MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6ES7421-1FH00-0AA0

SM 421 16-CHANNEL DIGITAL INPUT MODULE

Used with the applicable SIMATIC S7-400 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens S7-400 Module Data, section 4.11

4.11 Digital input module SM 421; DI 16 x UC 120/230 V (6ES7 421-1FH00-0AA0)

Features

The SM 421; DI 16 x UC 120/230 is characterized by the following features:

- 16 inputs, isolated
- Nominal input voltage 120/230 VUC
- Suitable for switches and 2-wire proximity switches

Wiring and block diagram of the SM 421; DI 16 x UC 120/230 V

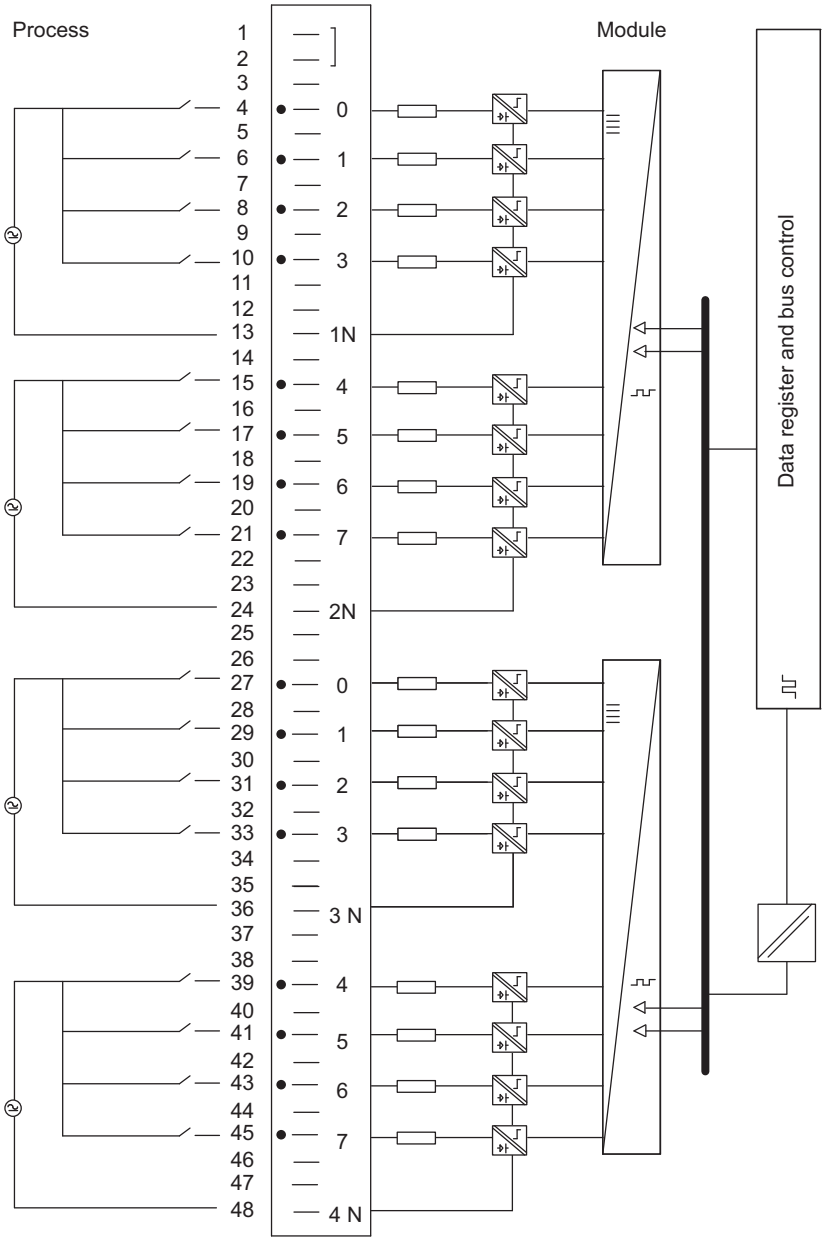


Figure 4-8 Wiring and block diagram of the SM 421; DI 16 x UC 120/230 V

Specifications of the SM 421; DI 16 x UC 120/230 V

Dimensions and weight	
Dimensions W x H x D (mm)	25 x 290 x 210
Weight	Approx. 650 g
Module-specific data	
Number of inputs	16

Cable length	
• Unshielded	600 m
• Shielded	1000 m
Voltages, currents, electrical potentials	
Number of simultaneously controlled inputs	16 at 120 V 8 at 240 V 16 with fan subassembly
Electrical isolation	
• Between channels and the backplane bus	Yes
• Between channels In groups of	Yes 4
Permissible potential difference	
• between $M_{internal}$ and inputs	230 VAC
• Between inputs of different groups	500 VAC
Insulation resistance	4000 VAC
Current consumption	
• From the backplane bus (5 V)	Max. 100 mA
Power loss of the module	Typ. 3.5 W
Status, interrupts, diagnostics	
Status display	Green LED per channel
Interrupts	None
Diagnostic functions	None
Sensor selection data	
Input voltage	
• Nominal value	120/230 VUC
• For "1" signal	79 to 264 V AC 80 to 264 V DC
• For "0" signal	0 to 48 V UC
• Frequency band	47 to 63 Hz
Input current	
• With "1" signal	2 to 5 mA
• With "0" signal	0 to 1 mA
Input delay	
• At "0" to "1" transitions	5 to 25 ms
• With "1" to "0"	5 to 25 ms
Input characteristics	In accordance with IEC 61131-2; Type 1
Connection of 2-wire BEROs	Supported
• Permissible quiescent current	Max. 1 mA