DATA SHEET

DP840
System 800xA hardware selector

The DP840 module consists of 8 identical independent channels. Each channel can be used for pulse count or frequency (speed) measurement, maximum 20 kHz. The inputs can also be read as DI signals. Each channel has a configurable input filter. The module perform self-diagnostics cyclically. With advanced diagnostics, for single or redundant applications. Interface for NAMUR, 12 V and 24 V. The input can be read as digital input signals.

Use DP840 with Module Termination Units TU810V1, TU812V1, TU814V1, TU830V1, TU833.

Features and benefits

- 8 channels
- The modules can be used in both single and redundant applications
- Interface for NAMUR, 12 V and 24 V transducer signal levels
- Each channel can be configured for pulse count or frequency measurement
- The inputs can also be read as DI signals
- Pulse count by accumulation in a 16 bit counter
- Frequency (speed) measurement 0.5 Hz - 20 kHz
- Advanced on-board diagnostics

General info	
Article number	3BSE028926R1
Type	Pulse counter
Signal specification	24 V d.c. (19.2 - 32 V d.c.)
Number of channels	8
HART	No
SOE	No
Redundancy	Yes
High integrity	No
Intrinsic safety	No
Mechanics	S800

Detailed data	
Isolation	Groupwise isolated from ground
Error	Max relative error (4): PRIT = 10 ms: 300 ppm PRIT = 20 ms: 150 ppm PRIT = 50 ms: 60 ppm PRIT = 100 ms: 30 ppm Max error in crystal oscillator: 120 ppm + 5 ppm/year Max absolute error = rel. error + oscillator error (PRIT = 10 ms, age < 16 year): 500 ppm (= 0.05%)
Current limiting	Built in current limited sensor power
Maximum field cable length	200 meters (218 yards)
Rated insulation voltage	50 V
Dielectric test voltage	500 V a.c.
Power dissipation	4 W
Current consumption +5 V Modulebus	115 mA
Current consumption +24 V external	NAMUR = 56 + 0.5 x external load [mA] 12 V = 89 + 0.7 x external load [mA] 24 V = 97 + external load [mA]

Diagnostics	
Front LED's	F(ault), R(un), W(arning), P(rimary), Channel 1-8 P(ulse) and F(ault)
Supervision	Process voltage Loop supervision
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	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, TU818, TU830, TU833, TU842, TU843, TU844, TU845, TU852, TU854
Keying code	CF

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**	 **TU842**
 **TU843**	 **TU844**
 **TU845**	 **TU852**
 **TU854**	

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