GUIDANT

Load Computer 1010CB

Application Pack Manual

MN06318 (August 2025)

Important

All information and technical specifications in this document have been carefully checked and compiled by the author; however, we cannot completely exclude the possibility of errors. Guidant Measurement is always grateful to be informed of any errors; contact us at TechnicalCommunications@GuidantMeasurement.com.

Caution

The default or operating values used in this document and in the configuration parameters of the product described in this document are for factory testing only and should not be construed as default or operating values for your system. Each system is unique and each configuration parameter must be reviewed and programmed for that specific system application.

Disclaimer

Guidant hereby disclaims all responsibility for damages, including but not included to consequential damages arising out of or related to the inputting of incorrect or improper program or default values entered in connection with the product described in this document.

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System installation supervision, startup, and commissioning services are available.

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1 Description

The CB Application Pack is a line extension of 1010CJ load computer, handling blending and/or straight product loading and internal additive injector control depending upon the instrument configuration described in the following table. It is flash memory based with field configurable I/Os, full graphics display, and a rugged alphanumeric keyboard incorporating Hall Effect push buttons.

Sales Code	Description	Physical Loading Arms		Internal Additive	RIT Panel	Analog Inputs
		Arm 1	Arm 2			
MODEL A	One arm loading – no blending	Single Product	NA	4	YES	1 Temp Input 1 Density Input 1 Pressure Input
MODEL B	One arm loading with two product ratio blending	2 Product Ratio	NA	4	YES	2 Temp Input 2 Density Input 2 Pressure Input
MODEL C	One arm loading with two product side	2 Product Side Stream	NA	4	YES	2 Temp Input 2 Density Input 2 Pressure Input

Sales Code	Description	Physical Loading Arms		Internal Additive	RIT Panel	Analog Inputs
		Arm 1	Arm 2			
MODEL D	Two single arms – no blending	Single Product	Single Product	4	YES	2 Temp Input 2 Density Input 2 Pressure Input
MODEL E	Two load arms, each comprised of 2 product ratio blending	2 Product Ratio	2 Product Ratio	4	YES	4 Temp Input 4 Density Input 4 Pressure Input
MODEL F	Two load arms, one straight loading, one with side stream blending	Single Product	2 Product Side Stream	2	YES	3 Temp Input 3 Density Input 3 Pressure Input
MODEL K	One arm loading – Vapour Return for LNG/LPG loading	Single Product	NA	0	NO	3 Temp Input 3 Density Input 3 Pressure Input

Arm Number	Sales Code					
	A	B/C	D	F	E	K
Arm 1	Product 1 (Meter 1)	Product 1 (Meter 1) & Product 2 (Meter 2)	Product 1 (Meter1)	Product 1 (Meter 1)	Product 1 (Meter 1) & Product 2 (Meter 2)	Product 1 (Meter 1) & Vapour Return (Meter 2)
Arm 2	NA	NA	Product 2	Product 2 (Meter 2) & Product 3 (Meter 3)	Product 3 (Meter 3) & Product 4 (Meter 4)	NA

2 Features

Flexible and Powerful

- Customizable
- Simplified Chinese language support
- Standalone mode
- 16 recipes for blending/additives
- 1000 transaction logs
- 2000 audit trail logs
- Straight, Ratio and Side stream blending
- Internal Additive Injector Control
- Dual/Single Pulse Input per channel
- Non-linearity Correction for flow
- Batch Control on Gross/Net
- Flow Control Valve (DCV, ACV, Two-Stage)
- Automated proving mode
- RIT Panel interface
- Pump Demand with Delay Time
- System Alarm Output
- Slow Opening During Resume Batch
- Power Failure Resume Batch

Precise and Compliant

- Temperature, pressure and density correction
- Built according to API MPMS standards

User Friendly

- Flash downloadable firmware
- Configurable I/O
- Large backlit LCD with adjustable contrast
- 18 alphanumeric keys
- Programmable Initial Message
- Programmable Permissive and Interlocks Message
- Programmable Units (liter/gallon/kg/lb, m3, t, g)

- Deadman Timer (Enable/Disable)
- Programmable Workflow Prompts
- Programmable Product Description (Alphanumeric)
- Programmable Product Name (Alphanumeric)
- Programmable Inputs (Pause/Timeout/Terminate/Manager Reset)

Integrated

- Interfaces with Honeywell Terminal Automation Systems
- Allows 3rd Party TAS interface via SLIP+, Modbus RTU and Modbus TCP/IP
- 3 Isolated Serial RS485 communication ports
- Two TCP/IP (IEEE 802.3 10/100 Base-T standard) Ethernet ports

Resilient

- Rugged push buttons
- Explosion proof NEC 500/505
- Flame-proof ATEX & IECEx
- Diagnostics program

Secure

- Integrated touch key reader
- Honeywell NexWatch card reader
- Local or remote authorization
- Driver and truck ID (2,750 each)
- Illegal access lockout
- Multi-level security with password protection

Refer the 1010 CB Programming and Software Manuals for further details on individual functions.

3 Hardware Description

Boards	Power supply board Board Input board CPU card Display board	S800PS4-6 Output S10RA-RRR-I2 S10NA-I2 S10CPU CARD 51307995-176-A2 S810FPLG-18-I3
Max. Number of Arms per 1010A	2	
Products	(A) Crude Oils (API Tables 23, 24, 53, 54, 59 & 60) (B) Refined (API Tables 23, 24, 53, 54, 59 & 60) (C) Special (API Tables 24, 54 & 60) (D) Lube Oils (API Tables 23, 24, 53, 54, 59 & 60) (E) NGL and LPG (API Tables 23, 24, 53, 54, 59 & 60) (F) FAME - Fatty Acid Methyl Esters (NEN-EN14214) Support to GPA TP27 Tables	
Temperature Inputs	4-20 mA or RTD	
Pressure Inputs	4 - 20 mA (Availability based on sales code, refer terminal designation)	
Density Inputs	4 - 20 mA (Availability based on sales code, refer terminal designation)	
Protocol	SLIP+ Modbus RTU Modbus TCP/IP	

Communications	Com Port 1: Isolated RS485/232 (standard) Com Port 2: Isolated RS485 standard) Com Port 3: Isolated RS485(standard) Ports no longer require jumper configuration: all configuration is obtained through software control via configuration settings. Ethernet Port 1: (IEEE 802.3 10/100 Base-T standard) Ethernet Port 2: (IEEE 802.3 10/100 Base-T standard)
Part Number	1010Ax – CB - abcNe Where x designates the sales code(A/B/C/D/E/F/K) a designates the authorization options b designates the glands and heater options c designates the power supply input N is for the graphics display e designates the metrology approvals

4 Terminal Designation

4.1 Sales Code A

A1 0 Vdc DC Ground

A2 Supply out (8 - 30 Vdc, 100mA)

A3 Supply out (12 Vdc, 250mA)

A4 Not used

A5 Not used

A6 Not used

A7 Not used

A8 Not used

A9 Relay A1 - GP Output #1

A10 (Deadman Indicator)

A11 Relay A2 -GP Output #2

A12 (Deadman Bell)

A13 Relay A3 - GP Output #3 (Pump Demand Product 1)

A14 Relay A4 - GP Output #4 (None)

A15 Relay A5 - GP Output #5 (None)

A16 Relay A6 - GP Output #6 (None)

A17 Relay Common for A13 - A16

BA1 Relay B1 - GP Output #7 (DCV Inlet Product 1)

BA2 Common for Relay 1 & 2

BA3 Relay B2 - GP Output #8 (DCV Outlet Product 1)

BA4 Relay B3 - GP Output #9 (Internal Add 1 Solenoid O/P)

BA5 Common for Relay 3 & 4

BA6 Relay B4 - GP Output #10 (Internal Add 2 Solenoid O/P)

BA7 Relay B5 - GP Output #11 (Internal Add 3 Solenoid O/P)

BA8 Common for Relay 5 & 6

BA9 Relay B6 - GP Output #12 (Internal Add 4 Solenoid O/P)

BA10 Relay B7 - GP Output #13 (Internal Add 5 Solenoid O/P)

BA11 Common for Relay 7 & 8

BA12 Relay B8 - GP Output #14 (Internal Add 6 Solenoid O/P)

BA13 Relay B9 - GP Output #15 (Pump Demand Additive 1)

BA14 Common for Relay 9 & 10

BA15 Relay B10 - GP Output #16 (Pump Demand Additive 2)

BA16 Relay B11 - GP Output #17 (Pump Demand Additive 3)

BA17 Common for Relay 11 & 12

BA18 Relay B12 - GP Output #18 (Pump Demand Additive 4)

BB1 Relay B13 - GP Output #19 (Pump Demand Additive 5)

BB2 Common for Relay 13 & 14

BB3 Relay B14 - GP Output #20 (Pump Demand Additive 6)

BB4 Relay B15 - GP Output #21 (Isolation Valve Product 1)

