





6. General Module Specifications

Table 6-1 General Environmental and Agency Certifications

Parameter	Specification	
Environmental Conditions	0 to 60 °C (32 to 140°F) -40 to 85°C (-40 to 185°F) 5 to 95% noncondensing ≤ 1°C/min. (≤ 5°C/min. storage)	
Coated Models (TK-xxxxx) ²	Mild (G1) Moderate (G2) or Harsh (G3)	
	Operative and Storage Limits	Transportation Band
Vibration (3 axes)		
Frequency	10 to 60 Hz	10 to 60 Hz
Acceleration	0.5 g max.	1 g max.
Displacement	0.1 inches	0.1 inches
Mechanical Shock		
Acceleration	5 g max.	20 g max.
Duration	30 ms max.	30 ms max.
Barometric Pressure	-300 to +3000 m	Any
Altitude		
Agency Certification (when product is marked)	 UL 508 Industrial Control Equipment	
	 Class I, Div 2, Groups A, B, C & D Hazardous and Ordinary locations (Maintenance may require a hot work permit)	
	 89/336/EEC, EMC Directive EN 50081-2, Emissions, Industrial EN 50082-2, Immunity, Industrial	
	 (C-Tick) Meets requirements of the Australian Radiocommunications Act of 1992, Section 182, relating to electromagnetic compatibility.	
Removal/Insertion Under Power (RIUP)	<p>NOT PERMITTED when equipment is installed in a Class I, Division 2, Hazardous (Classified) Location.</p> <p>PERMITTED when equipment is installed in ordinary, non-hazardous, locations (I/O modules reload automatically)</p>	
<p>The above environmental and agency specifications apply to all Experion Chassis Series A models, including Controllers, Power Supplies and I/O, except where noted.</p> <ul style="list-style-type: none"> • The maximum relative humidity specification applies up to 40°C. Above 40°C the RH specification is de-rated to 55% to maintain constant moisture content. • With an enclosure. • The 1/2AA Control Processor Lithium Battery (TC-BATT01) has a non-restricted classification due to its size. It can be shipped without any special documentation or note on the shipping list. The battery is specified for operation from -55 °C to +85 °C. 		

CE-Mark Approval. The C200 and Series-A I/O system fully meet stringent industrial CE-Mark (European Community) immunity and emissions requirements.

Conformal Coating Corrosion Protection. Corrosion is one of the leading failure mechanisms of electronic boards in harsh environments. To insure the maximum possible reliability in corrosive industrial environments, Honeywell provides an optional conformal coating solution. Conformal coating is highly recommended for any installations for which the ambient environment meets either Moderate (G2) or Harsh (G3) conditions as defined by *ANSI/ISA-S71.04-1985, "Environmental Conditions for Process Measurement and Control Systems: Airborne Contaminates."*

Chassis Series-A Model Numbers beginning with a TK- have conformal coating applied. Model numbers beginning with TC- do not.

6.1 Summary of Series-A Modules and Model Numbers

Table 6-2: Standard/Traditional I/O Modules & Model Numbers

Module Description (All modules below are single-wide modules)	No. of I/O Channels	No. of TB Pins (1)	Honeywell Model (2) TC or TK-
<i>Analog Input and Output</i>			
High Level Analog Input, (10V & 4-20ma)	6	20	IAH061
Analog Output, (4-20ma)	6	20	OAH061
Analog Output, (10v)	6	20	OAV061
Thermocouple Input <i>see note (4)</i>	6	20	IXL061
Thermocouple Input	6	20	IXL062
RTD Input	6	20	IXR061
Analog Input, Voltage and Current	16	36	IAH161
Analog Output, Current/Voltage	8	20	OAV081
Analog Input, Voltage/Current/HART enabled	8	36	HAI081
Analog Output, Voltage/Current/HART enabled	8	20	HAO081
<i>Isolated Discrete Relay</i>			
24-220 VAC Output (8 NO & 8 NC)	8	36	ORC081
24-220 VAC Output (16 NO)	16	36	ORC161
<i>AC Input (Discrete)</i>			
120 VAC, (Isolated)	16	36	IDK161
220 VAC, (Isolated)	16	36	IDW161
120 VAC, (Diagnostic)	8	20	IDX081
120 VAC	16	20	IDA161
120 VAC (2 Isolated Groups)	32	36	IDB321
<i>AC Output (Discrete)</i>			
120/220 VAC, (Isolated)	16	36	ODK161
120 VAC, (Diagnostic)	8	20	ODX081
120/220 VAC,	16	20	ODA161
<i>DC Input (Discrete)</i>			
24 VDC (Isolated)	16	36	IDJ161
10-30 VDC (Diagnostic)	16	36	IDX161
24 VDC	32	36	IDD321
<i>DC Output (Discrete)</i>			
24 VDC (Isolated)	16	36	ODJ161
10-30 VDC (Diagnostic)	16	36	ODX161
24 VDC	32	36	ODD321

