

Analog output module

AO

M3-32A

AO

M3-32B

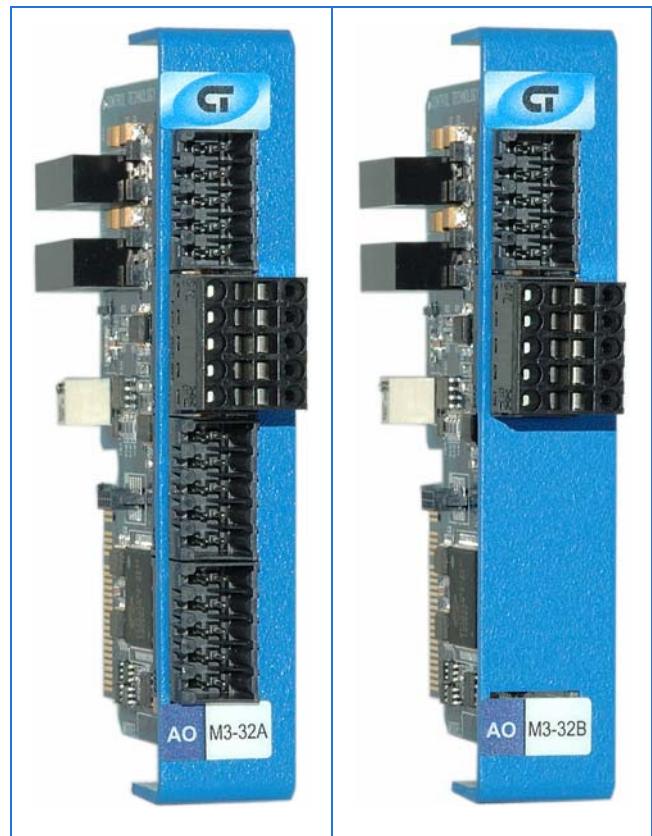
M3-32A: 32 analog outputs (± 10 VDC)

M3-32B: 16 analog outputs (± 10 VDC)

- ▶ 16-bit analog converter
- ▶ Each channel is individually optically isolated

General specifications

| | |
|------------------------------|---|
| Outputs per module: | |
| M3-32A | 32 |
| M3-32B | 16 |
| Output type | Voltage, ± 10 VDC (single ended) |
| Analog ground type | Isolated from CPU electronics |
| Connection | Removable terminal block |
| Connection type | Tension clamp |
| Terminal block part number | 069-621010 |
| Terminal wire size (UL 1059) | 18 - 22 AWG |
| Test point | All connections |
| Module size | 1 rack slot (0.75"/19 mm) |
| Bus power required (5 VDC) | 0.26 mA |
| Isolation rating | 500 VDC |
| Operating temperature | |
| Horizontal installation | 0 - 50°C |
| Vertical installation | 0 - 45°C |
| Storage temperature | -25 - 85°C |
| Humidity | 5 - 95% non-condensing |



Actual size

| | |
|--------------------------------------|---------|
| Minimum hardware revision | 0, A |
| Minimum firmware revision | 1.02 |
| Minimum operating system revision | 5.00.90 |
| Documentation number: 950-533201-001 | |

| | | |
|----------------------|----|--------|
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Performance specifications

| Parameter | Value |
|--|-----------------|
| Output range | -10 V to +10 V |
| Output resolution | 16-bit |
| Full range calibration error ^{1,2} | 0.025% of range |
| Offset calibration error at 0 V ^{1,2} | 0.025% of range |
| Linearity error (full range) ^{1,2} | 0.073% of range |
| Output slew rate | 10 V/ μ sec |
| Max output current | 5 mA/channel |
| Update rate (all channels): | |
| M3-32A | 313 Hz |
| M3-32B | 625 Hz |