BB5 Common for Relay 15 & 16

BB6 Relay B16 - GP Output 22 (None)

BB7 Relay B17- GP Output #23 (System Alarm)

BB8 Common for Relay 17 & 18

BB9 Relay B18 - GP Output #24 (Instrument Alarm)

BB10 Relay B19 - GP Output #25 (RIT Lamp Start Arm 1)

BB11 Common for Relay 19 & 20

BB12 Relay B20 - GP Output #26 (RIT Lamp Ack Arm 1)

BB13 Relay B21 - GP Output #27 (RIT Lamp Stop Arm 1)

BB14 Common for Relay 21 & 22

BB15 Relay B22 - GP Output #28 (None)

BB16 Relay B23 - GP Output #29 (Deadman Callout)

BB17 Common for Relay 23 & 24

BB18 Relay B24 - GP Output #30 (None)

CA1 RTD 1 Source

CA2 RTD 1 Sense (+) / 4-20mA (+) Temperature Input Product 1

CA3 RTD 1 Sense (-)

CA4 RTD 1 Sink

CA5 Not used

CA6 Not used

CA7 Not used

CA8 4-20mA (+) Pressure Input Product 1

CA9 Not used

CA10 Opto Output 1 (Add Pulse)

CA11 Opto Output 2 (Add Pulse)

CA12 Opto 0 Volt

CA13 Signal Ground (Flow)/4-20mA (-)

CA14 Flow Input Meter 1A Product 1 Pulse

CA15 Flow Input Meter 1B Product 1 Pulse

CA16 Signal Ground (Flow)/4-20mA (-)

CA17 Flow Input Meter 2A

CA18 Flow Input Meter 2B

CA19 Signal Ground

CA20 GP Input 1 (Emergency Stop)

CA21 GP Input 2 (Overfill Ground)

CA22 GP Input 3 (Vapor Recovery)

CA23 GP Input 4 (Prog Permissive)

CA24 Signal Ground

CA25 GP Input 5 (Prog. Input #1)

CA26 GP Input 6 (Prog. Input #2)

CA27 GP Input 7 (Prog. Input #3)

CA28 GP Input 8 (Prog. Input #4)

CB1 Not used

CB2 Not used

CB3 Not used

CB4 Not used

CB5 Not used

CB6 Not used

CB7 Not used

CB8 4-20mA (+)

CB9 Not Used

CB10 Opto Output 3 (Add Pulse)

CB11 Opto Output 4 (Add Pulse)

CB12 Opto 0 Volt

CB13 Signal Ground (Flow)

CB14 Flow Input Meter 3A

CB15 Flow Input Meter 3B

CB16 Signal Ground (Flow)

CB17 Flow Input Meter 4A

CB18 Flow Input Meter 4B

CB19 Signal Ground

CB20 GP Input 9 (Prog. Input #5)

CB21 GP Input 10 (Prog. Input #6)

CB22 GP Input 11 (RIT Start Arm 1)

CB23 GP Input 12 (RIT Ack Arm 1)

CB24 Signal Ground

CB25 GP Input 13 (RIT Stop Arm 1)

CB26 GP Input 14 (None)

CB27 GP Input 15 (None)

CB28 GP Input 16 (None)

DA1 ETH 0V Common

DA2 Port 1 ETH_TXP

DA3 Port 1 ETH_TXN

DA4 Port 1 ETH_RXN

DA5 Port 1 ETH_RXP

DA6 Port 1 Tx RS232

DA7 Port 1 Rx RS232

DA8 Port 1 0V Common

DA9 Port 2 A RS485

DA10 Port 2 B RS485

DA11 Port 2 0V Common

DA12 Signal Ground

DA13 GP Input 17 (None)

DA14 GP Input 18(None)

DA15 GP Input 19 (None)

DA16 GP Input 20 (None)

DA17 GP Input 21 (None)

DA18 GP Input 22 (None)

DA19 Signal Ground

DA20 +5V to Reader

DA21 Signal Ground (Flow)/4-20mA (-)

DA22 Flow Input Meter 5A (Internal Additive 1)

DA23 Flow Input Meter 5B (Internal Additive 2)

DB24 Flow Input Meter 6A (Internal Additive 3)

DA25 Flow Input Meter 6B (Internal Additive 4)

DA26 Signal Ground (Flow)/4-20mA (-)

DA27 4-20mA 9(+) Density Input Product 1

DA28 4-20mA 10(+)

DA29 4-20mA Channel 1 Iout

DB1 ETH 0V Common

DB2 Port 2 ETH_TXP

DB3 Port 2 ETH_TXN

DB4 Port 2 ETH_RXN

DB5 Port 2 ETH_RXP

DB6 Port 1 A RS485

DB7 Port 1 B RS485

DB8 Port 1 0V Common

DB9 Port 3 A RS485

DB10 Port 3 B RS485

DB11 Port 3 0V Common

DB12 Signal Ground

DB13 GP Input 23 (None)

DB14 GP Input 24 (None)

DB15 GP Input 25 (None)

DB16 GP Input 26 (None)

DB17 GP Input 27 (None)

DB18 GP Input 28 (None)

DB19 Signal Ground

DB20 Touchkey Data Out

DB21 Touchkey Data In

DB22 Not used

DB23 Signal Ground(Flow)/4- 20mA(-)

DB24 Flow Input Meter 7A (Internal Additive 5)

DB25 Flow Input Meter 7B (Internal Additive 6)

DB26 Signal Ground(Flow)/4- 20mA(-)

DB27 4-20mA 11(+)

DB28 4-20mA 12(+)

DB29 4-20mA Channel 1V+

4.2 Sales Code B

A1 0 Vdc DC Ground

A2 Supply out (8 - 30 Vdc, 100mA)

A3 Supply out (12 Vdc, 250mA)

A4 Not used

A5 Not used

A6 Not used

A7 Not used

A8 Not used

A9 Relay A1 - GP Output #1

A10 (Deadman Indicator)

A11 Relay A2 -GP Output #2

A12 (Deadman Bell)

A13 Relay A3 - GP Output #3 (Pump Demand Product 1)

A14 Relay A4 - GP Output #4 (Pump Demand Product 2)

A15 Relay A5 - GP Output #5(None)

A16 Relay A6 - GP Output #6 (None)

A17 Relay Common for A13 - A16

BA1 Relay B1 - GP Output #7 (DCV Inlet Product 1)

BA2 Common for Relay 1 & 2

BA3 Relay B2 - GP Output #8(DCV Outlet Product 1)

BA4 Relay B3 - GP Output #9 (DCV Inlet Product 2)

BA5 Common for Relay 3 & 4

BA6 Relay B4 - GP Output #10 (DCV Outlet Product 2)

BA7 Relay B5 - GP Output #11 (Internal Add 1 Solenoid O/P)

BA8 Common for Relay 5 & 6

BA9 Relay B6 - GP Output #12 (Internal Add 2 Solenoid O/P)

BA10 Relay B7 - GP Output #13 (Internal Add 3 Solenoid O/P)

BA11 Common for Relay 7 & 8

BA12 Relay B8 - GP Output #14 (Internal Add 4 Solenoid O/P)

BA13 Relay B9 - GP Output #15 (Pump Demand Additive 1)

BA14 Common for Relay 9 & 10

BA15 Relay B10 - GP Output #16 (Pump Demand Additive 2)

BA16 Relay B11 - GP Output #17 (Pump Demand Additive 3)

BA17 Common for Relay 11 & 12

BA18 Relay B12 - GP Output #18 (Pump Demand Additive 4)

BB1 Relay B13 - GP Output #19 (Isolation Valve Product 1)

BB2 Common for Relay 13 & 14

BB3 Relay B14 - GP Output #20 (Isolation Valve Product 2)

BB4 Relay B15 - GP Output #21 (None)

BB5 Common for Relay 15 & 16

BB6 Relay B16 - GP Output #22

BB7 Relay B17- GP Output #23 (System Alarm)

BB8 Common for Relay 17 & 18

BB9 Relay B18 - GP Output #24 (Instrument Alarm)

BB10 Relay B19 - GP Output #25 (RIT Lamp Start Arm 1)

BB11 Common for Relay 19 & 20

BB12 Relay B20 - GP Output #26 (RIT Lamp Ack Arm 1)

BB13 Relay B21 - GP Output #27 (RIT Lamp Stop Arm 1)

BB14 Common for Relay 21 & 22

BB15 Relay B22 - GP Output #28 (None)

BB16 Relay B23 - GP Output #29 (Deadman Callout)

BB17 Common for Relay 23 & 24

BB18 Relay B24 - GP Output #30 (None)

CA1 RTD 1 Source

CA2 RTD 1 Sense (+)/ 4-20mA 1 (+) Temperature Input Product 1

CA3 RTD 1 Sense (-)

CA4 RTD 1 & 2 Sink

CA5 RTD 2 Source

CA6 RTD 2 Sense (+) / 4-20mA 2 (+) Temperature Input Product 2 CA7 RTD 2 Sense (-)

