DATA SHEET

# AO815

## ABB Ability™ System 800xA® hardware selector

The AO815 Analog Output Module has 8 unipolar analog output channels. The module performs self-diagnostic cyclically. Module diagnostics include:

- External Channel Error is reported (only reported on active channels) if the process power supply that supply voltage to output circuitry is too low, or the output current is less than the output set value and the output set value is greater than 1 mA (open circuit).
- Internal Channel Error is reported if the output circuit can not give the right current value.
- Module Error is reported in case of Output Transistor Error, Short Circuit, Checksum Error, Internal Power Supply Error or Watchdog error.

The module has HART pass-through functionality. Only point to point communication is supported. The output filter must be enabled on channels used for HART communication.

## Features and benefits

- 8 channels of 4...20 mA
- 1 group of 8 channels isolated from ground
- Analog inputs are short circuit secured to ZP or +24 V
- HART pass-through communication

| General info | |
|---|---|
| Article number | 3BSE052605R1 |
| Type | Analog Output |
| Signal specification | 4..20 mA |
| Number of channels | 8 |
| HART | Yes |
| SOE | No |
| Redundancy | No |
| High integrity | No |
| Intrinsic safety | No |
| Mechanics | S800 |

| Detailed data | |
|---|---|
| Resolution | 12 bit |
| Isolation | Groupwise isolated from ground |
| Under/over range | -12.5% / +15% |
| Output load | Max 750 Ω |
| Error | Max. 0.1% |
| Temperature drift | Max. 50 ppm/°C |
| Input filter (rise time 0-90%) | 23 ms (0-90%), max 4 mA / 12.5 ms |
| Update cycle time | 10 ms |
| 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 | 3.5 W (typ.) |
| Current consumption +5 V Modulebus | Max. 125 mA |
| Current consumption +24 V Modulebus | 0 |
| Current consumption +24 V external | Max. 165 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 | 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, 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 | DB |

| Dimensions | |
|---|---|
| Width | 45 mm (1.77”) |
| Depth | 102 mm (4.01”), 111 mm (4.37”) including connector |
| Height | 119 mm (4.7”) |
| Weight | 0.21 kg (0.46 lbs.) |

# Related products

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

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