



SIMATIC DP,  
ELECTRONIC MODULE FOR ET 200S,  
2 AI STANDARD 15 MM WIDE +/-10 V;  
13 BIT + SIGN +/-5 V;  
12 BIT+ SIGN, 1..5V;  
12BIT,  
CYCLE TIME 65 MS/CHANNEL WITH LED SF (GROUP  
FAULT)

<b>Supply voltage</b>	
<b>Load voltage L+</b>	
Rated value (DC)	24 V ; From power module
Reverse polarity protection	Yes
<b>Input current</b>	
from load voltage L+ (without load), max.	30 mA
from backplane bus 3.3 V DC, max.	10 mA
<b>Power loss</b>	
Power loss, typ.	0.6 W
<b>Address area</b>	
<b>Address space per module</b>	
Address space per module, max.	4 byte
<b>Analog inputs</b>	
Number of analog inputs	2
permissible input voltage for voltage input (destruction limit), max.	35 V ; 35 V continuous; 75 V for max. 1 ms (mark to space ratio 1:20)
Cycle time (all channels) max.	Number of active channels per module x basic conversion time
<b>Input ranges</b>	
Voltage	Yes

Current	No
Thermocouple	No
Resistance thermometer	No
Resistance	No
<b>Input ranges (rated values), voltages</b>	
1 to 5 V	Yes
-10 V to +10 V	Yes
-5 V to +5 V	Yes
<b>Cable length</b>	
Cable length, shielded, max.	200 m
<b>Analog value generation</b>	
Measurement principle	integrating
<b>Integration and conversion time/resolution per channel</b>	
Resolution with overrange (bit including sign), max.	14 bit ; +/-10 V: 13 bits + sign, +/-5 V: 13 bits + sign; 1 to 5 V: 13 bits
Integration time, ms	16,7 / 20 ms
Interference voltage suppression for interference frequency f1 in Hz	60 / 50 Hz
Conversion time (per channel)	65 ms ; 55 / 65 ms
<b>Smoothing of measured values</b>	
parameterizable	Yes ; In four stages by means of digital filtering
Step: None	Yes ; 1 x cycle time
Step: Low	Yes ; 4 x cycle time
Step: Medium	Yes ; 32 x cycle time
Step: High	Yes ; 64 x cycle time
<b>Errors/accuracies</b>	
Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.01 %/K
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input area), (+/-)	0.05 %
<b>Operational error limit in overall temperature range</b>	
Voltage, relative to input area, (+/-)	0.6 %
<b>Basic error limit (operational limit at 25 °C)</b>	
Voltage, relative to input area, (+/-)	0.4 %
<b>Interference voltage suppression for <math>f = n \times (f1 \pm 1 \%)</math>, f1 = interference frequency</b>	
Series mode interference (peak value of interference < rated value of input range), min.	70 dB
Common mode interference (USS < 2.5 V) , min.	90 dB
<b>Isochronous mode</b>	

<b>Isochronous mode (application synchronized up to terminal)</b>	No
<b>Interrupts/diagnostics/status information</b>	
<b>Diagnostic messages</b>	
<b>Wire-break</b>	Yes ; Measuring range 1 to 5 V only
<b>Group error</b>	Yes
<b>Overflow/underflow</b>	Yes
<b>Diagnostics indication LED</b>	
<b>Group error SF (red)</b>	Yes
<b>Parameter</b>	
<b>Remark</b>	4 byte
<b>Diagnostics wire break</b>	Disable / enable (only in measuring range 1 to 5 V)
<b>Measurement type/range</b>	deactivated / +/-5 V / 1 to 5 V / +/-10 V
<b>Group diagnostics</b>	Disable / enable
<b>Overflow/underflow</b>	Disable / enable
<b>Galvanic isolation</b>	
<b>Galvanic isolation analog inputs</b>	
<b>between the channels</b>	No
<b>between the channels and the backplane bus</b>	Yes
<b>between the channels and the load voltage L+</b>	Yes
<b>Permissible potential difference</b>	
<b>between inputs and MANA (UCM)</b>	2 V AC PP
<b>between MANA and M internally (UISO)</b>	75 VDC / 60 VAC
<b>Isolation</b>	
<b>Isolation tested with</b>	500 V DC
<b>Dimensions</b>	
<b>Width</b>	15 mm
<b>Height</b>	81 mm
<b>Depth</b>	52 mm
<b>Weights</b>	
<b>Weight, approx.</b>	40 g
Status	Jul 16, 2014