CA8 4-20mA 3 (+) Pressure Input Product 1

CA9 4-20mA 4 (+) Pressure Input Product 2

CA10 Opto Output 1 (Add Pulse)

CA11 Opto Output 2 (Add Pulse)

CA12 Opto 0 Volt

CA13 Signal Ground (Flow)/4-20mA (-)

CA14 Flow Input Meter 1A Product 1 Pulse

CA15 Flow Input Meter 1B Product 1 Pulse

CA16 Signal Ground (Flow)/4-20mA (-)

CA17 Flow Input Meter 2A Product 2 Pulse

CA18 Flow Input Meter 2B Product 2 Pulse

CA19 Signal Ground

CA20 GP Input 1 (Emergency Stop)

CA21 GP Input 2 (Overfill Ground)

CA22 GP Input 3 (Vapor Recovery)

CA23 GP Input 4 (Prog Permissive)

CA24 Signal Ground

CA25 GP Input 5 (Prog. Input #1)

CA26 GP Input 6 (Prog. Input #2)

CA27 GP Input 7 (Prog. Input #3)

CA28 GP Input 8 (Prog. Input #4)

CB1 Not used

CB2 Not used

CB3 Not used

CB4 Not used

CB5 Not used

CB6 Not used

CB7 Not used

CB8 4-20mA 7(+)

CB9 4-20mA 8(+)

CB10 Opto Output 3 (Add Pulse)

CB11 Opto Output 4 (Add Pulse)

CB12 Opto 0 Volt

CB13 Signal Ground (Flow) /4-20mA (-)

CB14 Flow Input Meter 3A

CB15 Flow Input Meter 3B

CB16 Signal Ground (Flow) /4-20mA (-)

CB17 Flow Input Meter 4A

CB18 Flow Input Meter 4B

CB19 Signal Ground

CB20 GP Input 9 (Prog. Input #5)

CB21 GP Input 10 (Prog. Input #6)

CB22 GP Input 11 (RIT Start Arm 1)

CB23 GP Input 12 (RIT Ack Arm 1)

CB24 Signal Ground

CB25 GP Input 13 (RIT Stop Arm 1)

CB26 GP Input 14 (None)

CB27 GP Input 15 (None)

CB28 GP Input 16 (None)

DA1 ETH 0V Common

DA2 Port 1 ETH_TXP

DA3 Port 1 ETH_TXN

DA4 Port 1 ETH_RXN

DA5 Port 1 ETH_RXP

DA6 Port 1 Tx RS232

DA7 Port 1 Rx RS232

DA8 Port 1 0V Common

DA9 Port 2 A RS485

DA10 Port 2 B RS485

DA11 Port 2 0V Common

DA12 Signal Ground

DA13 GP Input 17 (None)

DA14 GP Input 18(None)

DA15 GP Input 19 (None)

DA16 GP Input 20 (None)

DA17 GP Input 21 (None)

DA18 GP Input 22 (None)

DA19 Signal Ground

DA20 +5V to Reader

DA21 Signal Ground (Flow)/4-20mA (-)

DA22 Flow Input Meter 5A Internal Additive 1

DA23 Flow Input Meter 5B Internal Additive 2

DA24 Flow Input Meter 6A Internal Additive 3

DA25 Flow Input Meter 6B Internal Additive 4

DA26 Signal Ground (Flow)/4-20mA (-)

DA27 4-20mA 9(+) Density Input Product 1

DA28 4-20mA 10(+) Density Input Product 2

DA29 4-20mA Channel 1 Iout

DB1 ETH 0V Common

DB2 Port 2 ETH_TXP

DB3 Port 2 ETH_TXN

DB4 Port 2 ETH_RXN

DB5 Port 2 ETH_RXP

DB6 Port 1 A RS485

DB7 Port 1 B RS485

DB8 Port 1 0V Common

DB9 Port 3 A RS485

DB10 Port 3 B RS485

DB11 Port 3 0V Common

DB12 Signal Ground

DB13 GP Input 23 (None)

DB14 GP Input 24 (None)

DB15 GP Input 25 (None)

DB16 GP Input 26 (None)

DB17 GP Input 27 (None)

DB18 GP Input 28 (None)

DB19 Signal Ground

DB20 Touchkey Data Out

DB21 Touchkey Data In

DB22 Not used

DB23 Signal Ground(Flow)/4- 20mA(-)

DB24 Flow Input Meter 7A

DB25 Flow Input Meter 7B

DB26 Signal Ground(Flow)/4- 20mA(-)

DB27 4-20mA 11(+)

DB28 4-20mA 12(+)

DB29 4-20mA Channel 1V+

4.3 Sales Code C

A1 0 Vdc DC Ground

A2 Supply out (8 - 30 Vdc, 100mA)

A3 Supply out (12 Vdc, 250mA)

A4 Not used

A5 Not used

A6 Not used

A7 Not used

A8 Not used

A9 Relay A1 - GP Output #1

A10 (Deadman Indicator)

A11 Relay A2 -GP Output #2

A12 (Deadman Bell)

A13 Relay A3 - GP Output #3 (Pump Demand Product 1)

A14 Relay A4 - GP Output #4

(Pump Demand Product 2)

A15 Relay A5 - GP Output #5 (None)

A16 Relay A6 - GP Output #6 (None)

A17 Relay Common for A13 - A16

BA1 Relay B1 - GP Output #7 (DCV Inlet Product 1)

BA2 Common for Relay 1 & 2

BA3 Relay B2 - GP Output #8 (DCV Outlet Product 1)

BA4 Relay B3 - GP Output #9 (DCV Inlet Product 2)

BA5 Common for Relay 3 & 4

BA6 Relay B4 - GP Output #10 (DCV Outlet Product 2)

BA7 Relay B5 - GP Output #11 (Internal Add 1 Solenoid O/P)

BA8 Common for Relay 5 & 6

BA9 Relay B6 - GP Output #12 (Internal Add 2 Solenoid O/P)

BA10 Relay B7 - GP Output #13 (Internal Add 3 Solenoid O/P)

BA11 Common for Relay 7 & 8

BA12 Relay B8 - GP Output #14 (Internal Add 4 Solenoid O/P)

BA13 Relay B9 - GP Output #15 (Pump Demand Additive 1)

BA14 Common for Relay 9 & 10

BA15 Relay B10 - GP Output #16 (Pump Demand Additive 2)

BA16 Relay B11 - GP Output #17 (Pump Demand Additive 3)

BA17 Common for Relay 11 & 12

BA18 Relay B12 - GP Output #18 (Pump Demand Additive 4)

BB1 Relay B13 - GP Output #19 (Isolation Valve Product 1)

BB2 Common for Relay 13 & 14

BB3 Relay B14 - GP Output #20 (Isolation Valve Product 2)

BB4 Relay B15 - GP Output #21 (None)

BB5 Common for Relay 15 & 16

BB6 Relay B16 - GP Output #22

BB7 Relay B17 - GP Output #23 (System Alarm)

BB8 Common for Relay 17 & 18

BB9 Relay B18 - GP Output #24 (Instrument Alarm)

BB10 Relay B19 - GP Output #25 (RIT Lamp Start Arm 1)

BB11 Common for Relay 19 & 20

BB12 Relay B20 - GP Output #26 (RIT Lamp Ack Arm 1)

BB13 Relay B21 - GP Output #27 (RIT Lamp Stop Arm 1)

BB14 Common for Relay 21 & 22

BB15 Relay B22 - GP Output #28 (None)

BB16 Relay B23 - GP Output #29 (Deadman Callout)

BB17 Common for Relay 23 & 24

BB18 Relay B24 - GP Output #30 (None)

CA1 RTD 1 Source

CA2 RTD 1 Sense (+)/ 4-20mA 1 (+) Temperature Input Product 1

CA3 RTD 1 Sense (-)

CA4 RTD 1 & 2 Sink

CA5 RTD 2 Source

CA6 RTD 2 Sense (+) / 4-20mA 2 (+) Temperature Input Product 2

CA7 RTD 2 Sense (-)

CA8 4-20mA 3 (+) Pressure Input Product 1

CA9 4-20mA 4 (+) Pressure Input Product 2

CA10 Opto Output 1 (Add Pulse)

CA11 Opto Output 2 (Add Pulse)

CA12 Opto 0 Volt

CA13 Signal Ground (Flow)/4-20mA (-)

CA14 Flow Input Meter 1A Product 1 Pulse

CA15 Flow Input Meter 1B Product 1 Pulse

CA16 Signal Ground (Flow)/4-20mA (-)

CA17 Flow Input Meter 2A Product 2 Pulse

CA18 Flow Input Meter 2B Product 2 Pulse

CA19 Signal Ground

CA20 GP Input 1 (Emergency Stop)

CA21 GP Input 2 (Overfill Ground)

CA22 GP Input 3 (Vapor Recovery)

