

Ransburg RCS2 Ethernet/IP Implicit Communications Programmer's Manual



Model: A14084-00 RCS2 Interface with Ethernet/IP Card

IMPORTANT: Before using this equipment, carefully read SAFETY PRECAUTIONS and all instructions in this manual. Keep this Service Manual for future reference.

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SAFETY

SAFETY PRECAUTIONS

Before operating, maintaining or servicing any Ransburg electrostatic coating system, read and understand all of the technical and safety literature for your Ransburg products. This manual contains information that is important for you to know and understand. This information relates to **USER SAFETY** and **PREVENTING EQUIPMENT PROBLEMS**. To help you recognize this information, we use the following symbols. Please pay particular attention to these sections.

WARNING

A **WARNING!** states information to alert you to a situation that might cause serious injury if instructions are not followed.

CAUTION

A **CAUTION!** states information that tells how to prevent damage to equipment or how to avoid a situation that might cause minor injury.

NOTE

A **NOTE** is information relevant to the procedure in progress.

While this manual lists standard specifications and service procedures, some minor deviations may be found between this literature and your equipment. Differences in local codes and plant requirements, material delivery requirements, etc., make such variations inevitable. Compare this manual with your system installation drawings and appropriate Ransburg equipment manuals to reconcile such differences.


Careful study and continued use of this manual will provide a better understanding of the equipment and process, resulting in more efficient operation, longer trouble-free service and faster, easier troubleshooting. If you do not have the manuals and safety literature for your Ransburg system, contact your local Ransburg representative or Ransburg.



WARNING

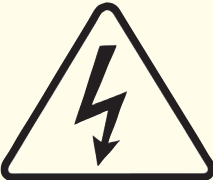
- The user **MUST** read and be familiar with the Safety Section in this manual and the Ransburg safety literature therein identified.
- This equipment is intended to be used by trained personnel **ONLY**.
- This manual **MUST** be read and thoroughly understood by **ALL** personnel who operate, clean or maintain this equipment! Special care should be taken to ensure that the **WARNINGS** and safety requirements for operating and servicing the equipment are followed. The user should be aware of and adhere to **ALL** local building and fire codes and ordinances as well as **NFPA-33 AND EN 50176 SAFETY STANDARDS, LATEST EDITION**, or applicable country safety standards, prior to installing, operating, and/or servicing this equipment.




WARNING

- The hazards shown on the following pages may occur during the normal use of this equipment

<p>AREA Tells where hazards may occur.</p>	<p>HAZARD Tells what the hazard is.</p>	<p>SAFEGUARDS Tells how to avoid the hazard.</p>
<p>Spray Area</p> 	<p>Fire Hazard</p> <p>Improper or inadequate operation and maintenance procedures will cause a fire hazard.</p> <p>Protection against inadvertent arcing that is capable of causing fire or explosion is lost if any safety interlocks are disabled during operation. Frequent Power Supply or Controller shutdown indicates a problem in the system requiring correction.</p>	<p>Fire extinguishing equipment must be present in the spray area and tested periodically.</p> <p>Spray areas must be kept clean to prevent the accumulation of combustible residues.</p> <p>Smoking must never be allowed in the spray area.</p> <p>The high voltage supplied to the atomizer must be turned off prior to cleaning, flushing or maintenance.</p> <p>Spray booth ventilation must be kept at the rates required by NFPA-33, OSHA, country, and local codes. In addition, ventilation must be maintained during cleaning operations using flammable or combustible solvents.</p> <p>Electrostatic arcing must be prevented. Safe sparking distance must be maintained between the parts being coated and the applicator. A distance of 1 inch for every 10KV of output voltage is required at all times.</p> <p>Test only in areas free of combustible material. Testing may require high voltage to be on, but only as instructed.</p> <p>Non-factory replacement parts or unauthorized equipment modifications may cause fire or injury. If used, the key switch bypass is intended for use only during setup operations. Production should never be done with safety interlocks disabled.</p> <p>The paint process and equipment should be set up and operated in accordance with NFPA-33, NEC, OSHA, local, country, and European Health and Safety Norms.</p>

