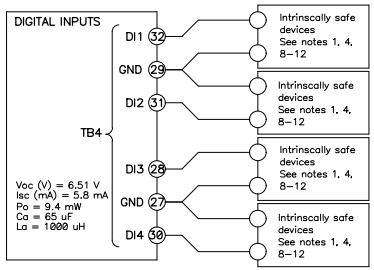


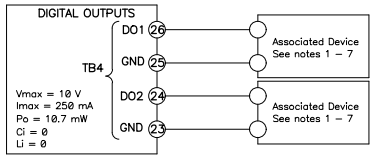


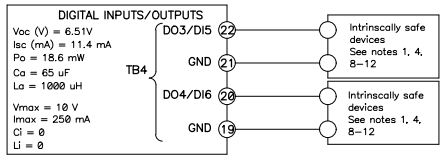


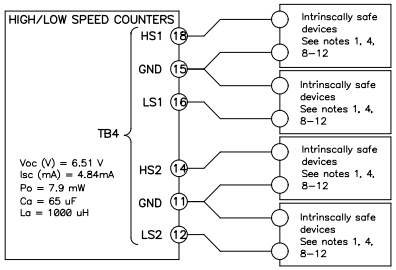


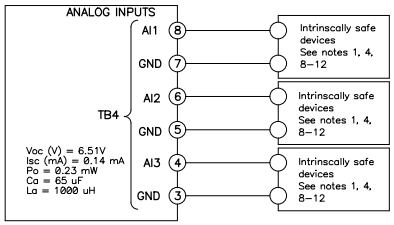












REV K − 8/20/09 Update per comments from UL

Associated Apparatus

1. The output current of this associated apparatus is limited by a resistor such that the output voltage−current plot is a straight line drawn between open−circuit voltage and short−circuit current.

2. Selected intrinsically safe equipment must be third party listed as intrinsically safe for the application, and have intrinsically safe entity parameters conforming with Table 1 below.

TABLE 1:

I.S. EQUIPMENT		Associated Apparatus
V max (or Ui)	≥	Voc or Vt (or Uo)
I max (or Ii)	≥	Isc or It (or Io)
P max, Pi	≥	Po
Ci + Ccable	≤	Ca (or Co)
Li + Lcable	≤	La (or Lo)

3. This associated apparatus may also be connected to simple apparatus as defined in Article 504.2 and installed and temperature classified in accordance with Article 504.109B) of the National Electric Code (ANSI/NFPA 70), or other local codes, as applicable.

4. Capacitance and inductance of the wiring from the intrinsically safe equipment to the associated apparatus shall be calculated and must be included in the system calculations as shown in Table 1. Cable capacitance, Ccable, plus intrinsically safe equipment capacitance, Ci must be less than the marked capacitance, Ca (or Co), shown on any associated apparatus used. The same applies for inductance (Lcable, Li and La or Lo, respectively). Where the cable capacitance and inductance per foot are not known, the following values shall be used: Ccable = 60 pF/ft., Lcable = 0.2 uH/ft.

5. Where multiple circuits extend from the same piece fo associated apparatus, they must be installed in seperate cables or in one cable having suitable insulation. Refer to Article 504.30(B) of the National Electric Code (ANSI/NFPA 70) and Instrument Society of America Recommended Practice ISA RP12.6 for installing intrinsically safe equipment.

6. Intrinsically safe circuits must be wired and separated in accordance with Article 504.20 of the National Electric Code (ANSI/NFPA 70) or other local codes, as applicable.

7. This associated apparatus has not been evaluated for use in combination with another associated apparatus.

For Entity−connected Intrinsically safe Equipment for Use in Hazardous Locations:

8. Associated apparatus may be in a Division 2 or Zone 2 location if so approved.

9. Selected associated apparatus must be third party listed as providing intrinsically safe circuits for the application, and have a Voc or Vt not exceeding Vmax (or Uo not exceeding Ui), Isc or It not exceeding Imax (or Io not exceeding Ii), and the Po of the assicated apparatus must be less than or equal to the Pmax or Pi of the intrinsically safe equipment, as shown in Table 1.

