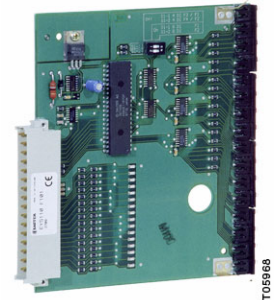


EYS110: nova106, Function card DI

This function card enables 16 digital inputs to be monitored and (with the F101 version) their status to be indicated via LEDs.

The sensing voltage is provided by the processor and power-supply card in the AS rack and conforms to the regulations concerning protective low voltage. Potential-free contacts, opto-couplers or transistors can be wired to the inputs. The 16 inputs can be split into groups of eight (2 × 8 bits) or four (4 × 4 bits), or combinations thereof (8 bits + 2 × 4 bits). The colour reaction (red/green) of the LEDs can be chosen for each input and be indicated for closed or open contacts.

Application: for monitoring contacts (alarm/status) or feedback signals from switching commands.



Products

Type	Description	Weight (kg)
EYS110F001	Digital input card	0.23
EYS110F101	Digital input card with LED	0.24

Technical data

Electrical supply	
Power supply	from AS rack
Max. output current of the input	1.3 mA with respect to earth
Max. input resistance	1 kΩ (incl. cable)
Protection against extraneous voltage	up to 24 V AC/DC
Max. current	
EYS110F001	17 mA
EYS110F101	160 mA (all LEDs "on")
Power loss. Max.	approx. 2 W

Inputs / Outputs	
Number of inputs	16
Type of inputs	potential-free contacts (with respect to earth)
	optocoupler
	transistor (open collector)

Permitted ambient conditions	
Operating temperature	0...45 °C
Storage and transport temperature	-25...70 °C
Humidity	10...90% rh no condensation

Standards, guidelines and directives	
CE conformity as per	
EMC Directive 2004/108/EC	EN 61000-6-1/EN 61000-6-2
	EN 61000-6-3/EN 61000-6-4

Additional information	
Fitting instructions	MV 505535
Wiring diagram	A05964

Engineering notes

This function card covers 16 pieces of digital information. The monitored input is connected between earth and one of the input terminals. The card applies approx. 24 V at the terminal. When the contacts are open, this is equivalent to bit = 0. When the contacts are closed (equals bit = 1), there is no voltage but a current of approx. 1 mA. The card is interrogated at least every 150 ms with regard to status changes; a brief change per input of at least 30 ms between the interrogations are buffered on the card and then reported at the next slot interrogation.

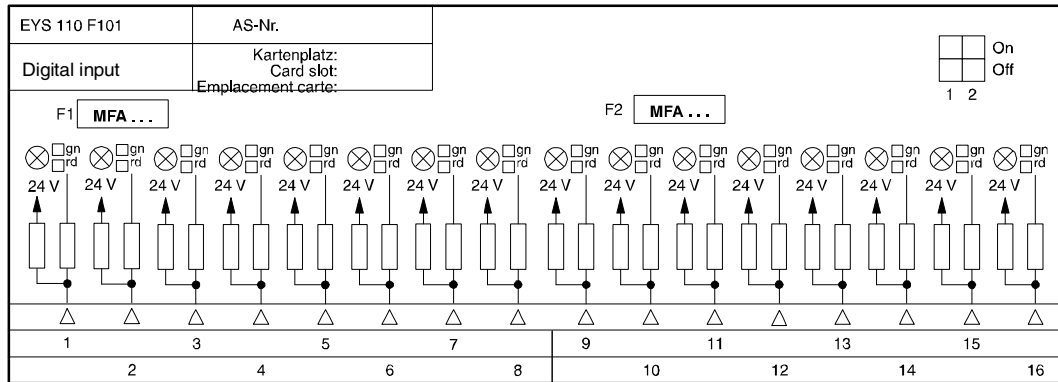
You can use the CASE software to choose how the functions are processed:

Eight inputs (eight bits) are read in for each MFA. There are two MFAs available for each function card. Therefore, the card should preferably be inserted in slots 8 and 9. The function is equivalent to 2 × 8 alarms/statuses or 2 × 1 FWC functions (with A, I, L, II, III, IV, V, VI).