<p>AREA Tells where hazards may occur.</p>	<p>HAZARD Tells what the hazard is.</p>	<p>SAFEGUARDS Tells how to avoid the hazard.</p>
<p>Spray Area</p> 	<p>Explosion Hazard</p> <p>Improper or inadequate operation and maintenance procedures will cause a fire hazard.</p> <p>Protection against inadvertent arcing that is capable of causing fire or explosion is lost if any safety interlocks are disabled during operation.</p> <p>Frequent Power Supply or Controller shutdown indicates a problem in the system requiring correction.</p>	<p>Electrostatic arcing must be prevented. Safe sparking distance must be maintained between the parts being coated and the applicator. A distance of 1 inch for every 10KV of output voltage is required at all times.</p> <p>Unless specifically approved for use in hazardous locations, all electrical equipment must be located outside Class I or II, Division 1 or 2 hazardous areas, in accordance with NFPA-33.</p> <p>Test only in areas free of flammable or combustible materials.</p> <p>The current overload sensitivity (if equipped) MUST be set as described in the corresponding section of the equipment manual. Protection against inadvertent arcing that is capable of causing fire or explosion is lost if the current overload sensitivity is not properly set. Frequent power supply shutdown indicates a problem in the system which requires correction.</p> <p>Always turn the control panel power off prior to flushing, cleaning, or working on spray system equipment.</p> <p>Before turning high voltage on, make sure no objects are within the safe sparking distance.</p> <p>Ensure that the control panel is interlocked with the ventilation system and conveyor in accordance with NFPA-33, EN 50176.</p> <p>Have fire extinguishing equipment readily available and tested periodically.</p>
<p>General Use and Maintenance</p> 	<p>Improper operation or maintenance may create a hazard.</p> <p>Personnel must be properly trained in the use of this equipment.</p>	<p>Personnel must be given training in accordance with the requirements of NFPA-33, EN 60079-0.</p> <p>Instructions and safety precautions must be read and understood prior to using this equipment.</p> <p>Comply with appropriate local, state, and national codes governing ventilation, fire protection, operation maintenance, and housekeeping. Reference OSHA, NFPA-33, EN Norms and your insurance company requirements.</p>

<p>AREA Tells where hazards may occur.</p>	<p>HAZARD Tells what the hazard is.</p>	<p>SAFEGUARDS Tells how to avoid the hazard.</p>
<p>Spray Area / High Voltage Equipment</p> 	<p>Electrical Discharge</p> <p>There is a high voltage device that can induce an electrical charge on ungrounded objects which is capable of igniting coating materials.</p> <p>Inadequate grounding will cause a spark hazard. A spark can ignite many coating materials and cause a fire or explosion.</p>	<p>Parts being sprayed and operators in the spray area must be properly grounded.</p> <p>Parts being sprayed must be supported on conveyors or hangers that are properly grounded. The resistance between the part and earth ground must not exceed 1 meg ohm. (Refer to NFPA-33.)</p> <p>Operators must be grounded. Rubber soled insulating shoes should not be worn. Grounding straps on wrists or legs may be used to assure adequate ground contact.</p> <p>Operators must not be wearing or carrying any ungrounded metal objects.</p> <p>When using an electrostatic handgun, operators must assure contact with the handle of the applicator via conductive gloves or gloves with the palm section cut out.</p> <p>NOTE: REFER TO NFPA-33 OR SPECIFIC COUNTRY SAFETY CODES REGARDING PROPER OPERATOR GROUNDING.</p> <p>All electrically conductive objects in the spray area, with the exception of those objects required by the process to be at high voltage, must be grounded. Grounded conductive flooring must be provided in the spray area.</p> <p>Always turn off the power supply prior to flushing, cleaning, or working on spray system equipment.</p> <p>Unless specifically approved for use in hazardous locations, all electrical equipment must be located outside Class I or II, Division 1 or 2 hazardous areas, in accordance with NFPA-33.</p> <p>Avoid installing an applicator into a fluid system where the solvent supply is ungrounded.</p> <p>Do not touch the applicator electrode while it is energized.</p>