10. Associated Apparatus must be installed in accordance with its manufacturer's control drawing and article 504 of the National Electric Code (ANSI/NFPA 70) for installation in the United States, or Section 18 of the Canadian Electric Code for Installations in Canada.

11. When required by the manufacturer's control drawing, the associated apparatus must be connected to a suitable ground electrode per the National Electric Code (ANSI/NFPA 70), the Canadian Electrical Code, or other local installation codes, as applicable. The resistance of the ground path must be less than 1 ohm.

12. Associated apparatus must not be used in combination unless permitted by the associated apparatus certification.

DI1, DI2, DI3, DI4, DO3/DI5, DO4/DI6, HS1, LS1, HS2, LS2, DI/HSC1 and DI/HSC2 SHALL BE CONNECTED TO SIMPLE APPARATUS. SIMPLE APPARATUS IS DEFINED AS A DEVICE THAT WILL GENERATE NO MORE THAN 1.5 V, 0.1A and 25 mW. EACH SIMPLE APPARATUS MUST HAVE AN INDEPENDENT GROUND RETURN.

ALL FIELD WIRING MUST HAVE AT LEAST 0.50 MM INSULATION THICHNESS.

ENG	L LACHOWICZ	DATE MFG	8/20/09
CHECK		DATE QA	
		DATE	
		DATE	

Bristol Inc.
1100 BUCKINGHAM ST, WATERTOWN CT, 06795

Title	CW EXPRESS IS REMOTE TERM PANEL ENTITY PARAMETERS		
Size	D	Number	400135−00−0
Rev	K		
Date	8/20/09	Drawn by	L LACHOWICZ
Filename	400135−00−0RK.sch	Sheet	1 of 2

The following tables detail the model specification for the ControlWave GFC-IS / ControlWave Corrector-IS:

MODEL NUMBER FORMAT: CWM-GFC-1- ***ABC-D-E-F-G-H-J-K-L-M-N-O-P-Q-R***

DIFFERENTIAL / STATIC PRESSURE RANGE

(When using differential / static pressure, substitute one of these Range Codes for *ABC* in model number)

Description	Range Code (ABC)
NO SENSOR	0 0 0
150" WC / 1000 PSI	1 2 1
150" WC / 2000 PSI	1 2 2
150" WC / 500 PSI	1 2 3
100" WC / 2000 PSI	1 3 2
300" WC / 1000 PSI	1 4 1
300" WC / 2000 PSI	1 4 2
25 PSI / 2000 PSI	2 0 2
25 PSI / 4000 PSI	2 0 4

GAGE PRESSURE RANGE

(When using gage pressure, substitute one of these Range Codes for *ABC* in model number)

Description	Range Code (ABC)
300" WC	0 1 4
25 PSI	0 2 0
100 PSI	0 2 2
300 PSI	0 2 3
1000 PSI	0 2 5
2000 PSI	0 2 8

STATIC PRESSURE FLANGE ORIENTATION

(Substitute one of these flange codes for *D* in the model number)

Description	Note	Flange Code (D)
Upstream left	First digit of range code (*A)* must be 1 or 2.	1
Upstream right	First digit of range code (*A*) must be 1 or 2.	2
None, correct no counter	First digit of range code (*A*) must be 0.	3
Counter with index (CW)	First digit of range code (*A*) must be 0.	4
Counter with index (CCW)	First digit of range code (*A*) must be 0.	5

MODEL NUMBER FORMAT: CWM-GFC-1- *ABC-D-E-F-G-H-J-K-L-M-N-O-P-Q-R*

ENCLOSURE (Substitute one of these enclosure codes for *E* in the model number)

Description	Note	Enclosure Code (E)
2-button	First digit of range code (*A*) must be 1 or 2.	2
25-button	First digit of range code (*A*) must be 1 or 2.	3
2-button	First digit of range code (*A*) must be 0.	5
25-button	First digit of range code (*A*) must be 0.	6

