Product Information: <u>ExTR Reference No. GB.FME.ExTR11.0006-00</u>

Experion Series C input/output chassis-less mounted modules and field level network gateways provide the physical connection between an automation system and the process when used with the C300 Controller. Input/Output Modules and field terminations are combined in the same area. The Input/Output Modules are plugged into Input /Output Termination Assemblies to eliminate the need for a separate chassis to hold the electronics assemblies.

<u>C300 Controller</u>

The C300 Controller is constructed using the Series C form factor that employs an Input Output Termination Assembly (IOTA) and an electronics module which mounts and connects to the IOTA. One C300 Controller contains all of the control functionality and the communications functions with plug-in modules.

The C300 Controller may operate in both non-redundant and redundant configurations. Redundant operation requires a second identical controller and connecting cables, which is the typical configuration. The C300 Controller is connected to the associated I/O hardware by a pair of I/O Link Interface cables

The table below identifies the C300 Controller components and its associated components. TheC300 Controller supports non-redundant and fully redundant operation. Redundancy is built in to the controller, so that just adding another controller and a redundancy cable; a redundant controller pair is achieved.
Note that the 'CC' designation on the model number indicates the printed wiring boards are conformally coated for additional protection from the environment, (CU = uncoated).

Components	Description	Model No.
C300 Controller Module	A distributed process controller and I/O gateway for the Experion system. Module contains printed circuit assemblies, status indicators and a display, inside in a plastic housing. Module mounts to its Input Output Termination Assembly (IOTA). Supply Rating: 0.311A @ 24VDC	CC-PCNT01 CU-PCNT01
C300 Controller Input Output Termination Assembly (IOTA)	Provides the connection point for theC300 Controller module and all cable terminations to the controller, (FTE, IO Link, Redundancy, Battery and Time Source cable terminations). Provides 24Vdc power distribution to the controller module. Supply Rating: 0.311A @ 24VDC Note: The C300 Controller IOTA supports only one controller module.	CC-TCNT01 CU-TCNT01
9 Port FTE Control Firewall Module	Provides FTE distribution to in-cabinet network nodes. (C300 Controllers and Series C Modules) Supply Rating: 0.112A @ 24VDC	CC-PCF901 CU-PCF901
9 Port Control Firewall IOTA	Provides connection for eight FTE cables from in-cabinet controllers and Series CFIMs. The 9th port provides an uplink to the FTE supervisory network. Provides 24Vdc power distribution to the control. Ethernet: 9 RJ-45 Connections Fiber-Optic: Model Ca-FSMx01 FTE Single Mode Fiber Module Supply Rating: 0.30mA@24VDC Model Ca-FMMx01 FTE Multi-Mode Fiber Module Supply Rating: 0.30mA@24VDC	CC-TCF901 CU-TCF901

The Series C modules comprise:

- **Input Output Termination Assembly (IOTA):** An assembly that holds the IOM and the connections for field wiring,
- **Input Output Module (IOM):** A device that contains most of the electronics required to perform a specific I/O function. The IOM plugs onto the IOTA.

The Experion Series C I/O consists of the following I/O modules (IOM's):

High Level Analog Input /HART Input Module (16pt):

A High Level Analog Input Module supports both high level analog and HART inputs. Analog inputs are typically 4-20mA DC for both traditional and HART devices. HART data can be used for status and configuration. HART data, such as the secondary and tertiary variables, can also be used as process control variables.

Supply Rating: 0.195A @ 24VDC
Input Voltage: 24Vdc

Manufacturer's Declared Parameters			
Input / Output Model	CC-PAIH01 - High-Level Analog Input with HART CU-PAIH01 - High-Level Analog Input with HART		
IOTA Models	CC-TAIX01 CU-TAIX01	Non Redundant	6"
	CC-TAIX11 CU-TAIX11	Redundant	12"
Input Type	Voltage, current (2-wire or self-powered transmitters)		
Input Channels [1]	16 Channels (12 Single Ended / 4 Differential)		
Common Mode Rejection Ratio, dc to 60 Hz (500 Ω source imbalance)	70 dB		
Common Mode Voltage, dc to 60 Hz	-6 to +5 V peak		
A/D Converter Resolution	16 bits		
Input Range [1]	0 to 5 V, 1 to 5 V, 0.4 to 2 V, 4-20 mA (through 250 Ω)		
Normal Mode Rejection Ratio, at 60 Hz	19 dB		
Normal Mode Filter Response	Single-pole RC, -3 dB @ 6.5 Hz		
Maximum Normal Mode Input (differential inputs, no damage)	± 30 Volts		
Crosstalk, dc to 60 Hz (channel-to-channel)	-60 dB		
Input Impedance (voltage inputs)	> 10 M Ω powered		
Maximum Input Voltage (any input referenced to common, no damage)	± 30 Volts		
Input Scan Rate	50 ms		
Hardware Accuracy (@ CMV = 0 V)	± 0.075% of full-scale (23.5°± 2°C) ± 0.15% of full-scale (0 to 60°C)		
Transmitter Field Power Conditioning	Individually Protected Current Limiting Circuits for Class 1, Div 2 non-incendive interfacing. No fusing required		
1) Each channel's 250-Ohm load resistor is connected to the input terminal through a wire jumper on the IOTA. This jumper should be cut by the user on channels to be used with voltage transmitters. For channels 13-16 the low-side input connection is normally connected to system common by a wire jumper on the IOTA. This jumper may be cut by the user to enable differential operation subject to operating within the CMV specification.			