1. Errors are at 25°C.
2. Errors are double across full ambient temperature range of 0 – 50°C.

Analog output module

AO

M3-32A

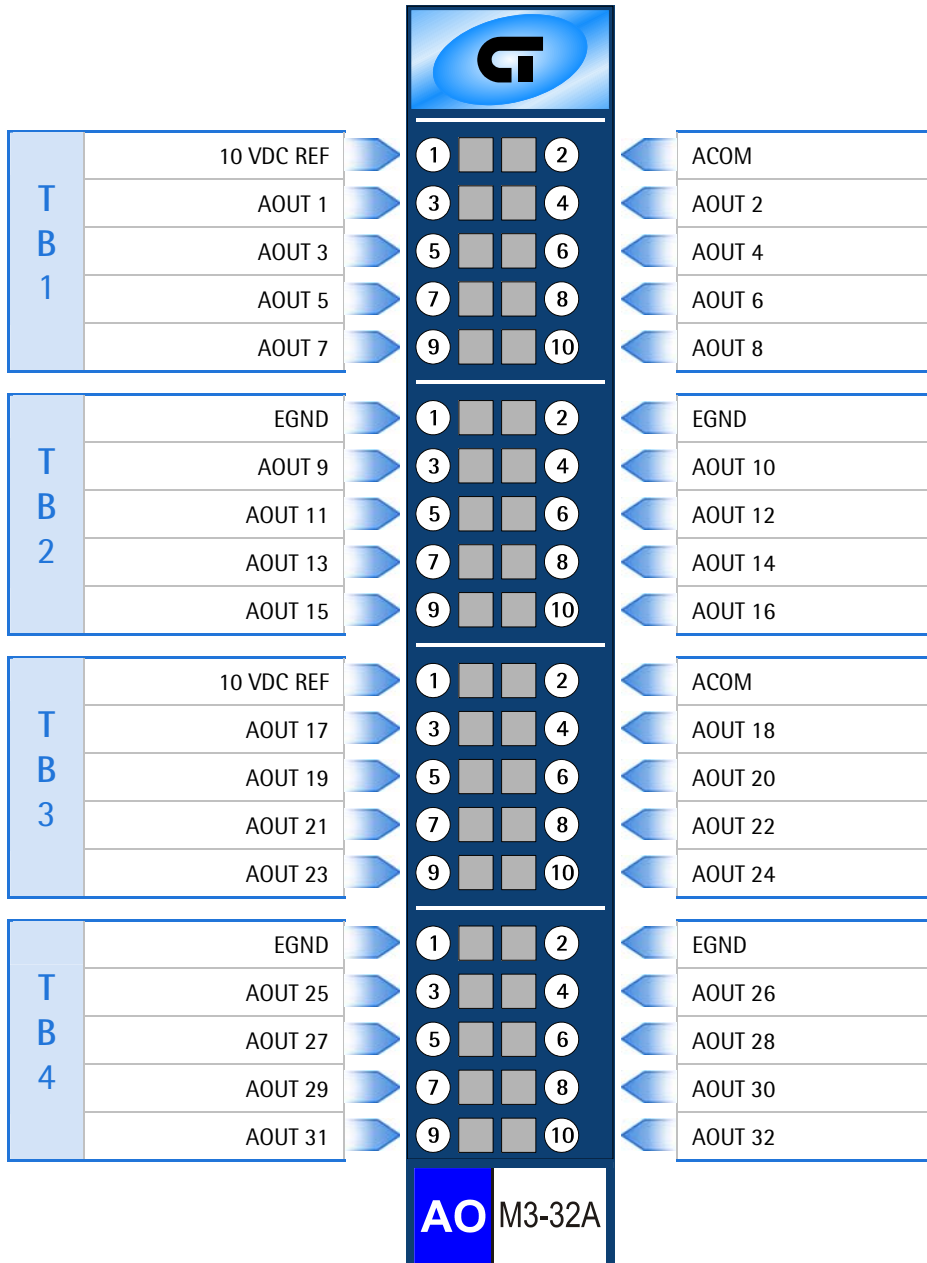
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M3-32B

M3-32A: 32 analog outputs (± 10 VDC)

M3-32B: 16 analog outputs (± 10 VDC)

Terminal block connections



Notes

1. TB3 and TB4 not available on M3-32B.
2. Max total current for all 10 VDC REF connections is 25 mA per module.

Analog output module

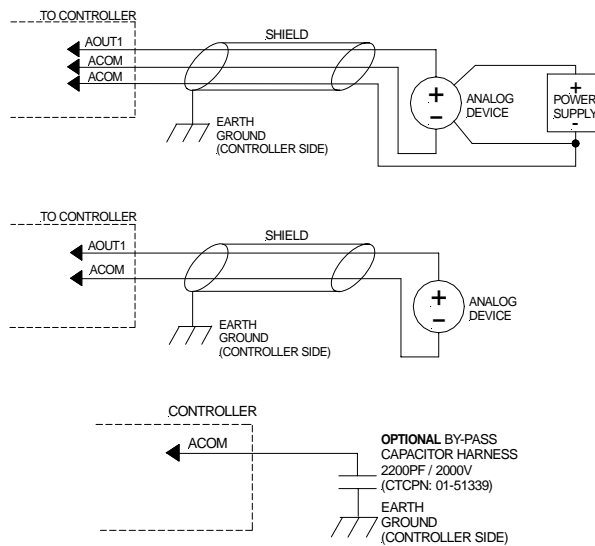
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M3-32A

AO

M3-32B

Application Information



Notes

1. Shield grounds must be terminated on the controller side of the cable.
2. When an analog device is powered via an external power source, it may be necessary to tie the ground of this power source to the module's analog common (ACOM) to limit common mode voltages.
3. For register and programming information, refer to the appropriate controller Applications Guide.
4. The information and illustrations contained herein are the property of Control Technology Corporation and are subject to change without notice. Data based on VS = 24 VDC @ 25°C unless otherwise noted. For additional information and/or updates, visit www.ctc-control.com. Copyright © 2007 Control Technology Corporation. All Rights Reserved.
5. VS refers to the voltage supply of the controller.