CA23 GP Input 4 (Prog Permissive)

CA24 Signal Ground

CA25 GP Input 5 (Programmable In #1)

CA26 GP Input 6 (Programmable In #2)

CA27 GP Input 7 (Programmable In #3)

CA28 GP Input 8 (Programmable In #4)

CB1 Not used

CB2 Not used

CB3 Not used

CB4 Not used

CB5 Not used

CB6 Not used

CB7 Not used

CB8 4-20mA (+)

CB9 Not Used

CB10 Opto Output 3 (Add Pulse)

CB11 Opto Output 4 (Add Pulse)

CB12 Opto 0 Volt

CB13 Signal Ground (Flow) /4-20mA (-)

CB14 Flow Input Meter 3A

CB15 Flow Input Meter 3B

CB16 Signal Ground (Flow) /4-20mA (-)

CB17 Flow Input Meter 4A

CB18 Flow Input Meter 4B

CB19 Signal Ground

CB20 GP Input 9 (Programmable In #5)

CB21 GP Input 10 (Programmable In #6)

CB22 GP Input 11 (RIT Start Arm 1)

CB23 GP Input 12 (RIT Ack Arm 1)

CB24 Signal Ground

CB25 GP Input 13 (RIT Stop Arm 1)

CB26 GP Input 14 (None)

CB27 GP Input 15 (None)

CB28 GP Input 16 (None)

DA1 ETH 0V Common

DA2 Port 1 ETH_TXP

DA3 Port 1 ETH_TXN

DA4 Port 1 ETH_RXN

DA5 Port 1 ETH_RXP

DA6 Port 1 Tx RS232

DA7 Port 1 Rx RS232

DA8 Port 1 0V Common

DA9 Port 2 A RS485

DA10 Port 2 B RS485

DA11 Port 2 0V Common

DA12 Signal Ground

DA13 GP Input 17 (None)

DA14 GP Input 18(None)

DA15 GP Input 19 (None)

DA16 GP Input 20 (None)

DA17 GP Input 21 (None)

DA18 GP Input 22 (None)

DA19 Signal Ground

DA20 +5V to Reader

DA21 Signal Ground (Flow)/4-20mA (-)

DA22 Flow Input Meter 5A Internal Additive 1

DA23 Flow Input Meter 5B Internal Additive 2

DA24 Flow Input Meter 6A Internal Additive 3

DA25 Flow Input Meter 6B Internal Additive 4

DA26 Signal Ground (Flow)/4-20mA (-)

DA27 4-20mA 9(+) Density Input Product 1

DA28 4-20mA 10(+) Density Input Product 2

DA29 4-20mA Channel 1 Iout

DB1 ETH 0V Common

DB2 Port 2 ETH_TXP

DB3 Port 2 ETH_TXN

DB4 Port 2 ETH_RXN

DB5 Port 2 ETH_RXP

DB6 Port 1 A RS485

DB7 Port 1 B RS485

DB8 Port 1 0V Common

DB9 Port 3 A RS485

DB10 Port 3 B RS485

DB11 Port 3 0V Common

DB12 Signal Ground

DB13 GP Input 23 (None)

DB14 GP Input 24 (None)

DB15 GP Input 25 (None)

DB16 GP Input 26 (None)

DB17 GP Input 27 (None)

DB18 GP Input 28 (None)

DB19 Signal Ground

DB20 Touchkey Data Out

DB21 Touchkey Data In

DB22 Not used

DB23 Signal Ground(Flow)/4- 20mA(-)

DB24 Flow Input Meter 7A

DB25 Flow Input Meter 7B

DB26 Signal Ground(Flow)/4- 20mA(-)

DB27 4-20mA 11(+)

DB28 4-20mA 12(+)

DB29 4-20mA Channel 1V+

4.4 Sales Code D

A1 0 Vdc DC Ground

A2 Supply out (8 - 30 Vdc, 100mA)

A3 Supply out (12 Vdc, 250mA)

A4 Not used

A5 Not used

A6 Not used

A7 Not used

A8 Not used

A9 Relay A1 - GP Output #1

A10 (Deadman Indicator)

A11 Relay A2 -GP Output #2

A12 (Deadman Bell)

A13 Relay A3 - GP Output #3 (Pump Demand Product 1)

A14 Relay A4 - GP Output #4 (Pump Demand Product 2)

A15 Relay A5 - GP Output #5 (None)

A16 Relay A6 - GP Output #6 (None)

A17 Relay Common for A13 - A16

BA1 Relay B1 - GP Output #7 (DCV Inlet Product 1)

BA2 Common for Relay 1 & 2

BA3 Relay B2 - GP Output #8 (DCV Outlet Product 1)

BA4 Relay B3 - GP Output #9 (DCV Inlet Product 2)

BA5 Common for Relay 3 & 4

BA6 Relay B4 - GP Output #10 (DCV Outlet Product 2)

BA7 Relay B5 - GP Output #11 (Internal Add 1 Solenoid O/P)

BA8 Common for Relay 5 & 6

BA9 Relay B6 - GP Output #12 (Internal Add 2 Solenoid O/P)

BA10 Relay B7 - GP Output #13 (Internal Add 3 Solenoid O/P)

BA11 Common for Relay 7 & 8

BA12 Relay B8 - GP Output #14 (Internal Add 4 Solenoid O/P)

BA13 Relay B9 - GP Output #15 (Pump Demand Additive 1)

BA14 Common for Relay 9 & 10

BA15 Relay B10 - GP Output #16 (Pump Demand Additive 2)

BA16 Relay B11 - GP Output #17 (Pump Demand Additive 3)

BA17 Common for Relay 11 & 12

BA18 Relay B12 - GP Output #18 (Pump Demand Additive 4)

BB1 Relay B13 - GP Output #19 (Isolation Valve Product 1)

BB2 Common for Relay 13 & 14

BB3 Relay B14 - GP Output #20 (Isolation Valve Product 2)

BB4 Relay B15 - GP Output #21 (None)

BB5 Common for Relay 15 & 16

BB6 Relay B16 - GP Output #22 (None)

BB7 Relay B17- GP Output #23 (System Alarm)

BB8 Common for Relay 17 & 18

BB9 Relay B18 - GP Output #24 (Instrument Alarm)

BB10 Relay B19 - GP Output #25 (RIT Lamp Start Arm 1)

BB11 Common for Relay 19 & 20

BB12 Relay B20 - GP Output #26 (RIT Lamp Ack Arm 1)

BB13 Relay B21 - GP Output #27 (RIT Lamp Stop Arm 1)

BB14 Common for Relay 21 & 22

BB15 Relay B22 - GP Output #28 (RIT Lamp Start Arm 2)

BB16 Relay B23 - GP Output #29 (RIT Lamp Ack Arm 2)

BB17 Common for Relay 23 & 24

BB18 Relay B24 - GP Output #30 (RIT Lamp Stop Arm 2)

CA1 RTD 1 Source

CA2 RTD 1 Sense (+)/ 4-20mA 1 (+) Temperature Input Product 1

CA3 RTD 1 Sense (-)

CA4 RTD 1 & 2 Sink

CA5 RTD 2 Source

CA6 RTD 2 Sense (+) / 4-20mA 2 (+) Temperature Input Product 2

CA7 RTD 2 Sense (-)

CA8 4-20mA 3 (+) Pressure Input Product 1

CA9 4-20mA 4 (+) Pressure Input Product 2

CA10 Opto Output 1 (Add Pulse)

CA11 Opto Output 2 (Add Pulse)

CA12 Opto 0 Volt

CA13 Signal Ground (Flow)/4-20mA (-)

CA14 Flow Input Meter 1A Product 1 Pulse

CA15 Flow Input Meter 1B Product 1 Pulse

CA16 Signal Ground (Flow)/4-20mA (-)

CA17 Flow Input Meter 2A Product 2 Pulse

CA18 Flow Input Meter 2B Product 2 Pulse

CA19 Signal Ground

CA20 GP Input 1 (Emergency Stop)

CA21 GP Input 2 (Overfill Ground)

CA22 GP Input 3 (Vapor Recovery)

CA23 GP Input 4 (Prog Permissive)

CA24 Signal Ground

CA25 GP Input 5 (Prog. Input #1)

CA26 GP Input 6 (Prog. Input #2)

CA27 GP Input 7 (Prog. Input #3)

CA28 GP Input 8 (Prog. Input #4)

CB1 Not used

CB2 Not used

CB3 Not used

CB4 Not used

CB5 Not used

CB6 Not used

CB7 Not used

CB8 4-20mA 7 (+)

CB9 4-20mA 8(+)

CB10 Opto Output 3 (Add Pulse)

CB11 Opto Output 4 (Add Pulse)

CB12 Opto 0 Volt

CB13 Signal Ground (Flow) /4-20mA (-)

CB14 Flow Input Meter 3A

CB15 Flow Input Meter 3B

CB16 Signal Ground (Flow) /4-20mA (-)

