SIEMENS

Data sheet 6ES7144-4FF01-0AB0

SIMATIC DP, Electronic module for ET 200pro 4 AI U High Feature, +-10 V; 0...10 V; +-5 V; 1...5V; Channel diagnostics; incl. bus module, Connection module IO 6ES7194-4..00-0AA0 order separately

Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes; against destruction
Input current	
from supply voltage 1L+, max.	40 mA; Typical
from backplane bus 3.3 V DC, max.	12 mA; Typical
Encoder supply	
Number of outputs	4
Short-circuit protection	Yes; per module, electronic to frame
Output current	
● up to 55 °C, max.	1 A
Power loss	
Power loss, typ.	1.1 W
Address area	
Address space per module	
● Address space per module, max.	8 byte
Analog inputs	
Number of analog inputs	4
permissible input voltage for voltage input (destruction limit), max.	35 V
Cycle time (all channels) max.	5 ms
Input ranges (rated values), voltages	
● 0 to +10 V	Yes
● 1 V to 5 V	Yes
● -10 V to +10 V	Yes
● -5 V to +5 V	Yes
Cable length	
● shielded, max.	30 m
Analog value generation for the inputs	
Measurement principle	integrating
Integration and conversion time/resolution per channel	
● Resolution with overrange (bit including sign), max.	15 bit; 15 bit + sign at ±10 V, at ±5 V; 15 bit at 0 V to 10 V, at 1 V to 5 V
● Interference voltage suppression for interference frequency f1 in Hz	16,67 / 50 / 60 / 3 600
Smoothing of measured values	
● Parameterizable	Yes
● Step: None	Yes; 1x cycle time
● Step: low	Yes; 4x cycle time
● Step: Medium	Yes; 16x cycle time

● Step: High	Yes; 64x cycle time
Encoder	
Connection of signal encoders	
● for voltage measurement	Yes
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.0075 %
Temperature error (relative to input range), (+/-)	0.00075 %/K
Crosstalk between the inputs, min.	-70 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.004 %
Operational error limit in overall temperature range	
● Voltage, relative to input range, (+/-)	0.1 %
Basic error limit (operational limit at 25 °C)	
● Voltage, relative to input range, (+/-)	0.075 %
Interference voltage suppression for f = n x (f1 +/- 0.5 %), f1 = interference frequency	
● Series mode interference (peak value of interference < rated value of input range), min.	60 dB
● Common mode interference (USS < 2.5 V), min.	80 dB; Interference voltage < 10 V
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
● Diagnostic alarm	Yes; Parameterizable
● Hardware interrupt	Yes; (limit value alarm), can be parameterized for channel 0
Diagnoses	
● Diagnostic information readable	Yes
● Wire break	Yes; at 1 to 5 V
● Short-circuit	Yes; at 1 to 5 V
Diagnostics indication LED	
● Group error SF (red)	Yes
Potential separation	
Potential separation analog inputs	
● between the channels	No
● between the channels and backplane bus	Yes
Permissible potential difference	
Between the inputs and MANA (UCM)	10 Vpp AC
Isolation	
Isolation tested with	707 V DC (type test)
Dimensions	
Width	45 mm
Height	130 mm
Depth	35 mm
Weights	
Weight, approx.	150 g
Classifications	

	Version	Classification
eClass	16	27-24-26-01
eClass	14	27-24-26-01
eClass	12	27-24-26-01
eClass	9.1	27-24-26-01
eClass	9	27-24-26-01
eClass	8	27-24-26-01
eClass	7.1	27-24-26-01
eClass	6	27-24-26-01
ETIM	10	EC001596
ETIM	9	EC001596
ETIM	8	EC001596
ETIM	7	EC001596

IDEA	4	3562
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

Miscellaneous

General Product Approval

China RoHS

Manufacturer Declaration

Miscellaneous

EMV

For use in hazardous locations

For use in hazardous locations

FM

Declaration of Conformity

Type Examination Certificate

Maritime application

NK / Nippon Kaiji Kyokai

Maritime application

CCS (China Classification Society)

Environment

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