

8.4.5 6ES5 434-4UA12 Digital Input Module

Rated input voltage (LH+)	DC 5 to 15 V
Rated input voltage (L+)	DC 12 to 24 V (NAMUR) ¹⁾
Number of inputs	32
Isolation	Yes, 1 group of 32 inputs
Input voltage TTL: for logic 0 CMOS: for logic 1 for logic 0 for logic 1	0 to 0.8 V 2.4 to 5.0 V 0 V to 0.3 x LH+ 0.7 V x LH+ to 1 x LH+
Rated input current TTL: for logic 0 for logic 1 CMOS: for logic 0 for logic 1 NAMUR: for logic 0 for logic 1	-1 mA 0.1 mA or open input -1 to -3 mA (5 to 15 V) 0.1 to 0.3 mA (5 to 15 V) ≤ 1.2 mA ≥ 2.1 mA
Internal resistance	1 kohm typical
Line resistance	50 ohm max.
Input frequency	100 Hz max.
Delay time for positive-going edge for negative-going edge	3 ms typical (1.4 to 5 ms) 3 ms typical (1.4 to 5 ms)
Coincidence factor (total load capability)	100 %
Permissible line length TTL/CMOS NAMUR	200 m max. unshielded 600 m max. unshielded
Power supply	
Digital section from system bus	5 V, 80 mA typical
Supply voltage L+/L-	24 V (20 to 30 V)
Current consumption at L+/L-	100 mA each
Current consumption at LH+/LH-	150 mA each at 15 V input voltage
Current output from LH+/LH-	120 mA each at 8.5 V sensor supply (NAMUR) ²⁾
Power dissipation (rated operation)	5.5 W
Enable input (F+/F-)	
Rated input voltage	5/ 15/ 24 V DC
Input voltage for logic 0 for logic 1	-15 to 2 V 4 to 33 V
Rated input current	5 mA
Permissible line length	100 m max.
Voltage test to VDE 0160	Between group and ground point: 500 V AC
Mechanical specifications	
Dimensions (W x H x D)	20 mm x 255 mm x 195 mm
Weight	Approx. 0.45 kg

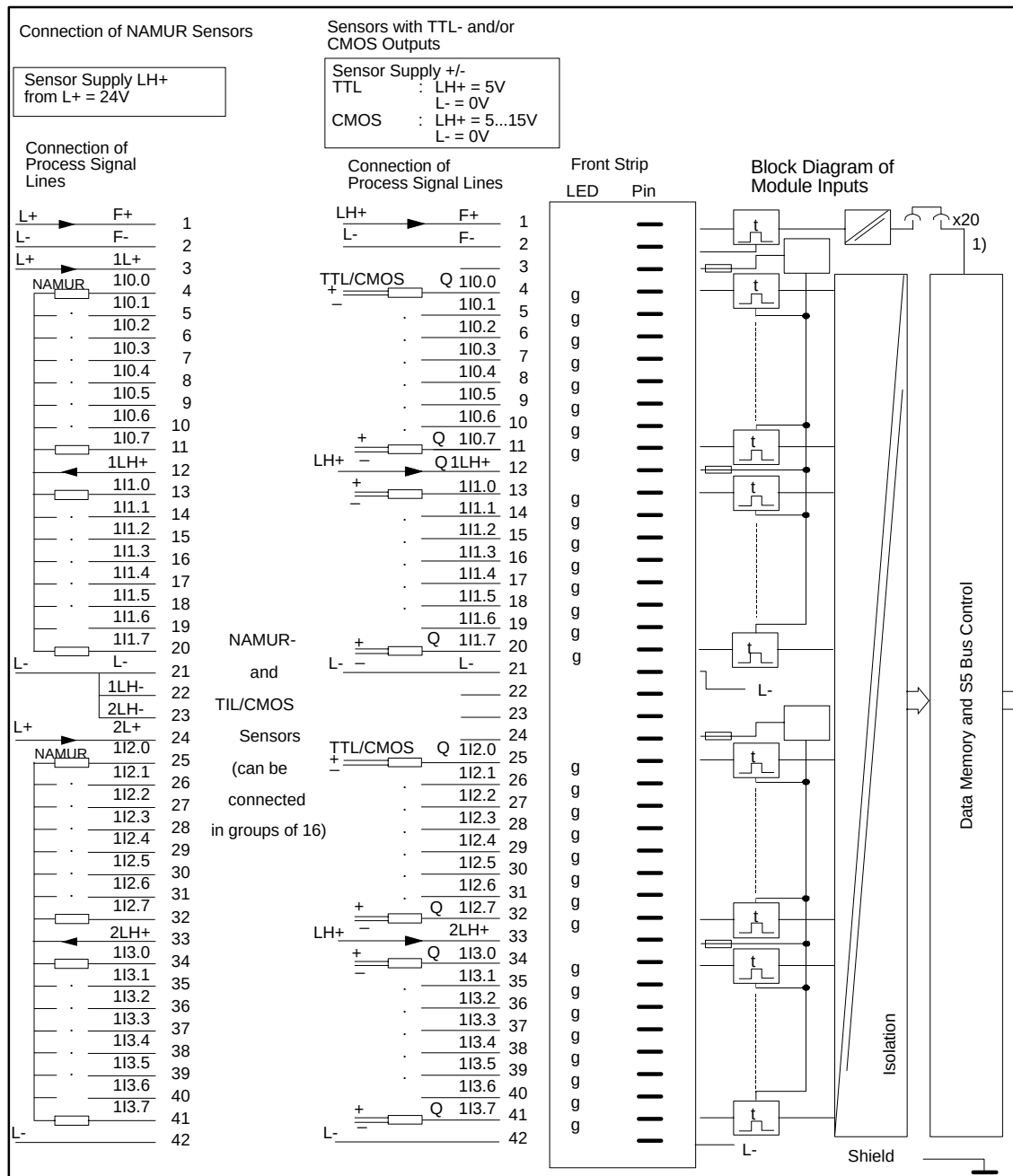
¹⁾ NAMUR = Sensor with current output to EN 50227, Standards Committee for Measurement and Control. However, the module is not intrinsically safe.

²⁾ The current consumption from L+/L- increases accordingly.

**Connection for supply voltage,
jumpers and sensor supply in groups of 2 bytes
(16 inputs each)**

Type of Sensor \ Byte 0 + 1 Byte 2 + 3	1L+ Terminal 3 2L+ Terminal 24	1LH+ Terminal 12 2LH+ Terminal 33	1LH- Terminal 22 2LH- Terminal 23
NAMUR	Connect to L+ (24 V supply)	Output for sensor supply	Jumper to L- Terminal 21
CMOS	open	Connect to 5 to 15 V supply	open
TTL	open	Connect to 5 V supply	open

The types of sensor can be arbitrarily mixed in groups of 16 inputs.
With CMOS TTL sensors, open inputs are at logic 1 (LED is lit).



Example of connection designation for an input:

- g = Green LED (status indicator)
F+/F- = Enable input
1) Changeover of enable mode with jumper X20:
Jumper inserted = Enable input active (factory setting)
Jumper open = Enable input inactive.

- (1) I 3.5 Input 5 (5th bit);
0 to 7 possible
Address of input byte
(1st byte);
0 to 255 possible
I = Input
1st group (not specified
in the address)