CB17 Flow Input Meter 4A

CB18 Flow Input Meter 4B

CB19 Signal Ground

CB20 GP Input 9 (Prog. Input #5)

CB21 GP Input 10 (Prog. Input #6)

CB22 GP Input 11 (RIT Start Arm 1)

CB23 GP Input 12 (RIT Ack Arm 1)

CB24 Signal Ground

CB25 GP Input 13 (RIT Stop Arm 1)

CB26 GP Input 14 (RIT Start Arm 2)

CB27 GP Input 15 (RIT Ack Arm 2)

CB28 GP Input 16 (RIT Stop Arm 2)

DA1 ETH 0V Common

DA2 Port 1 ETH_TXP

DA3 Port 1 ETH_TXN

DA4 Port 1 ETH_RXN

DA5 Port 1 ETH_RXP

DA6 Port 1 Tx RS232

DA7 Port 1 Rx RS232

DA8 Port 1 0V Common

DA9 Port 2 A RS485

DA10 Port 2 B RS485

DA11 Port 2 0V Common

DA12 Signal Ground

DA13 GP Input 17 (None)

DA14 GP Input 18(None)

DA15 GP Input 19 (None)

DA16 GP Input 20 (None)

DA17 GP Input 21 (None)

DA18 GP Input 22 (None)

DA19 Signal Ground

DA20 +5V to Reader

DA21 Signal Ground (Flow)/4-20mA (-)

DA22 Flow Input Meter 5A Internal Additive 1

DA23 Flow Input Meter 5B Internal Additive 2

DA24 Flow Input Meter 6A Internal Additive 3

DA25 Flow Input Meter 6B Internal Additive 4

DA26 Signal Ground (Flow)/4-20mA (-)

DA27 4-20mA 9(+) Density Input Product 1

DA28 4-20mA 10(+) Density Input Product 2

DA29 4-20mA Channel 1 Iout

DB1 ETH 0V Common

DB2 Port 2 ETH_TXP

DB3 Port 2 ETH_TXN

DB4 Port 2 ETH_RXN

DB5 Port 2 ETH_RXP

DB6 Port 1 A RS485

DB7 Port 1 B RS485

DB8 Port 1 0V Common

DB9 Port 3 A RS485

DB10 Port 3 B RS485

DB11 Port 3 0V Common

DB12 Signal Ground

DB13 GP Input 23 (None)

DB14 GP Input 24 (None)

DB15 GP Input 25 (None)

DB16 GP Input 26 (None)

DB17 GP Input 27 (None)

DB18 GP Input 28 (None)

DB19 Signal Ground

DB20 Touchkey Data Out

DB21 Touchkey Data In

DB22 Not used

DB23 Signal Ground(Flow)/4- 20mA(-)

DB24 Flow Input Meter 7A

DB25 Flow Input Meter 7B

DB26 Signal Ground(Flow)/4- 20mA(-)

DB27 4-20mA 11(+)

DB28 4-20mA 12(+)

DB29 4-20mA Channel 1V+

4.5 Sales Code E

A1 0 Vdc DC Ground

A2 Supply out (8 - 30 Vdc, 100mA)

A3 Supply out (12 Vdc, 250mA)

A4 Not used

A5 Not used

A6 Not used

A7 Not used

A8 Not used

A9 Relay A1 - GP Output #1

A10 (Deadman Indicator)

A11 Relay A2 -GP Output #2

A12 (Deadman Bell)

A13 Relay A3 - GP Output #3 (Pump Demand Product 1)

A14 Relay A4 - GP Output #4 (Pump Demand Product 2)

A15 Relay A5 - GP Output #5 (Pump Demand Product 3)

A16 Relay A6 - GP Output #6 (None)

A17 Relay Common for A13 - A16

BA1 Relay B1 - GP Output #7 (DCV Inlet Product 1)

BA2 Common for Relay 1 & 2

BA3 Relay B2 - GP Output #8 (DCV Outlet Product 1)

BA4 Relay B3 - GP Output #9 (DCV Inlet Product 2)

BA5 Common for Relay 3 & 4

BA6 Relay B4 - GP Output #10 (DCV Outlet Product 2)

BA7 Relay B5 - GP Output #11 (DCV Inlet Product 3)

BA8 Common for Relay 5 & 6

BA9 Relay B6 - GP Output #12 (DCV Outlet Product 3)

BA10 Relay B7 - GP Output #13 (Internal Add 1 Solenoid O/P)

BA11 Common for Relay 7 & 8

BA12 Relay B8 - GP Output #14 (Internal Add 2 Solenoid O/P)

BA13 Relay B9 - GP Output #15 (Pump Demand Additive 1)

BA14 Common for Relay 9 & 10

BA15 Relay B10 - GP Output #16 (Pump Demand Additive 2)

BA16 Relay B11 - GP Output #17 (None)

BA17 Common for Relay 11 & 12

BA18 Relay B12 - GP Output #18 (None)

BB1 Relay B13 - GP Output #19 (Isolation Valve Product 1)

BB2 Common for Relay 13 & 14

BB3 Relay B14 - GP Output #20 (Isolation Valve Product 2)

BB4 Relay B15 - GP Output #21 (Isolation Valve Product 3)

BB5 Common for Relay 15 & 16

BB6 Relay B16 - GP Output #22 (None)

BB7 Relay B17- GP Output #23 (System Alarm)

BB8 Common for Relay 17 & 18

BB9 Relay B18 - GP Output #24 (Instrument Alarm)

BB10 Relay B19 - GP Output #25 (RIT Lamp Start Arm 1)

BB11 Common for Relay 19 & 20

BB12 Relay B20 - GP Output #26 (RIT Lamp Ack Arm 1)

BB13 Relay B21 - GP Output #27 (RIT Lamp Stop Arm 1)

BB14 Common for Relay 21 & 22

BB15 Relay B22 - GP Output #28 (RIT Lamp Start Arm 2)

BB16 Relay B23 - GP Output #29 (RIT Lamp Ack Arm 2)

BB17 Common for Relay 23 & 24

BB18 Relay B24 - GP Output #30 (RIT Lamp Stop Arm 2)

CA1 RTD 1 Source

CA2 RTD 1 Sense (+)/ 4-20mA 1 (+) Temperature Input Product 1

CA3 RTD 1 Sense (-)

CA4 RTD 1 & 2 Sink

CA5 RTD 2 Source

CA6 RTD 2 Sense (+) / 4-20mA 2 (+) Temperature Input Product 2

CA7 RTD 2 Sense (-)

CA8 4-20mA 3 (+) Pressure Input Product 1

CA9 4-20mA 4 (+) Pressure Input Product 2

CA10 Opto Output 1 (Add Pulse)

CA11 Opto Output 2 (Add Pulse)

CA12 Opto 0 Volt

CA13 Signal Ground (Flow)/4-20mA (-)

CA14 Flow Input Meter 1A Product 1 Pulse

CA15 Flow Input Meter 1B Product 1 Pulse

CA16 Signal Ground (Flow)/4-20mA (-)

CA17 Flow Input Meter 2A Product 2 Pulse

CA18 Flow Input Meter 2B Product 2 Pulse

CA19 Signal Ground

CA20 GP Input 1 (Emergency Stop)

CA21 GP Input 2 (Overfill Ground)

CA22 GP Input 3 (Vapor Recovery)

CA23 GP Input 4 (Prog Permissive)

CA24 Signal Ground

CA25 GP Input 5 (Prog. Input #1)

CA26 GP Input 6 (Prog. Input #2)

CA27 GP Input 7 (Prog. Input #3)

CA28 GP Input 8 (Prog. Input #4)

CB1 RTD 3 Source

CB2 RTD 3 Sense (+)/4-20mA 5 (+) Temperature Input Product 3

CB3 RTD 3 Sense (-)

CB4 RTD 3 Sink

CB5 RTD 4 Source

CB6 RTD 4 Sense (+)/4-20mA 6 (+) Temperature Input Product 4

CB7 RTD 3 Sense(-)

CB8 4-20mA 7 (+) Pressure Input Product 3

CB9 4-20mA 8 (+) Pressure Input Product4

CB10 Opto Output 3 (Add Pulse)

CB11 Opto Output 4 (Add Pulse)

CB12 Opto 0 Volt

CB13 Signal Ground (Flow) /4-20mA (-)

CB14 Flow Input Meter 3A Product 3 Pulse

CB15 Flow Input Meter 3B Product 3 Pulse

CB16 Signal Ground (Flow) /4-20mA (-)

CB17 Flow Input Meter 4A Product 4 Pulse

CB18 Flow Input Meter 4B Product 3 Pulse

CB19 Signal Ground

CB20 GP Input 9 (Prog. Input #5)

CB21 GP Input 10 (Prog. Input #6)

CB22 GP Input 11 (RIT Start Arm 1)

CB23 GP Input 12 (RIT Ack Arm 1)

