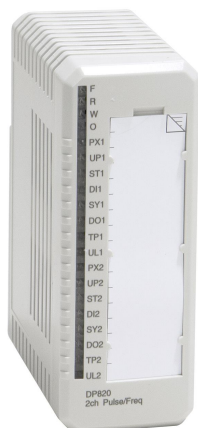


DP820

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/(MEASTIME _x in ms)] ppm [(320/(MEASTIME _x 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(pulse)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 | IEC 61131-2, UL 61010-1, UL 61010-2-201 |
| Hazardous Location | C1 Div 2 cULus, C1 Zone 2 cULus, ATEX Zone 2 |
| Marine certification | ABS, BV, DNV-GL, LR |
| Protection rating | IP20 according to IEC 60529 |
| Corrosive atmosphere ISA-S71.04 | G3 |
| Climatic operating conditions | 0 to +55 °C (Storage -40 to +70 °C), RH=5 to 95 % no condensation, IEC/EN 61131-2 |
| Pollution degree | Degree 2, IEC 60664-1 |
| 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) |
| Max ambient temperature | 55 °C (131 °F), for vertical mounting in compact MTU 40 °C (104 °F) |
| RoHS compliance | DIRECTIVE/2011/65/EU (EN 50581:2012) |
| WEEE compliance | DIRECTIVE/2012/19/EU |

| Compability | |
|--------------|-------------------------------------|
| 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

solutions.abb/800xA
solutions.abb/controlsystems

800xA is a registered or pending trademark of ABB. All rights to other trademarks reside with their respective owners.

We reserve the right to make technical changes to the products or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not assume any responsibility for any errors or incomplete information in this document.

We reserve all rights to this document and the items and images it contains. The reproduction, disclosure to third parties or the use of the content of this document – including parts thereof – are prohibited without ABB's prior written permission.

Copyright© 2022 ABB All rights reserved