

INDUSTRIAL AUTOMATION PRODUCT

3805E

Eight-Point 4-20 mA Analog Output Module

Triconex 3805E is an eight-point TMR analog output module. It generates voted 4-20 mA commands for field control loops and supervises output-current integrity.

IDENTITY	VERIFIED VALUE
Manufacturer	Triconex
System family	Tricon v9-v10 analog output
Part number	3805E
Country	USA
HS code	8537101190

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2

Technical Specifications

Technical values below are limited to the named Triconex product record.

PARAMETER	TECHNICAL VALUE
Module type	TMR analog output
Output points	8
Output current	4 to 20 mA (+6% overrange)
Return arrangement	Commoned return; DC coupled
Resolution	12 bit
Output accuracy	<0.25% FSR, 0 to 60 degC
External loop power	24 VDC nominal; 42.5 VDC maximum
Loop-power current	1 A minimum
Load at >20 VDC	250 Ohm
Load at >25 VDC	500 Ohm
Load at >30 VDC	750 Ohm
Load at >35 VDC	1000 Ohm
Ovrerrange protection	+42.5 VDC continuous
Leg-failure switch time	<10 ms typical
Indicators	PASS; FAULT; ACTIVE; LOAD; PWR1; PWR2
Compatible basic panel	9853-610
Compatible nonincendive panel	9861-610

3

System Role and Architecture

Triconex 3805E is an eight-point TMR analog output module. It generates voted 4-20 mA commands for field control loops and supervises output-current integrity.

FUNCTION 1

Votes three internal channels and selects a healthy channel to drive eight current loops

FUNCTION 2

Monitors each current output with loopback diagnostics independent of the field load

FUNCTION 3

Supports redundant external loop-power sources with PWR1 and PWR2 indication

FUNCTION 4

Reports open-loop conditions through the module LOAD diagnostic

Matched system components

- 9853-610 or 9861-610 termination panel
- 24-42.5 VDC loop-power source
- Tricon main and I/O chassis
- 4-20 mA field loads

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	9853-610 or 9861-610 termination panel
Companion hardware	24-42.5 VDC loop-power source
Field connection	Tricon main and I/O chassis
Primary system function	Votes three internal channels and selects a healthy channel to drive eight current loops
Controlled acceptance duty	Safety-related control-valve command loops

4

Applications and Engineering Context

Safety-related control-valve command loops

Votes three internal channels and selects a healthy channel to drive eight current loops

Voted analog setpoint delivery

Monitors each current output with loopback diagnostics independent of the field load

Redundant loop-power output cabinets

Supports redundant external loop-power sources with PWR1 and PWR2 indication

Online hot-spare analog-output maintenance

Reports open-loop conditions through the module LOAD diagnostic

TECHNICAL NOTE

Match 3805E to the documented termination panel and redundant loop-power arrangement, then command controlled output values and verify measured current, LOAD status, and leg-failure behavior.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	3805E / 3805E recorded
Physical interface	9853-610 or 9861-610 termination panel
Companion check	24-42.5 VDC loop-power source
Functional proof	Votes three internal channels and selects a healthy channel to drive eight current loops
Application test	Safety-related control-valve command loops

5

Engineering Precautions

1

Verify 3805E and the assigned analog-output slot before removing the module.

2

Place every connected final element in its approved safe maintenance condition.

3

Isolate both external loop-power sources and record PWR1/PWR2 polarity.

4

Confirm the field load and loop voltage remain inside the published operating table.

5

Keep the commoned return and termination-panel wiring unchanged during replacement.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Triconex 3664	Dual Digital Output Module	Open product page
Triconex 9662-610	24 VDC Digital Output Termination Panel	Open product page
Triconex 3008	Main Processor Module	Open product page
Triconex 8312	230 VAC Power Module	Open product page

MANUFACTURER SOURCE RECORD

Tricon Systems Technical Product Guide

9791007-013

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