

Allen-Bradley 1746SC-CTR4

Counter Flowmeter Module

Overview

Allen-Bradley 1746SC-CTR4 is a Spectrum Controls four-channel counter and turbine-flowmeter module for the SLC 500 platform. It accepts DC counter signals or variable-reluctance AC inputs and exchanges data with the SLC processor through the chassis backplane.

01 / Function

Provides four configurable counter or turbine-flow channels

02 / Function

Accepts 5, 12 or 24 V DC counter inputs and variable-reluctance AC inputs

03 / Function

Supports input frequencies up to 50 kHz

04 / Function

Communicates with the SLC 500 processor through the chassis backplane

PRODUCT FIELD	OFFICIAL VALUE
Manufacturer	Spectrum Controls for the Allen-Bradley SLC 500 platform
Catalog number	1746SC-CTR4
Module function	Four-channel counter / turbine flowmeter
Input channels	4

Technical parameter dashboard

Allen-Bradley 1746SC-CTR4

PARAMETER	VERIFIED VALUE	PARAMETER	VERIFIED VALUE	PARAMETER	VERIFIED VALUE
Manufacturer	Spectrum Controls for the Allen-Bradley SLC 500 platform	External counter-enable inputs	4	Channel-to-rack isolation	1000 V DC
Catalog number	1746SC-CTR4	Maximum input frequency	50 kHz	Count accuracy	+/-1 count
Module function	Four-channel counter / turbine flowmeter	Maximum count selections	+/-32K or +/-8M	SLC 500 rack current	175 mA at 5 V DC; 75 mA at 24 V DC
Input channels	4	Scaling variables	K, M and R	Field connector	24-pin removable terminal block
DC counter input levels	5 V DC, 12 V DC or 24 V DC	Channel update time	4 ms per channel		
Variable-reluctance input range	50 mV to 75 V peak AC	Selectable input filters	15 kHz, 30 kHz or 50 kHz		

Evidence boundary: Values are limited to the supplied Spectrum Controls 1746sc-CTR4/CTR8 User Manual, the official installation guide and the official Spectrum Controls catalog. Final channel scaling and machine logic remain project-specific.

Evidence reviewed: Spectrum Controls 1746sc-CTR4/CTR8 User Manual 0300181-09 and official 1746sc installation/catalog documents.

Applications and product precautions

Allen-Bradley 1746SC-CTR4

High-speed event counting Counts documented single-ended pulse inputs at rates up to 50 kHz.	Turbine flow measurement Processes compatible variable-reluctance turbine pickup signals and applies the configured scaling.	Rate and totalization Provides count and rate information to the SLC 500 processor for machine or process logic.	Legacy SLC 500 maintenance Restores a four-channel installation while preserving wiring, scaling and filter assignments.
01 / Check Verify the complete 1746SC-CTR4 catalog identity and assigned SLC 500 chassis slot before work.	02 / Check Place the machine, flow system and associated outputs in the approved maintenance state before module removal.	03 / Check Record all four channel modes, K/M/R scaling values, filter selections and counter-enable assignments.	04 / Check Remove chassis and field power and verify a safe state before disconnecting the 24-pin removable terminal block.
05 / Check Confirm the SLC chassis power budget includes 175 mA at 5 V DC and 75 mA at 24 V DC for 1746SC-CTR4.	06 / Check Match each field signal to the configured 5, 12 or 24 V DC input level or the documented variable-reluctance range.	07 / Check Use the documented conductor range and tighten the terminal block to 0.5 N m without damaging the removable connector.	08 / Check After installation, verify channel LEDs, counts, rates, scaling, enable inputs and controlled machine or flow response before release.

Evidence reviewed: Spectrum Controls 1746sc-CTR4/CTR8 User Manual 0300181-09 and official 1746sc installation/catalog documents.

Model-specific engineering FAQ

Allen-Bradley 1746SC-CTR4

How many channels does 1746SC-CTR4 provide?

1746SC-CTR4 provides four general-purpose counter or turbine-flowmeter channels.

Which input signal types can 1746SC-CTR4 accept?

It supports 5, 12 or 24 V DC counter inputs and variable-reluctance AC inputs from 50 mV to 75 V peak.

What is the maximum input frequency of 1746SC-CTR4?

The user manual specifies operation up to 50 kHz, with selectable 15, 30 and 50 kHz input filters.

Which count ranges are available in 1746SC-CTR4?

The module supports maximum count selections of plus or minus 32K or plus or minus 8M.

How quickly does 1746SC-CTR4 update its channels?

The documented update time is 4 ms per channel.

What isolation is provided by 1746SC-CTR4?

The module provides 1000 V DC channel-to-rack isolation; the channels are not isolated from each other.

What SLC 500 power budget is required for 1746SC-CTR4?

Allow 175 mA from the 5 V DC backplane rail and 75 mA from the 24 V DC rail.

What should be retained when replacing 1746SC-CTR4?

Preserve slot identity, all channel modes, input level, K/M/R scaling, filters, enable assignments and the as-found count or flow baseline.

Use the final installed drawing, configuration record and manufacturer instructions for acceptance decisions.

Related products and contact

Recommendation count is fitted to the available page area

NO.	RELATED PRODUCT	APTERPOWER LINK
01	Allen-Bradley 1746-OAP12	View Allen-Bradley 1746-OAP12 page
02	Allen-Bradley 1746-NIO4V	View Allen-Bradley 1746-NIO4V page
03	Allen-Bradley 1746-IV32	View Allen-Bradley 1746-IV32 page
04	Allen-Bradley 1746-ITB16	View Allen-Bradley 1746-ITB16 page
05	Allen-Bradley 1746-IO8	View Allen-Bradley 1746-IO8 page
06	Allen-Bradley 1746-IO12	View Allen-Bradley 1746-IO12 page
07	Allen-Bradley 1746-IH16	View Allen-Bradley 1746-IH16 page
08	Allen-Bradley 1746-NR4	View Allen-Bradley 1746-NR4 page
09	Allen Bradley 1734-4IOL	View Allen Bradley 1734-4IOL page
10	Allen Bradley 1734-IR2	View Allen Bradley 1734-IR2 page
11	Allen Bradley 1756-IV32	View Allen Bradley 1756-IV32 page
12	Allen Bradley 1756-L1M2	View Allen Bradley 1756-L1M2 page
13	Allen Bradley 1756-L55M12	View Allen Bradley 1756-L55M12 page
14	Allen Bradley 1756-L55M13	View Allen Bradley 1756-L55M13 page
15	Allen Bradley 1756-L61S	View Allen Bradley 1756-L61S page
16	Allen Bradley 1756-L62S	View Allen Bradley 1756-L62S page

Recommendation links are navigation aids only and do not establish compatibility.

APTER POWER CONTACT

WHATSAPP / PHONE +86 180 3023 5313
EMAIL sales13@apterpower.com
WEBSITE www.apterpower.com



1746SC-CTR4