MOUNTING HARDWARE (Substitute one of these mounting hardware codes for *F* in the model number)

Description	Note	Mounting Hardware Code (F)
Process mount	First digit of range code (*A*) or mounting kit *(P)* must be 1 or 2.	0
Pole mount	First digit of range code (*A*) or mounting kit *(P)* may be 0, 1, or 2.	1

PROCESSOR (Substitute one of these processor codes for *G* in the model number)

Description	Processor Code (G)
14 MHz CPU 5.4 to 8 Vdc powered, Intrinsic rated. Includes 10 kHz counter and RS 485 port.	2

APPLICATION PROGRAM (Substitute one of these program codes for *H* in the model number)

Description	Note	Program Code (H)
No application	Unit ships from factory without an application	0
Base 2-Run measurement application		1
TeleFlow Emulator		3

POWER SYSTEM (Substitute one of these power system codes for *J* in the model number)

Description	Note	Power System Code (J)
External	Unit ships from factory without a power system. Adding an external power supply does **not** meet UL intrinsically safe certification.	1
6V, 7AH lead acid battery with 1W, 6V solar panel system	This is an intrinsically safe system as it ships from the factory. You cannot substitute other third-party batteries/solar panels without voiding UL intrinsically safe certification.	4
6V, 7AH lead acid battery with 6W, 6V solar panel system	This is an intrinsically safe system as it ships from the factory. You cannot substitute other third-party batteries/solar panels without voiding UL intrinsically safe certification.	5

MODEL NUMBER FORMAT: CWM-GFC-1- *ABC-D-E-F-G-H-J-K-L-M-N-O-P-Q-R*

RTD (Substitute one of these RTD codes for *K* in the model number)

Description	Note	RTD Code (K)
No RTD included	Sealed plug in space for RTD	0
12 in bendable RTD with 6 ft cable length	Bendable RTD must be used with a thermo well.	1
12 in bendable RTD with 15 ft cable length	Bendable RTD must be used with a thermo well.	2
12 in bendable RTD with 25 ft cable length	Bendable RTD must be used with a thermo well.	3

RTD THERMO WELL OPTIONS (Substitute one of these thermo well codes for *L* in the model number)

NOTE: THERMO WELL IS REQUIRED TO PREVENT POSSIBLE RTD BLOWOUT DUE TO PIPELINE PRESSURE.

Description	Note	Thermo well Code (L)
None	This option applies only if thermo well is already installed or will be supplied from another source.	0
2.5 in insertion length	316 SS thermo well	1
4.5 in insertion length	316 SS thermo well	2
7.5 in insertion length	316 SS thermo well	3

I/O OPTIONS (Substitute one of these I/O codes for *M* in the model number)

Description	Note	I/O Code (M)
None	No I/O	0
2 DI/DO, 4 DI, 2 DO, 2 HSC	2 DI/DO, 4 DI, 2 DO, 2 HSC	1
2 DI/DO, 4 DI, 2 DO, 2 HSC, 3 AI	2 DI/DO, 4 DI, 2 DO, 2 HSC, 3 Ai	2

ISTRAN (Intrinsically Safe Communication Interface) OPTIONS

(Substitute one of these ISTRAN codes for *N* in the model number)

Description	ISTRAN Code (N)
None / ISTRAN Ready	0
ISTRAN installed	1

ISPROX OPTIONS (Intrinsically Safe Proximity Sensor Interface Board)

(Substitute one of these ISPROX codes for *O* in the model number)

Description	Note	ISPROX Code (O)
None	No ISPROX installed.	0
ISPROX installed and connected to CPU HSC	Flange code *(D)* must be 1, 2, or 3.	1
ISPROX installed and connected to CPU HSC Input 2	Flange code *(D)* must be 4 or 5.	1
ISPROX installed and connected to process I/O terminal “LS”	Flange code *(D)* must be 4 or 5.	2