<p>AREA Tells where hazards may occur.</p>	<p>HAZARD Tells what the hazard is.</p>	<p>SAFEGUARDS Tells how to avoid the hazard.</p>
<p>Electrical Equipment</p> 	<p>Electrical Discharge</p> <p>High voltage equipment is utilized in the process. Arcing in the vicinity of flammable or combustible materials may occur. Personnel are exposed to high voltage during operation and maintenance.</p> <p>Protection against inadvertent arcing that may cause a fire or explosion is lost if safety circuits are disabled during operation.</p> <p>Frequent power supply shut-down indicates a problem in the system which requires correction.</p> <p>An electrical arc can ignite coating materials and cause a fire or explosion.</p>	<p>Unless specifically approved for use in hazardous locations, the power supply, control cabinet, and all other electrical equipment must be located outside Class I or II, Division 1 and 2 hazardous areas in accordance with NFPA-33 and EN 50176.</p> <p>Turn the power supply OFF before working on the equipment.</p> <p>Test only in areas free of flammable or combustible material.</p> <p>Testing may require high voltage to be on, but only as instructed.</p> <p>Production should never be done with the safety circuits disabled.</p> <p>Before turning the high voltage on, make sure no objects are within the sparking distance.</p>
<p>Toxic Substances</p> 	<p>Chemical Hazard</p> <p>Certain materials may be harmful if inhaled, or if there is contact with the skin.</p>	<p>Follow the requirements of the Safety Data Sheet supplied by coating material manufacturer.</p> <p>Adequate exhaust must be provided to keep the air free of accumulations of toxic materials.</p> <p>Use a mask or respirator whenever there is a chance of inhaling sprayed materials. The mask must be compatible with the material being sprayed and its concentration. Equipment must be as prescribed by an industrial hygienist or safety expert, and be NIOSH approved.</p>
<p>Spray Area</p> 	<p>Explosion Hazard — Incompatible Materials</p> <p>Halogenated hydrocarbon solvents for example: methylene chloride and 1,1,1,-Trichloroethane are not chemically compatible with the aluminum that might be used in many system components. The chemical reaction caused by these solvents reacting with aluminum can become violent and lead to an equipment explosion.</p>	<p>Spray applicators require that aluminum inlet fittings be replaced with stainless steel.</p> <p>Aluminum is widely used in other spray application equipment - such as material pumps, regulators, triggering valves, etc. Halogenated hydrocarbon solvents must never be used with aluminum equipment during spraying, flushing, or cleaning. Read the label or data sheet for the material you intend to spray. If in doubt as to whether or not a coating or cleaning material is compatible, contact your coating supplier. Any other type of solvent may be used with aluminum equipment.</p>

ETHERNET/IP IMPLICIT COMMUNICATIONS INTERFACE

The Ethernet/IP interface of the RCS2 supports Real-Time Implicit messaging using the Assemblies specified in this manual. The Implicit data is continuously exchanged. In contrast, Explicit messaging is done periodically “on-demand”. The RCS2 Explicit commands are described in a separate document.

The Ethernet/IP Implicit Interface for the RCS2 Controller is defined as a set of seventeen 16 bit words of input plus a set of seventeen 16 bit words of output. The Assembly instances are defined for the controller as follows:

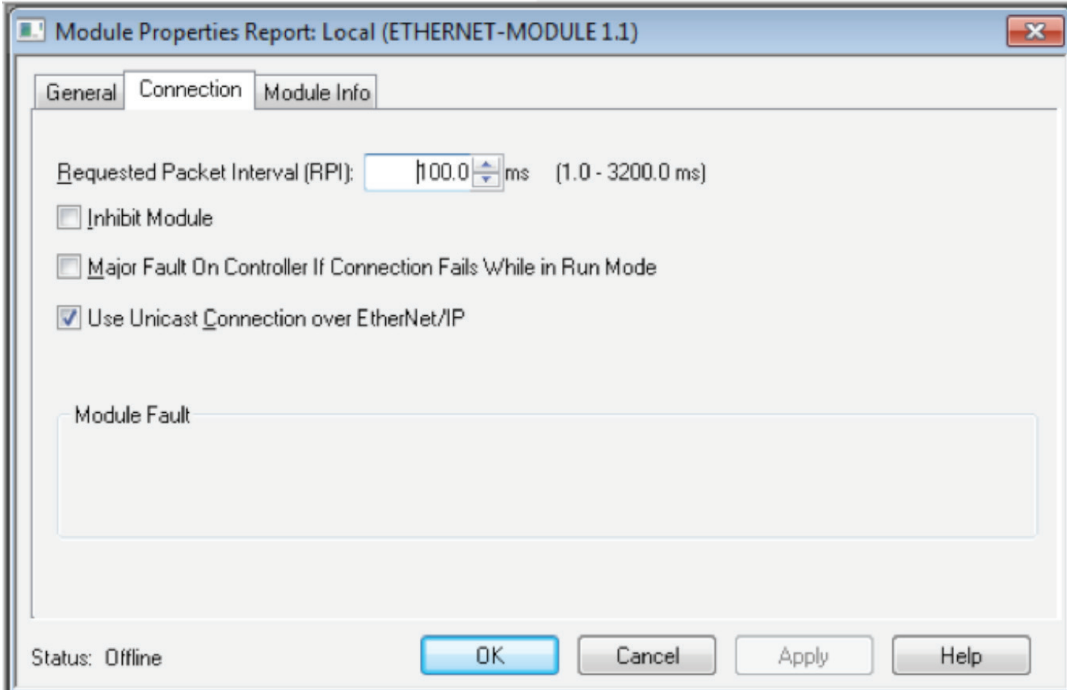
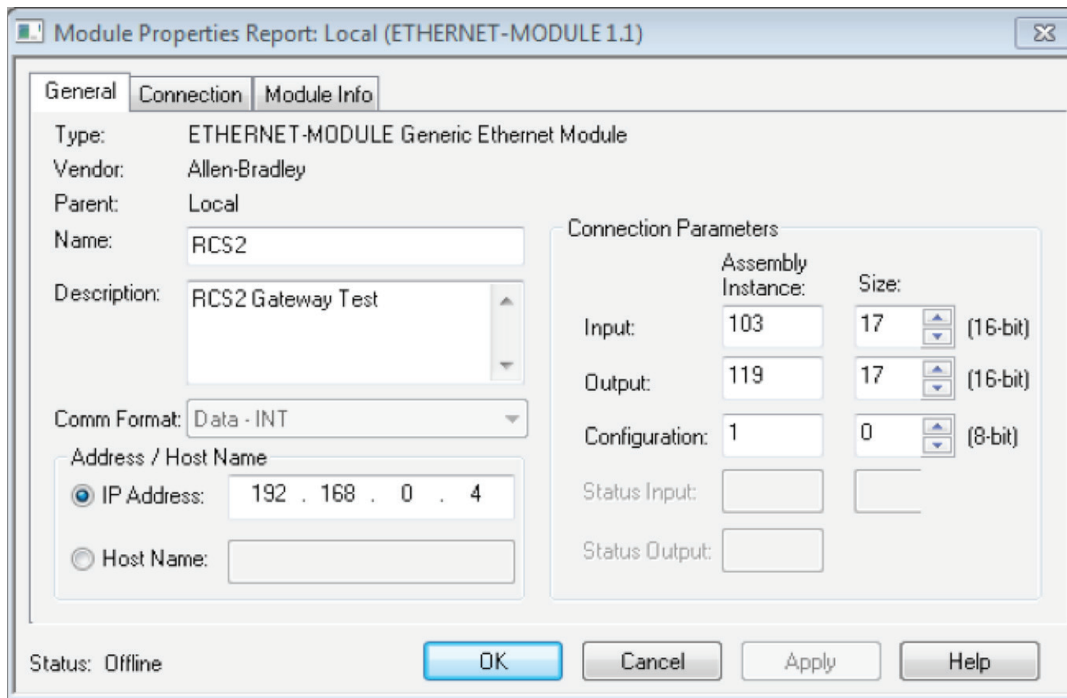
Instance	Number	Count	Size
Input	103 (0x67)	17	16 bits
Output	119 (0x77)	17	16 bits
Configuration	1 (0x01)	0	8 bits