CB24 Signal Ground

CB25 GP Input 13 (RIT Stop Arm 1)

CB26 GP Input 14 (RIT Start Arm 2)
CB27 GP Input 15 (RIT Ack Arm 2)

CB28 GP Input 16 (RIT Stop Arm 2)

DA1 ETH 0V Common

DA2 Port 1 ETH_TXP

DA3 Port 1 ETH_TXN

DA4 Port 1 ETH_RXN

DA5 Port 1 ETH_RXP

DA6 Port 1 Tx RS232

DA7 Port 1 Rx RS232

DA8 Port 1 0V Common

DA9 Port 2 A RS485

DA10 Port 2 B RS485

DA11 Port 2 0V Common

DA12 Signal Ground

DA13 GP Input 17 (None)

DA14 GP Input 18(None)

DA15 GP Input 19 (None)

DA16 GP Input 20 (None)

DA17 GP Input 21 (None)

DA18 GP Input 22 (None)

DA19 Signal Ground

DA20 +5V to Reader

DA21 Signal Ground (Flow)/4-20mA (-)

DA22 Flow Input Meter 5A Internal Additive 1

DA23 Flow Input Meter 5B Internal Additive 2

DA24 Flow Input Meter 6A Internal Additive 3

DA25 Flow Input Meter 6B Internal Additive 4

DA26 Signal Ground (Flow)/4-20mA (-)

DA27 4-20mA 9(+) Density Input Product 1

DA28 4-20mA 10(+) Density Input Product 2

DA29 4-20mA Channel 1 Iout

DB1 ETH 0V Common

DB2 Port 2 ETH_TXP

DB3 Port 2 ETH_TXN

DB4 Port 2 ETH_RXN

DB5 Port 2 ETH_RXP

DB6 Port 1 A RS485

DB7 Port 1 B RS485

DB8 Port 1 0V Common

DB9 Port 3 A RS485

DB10 Port 3 B RS485

DB11 Port 3 0V Common

DB12 Signal Ground

DB13 GP Input 23 (None)

DB14 GP Input 24 (None)

DB15 GP Input 25 (None)

DB16 GP Input 26 (None)

DB17 GP Input 27 (None)

DB18 GP Input 28 (None)

DB19 Signal Ground

DB20 Touchkey Data Out

DB21 Touchkey Data In

DB22 Not used

DB23 Signal Ground(Flow)/4- 20mA(-)

DB24 Flow Input Meter 7A

DB25 Flow Input Meter 7B

DB26 Signal Ground(Flow)/4- 20mA(-)

DB27 4-20mA 11(+) Density Input Product 3

DB28 4-20mA 12(+) Density Input Product 4

DB29 4-20mA Channel 1V

4.6 Sales Code F

A1 0 Vdc DC Ground

A2 Supply out (8 - 30 Vdc, 100mA)

A3 Supply out (12 Vdc, 250mA)

A4 Not used

A5 Not used

A6 Not used

A7 Not used

A8 Not used

A9 Relay A1 - GP Output #1

A10 (Deadman Indicator)

A11 Relay A2 -GP Output #2

A12 (Deadman Bell)

A13 Relay A3 - GP Output #3 (Pump Demand Product 1)

A14 Relay A4 - GP Output #4 (Pump Demand Product 2)

A15 Relay A5 - GP Output #5 (Pump Demand Product 3)

A16 Relay A6 - GP Output #6 (None)

A17 Relay Common for A13 - A16

BA1 Relay B1 - GP Output #7 (DCV Inlet Product 1)

BA2 Common for Relay 1 & 2

BA3 Relay B2 - GP Output #8 (DCV Outlet Product 1)

BA4 Relay B3 - GP Output #9 (DCV Inlet Product 2)

BA5 Common for Relay 3 & 4

BA6 Relay B4 - GP Output #10 (DCV Outlet Product 2)

BA7 Relay B5 - GP Output #11 (DCV Inlet Product 3)

BA8 Common for Relay 5 & 6

BA9 Relay B6 - GP Output #12 (DCV Outlet Product 3)

BA10 Relay B7 - GP Output #13 (Internal Add 1 Solenoid O/P)

BA11 Common for Relay 7 & 8

BA12 Relay B8 - GP Output #14 (Internal Add 2 Solenoid O/P)

BA13 Relay B9 - GP Output #15 (Pump Demand Additive 1)

BA14 Common for Relay 9 & 10

BA15 Relay B10 - GP Output #16 (Pump Demand Additive 2)

BA16 Relay B11 - GP Output #17 (None)

BA17 Common for Relay 11 & 12

BA18 Relay B12 - GP Output #18 (None)

BB1 Relay B13 - GP Output #19 (Isolation Valve Product 1)

BB2 Common for Relay 13 & 14

BB3 Relay B14 - GP Output #20 (Isolation Valve Product 2)

BB4 Relay B15 - GP Output #21 (Isolation Valve Product 3)

BB5 Common for Relay 15 & 16

BB6 Relay B16 - GP Output #22 (None)

BB7 Relay B17- GP Output #23 (System Alarm)

BB8 Common for Relay 17 & 18

BB9 Relay B18 - GP Output #24 (Instrument Alarm)

BB10 Relay B19 - GP Output #25 (RIT Lamp Start Arm 1)

BB11 Common for Relay 19 & 20

BB12 Relay B20 - GP Output #26 (RIT Lamp Ack Arm 1)

BB13 Relay B21 - GP Output #27 (RIT Lamp Stop Arm 1)

BB14 Common for Relay 21 & 22

BB15 Relay B22 - GP Output #28 (RIT Lamp Start Arm 2)

BB16 Relay B23 - GP Output #29 (RIT Lamp Ack Arm 2)

BB17 Common for Relay 23 & 24

BB18 Relay B24 - GP Output #30 (RIT Lamp Stop Arm 2)

CA1 RTD 1 Source

CA2 RTD 1 Sense (+)/ 4-20mA 1 (+) (Temperature Input Product 1)

CA3 RTD 1 Sense (-)

CA4 RTD 1 & 2 Sink

CA5 RTD 2 Source

CA6 RTD 2 Sense (+) / 4-20mA 2 (+) Temperature Input Product 2

CA7 RTD 2 Sense (-)

CA8 4-20mA 3 (+) (Pressure Input Product 1)

CA9 4-20mA 4 (+) (Pressure Input Product 2)

CA10 Opto Output 1 (Add Pulse)

CA11 Opto Output 2 (Add Pulse)

CA12 Opto 0 Volt

CA13 Signal Ground (Flow)/4-20mA (-)

CA14 Flow Input Meter 1A Product 1 Pulse

CA15 Flow Input Meter 1B Product 1 Pulse

CA16 Signal Ground (Flow)/4-20mA (-)

CA17 Flow Input Meter 2A Product 2 Pulse

CA18 Flow Input Meter 2B Product 2 Pulse

CA19 Signal Ground

CA20 GP Input 1 (Emergency Stop)

CA21 GP Input 2 (Overfill Ground)

CA22 GP Input 3 (Vapor Recovery)

CA23 GP Input 4 (Prog Permissive)

CA24 Signal Ground

CA25 GP Input 5 (Prog. Input #1)

CA26 GP Input 6 (Prog. Input #2)

CA27 GP Input 7 (Prog. Input #3)

CA28 GP Input 8 (Prog. Input #4)

CB1 RTD 3 Source

CB2 RTD 3 Sense (+)/4-20mA 5 (+) Temperature Input Product 3

CB3 RTD 3 Sense (-)

CB4 RTD 3 Sink

CB5 Not used

CB6 Not used

CB7 Not used

CB8 4-20mA 7 (+) Pressure Input Product 3

CB9 Not used

CB10 Opto Output 3 (Add Pulse)

CB11 Opto Output 4 (Add Pulse)

CB12 Opto 0 Volt

CB13 Signal Ground (Flow) /4-20mA (-)

CB14 Flow Input Meter 3A Product 3 Pulse

CB15 Flow Input Meter 3B Product 3 Pulse

CB16 Signal Ground (Flow) /4-20mA (-)

CB17 Flow Input Meter 4A

CB18 Flow Input Meter 4B

CB19 Signal Ground

CB20 GP Input 9 (Prog. Input #5)

CB21 GP Input 10 (Prog. Input #6)

CB22 GP Input 11 (RIT Start Arm 1)

CB23 GP Input 12 (RIT Ack Arm 1)

CB24 Signal Ground

CB25 GP Input 13 (RIT Stop Arm 1)

CB26 GP Input 14 (RIT Start Arm 2)

CB27 GP Input 15 (RIT Ack Arm 2)

CB28 GP Input 16 (RIT Stop Arm 2)

DA1 ETH 0V Common

DA2 Port 1 ETH_TXP

DA3 Port 1 ETH_TXN

DA4 Port 1 ETH_RXN

DA5 Port 1 ETH_RXP

DA6 Port 1 Tx RS232

DA7 Port 1 Rx RS232

DA8 Port 1 0V Common

DA9 Port 2 A RS485

DA10 Port 2 B RS485

DA11 Port 2 0V Common

DA12 Signal Ground

DA13 GP Input 17 (None)