MODEL NUMBER FORMAT: CWM-GFC-1- ***ABC-D-E-F-G-H-J-K-L-M-N-O-P-Q-R***

MOUNTING KIT (Substitute one of these mounting kit codes for *P* in the model number)

Description	Note	Mounting Kit Code (P)
None	Mounting hardware code (*F*) must be 0 or 1	0
Standard (Rockwell, Roots type)	Mounting hardware code (*F*) must be 0	1
American Meter Type	Mounting hardware code (*F*) must be 0	2

DIGIT BLANKING (Substitute one of these digit blanking codes for *Q* in the model number)

Description	Digit Blanking Code (Q)
None	0
1st digit (tenths)	1
2nd digit (ones)	2
3rd digit (tens)	3

METER INDEX RATE (Substitute one of these meter index rate codes for *R* in the model number)

Description	Meter Index Rate Code (R)
None	0
1 CF/REV	1
5 CF/REV	2
10 CF/REV	3
100 CF/REV	4
1000 CF/REV	5
0.1 M^3/REV	6
1 M^3/REV	7
10 M^3/REV	8
100 M^3/REV	9

WARRANTY

A. Remote Automation Solutions (RAS) warrants that goods described herein and manufactured by RAS are free from defects in material and workmanship for one year from the date of shipment unless otherwise agreed to by RAS in writing.

B. RAS warrants that goods repaired by it pursuant to the warranty are free from defects in material and workmanship for a period to the end of the original warranty or ninety (90) days from the date of delivery of repaired goods, whichever is longer.

C. Warranties on goods sold by, but not manufactured by RAS are expressly limited to the terms of the warranties given by the manufacturer of such goods.

D. All warranties are terminated in the event that the goods or systems or any part thereof are (i) misused, abused or otherwise damaged, (ii) repaired, altered or modified without RAS consent, (iii) not installed, maintained and operated in strict compliance with instructions furnished by RAS or (iv) worn, injured or damaged from abnormal or abusive use in service time.

E. These warranties are expressly in lieu of all other warranties express or implied (including without limitation warranties as to merchantability and fitness for a particular purpose), and no warranties, express or implied, nor any representations, promises, or statements have been made by RAS unless endorsed herein in writing. Further, there are no warranties which extend beyond the description of the face hereof.

F. No agent of RAS is authorized to assume any liability for it or to make any written or oral warranties beyond those set forth herein.

REMEDIES

A. Buyer's sole remedy for breach of any warranty is limited exclusively to repair or replacement without cost to Buyer of any goods or parts found by Seller to be defective if Buyer notifies RAS in writing of the alleged defect within ten (10) days of discovery of the alleged defect and within the warranty period stated above, and if the Buyer returns such goods to the RAS Watertown office, unless the RAS Watertown office designates a different location, transportation prepaid, within thirty (30) days of the sending of such notification and which upon examination by RAS proves to be defective in material and workmanship. RAS is not responsible for any costs of removal, dismantling or reinstallation of allegedly defective or defective goods. If a Buyer does not wish to ship the product back to RAS, the Buyer can arrange to have a RAS service person come to the site. The Service person's transportation time and expenses will be for the account of the Buyer. However, labor for warranty work during normal working hours is not chargeable.

B. Under no circumstances will RAS be liable for incidental or consequential damages resulting from breach of any agreement relating to items included in this quotation from use of the information herein or from the purchase or use by Buyer, its employees or other parties of goods sold under said agreement.

How to return material for Repair or Exchange

Before a product can be returned to Remote Automation Solutions (RAS) for repair, upgrade, exchange, or to verify proper operation, Form (GBU 13.01) must be completed in order to obtain a RA (Return Authorization) number and thus ensure an optimal lead time. Completing the form is very important since the information permits the RAS Watertown Repair Dept. to effectively and efficiently process the repair order.

You can easily obtain a RA number by:

A. FAX
Completing the form (GBU 13.01) and faxing it to (860) 945-2220. A RAS Repair Dept. representative will return the call (or other requested method) with a RA number.