NOTE

- When defining the IO Instances to the host system, specify the input object of the controller as the output object of the host and the output object of the controller as the input object of the host.
- RCS2 will ignore any incoming EIP commands until the system has completed its boot-up tasks.

The Output bit definitions are shown in Table 1 and the Input bit definitions are shown in Table 2 on the following pages.

RCS2 ETHERNET I/P CONFIGURATION - ALLEN BRADLEY CONTROL LOGIX



OUTPUT STATUS DATA (TARGET TO ORIGINATOR ASSEMBLY)

The following section describes the structure and content of the Implicit status data output from the RCS2 Interface-EIP card. All data fields will be continuously transmitted whether or not the Gun is currently configured in the system.

TABLE 1 - RCS2 ETHERNET/IP IMPLICIT OUTPUT DEFINITIONS

Word #	Data Contained	Units
0	System - Status Flags	Flags - see table 1.1 below
1	Gun 1 - Status Flags	Flags - see table 1.2 below
2	Gun 1 – Actual Flow Rate	cc's/min
3	Gun 2 - Status Flags	Flags - see table 1.2 below
4	Gun 2 – Actual Flow Rate	cc's/min
5	Gun 3 - Status Flags	Flags - see table 1.2 below
6	Gun 3 – Actual Flow Rate	cc's/min
7	Gun 4 - Status Flags	Flags - see table 1.2 below
8	Gun 4 – Actual Flow Rate	cc's/min
9	Gun 5 - Status Flags	Flags - see table 1.2 below
10	Gun 5 – Actual Flow Rate	cc's/min
11	Gun 6 - Status Flags	Flags - see table 1.2 below
12	Gun 6 – Actual Flow Rate	cc's/min
13	Gun 7 - Status Flags	Flags - see table 1.2 below
14	Gun 7 – Actual Flow Rate	cc's/min
15	Gun 8 - Status Flags	Flags - see table 1.2 below
16	Gun 8 – Actual Flow Rate	cc's/min

TABLE 1.1 - SYSTEM STATUS FLAG WORDS	
Bit #	System Status Flags
0	
1	
2	
3	
4	
5	
6	
7	
8	System Faulted
9	System Pulse
10	User Link Active
11	
12	
13	
14	
15	

System Pulse

Type of Output: System
Type of Signal: Pulsing

This output pulses at approximately a 0.5 hertz rate as long as the processor on the interface board does not detect any on-board firmware problems. Users may wish to use this signal to detect when the RCS-2 controller is powered up and running.

User Link Active

Type of Output: System
Type of Signal: Maintained

This output is energized whenever a FMS client P.C. is connected and talking to the interface card via Ethernet.

SYSTEM OUTPUTS

System Faulted

Type of Output: System
Type of Signal: Maintained

This signal will be active anytime there is a system fault. Some examples of system faults are problems with the disk drive, hard drive, or CDROM of the user-interface PC. Also, certain problems with the interface board may cause a system fault. Gun faults can also be configured to cause a system fault which will cause this signal to become active. This is done on the CONFIG GUN screens. Each gun can be configured to cause the horn to sound when it faults independent of each other. Note that the horn must be enabled on the CONFIG SYSTEM screen or the horn will not sound for gun faults regardless of whether or not they are configured to do so on the CONFIG GUN screens.

