

Table 3-1. Ovation Module Choices (Cont'd)

| Module Type                                                                     | Channel | Electronic Module | Personality Module         |
|---------------------------------------------------------------------------------|---------|-------------------|----------------------------|
| Analog Input ( $\pm 1$ V) (13 bit)                                              | 8       | 1C31113G04        | 1C31116G01                 |
| Analog Input ( $\pm 10$ V) (13 bit)                                             | 8       | 1C31113G06        | 1C31116G01                 |
| Analog Input ( $\pm 5$ V) (13 bit)                                              | 8       | 1C31113G05        | 1C31116G01                 |
| Analog Input (0 - 20 mA local powered) (13 bit)                                 | 8       | 1C31113G05        | 1C31116G03                 |
| Analog Input (0 - 20 mA remote powered) (13 bit)                                | 8       | 1C31113G05        | 1C31116G02                 |
| Analog Input (4 - 20 mA local powered) (13 bit)                                 | 8       | 1C31113G05        | 1C31116G03                 |
| Analog Input (4 - 20 mA remote powered) (13 bit)                                | 8       | 1C31113G05        | 1C31116G02                 |
| Analog Input (4 - 20 mA) (14 bit)                                               | 8       | 1C31224G01        | 1C31227G01                 |
| Analog Input ( $\pm 1$ V) (14 bit)                                              | 8       | 1C31224G02        | 1C31227G02                 |
| Analog Input (4 - 20 mA) (14 bit High Speed (HS))                               | 8       | 5X00070G01        | 1C31227G01                 |
| Analog Input ( $\pm 100$ mV, $\pm 250$ mV, $\pm 1$ V) (14 bit HS)               | 8       | 5X00070G02        | 1C31227G02                 |
| Analog Input ( $\pm 5$ V, $\pm 10$ V) (14 bit High Speed)                       | 8       | 5X00070G03        | 1C31227G02                 |
| Analog Input ( $\pm 1$ mA, 2 wire local field powered) (14 bit HS)              | 8       | 5X00070G02        | 1C31227G03                 |
| Analog Input ( $\pm 1$ mA, 4wire field powered) (14 bit HS)                     | 8       | 5X00070G02        | 1C31227G02                 |
| Analog Input ( $\pm 20$ mV, $\pm 50$ mV, $\pm 100$ mV Thermocouple) (14 bit HS) | 8       | 5X00070G04        | 1C31227G04                 |
| Analog Output (0 to +10 V)                                                      | 4       | 1C31129G02        | 1C31132G01                 |
| Analog Output (0 to +5 V)                                                       | 4       | 1C31129G01        | 1C31132G01                 |
| Analog Output (0 to 20 mA w/diagnostics)                                        | 4       | 1C31129G03        | 1C31132G01                 |
| Analog Output (0 to 20 mA w/o diagnostics)                                      | 4       | 1C31129G04        | 1C31132G01                 |
| Analog Output (4 to 20 mA w/diagnostics)                                        | 4       | 1C31129G03        | 1C31132G01                 |
| Analog Output (4 to 20 mA w/o diagnostics)                                      | 4       | 1C31129G04        | 1C31132G01                 |
| Compact Contact Input w/Onboard 48 V aux                                        | 16      | 1C31234G01        | Cavity Insert <sup>2</sup> |
| Contact Input w/Onboard 48 V auxiliary                                          | 16      | 1C31142G01        | 1C31110G03                 |
| Digital Input (125 VAC/DC differential)                                         | 16      | 1C31107G02        | 1C31110G02                 |
| Digital Input (125 VAC/DC single ended)                                         | 16      | 1C31107G02        | 1C31110G01                 |

# Section 7. Analog Output Module

---

## 7-1. Description

The Analog Output Electronics Module uses low-power-drain 12-bit serial digital-to-analog converters (DACs) to provide four isolated output channels. The serial clock and data allow the four channels to be updated every 1.5 ms. The serial interface uses opto-isolators for high-voltage isolation.

The Analog Output Module is applicable for CE Mark Certified Systems.

### Note

See [Section 3. I/O Modules](#) for environmental, installation, wiring, and fuse information.

## 7-2. Module Groups

### 7-2.1. Electronics Modules

There are four groups of Electronics modules for the Analog Output Module:

- 1C31129G01 provides voltage output range of 0 to 5 V DC.
- 1C31129G02 provides voltage output range of 0 to 10 V.
- 1C31129G03 provides voltage output range of 0 to 20 mA with diagnostics.
- 1C31129G04 provides voltage output range of 0 to 20 mA without diagnostics.

### 7-2.2. Personality Module

There is one Personality module group for the Analog Output Module:

- 1C31132G01 routes field signals from the Electronics module to the terminal block.

**Table 7-1. Analog Output Subsystem**

| <b>Range</b>                                                                                                                                              | <b>Channels</b> | <b>Electronic Module</b> | <b>Personality Module</b> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------|---------------------------|
| <b>0-5 Volts DC</b>                                                                                                                                       | 4               | 1C31129G01               | 1C31132G01                |
| <b>0-10 Volts DC</b>                                                                                                                                      | 4               | 1C31129G02               | 1C31132G01                |
| <b>0-20 mA with Diagnostics</b><br><b>(4-20 mA with Diagnostics can also be selected in the I/O Builder; card will be configured appropriately)</b>       | 4               | 1C31129G03               | 1C31132G01                |
| <b>0-20 mA without Diagnostics</b><br><b>(4-20 mA without Diagnostics can also be selected in the I/O Builder; card will be configured appropriately)</b> | 4               | 1C31129G04               | 1C31132G01                |

All Configurations are CE Mark Certified.