

# AO810V2

## Freelance hardware selector



The AO810/AO810V2 Analog Output Module has 8 unipolar analog output channels. To supervise the communication to the D/A-converters the serial data is read back and verified. The opencircuit diagnostic is received during the readback. The module performs self-diagnostic cyclically. The module diagnostics includes process power supply supervision, which is reported when supply voltage to output circuitry is too low. The error is reported as a channel error. The channel diagnostic includes fault detection of the channel (only reported on active channels). The error is reported if the output current is less than the output set value and the output set value is greater than 1 mA.

## Features and benefits

- 8 channels of 0...20 mA, 4...20 mA outputs
- OSP sets outputs to predetermined state upon error detection
- Analog Output is to be short circuit secured to ZP or +24 V

| General info         |                    |
|----------------------|--------------------|
| Article number       | 3BSE038415R1       |
| Type                 | Analog Output      |
| Signal specification | 0..20 mA, 4..20 mA |
| Number of channels   | 8                  |
| HART                 | No                 |
| SOE                  | No                 |
| Redundancy           | No                 |
| High integrity       | No                 |
| Intrinsic safety     | No                 |
| Mechanics            | S800               |

| Detailed data                       |                                                                                        |
|-------------------------------------|----------------------------------------------------------------------------------------|
| Resolution                          | 14 bit                                                                                 |
| Isolation                           | Groupwise isolated from ground                                                         |
| Under/over range                    | - / +15%                                                                               |
| Output load                         | ≤ 500 Ω (supply connected to L1+ only)<br>250 - 850 Ω (with supply connected L2+ only) |
| Error                               | Max. 0.1% at 0 - 500 ohms (current)                                                    |
| Temperature drift                   | Typ. 30 ppm/°C, Max 60 ppm/°C                                                          |
| Rise Time                           | 0.35 ms (PL = 500 Ω)                                                                   |
| Update cycle time                   | ≤ 2ms                                                                                  |
| Current limiting                    | Short circuit proof current limited output                                             |
| Maximum field cable length          | 600 meters (656 yards)                                                                 |
| Rated insulation voltage            | 50 V                                                                                   |
| Dielectric test voltage             | 500 V a.c.                                                                             |
| Power dissipation                   | 2.3 W                                                                                  |
| Current consumption +5 V Modulebus  | Max 70 mA                                                                              |
| Current consumption +24 V Modulebus | 0                                                                                      |
| Current consumption +24 V external  | 245 mA                                                                                 |

| Diagnostics                      |                                                                                 |
|----------------------------------|---------------------------------------------------------------------------------|
| Front LED's                      | F(ault), R(un), W(arning), O(SP)                                                |
| Supervision                      | Module Error: Output power low. Channel Error: Open circuit (for current >1 mA) |
| Status indication of supervision | Module Error, Module Warning, Channel Error                                     |






| Environment and certification   |                                                                     |
|---------------------------------|---------------------------------------------------------------------|
| CE mark                         | Yes                                                                 |
| Electrical safety               | EN 61010-1, UL 61010-1, EN 61010-2-201, UL 61010-2-201              |
| Hazardous Location              | C1 Div 2 cULus, C1 Zone 2 cULus, ATEX Zone 2                        |
| Marine certification            | ABS, BV, DNV, LR                                                    |
| Temperature, Operating          | 0 to +55 °C (+32 to +131 °F), approvals are issued for +5 to +55 °C |
| Temperature, Storage            | -40 to +70 °C (-40 to +158 °F)                                      |
| Pollution degree                | Degree 2, IEC 60664-1                                               |
| Corrosion protection            | ISA-S71.04: G3                                                      |
| Relative humidity               | 5 to 95 %, non-condensing                                           |
| Max ambient temperature         | 55 °C (131 °F), for vertical mounting in compact MTU 40 °C (104 °F) |
| Protection class                | IP20 according to IEC 60529                                         |
| Mechanical operating conditions | IEC/EN 61131-2                                                      |
| EMC                             | EN 61000-6-4 and EN 61000-6-2                                       |
| Overvoltage categories          | IEC/EN 60664-1, EN 50178                                            |
| Equipment class                 | Class I according to IEC 61140; (earth protected)                   |
| RoHS compliance                 | DIRECTIVE/2011/65/EU (EN 50581:2012)                                |
| WEEE compliance                 | DIRECTIVE/2012/19/EU                                                |

| Compatibility |                                   |
|---------------|-----------------------------------|
| Use with MTU  | TU810, TU812, TU814, TU830, TU833 |
| Keying code   | AE                                |

| Dimensions |                                                    |
|------------|----------------------------------------------------|
| Width      | 45 mm (1.77")                                      |
| Depth      | 102 mm (4.01"), 111 mm (4.37") including connector |
| Height     | 119 mm (4.7")                                      |
| Weight     | 0.18 kg (0.4 lbs.)                                 |



# Related products

|                                                                                  |         |                                                                                   |         |
|----------------------------------------------------------------------------------|---------|-----------------------------------------------------------------------------------|---------|
|  | TU810V1 |  | TU812V1 |
|  | TU814V1 |  | TU830V1 |
|  | TU833   |                                                                                   |         |

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