**TABLE 1.2 - GUN STATUS
FLAGS WORD**

Bit #	Gun Status Flags
0	Fault
1	Run
2	Spray Shutdown
3	Flush Request
4	Motor On (Master)
5	Motor On (Slave)
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

GUN OUTPUTS (STATUS BITS)

Fault

This output is energized anytime a fault condition is recognized by the software. Even if the fault is disabled (known as a soft-fault) on the CONFIG ALARMS screen, this bit will be true as long as the condition persists. Fluid flow will not be halted when this bit is true unless it is configured to do so on the CONFIG ALARMS screen. If it is configured to be a hard-fault, this bit and the Spray Shutdown bit will both be true and the system will stop spraying (see Spray Shutdown, below).

Run

This bit is true if the gun is configured properly, a good job number has been loaded, and the gun has been placed in Run Mode or the Volume Fill Mode. This bit is false if a fault occurs, if it is Halted, or in the Ready state.

Spray Shutdown

This bit is true if a fault condition exists and the specific fault that exists is enabled on the CONFIG ALARMS screen (turned on). This indicates that the flow of fluid from the fluid panel has been stopped as the result of a detected fault condition.

Flush Request

This bit is true when the pot-life timer has expired. (For more information, see "Mixed Volume and Pot-Life Timer" in the "Operation's Manual".)

Motor On (Master, Slave)

The Motor On bit is set true by the software when it wants the motor amp to be active. There is a bit provided for the Gun's Master Channel and a second bit provided for the Gun's Slave channel. As long as this bit is true and the motor amplifier is not faulted, the pump will be held rigid in place by the motor amplifier. If this bit is false, the pump is allowed to free-wheel.

GUN OUTPUTS (VALUE)

Actual Flow Rate

This is the actual flow rate in cc's/minute for the Gun.

INPUT COMMAND DATA (ORIGINATOR TO TARGET ASSEMBLY)

The following section describes the structure and content of the Implicit command data input to the RCS2 Interface-EIP card. There are a couple of important considerations relating to these inputs.

EIP Implicit Command Input Enable

There is a system setting which enables or disables scanning of these control inputs. If disabled, these input bits will be ignored. The enable/disable setting is retained in non-volatile memory on the Interface-EIP board and configured via the RT serial console.

Command Input “Voting”

The RCS2 has several possible sources of command inputs. These include the FMS main HMI screen, the physically wired discrete input signals and now the Ethernet-I/P communications. These different command input sources are all concurrently actively scanning.

For the discrete input signals, an input will be considered “active” if any of the sources of that signal are “active”. To be inactive/off, all sources of that signal must be inactive.

For the setpoint signals (e.g. target flow), there is priority order for “voting” with non-zero values. If enabled and non-zero, the EIP setpoint value will be used. The next priority will be given to an FMS “forced” setpoint value. The third priority will be the Analog input reading. Finally, if the Analog input reading is below 250mV, the flow setpoint will be set to the default value for the job.

System Behavior on Loss of EIP Implicit communications

The system monitors the EIP Implicit communications activity. When it detects the loss of activity for more than 1 second, the system will respond in one of two ways.

1. If Implicit control inputs are DISABLED, the system will take no action affecting operations of the RCS or the EIP client.
2. If Implicit control inputs are ENABLED, the system will take the follow actions:
 - a. Ensure system enters Save operating state by:
 - Activate the Reset command bit for all Guns.
 - Deactivate all other command bits for all Guns.
 - Set Commanded Flow to 0 for all Guns.
 - b. Hold this condition for 0.5 second
 - c. Set EIP command registers to “no voting” state to ensure user is able to control the system through the display panel or physical I/O signals. The EIP command registers will be left at:
 - All command bits for all Guns will be Inactive.
 - Commanded Flow for all Guns will be 0.