DA14 GP Input 18(None)

DA15 GP Input 19 (None)

DA16 GP Input 20 (None)

DA17 GP Input 21 (None)

DA18 GP Input 22 (None)

DA19 Signal Ground

DA20 +5V to Reader

DA21 Signal Ground (Flow)/4-20mA (-)

DA22 Flow Input Meter 5A

DA23 Flow Input Meter 5B

DA24 Flow Input Meter 6A

DA25 Flow Input Meter 6B

DA26 Signal Ground (Flow)/4-20mA (-)

DA27 4-20mA 9(+) Density Input Product 1

DA28 4-20mA 10(+) Density Input Product 2

DA29 4-20mA Channel 1 Iout

DA20 +5V to Reader

DA21 Signal Ground (Flow)/4-20mA (-)

4.7 Sales Code G

A1 0 Vdc DC Ground

A2 Supply out (8 - 30 Vdc, 100mA)

A3 Supply out (12 Vdc, 250mA)

A4 Not used

A5 Not used

A6 Not used

A7 Not used

A8 Not used

A9 Relay A1 - GP Output #1

A10 (Deadman Indicator)

A11 Relay A2 -GP Output #2

A12 (Deadman Bell)

A13 Relay A3 - GP Output #3 (Pump Demand Product 1)

A14 Relay A4 - GP Output #4 (Pump Demand Product 2)

A15 Relay A5 - GP Output #5 (Pump Demand Product 3)

A16 Relay A6 - GP Output #6 (Pump Demand Product 4)

A17 Relay Common for A13 - A16

BA1 Relay B1 - GP Output #7 (DCV Inlet Product 1)

BA2 Common for Relay 1 & 2

BA3 Relay B2 - GP Output #8 (DCV Outlet Product 1)

BA4 Relay B3 - GP Output #9 (DCV Inlet Product 2)

BA5 Common for Relay 3 & 4

BA6 Relay B4 - GP Output #10 (DCV Outlet Product 2)

BA7 Relay B5 - GP Output #11 (DCV Inlet Product 3)

BA8 Common for Relay 5 & 6

BA9 Relay B6 - GP Output #12 (DCV Outlet Product 3)

BA10 Relay B7 - GP Output #13 (DCV Inlet Product 4)

BA11 Common for Relay 7 & 8

BA12 Relay B8 - GP Output #14 (DCV Outlet Product 4)

BA13 Relay B9 - GP Output #15 (None)

BA14 Common for Relay 9 & 10

BA15 Relay B10 - GP Output #16 (None)

BA16 Relay B11 - GP Output #17 (None)

BA17 Common for Relay 11 & 12

BA18 Relay B12 - GP Output #18 (None)

BB1 Relay B13 - GP Output #19 (Isolation Valve Product 1)

BB2 Common for Relay 13 & 14

BB3 Relay B14 - GP Output #20 (Isolation Valve Product 2)

BB4 Relay B15 - GP Output #21 (Isolation Valve Product 3)

BB5 Common for Relay 15 & 16

BB6 Relay B16 - GP Output #22 (Isolation Valve Product 4)

BB7 Relay B17- GP Output #23 (System Alarm)

BB8 Common for Relay 17 & 18

BB9 Relay B18 - GP Output #24 (Instrument Alarm)

BB10 Relay B19 - GP Output #25 (RIT Lamp Start Arm 1)

BB11 Common for Relay 19 & 20

BB12 Relay B20 - GP Output #26 (RIT Lamp Ack Arm 1)

BB13 Relay B21 - GP Output #27 (RIT Lamp Stop Arm 1)

BB14 Common for Relay 21 & 22

BB15 Relay B22 - GP Output #28 (RIT Lamp Start Arm 2)

BB16 Relay B23 - GP Output #29 (RIT Lamp Ack Arm 2)

BB17 Common for Relay 23 & 24

BB18 Relay B24 - GP Output #30 (RIT Lamp Stop Arm 2)

CA1 RTD 1 Source

CA2 RTD 1 Sense (+)/ 4-20mA 1 (+) Temperature Input Product 1

CA3 RTD 1 Sense (-)

CA4 RTD 1 & 2 Sink

CA5 RTD 2 Source

CA6 RTD 2 Sense (+) / 4-20mA 2 (+) Temperature Input Product 2

CA7 RTD 2 Sense (-)

CA8 4-20mA 3 (+) Pressure Input Product 1

CA9 4-20mA 4 (+) Pressure Input Product 2

CA10 Opto Output 1 (Add Pulse)

CA11 Opto Output 2 (Add Pulse)

CA12 Opto 0 Volt

CA13 Signal Ground (Flow)/4-20mA (-)

CA14 Flow Input Meter 1A Product 1 Pulse

CA15 Flow Input Meter 1B Product 1 Pulse

CA16 Signal Ground (Flow)/4-20mA (-)

CA17 Flow Input Meter 2A Product 2 Pulse

CA18 Flow Input Meter 2B Product 2 Pulse

CA19 Signal Ground

CA20 GP Input 1 (Emergency Stop)

CA21 GP Input 2 (Overfill Ground)

CA22 GP Input 3 (Vapor Recovery)

CA23 GP Input 4 (Prog Permissive)

CA24 Signal Ground

CA25 GP Input 5 (Prog. Input #1)

CA26 GP Input 6 (Prog. Input #2)

CA27 GP Input 7 (Prog. Input #3)

CA28 GP Input 8 (Prog. Input #4)

CB1 RTD 3 Source

CB2 RTD 3 Sense (+) / 4-20mA 5 (+) Temperature Input Product 3

CB3 RTD 3 Sense (-)

CB4 RTD 3 Sink

CB5 RTD 4 Source

CB6 RTD 4 Sense (+) / 4-20mA 6 (+) Temperature Input Product 4

CB7 RTD 4 Sense (-)

CB8 4-20mA 7 (+) Pressure Input Product 3

CB9 4-20mA 8 (+) Pressure Input Product 4

CB10 Opto Output 3 (Add Pulse)

CB11 Opto Output 4 (Add Pulse)

CB12 Opto 0 Volt

CB13 Signal Ground (Flow) /4-20mA (-)

CB14 Flow Input Meter 3A Product 3 Pulse

CB15 Flow Input Meter 3B Product 3 Pulse

CB16 Signal Ground (Flow) /4-20mA (-)

CB17 Flow Input Meter 4A Product 4 Pulse

CB18 Flow Input Meter 4B Product 4 Pulse

CB19 Signal Ground

CB20 GP Input 9 (Prog. Input #5)

CB21 GP Input 10 (Prog. Input #6)

CB22 GP Input 11 (RIT Start Arm 1)

CB23 GP Input 12 (RIT Ack Arm 1)

CB24 Signal Ground

CB25 GP Input 13 (RIT Stop Arm 1)

CB26 GP Input 14 (RIT Start Arm 2)

CB27 GP Input 15 (RIT Ack Arm 2)

CB28 GP Input 16 (RIT Stop Arm 2)

DA1 ETH 0V Common

DA2 Port 1 ETH_TXP

DA3 Port 1 ETH_TXN

DA4 Port 1 ETH_RXN

DA5 Port 1 ETH_RXP

DA6 Port 1 Tx RS232

DA7 Port 1 Rx RS232

DA8 Port 1 0V Common

DA9 Port 2 A RS485

DA10 Port 2 B RS485

DA11 Port 2 0V Common

DA12 Signal Ground

DA13 GP Input 17 (None)

DA14 GP Input 18(None)

DA15 GP Input 19 (None)

DA16 GP Input 20 (None)

DA17 GP Input 21 (None)

DA18 GP Input 22 (None)

DA19 Signal Ground

DA20 +5V to Reader

DA21 Signal Ground (Flow)/4-20mA (-)

DA22 Flow Input Meter 5A

DA23 Flow Input Meter 5B

DA24 Flow Input Meter 6A

DA25 Flow Input Meter 6B

DA26 Signal Ground (Flow)/4-20mA (-)

DA27 4-20mA 9(+) Density Input Product 1

DA28 4-20mA 10(+) Density Input Product 2

DA29 4-20mA Channel 1 Iout

DB1 ETH 0V Common

DB2 Port 2 ETH_TXP

DB3 Port 2 ETH_TXN

DB4 Port 2 ETH_RXN

DB5 Port 2 ETH_RXP

DB6 Port 1 A RS485

DB7 Port 1 B RS485

DB8 Port 1 0V Common

DB9 Port 3 A RS485

DB10 Port 3 B RS485

DB11 Port 3 0V Common

DB12 Signal Ground

DB13 GP Input 23 (None)

DB14 GP Input 24 (None)

DB15 GP Input 25 (None)

DB16 GP Input 26 (None)

