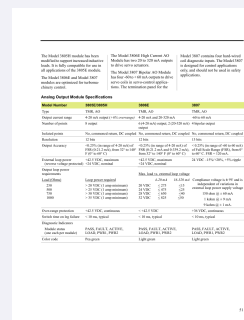


FIELD INSTALLATION QUICK GUIDE

Installation Instructions

3805EN

TMR analog output module



PRODUCT	3805EN
FAMILY	Triconex safety system
FUNCTION	TMR analog output module
STATUS	Verify exact installed equipment

Prepared by Amikon Limited from Triconex documentation. This guide supplements the complete manufacturer manual and site procedure.

01

CONFIRM THE ORDERED CONFIGURATION

Component Type	TMR analog output module
Order Reference	3805EN
System Platform	Triconex safety control system
Primary Function	Drives process current loops
Channel or Port Capacity	Eight analog output points
Electrical Classification	4–20 mA DC-coupled outputs

02

PREPARATION AND CONNECTION

- Confirm the complete 3805EN article number and installed revision.
- Isolate applicable electrical and process energy using the approved site procedure.
- Record every connector, cable, terminal, shield and protective-earth connection before removal.
- Install without forcing keyed parts, then secure terminals, latches, fasteners and cable supports.

OFFICIAL INSTALLATION REFERENCE

The Model 3805H module has been modified to support increased inductive loads. It is fully compatible for use in all applications of the 3805E module.

The Model 3806E and Model 3807 modules are optimized for turbomachinery control.

The Model 3806E High Current AO Module has two 20 to 320 mA outputs to drive servo actuators.

The Model 3807 Bipolar AO Module has four -60 to +60 mA outputs to drive servo coils in servo-control applications. The termination panel for the

Model 3807 contains four hard-wired coil diagnostic inputs. The Model 3807 is designed for control applications only, and should not be used in safety applications.

Analog Output Module Specifications

Model Number	3805E/3805H	3806E	3807																				
Type	TMR, AO	TMR, AO	TMR, AO																				
Output current range	4-20 mA output (+6% overrange)	4-20 mA and 20-320 mA	-60 to 60 mA																				
Number of points	8 output	6 (4-20 mA) output; 2 (20-320 mA) output	4 bipolar output																				
Isolated points	No, commoned return, DC coupled	No, commoned return, DC coupled	No, commoned return, DC coupled																				
Resolution	12 bits	12 bits	13 bits																				
Output Accuracy	<0.25% (in range of 4-20 mA) of FSR (0-21.2 mA), from 32° to 140° F (0° to 60° C)	<0.25% (in range of 4-20 mA) of FSR (0-21.2 mA and 0-339.2 mA), from 32° to 140° F (0° to 60° C)	< 0.25% (in range of -60 to 60 mA) of Full Scale Range (FSR), from 0° to 60° C. FSR = 120 mA.																				
External loop power (reverse voltage protected)	+42.5 VDC, maximum +24 VDC, nominal	+42.5 VDC, maximum +24 VDC, nominal	24 VDC -15%/+20%, +5% ripple																				
Output loop power requirements	Max. load vs. external loop voltage <table> <tr> <th>Load (Ohms)</th><th>Loop power required</th><th>4-20 mA</th><th>16-320 mA</th></tr> <tr> <td>250</td><td>> 20 VDC (1 amp minimum)</td><td>20 VDC ≤ 275</td><td>≤15</td></tr> <tr> <td>500</td><td>> 25 VDC (1 amp minimum)</td><td>24 VDC ≤ 475</td><td>≤25</td></tr> <tr> <td>750</td><td>> 30 VDC (1 amp minimum)</td><td>28 VDC ≤ 650</td><td>≤40</td></tr> <tr> <td>1000</td><td>> 35 VDC (1 amp minimum)</td><td>32 VDC ≤ 825</td><td>≤50</td></tr> </table>			Load (Ohms)	Loop power required	4-20 mA	16-320 mA	250	> 20 VDC (1 amp minimum)	20 VDC ≤ 275	≤15	500	> 25 VDC (1 amp minimum)	24 VDC ≤ 475	≤25	750	> 30 VDC (1 amp minimum)	28 VDC ≤ 650	≤40	1000	> 35 VDC (1 amp minimum)	32 VDC ≤ 825	≤50
Load (Ohms)	Loop power required	4-20 mA	16-320 mA																				
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			Compliance voltage is ± 9V and is independent of variations in external loop power supply voltage																				
			150 ohm @ ± 60 mA																				
			1 kohm @ ± 9 mA																				
			9 kohm @ ± 1 mA.																				
Over-range protection	+42.5 VDC, continuous	< +42.5 VDC	+36 VDC, continuous																				
Switch time on leg failure	< 10 ms, typical	< 10 ms, typical	< 10 ms, typical																				
Diagnostic Indicators																							
Module status (one each per module)	PASS, FAULT, ACTIVE, LOAD, PWR1, PWR2	PASS, FAULT, ACTIVE, LOAD, PWR1, PWR2	PASS, FAULT, ACTIVE, LOAD, PWR1, PWR2																				
Color code	Pea green	Light green	Light green																				

04 COMMISSIONING CHECKS

- 01 Confirm product identity and mechanical seating.
- 02 Verify the documented supply before energising.
- 03 Inspect polarity, shielding and protective-earth connections.
- 04 Restore power in the approved sequence and observe status indications.
- 05 Test each connected input, output or communication path.
- 06 Record diagnostics and functional-test results before return to service.

05 CONTROLLED DOCUMENT

Official source	Tricon Technical Product Guide
Product record	3805EN
Manufacturer	Triconex
Warranty	12 months from AMIKON
Support	INFO@AMIKON.CN

AMIKON PRODUCT SUPPORT

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