TABLE 2 - RCS2 ETHERNET/IP IMPLICIT INPUT DEFINITIONS

Word #	Data Contained	Units
0	System – Command Flags	(Future)
1	Gun 1 - Command Flags	Flags - see table 2.1 below
2	Gun 1 – Target Flow Rate	cc's/min
3	Gun 2 - Command Flags	Flags - see table 2.1 below
4	Gun 2 – Target Flow Rate	cc's/min
5	Gun 3 - Command Flags	Flags - see table 2.1 below
6	Gun 3 – Target Flow Rate	cc's/min
7	Gun 4 - Command Flags	Flags - see table 2.1 below
8	Gun 4 – Target Flow Rate	cc's/min
9	Gun 5 - Command Flags	Flags - see table 2.1 below
10	Gun 5 – Target Flow Rate	cc's/min
11	Gun 6 - Command Flags	Flags - see table 2.1 below
12	Gun 6 – Target Flow Rate	cc's/min
13	Gun 7 - Command Flags	Flags - see table 2.1 below
14	Gun 7 – Target Flow Rate	cc's/min
15	Gun 8 - Command Flags	Flags - see table 2.1 below
16	Gun 8 – Target Flow Rate	cc's/min

TABLE 2.1 - GUN COMMAND FLAGS WORD

Bit #	Gun Command Flags
0	Fast Fill
1	Channel Fill (Master)
2	Feather Set
3	Run
4	Halt/Fault Reset
5	Trigger 1
6	Channel Fill (Slave)
7	Trigger 2
8	Trigger 3
9	Trigger 4
10	Volume Fill
11	Push Out
12	
13	
14	
15	

GUN INPUTS (COMMAND BITS)

Fast Fill

Type of Input: Gun

Type of Signal: Pulsed, Triggered on rising edge

The gun must be in Run Mode or Volume Fill Mode prior to initiating this Mode or the RCS-2 controller will ignore the command. If the gun is configured as a single channel gun and this signal is pulsed, the gun will cause the pump to run at its maximum speed (typically 150 RPM) until the halt signal is pulsed. (Note that it is not necessary to have the trigger signal energized, flow starts immediately.) If the gun is configured as a two-channel gun, and this input is pulsed, the pumps will run at the maximum speed possible while maintaining the target ratio. That is, the software will determine which of the two pumps can be run at its maximum speed and run the opposite channel at whatever speed necessary to insure the proper ratio of component A to component B. The software determines this based on the programmed pump sizes and the programmed ratio. Pulsing the Halt/Reset input takes the gun out of Fast Fill Mode. (Note also paragraph below describing using Fast Fill with Volume Fill.)

Channel Fill (Master, Slave)

Type of Input: Channel

Type of Signal: Pulsed, Triggered on rising edge

A gun must be in the Ready state to use this Mode. This Mode functions the same for single channel guns as it does for dual channel guns. When this input bit is pulsed, the pump for that channel is run at its maximum rate (typically 150 RPM) until the halt bit is pulsed. It is not necessary for the trigger input to be energized. If it is desired to have both channels of a two channel gun run at full speed (for flushing, etc.) this bit must be pulsed on both channels independently. Note that each channel has its own independent Halt bit to take the channel out of Channel Fill Mode. Note also that the pilot air signal to the inlet pressure regulator is automatically set to 100 psi (689.5 k Pascal) while in Channel Fill Mode.

Feather Set

Type of Input: Gun

Type of Signal: Pulsed, Triggered on rising edge

If the gun is configured as a Manual Mode gun and the value zero (0) is programmed in for feather pressure (under the CONFIG JOB parameters) this bit can be used to program the feather pressure 'on the fly'. That is, if a hand sprayer is painting and this input is momentarily made true, the RCS-2 controller takes a snapshot of the outbound pressure of the pumps (or the pressure at the feather pressure sensor, if being used) and then starts controlling the speed of the pumps to maintain that pressure. The optional Remote Operator's Panel has a pushbutton on it that allows the hand sprayer to utilize this feature.

Run

Type of Input: Gun

Type of Signal: Pulsed, Triggered on rising edge

This bit takes a configured gun from the Ready state to the "Run" state. In order for a gun to spray, it must first be put into the Run State. It is essentially a way of enabling a gun. Energizing the trigger input of a gun will not cause fluid to flow unless the gun has been placed in Run Mode. When placed in Run Mode, the discrete output labeled Gun Run will be energized.