There is also the 4 × 1 FWC function (with A, I, L, II), so four MFAs are required and the card must be inserted in one of the slots 1 to 7. Four MFAs are also required in the case of a combination (1 × 8 + 2 × 4), so only slots 1 to 7 can be used.

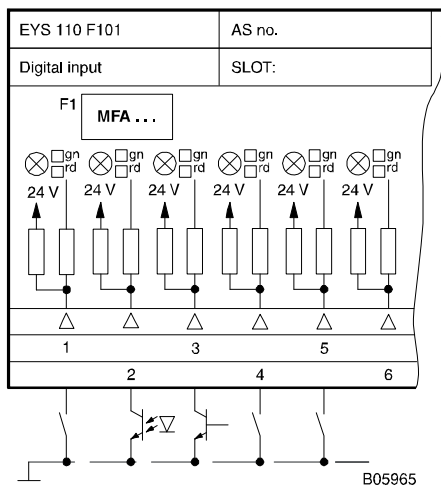
You use the software to set what type of contact should normally be interrogated and which LED colour (red/green) should light up. Normally closed (NC) contacts should be used for alarms. If the contacts are activated via a relay/contacter, then normally open contacts should be used (the normally open contacts open in the event of a malfunction). This makes it possible to detect if the relay/contacter cuts out (e.g. due to a power failure, if the contacts are defective or there is a break between terminal and status contacts). In the case of status, 'ON' is indicated for closed contacts and 'OFF' for open (when a relay/contacter with normally open contacts is used). Red is used for indicating alarm and green for status (in accordance with EN 60204).

Wiring diagram

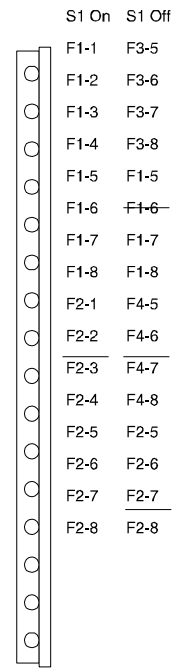


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Wiring detail



B05965



B05966a

Relationship between LED, terminal and bit on the EYS110F101 digital input card

If you take the alarm/status function as a priority and then arrange the terminals and bits accordingly, the binary feedback becomes impaired. Since the card will be used mainly as an alarm/status card, this can be accepted.

In the case of the alarm/status function, the matching of terminal and LED was achieved with a high priority.

Overview of terminals and functions

Terminal	LED	Function	Bit	AI./St. 2x8	FB 2x8	Function	Bit	FB 4x4
1	1	F1-1	24	0/1	III	F3-5	28	A
2	2	F1-2	25	0/1	IV	F3-6	29	II
3	3	F1-3	26	0/1	VI	F3-7	30	OE
4	4	F1-4	27	0/1	V	F3-8	31	I
5	5	F1-5	28	0/1	A	F1-5	28	A
6	6	F1-6	29	0/1	II	F1-6	29	II
7	7	F1-7	30	0/1	OE	F1-7	30	OE
8	8	F1-8	31	0/1	I	F1-8	31	I
9	9	F2-1	24	0/1	III	F4-5	28	A
10	10	F2-2	25	0/1	IV	F4-6	29	II
11	11	F2-3	26	0/1	VI	F4-7	30	OE
12	12	F2-4	27	0/1	V	F4-8	31	I
13	13	F2-5	28	0/1	A	F2-5	28	A
14	14	F2-6	29	0/1	II	F2-6	29	II
15	15	F2-7	30	0/1	OE	F2-7	30	OE
16	16	F2-8	31	0/1	I	F2-8	31	I