B. E-MAIL
Accessing the form (GBU 13.01) via the RAS Web site (www.emersonprocess.com/remote) and sending it via E-Mail to CustServe.RAS@Emerson.com . A RAS Repair Dept. representative will return E-Mail (or other requested method) with a RA number.

C. Mail
Mail the form (GBU 13.01) to

Remote Automation Solutions
A Division of Emerson Process Management
Repair Dept.
1100 Buckingham Street
Watertown, CT 06795

A RAS Repair Dept. representative will return call (or other requested method) with a RA number.

D. Phone
Calling the RAS Repair Department at (860) 945-2442. A RAS Repair Department representative will record a RA number on the form and complete Part I, send the form to the Customer via fax (or other requested method) for Customer completion of Parts II & III.

A copy of the completed Repair Authorization Form with issued RA number should be included with the product being returned. This will allow us to quickly track, repair, and return your product to you.

EMERSON
Process Management

Remote Automation Solutions

Repair Authorization Form

(Providing this information will permit Remote Automation Solutions to effectively and efficiently process your return. Completion is required to receive optimal lead time. Lack of information may result in increased lead times.)

Date _____ **RA #** _____ **SH** **Line No.** _____

Standard Repair Practice is as follows: Variations to this is practice may be requested in the "Special Requests" section.

- Evaluate / Test / Verify Discrepancy/Repair/Replace

Please be aware of the Non warranty standard charge:

- There is a $100 minimum evaluation charge.

The party sending in material is responsible to ensure that the materials returned are clean to safe levels, defined and/or determined by applicable federal, state and /or local law regulations or codes. Such party agrees to indemnify Remote Automation Solutions harmless to any liability or damage which Remote Automation Solutions may incur or suffer due to such party's failure to so act.

Part I Please complete the following information for single unit or multiple unit returns

Address No. _____ **Address No.** _____

Bill to : _____ **Ship to:** _____

_____ _____

_____ _____

Purchase Order: _____ **Contact Name:** _____

Phone: _____ **Fax:** _____ **E-Mail:** _____

Part II Please complete Parts II & III for each unit returned

Model No./Part No. _____ **Description:** _____

Range/Calibration: _____ **S/N:** _____

Reason for return : ☐ Failure ☐ Upgrade ☐ Verify Operation ☐ Other _____

1. Describe the conditions of the failure (Frequency/Intermittent, Physical Damage, Environmental Conditions, Communication, CPU watchdog, etc.) _____ (Attach a separate sheet if necessary)
2. Comm. interface used: ☐ Standalone ☐ RS-485 ☐ Ethernet ☐ Modem (PLM (2W or 4W) or SNW) ☐Other: _____
3. What is the **Firmware** revision?_____ What is the **Software** & version? _____

Part III If checking "replaced" for any question below, check an alternate option if replacement is not available

A. If product is deemed not repairable would you like your product: ☐ returned ☐ replaced ☐ scrapped?

B. If Remote Automation Solutions is unable to verify the discrepancy, would you like the product: ☐ returned ☐ replaced ☐ *see below?

* Continue investigating by contacting the customer to learn more about the problem experienced? The person to contact that has the most knowledge of the problem is: _____ phone _____

If we are unable to contact this person the backup person is:_____ phone _____

Special Requests:

_____

Ship prepaid to: Remote Automation Solutions, Repair Dept., 1100 Buckingham Street, Watertown, CT 06795
Phone: 860-945-2442 Fax: 860-945-2220

Emerson Process Management
Remote Automation Solutions
1100 Buckingham Street
Watertown, CT 06795
Phone: +1 (860) 945-2262
Fax: +1 (860) 945-2525
www.EmersonProcess.com/Remote

Emerson Process Management
Remote Automation Solutions
6338 Viscount Rd.
Mississauga, Ont. L4V 1H3
Canada
Phone: 905-362-0880
Fax: 905-362-0882
www.EmersonProcess.com/Remote

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