DB17 GP Input 27 (None)

DB18 GP Input 28 (None)

DB19 Signal Ground

DB20 Touchkey Data Out

DB21 Touchkey Data In

DB22 Not used

DB23 Signal Ground(Flow)/4-20mA(-)

DB24 Flow Input Meter 7A

DB25 Flow Input Meter 7B

DB26 Signal Ground(Flow)/4-20mA(-)

DB27 4-20mA 11(+) Density Input Product 3

DB28 4-20mA 12(+) Density Input Product 4

DB29 4-20mA Channel 1V+

4.8 Sales Code K

A1 0 Vdc DC Ground

A2 Supply out (8 - 30 Vdc, 100mA)

A3 Supply out (12 Vdc, 250mA)

A4 Not used

A5 Not used

A6 Not used

A7 Not used

A8 Not used

A9 Relay A1 - GP Output #1

A10 Liquid (V1) Isolation Valve

A11 Relay A2 -GP Output #2

A12 Vapour (V2) Isolation Valve

A13 Relay A3 - GP Output #3 Cooling (V3) Isolation Valve

A14 Relay A4 - GP Output #4 Drain (V4) Isolation Valve

A15 Relay A5 - GP Output #5 Pump Demand Liquid

A16 Relay A6 - GP Output #6 (None)

A17 Relay Common for A13 - A16

BA1 Relay B1 - GP Output #7 (DCV Inlet Liquid)

BA2 Common for Relay 1 & 2

BA3 Relay B2 - GP Output #8 (DCV Outlet Liquid)

BA4 Relay B3 - GP Output #9(None)

BA5 Common for Relay 3 & 4

BA6 Relay B4 - GP Output #10(None)

BA7 Relay B5 - GP Output #11 (None)

BA8 Common for Relay 5 & 6

BA9 Relay B6 - GP Output #12 (None)

BA10 Relay B7 - GP Output #13 (None)

BA11 Common for Relay 7 & 8

BA12 Relay B8 - GP Output #14 (None)

BA13 Relay B9 - GP Output #15 (None)

BA14 Common for Relay 9 & 10

BA15 Relay B10 - GP Output #16 (None)

BA16 Relay B11 - GP Output #17 (None)

BA17 Common for Relay 11 & 12

BA18 Relay B12 - GP Output #18 (None)

BB1 Relay B13 - GP Output #19 (None)

BB2 Common for Relay 13 & 14

BB3 Relay B14 - GP Output #20 (None)

BB4 Relay B15 - GP Output #21 (None)

BB5 Common for Relay 15 & 16

BB6 Relay B16 - GP Output 22 (None)

BB7 Relay B17- GP Output #23 (System Alarm)

BB8 Common for Relay 17 & 18

BB9 Relay B18 - GP Output #24 (Instrument Alarm)

BB10 Relay B19 - GP Output #25 (RIT Lamp Start Arm 1)

BB11 Common for Relay 19 & 20

BB12 Relay B20 - GP Output #26 (RIT Lamp Ack Arm 1)

BB13 Relay B21 - GP Output #27 (None)

BB14 Common for Relay 21 & 22

BB15 Relay B22 - GP Output #28 (None)

BB16 Relay B23 - GP Output #29 (None)

BB17 Common for Relay 23 & 24

BB18 Relay B24 - GP Output #30 (None)

CA1 RTD 1 Source

CA2 RTD 1 Sense (+) / 4-20mA (+) Liquid Line Temperature (TT1)

CA3 RTD 1 Sense (-)

CA4 RTD 1 & RTD 2 Sink

CA5 RTD 2 Source

CA6 RTD 2 Sense (+) / 4-20mA 2 (+) Vapour Line Temperature (TT2)

CA7 RTD 2 Sense (-)

CA8 4-20mA 3 (+) Liquid Line Pressure (PT1)

CA9 4-20mA 4 (+) Vapour Line Pressure (PT2)

CA10 Opto Output 1 (None)

CA11 Opto Output 2 (None)

CA12 Opto 0 Volt

CA13 Signal Ground (Flow)/4-20mA (-)

CA14 Flow Input Meter 1A Liquid Flow Meter Pulse Input A

CA15 Flow Input Meter 1B Liquid Flow Meter Pulse Input B

CA16 Signal Ground (Flow)/4-20mA (-)

CA17 Flow Input Meter 2A Vapour Meter Pulse Input A

CA18 Flow Input Meter 2B Vapour Meter Pulse Input B

CA19 Signal Ground

CA20 GP Input 1 (Emergency Stop)

CA21 GP Input 2 (Overfill Ground)

CA22 GP Input 3 (Vapor Recovery)

CA23 GP Input 4 (Prog Permissive)

CA24 Signal Ground

CA25 GP Input 5 (Prog. Input #1)

CA26 GP Input 6 (Prog. Input #2)

CA27 GP Input 7 (Prog. Input #3)

CA28 GP Input 8 (Prog. Input #4)

CB1 RTD 3 Source

CB2 RTD 3 Sense (+)/4-20mA 5 (+) LNG Arm Temperature (TT3)

CB3 RTD 3 Sense (-)

CB4 RTD 3 Sink

CB5 Not used

CB6 Not used

CB7 Not used

CB8 4-20mA 7 (+) LNG Arm Pressure (PT3)

CB9 Not Used

CB10 Opto Output 3 (None)

CB11 Opto Output 4 (None)

CB12 Opto 0 Volt

CB13 Signal Ground (Flow)

CB14 Flow Input Meter 3A

CB15 Flow Input Meter 3B

CB16 Signal Ground (Flow)

CB17 Flow Input Meter 4A

CB18 Flow Input Meter 4B

CB19 Signal Ground

CB20 GP Input 9 (Prog. Input #5)

CB21 GP Input 10 (Prog. Input #6)

CB22 GP Input 11 (None)

CB23 GP Input 12 (None)

CB24 Signal Ground

CB25 GP Input 13 (None)

CB26 GP Input 14 (None)

CB27 GP Input 15 (None)

CB28 GP Input 16 (None)

DA1 ETH 0V Common

DA2 Port 1 ETH_TXP

DA3 Port 1 ETH_TXN

DA4 Port 1 ETH_RXN

DA5 Port 1 ETH_RXP

DA6 Port 1 Tx RS232

DA7 Port 1 Rx RS232

DA8 Port 1 0V Common

DA9 Port 2 A RS485

DA10 Port 2 B RS485

DA11 Port 2 0V Common

DA12 Signal Ground

DA13 GP Input 17 (None)

DA14 GP Input 18(None)

DA15 GP Input 19 (None)

DA16 GP Input 20 (None)

DA17 GP Input 21 (None)

DA18 GP Input 22 (None)

DA19 Signal Ground

DA20 +5V to Reader

DA21 Signal Ground (Flow)/4-20mA (-)

DA22 Flow Input Meter 5A (None)

DA23 Flow Input Meter 5B (None)

DB24 Flow Input Meter 6A (None)

DA25 Flow Input Meter 6B (None)

DA26 Signal Ground (Flow)/4-20mA (-)

DA27 4-20mA 9(+) Density Input Product 1

DA28 4-20mA 10(+)

DA29 Analog Control Valve - 4- 20mA (+)

DB1 ETH 0V Common

DB2 Port 2 ETH_TXP

DB3 Port 2 ETH_TXN

DB4 Port 2 ETH_RXN

DB5 Port 2 ETH_RXP

DB6 Port 1 A RS485

DB7 Port 1 B RS485

DB8 Port 1 0V Common

DB9 Port 3 A RS485

DB10 Port 3 B RS485

DB11 Port 3 0V Common

DB12 Signal Ground

DB13 GP Input 23 (None)

DB14 GP Input 24 (None)

DB15 GP Input 25 (None)

DB16 GP Input 26 (N one)

DB17 GP Input 27 (None)

DB18 GP Input 28 (None)

DB19 Signal Ground

DB20 Touchkey Data Out

DB21 Touchkey Data In

DB22 Not used

DB23 Signal Ground(Flow)/ 4- 20mA(-)

DB24 Flow Input Meter 7A (None)

DB25 Flow Input Meter 7B (None)

DB26 Signal Ground(Flow)/4- 20mA(-)

DB27 4-20mA 11(+)

DB28 4-20mA 12(+)

DB29 Analog Control Valve - 4- 20mA (-)

NOTES:

- GP Outputs are configurable. The settings listed in brackets for GP outputs are default settings.
- RIT output and inputs will be set only if the RIT Panel is enabled.
- Except for emergency stop the rest inputs are configurable.
  The settings listed for rest of GP inputs in the brackets are default settings.
- Either the RTD or 4-20mA sensor can be used to sense the temperature of the product.
- For configuration refer to the 1010 CB programming manual.
- Internal Additives are not available in sales codes K.
- RIT Panel is not available in the sales code K.
- In case of straight loading arm if the mass meter is used with volume preset then the inputs shown for density can be used to connect the densitometer.

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