

DP820

ABB Ability™ System 800xA® hardware selector



DP820 is a two-channel pulse counting module for incremental pulse transmitters up to 1.5 MHz. Each channel contains counters and registers for position/length and speed/frequency measurement. Each channel provides three balanced inputs for connection of a pulse transmitter, one digital input and one digital output. Pulse transmitters with RS422, +5 V, +12 V, +24 V and 13 mA interfaces can be connected to DP820.

Use DP820 with Module Termination Units TU810V1, TU812V1, TU814V1, TU830V1, TU833.

Features and benefits

- Two channels
- Interface for RS422, 5 V, 12 V, 24 V and 13 mA transducer signal levels
- Simultaneous pulse count and frequency measurement
- Pulse count (length/position) by accumulation in a bidirectional 29 bit counter
- Frequency (speed) measurement 0.25 Hz - 1.5 MHz

| General info | |
|----------------------|----------------------------|
| Article number | 3BSE013228R1 |
| Type | Pulse counter |
| Signal specification | 24 V d.c. (12 - 32 V d.c.) |
| Number of channels | 2 |
| HART | No |
| SOE | No |
| Redundancy | No |
| High integrity | No |
| Intrinsic safety | No |
| Mechanics | S800 |

| Detailed data | |
|-------------------------------------|--|
| Input impedance | 2.5 kΩ (DI-input) |
| Isolation | Individually isolated, channel-to-channel and to circuit common |
| Error | Max. frequency measurement error Relative error Absolute error (Temperature drift included): [320/(MEASTIMEx in ms)] ppm [(320/(MEASTIMEx in ms) +100) ppm |
| Current limiting | Sensor power can be current limited by the MTU |
| Maximum field cable length | 200 meters (218 yards) |
| Rated insulation voltage | 50 V |
| Dielectric test voltage | 500 V a.c. |
| Power dissipation | 2.5 W |
| Current consumption +5 V Modulebus | 120 mA |
| Current consumption +24 V Modulebus | 0 |
| Current consumption +24 V external | 0 |

| Diagnostics | |
|----------------------------------|---|
| Front LED's | P(ulse)X, UP (direction), ST(robe), DI, SY(nch), DO, TP (transm. power OK), all per channel |
| Supervision | Process voltage per channel |
| 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 | EU RoHS, UAE RoHS, CN RoHS |
| WEEE compliance | DIRECTIVE/2012/19/EU |

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

| Dimensions | |
|-------------------|--|
| Width | 45 mm (1.77") |
| Depth | 102 mm (4.01"), 111 mm (4.37") including connector |
| Height | 119 mm (4.7") |
| Weight | 0.15 kg (0.33 lbs.) |

Related products



TU810V1



TU812V1



TU814V1



TU830V1



TU833

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