Table 6-3: Chassis - Series A Network and Specialty I/O Module Model Numbers

Description	Chassis Slots Used	Model Number
Specialty Modules		
PI (High Speed Pulse Input). 8-high speed counter inputs & 2- On/Off outputs. This module uses a 36 pin Terminal Block (TC-TBCH). Corresponding A-B model number is 1756-IJ4.	1	TK-MDP081
SI (Serial Interface) module. Provides 2-Serial Channels to communicate with smart devices.	2	TC or TK-MUX021
C200 Control Processor For complete information, consult the C200 Specification document.	2	TK-PRS021
RM (Redundancy Module) to support C200 redundancy	2	TK-PRR021
Communication/ Network/ Gateway Modules		
PBIM (PROFIBUS DP Interface Module) <i>Order directly from SST</i> For complete information, consult the PBIM Specification document.	1	SST-PFBCLX
DeviceNet Bridge Module. <i>Order directly from Allen-Bradley</i> For complete information, consult the DeviceNet Specification document.	1	1756-DNB
IOLIM (I/O Link Module), Interface for PMIO. For complete information, consult the PMIO Specification document.	2	TK-IOLI01
CNI (Single media Type)	1	TC-CCN014
CNI (Dual Media Type)	1	TC OR TK-CCR014
Ethernet Module	1	TK-FTEB01

6.2 Series-A Chassis Summary

Table 6-4 – Series-A Chassis Types & Specifications

Table 7. TC-FXX041, TC-FXX071, TC-FXX102, TC-FXX132, TC-FXX171, TK-FXX101, TK-FXX131			
Model	Module slots	Dimensions (with mounting tabs & power supplies) W x H x D	Approx. weight (without modules)
TC-FXX042	4	26.3 x 16.9 x 14.5 cm (10.3 x 6.7 x 5.8 in)	0.75 kg (1.6 lbs)
TC-FXX072	7	36.8 x 16.9 x 14.5 cm (14.5 x 6.7 x 5.8 in)	1.1 kg (2.4 lbs)
TC-, TK-FXX102	10	48.3 x 16.9 x 14.5 cm (19.0 x 6.7 x 5.8 in)	1.45 kg (3.2 lbs)
TC-, TK-FXX132	13	58.8 x 16.9 x 14.5 cm (23.1 x 6.7 x 5.8 in)	1.9 kg (4.2 lbs)
TC-FXX172	17	73.8 x 16.9 x 14.5 cm (29.1 x 6.7 x 5.8 in)	2.2 kg (4.8 lbs)
Minimum Chassis-to-Cabinet Vertical Distance		15.2 cm (6.0 in)	
Minimum Chassis-to-Cabinet Horizontal Distance		10.2 cm (4.0 in)	
Minimum Chassis-to-Chassis Vertical Distance		20.3 cm (8.0 in)	
Minimum Chassis-to-Chassis Horizontal Distance		10.2 cm (4.0 in)	
Type of mount		Panel mount	
Environmental Conditions Agency Certification		Same as Power Supply Specifications	
Minimum Enclosure Depth		20.3 cm (8.0 in)	

6.3 Hardware Mounting Options

Note that in order to comply with applicable regulations and codes, the controller and I/O racks may have to be located in a room, vault, or enclosure that is accessible only to qualified persons. Please refer to NEC 110-17, part 1 (1996 National Electrical Code, Copyright 1995 NFPA) or to the appropriate local or national electrical standards for more information.

Table 6-5 Chassis Dimensions

Chassis Type (No. of Slots)	Dimensions (HxWxD), Approx. (Note-1)
4	137 x 263 x 145 mm (5.4 x 10.4 x 5.8 in.)
7	137 x 368 x 145 mm (5.4 x 14.5 x 5.8 in.)
10	137 x 483 x 145 mm (5.4 x 19.0 x 5.8 in.)
13	137 x 588 x 145 mm (5.4 x 23.2 x 5.8 in.)
17	137 x 738 x 145 mm (5.4 x 29.1 x 5.8 in.)
Note-1: All dimensions include the chassis and power supply assembly.	

6.4 Miscellaneous Components

The following blank cover module is used to cover an empty slot in the chassis.

Model Number	Description
TC-XXXXX2	Blank Cover Modules (Qty 1). These are covers that clip into used chassis slot positions.