2500 Series™ Compact System



2500C-8-AO Analog Output Module



DESCRIPTION

The 2500C-8-AO is an 8 analog output module. Designed for CTI's 2500 Series Compact System. The module provides 8 outputs that can be configured for voltage or current signals on a channel by channel basis.

FEATURES

- 8 analog outputs
- Supports Classic and Classic Plus Modes
- 7 Segment Display for Module Status indication
- No user calibration
- Outputs voltage or current signals
- Supports bipolar or unipolar ranges
- Software Configurable Range Selection
- Uses removable connector 2500C-32F

Modules ship in Classic Mode Default Configuration: 0-20mA Current Mode, Unipolar, Digital Filtering Enabled, offset scaling disabled.

2500-8-AO Default Shipment Settings	
Operation Mode	Classic Mode
Logon	8WY
Signal Range	0 to 20 mA
Digital Filtering	Enabled
Offset Scaling	Disabled

Output Specifications		
Operation Mode Support (See Note 1)	**Classic Mode**	**Classic Plus Mode**
8 Analog Output Channels	Supported	Supported
Module Logon	8WY	8WX/16WY
Module Response Time		
Signal Range(Note 2):		
Unipolar Ranges	0 to 5.12 VDC, 0 to 20.24 mA	0 to 10.24 VDC, 0 to 5.12 VDC, 0 to 20.24 mA
Bipolar Ranges	NA	+/- 5.12 VDC +/- 10.24 VDC +/- 20.24 mA

Resolution (15 bits plus sign)	
0 to +5.12 VDC or +/- 5.12 VDC	156µV per bit
0 to +10 VDC or +/-10VDC	312.50µV per bit
0 to +20mA or +/-20mA	0.625µA per bit

	Current Mode	Voltage Mode
Accuracy 0º to 60 ºC Voltage Mode	.15% @25ºC	.15% @ 25ºC
Accuracy 0º to 60º C Current Mode	.15% @ 25ºC	.15% @ 25ºC
Load Resistance (See Note 2)	Min - 250Ω Max - 1kΩ	Min - 1kΩ Max - 0Ω

⚠ **User supplied Loop Power**	20 to 30VDC @ 0.50 Amps max Maximum Ripple of 0.4V
User supplied 24VDC Power Fusing	1A 250VAC Fast Blow Littelfuse P/N: 37011000410
Backplane Power (MAX)	.312 watts
Input ESD Protection	IEC 1000-4-2 level 4
Isolation	24VDC IN - 500VDC
Connector	2500C-32F
Agency Approvals Pending	UL, ULC, UL Class 1, Div 2, CE
Shipping Dimensions and Weight	223.84mm x 109.86mm x 34.93mm, 0.234kg

Note 1:	Classic or Classic Plus modes are jumper selectable for the module.
Note 2:	In current mode for 600Ωto 1KΩ load user must have a 24V to 30 V Power Supply.

Control Technology Inc.
5734 Middlebrook Pike, Knoxville, TN 37921-5962

CE

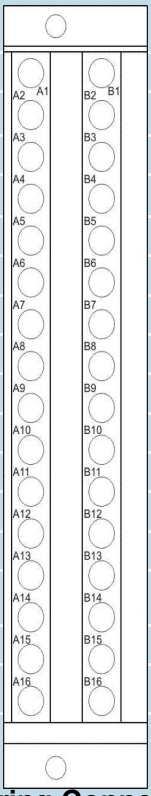
Copyright©2024 Control Technology Inc. All Rights Reserved

2500 Series™ Compact System



2500C-8-AO Analog Output Module

Channel 1	V Out	A1	B1	I Out	Channel 1
	Earth	A2	B2	Return	
Channel 2	V Out	A3	B3	I Out	Channel 2
	Earth	A4	B4	Return	
Channel 3	V Out	A5	B5	I Out	Channel 3
	Earth	A6	B6	Return	
Channel 4	V Out	A7	B7	I Out	Channel 4
	Earth	A8	B8	Return	
Channel 5	V Out	A9	B9	I Out	Channel 5
	Earth	A10	B10	Return	
Channel 6	V Out	A11	B11	I Out	Channel 6
	Earth	A12	B12	Return	
Channel 7	V Out	A13	B13	I Out	Channel 7
Module Power	+24V	A14	B14	Return	
Channel 8	V Out	A15	B15	I Out	Channel 8
Module Power	24V Return	A16	B16	Return	



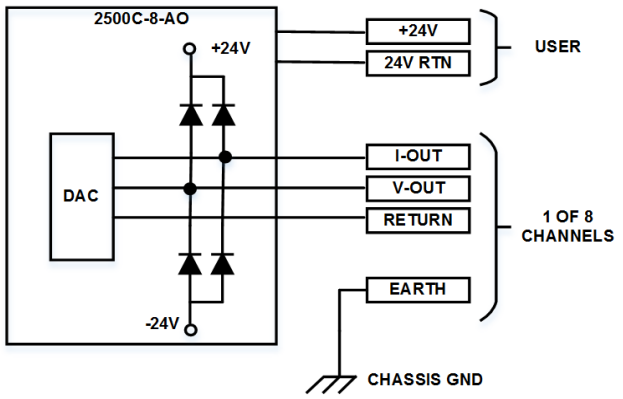
2500C-8-AO Wiring Connection Diagram

Note:
The 2500C-8-AO Analog Output Module uses CTI Wiring Connector 2500C-32F. Please see the wiring connector specification table below. This connector is ordered separately from the module.

2500C-32F Specifications	
Connector Style	Removable
Number of Wiring Connections	32 point
Wire Gauge	14 to 22AWG
Screw Torque Value	5.22 lb-in
Current Rating	6A @ 300VAC
Insulation Stripping Length	0.24" 6mm

Connector Material	
Body:	Polycarbonate UL 94V0
Screw :	M3 Zinc plated Steel
Cage Clamp	Nickel Plated Brass
Socket Contact Spring:	Tin Plated Bronze
Retaining Screw:	M3 Zinc Plated Steel

TYPICAL INTERNAL CIRCUIT



Control Technology Inc.
5734 Middlebrook Pike, Knoxville, TN 37921-5962
Phone: +1.865.584.0440 Fax: +1.865.584.5720
www.controltechnology.com

CE

Copyright©2024 Control Technology Inc. All Rights Reserved

3 July 2024

2500 Series™ Compact System



2500C-8-AO Analog Output Module

CAUTION – Non-Hazardous Areas/Hazardous Areas

WARNING – EXPLOSION HAZARD. DO NOT REMOVE OR REPLACE WHILE CIRCUIT IS LIVE UNLESS THE AREA IS FREE OF IGNITIBLE CONCENTRATIONS.	AVERTISSEMENT – RISQUE D'EXPLOSION. NE PAS RETIRER NI REMPLACER PENDANT QUE LE CIRCUIT EST SOUS TENSION À MOINS QUE L'EMPLACEMENT NE SOIT EXEMPT DE CONCENTRATIONS INFLAMMABLES.
WARNING – EXPLOSION HAZARD. DO NOT REMOVE OR REPLACE FUSE WHEN ENERGIZED.	AVERTISSEMENT – RISQUE D'EXPLOSION. NE PAS RETIRER NI REMPLACER UN FUSIBLE SI L'APPAREILLAGE EST SOUS TENSION.

Control Technology Inc.
5734 Middlebrook Pike, Knoxville, TN 37921-5962
Phone: +1.865.584.0440 Fax: +1.865.584.5720
www.controltechnology.com

CE

Copyright©2024 Control Technology Inc. All Rights Reserved 3 July 2024