SIEMENS

Data sheet 6ES7421-1FH20-0AA0



SIMATIC S7-400, digital input SM 421, isolated 16 DI; UC 120/230V Inputs according to IEC1131-2 Type 2

Input current	
from backplane bus 5 V DC, max.	80 mA
Power loss	
Power loss, typ.	12 W
Digital inputs	
Number of digital inputs	16
Input characteristic according to IEC 61131	Type 2
Number of simultaneously controllable inputs	
● Number of simultaneously controllable inputs	16
Input voltage	
● Type of input voltage	AC/DC
● Rated value (UC)	230 V; 120/230 V UC (47 ... 63 Hz)
● for signal "0"	0 to 40 V AC/ -40 to +40 V DC
● for signal "1"	74 to 264 V AC; 80 to 264 V DC, -80 to -264 V
Input current	
● for signal "0", min.	0 mA; AC: 0 mA; DC: 0 mA
● for signal "0", max. (permissible quiescent current)	6 mA; AC: 6 mA; DC: 2 mA
● for signal "1", typ.	10 mA; at 120 V: 10 mA AC, 1.8 mA DC; at 230 V: 14 mA AC, 2 mA DC
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", max.	20 ms; AC: 20 ms; DC: 15 ms
— at "1" to "0", max.	30 ms; AC: 30 ms; DC: 25 ms
Cable length	
● shielded, max.	1 000 m
● unshielded, max.	600 m
Encoder	
Connectable encoders	
● 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	5 mA; AC: 5 mA
Interrupts/diagnostics/status information	
Diagnostics function	No
Diagnostics indication LED	
● Status indicator digital input (green)	Yes
Potential separation	
Potential separation digital inputs	
● between the channels	Yes
● between the channels, in groups of	4
● between the channels and backplane bus	Yes
Isolation	

Subject to change without notice
© Copyright Siemens

Isolation tested with	1 500 V AC
Dimensions	
Width	25 mm
Height	290 mm
Depth	210 mm
Weights	
Weight, approx.	650 g

Classifications

	Version	Classification
eClass	16	27-24-22-04
eClass	14	27-24-22-04
eClass	12	27-24-22-04
eClass	9.1	27-24-22-04
eClass	9	27-24-22-04
eClass	8	27-24-22-04
eClass	7.1	27-24-22-04
eClass	6	27-24-22-04
ETIM	10	EC001419
ETIM	9	EC001419
ETIM	8	EC001419
ETIM	7	EC001419
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

Miscellaneous

General Product Approval | **EMV** | **For use in hazardous locations**

China RoHS | Miscellaneous | Manufacturer Declaration | FM

Maritime application

NK / Nippon Kaiji Kyokai

Maritime application

CCS (China Classification Society)

last modified: 8/7/2026

Subject to change without notice
© Copyright Siemens