

3805E

Eight-Point 4-20 mA Analog Output Module

CONTROLLED ENGINEERING COPY

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.

INSTALLATION IDENTITY	REQUIRED VALUE
Complete model	3805E
Manufacturer part	3805E
Hardware type	TMR analog output
System family	Tricon v9-v10 analog output



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01 PRE-INSTALLATION PLAN

- 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.

MATCHED HARDWARE

- 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

INSTALLATION CONTROL RECORD

CONTROL ITEM	REQUIRED RECORD
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

02 WIRING & INTERFACE CHECKS

CHECK ITEM	REQUIRED 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
Overrange protection	+42.5 VDC continuous
Leg-failure switch time	<10 ms typical

FIELD 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.

03 COMMISSIONING WORKFLOW



COMMISSIONING ACCEPTANCE EVIDENCE

EVIDENCE ITEM	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

04 RETURN-TO-SERVICE RECORD

- ☐
- Use ESD controls and inspect the keyed module and backplane connectors.
- ☐
- Command several current points across the operating range and compare measured loop current.
- ☐
- Clear LOAD or FAULT indications and prove the intended process response before service.
- ☐
- Confirm the intended process response before normal operation.

VERIFICATION RECORD

TECHNICIAN

DATE

CABINET / POSITION

FINAL DIAGNOSTIC STATE

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

SOURCE IDENTIFIERS

Tricon Systems Technical Product Guide
9791007-013

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