Halt/Fault Reset

Type of Input: Gun

Type of Signal: Pulsed, Triggered on rising edge

This input bit takes a configured gun that is in Run Mode to the Ready state, essentially disabling the gun from spraying. It also resets a fault for the gun if it is in the Faulted state.

Trigger [1, 2, 3 or 4]

Type of Input: Gun

Type of Signal: Maintained

These input bits tell the controller to run the pumps if and only if the gun has first been placed in Run Mode. The additional trigger input bits (2, 3, and 4) can be used in cases where the output of a fluid panel is split between multiple applicators. They work in conjunction with each other to allow up to 4 independent triggers, one for each of 4 applicators. The software can be configured in such a way that if one of these input bits is enabled, the fluid panel delivers the target flow rate of material. If a second bit is made high, then the fluid panel will deliver twice the target flow rate. If a third input is made high, three times the target flow is delivered and if all four bits are energized, the fluid panel will deliver four times the target flow rate. It is assumed that each of these bits are also associated with the trigger inputs on four independent applicators.

Volume Fill

Type of input: Gun

Type of signal: Pulsed, Triggered on rising edge

By pulsing the volume fill bit, the unit will be put into the V. FILL Mode. (The gun must be in the Ready state prior to this.) When the gun trigger input goes high, the pumps will run at the programmed flow rate and ratio until the volume programmed in for Fill Volume (on the Job parameters screen) is dispensed. If more than one gun trigger input goes high the unit will multiply the flow rate by the number of high inputs but still only run until the programmed volume is dispensed. When that volume is reached, the gun will be halted and placed in the Ready state. See paragraph labeled "Volume Fill with Fast Fill" below if it is necessary to run this mode in parallel with Fast Fill.

Volume Fill with Fast Fill Mode:

It is possible to Volume Fill and Fast Fill simultaneously. If the gun is put into Volume Fill Mode, and then the Fast Fill input is made high momentarily, the unit will run in Fast Fill Mode until the volume programmed in for Fill Volume is dispensed. At that time, the gun will be automatically halted by the software. This happens regardless of the condition of the gun trigger inputs so make sure the applicator is triggered or an overpressure fault may occur. When it is desirable to run both modes in parallel, it is important to watch the Run output bit to ensure the unit has in fact gone into Volume Fill Mode prior to sending the Fast Fill bit.

Pushout

Type of input: Gun

Type of signal: Maintained

When this input is made high, it puts the gun in "Pushout Mode". When initiated, the RCS-2 will immediately turn off the catalyst pump and speed up the resin pump to maintain the target flow rate that was being sprayed prior to the initiation of pushout mode. (Note that this pushout bit must be maintained.) The RCS-2 will continue to deliver fluid out of the first dual purge side until the volume programmed in for Mixed Volume has been sprayed and then that gun will automatically be halted by the software (taken out of Run Mode). This state will be recognized by the PLC or robot when the Run output bit from the RCS-2 goes false. For more information on using this function, refer to the Operator's Manual.

GUN INPUTS (VALUE)

Flow Setpoint

Type of input: Gun

Type of signal: Maintained

The allowable range of values for this parameter is any integer from 0 cc's/min to 10,000 cc's/min. This is the target flow rate for the output of the fluid panel associated with this gun.

WARRANTY POLICY

This product is covered by Carlisle Fluid Technologies materials and workmanship limited warranty. The use of any parts or accessories, from a source other than Carlisle Fluid Technologies, will void all warranties. For specific warranty information please contact Carlisle Fluid Technologies.

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China	Tel: +8621-3373 0108 Fax: +8621-3373 0308	
Japan	Tel: +81 45 785 6421 Fax: +81 45 785 6517	
Australia	Tel: +61 (0) 2 8525 7555 Fax: +61 (0) 2 8525 7575	

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