



Cn1, PNP Opto Inputs

- Optocoupled inputs with common cathodes. Yellow LED's.
- Cathodes may be connected into the **GND** with **J1**.
- SMD or DIL components, CTR 130...260%, isolation 3|5kV.
- Typical input levels 24Vdc @ 9mA and 12Vdc @ 4mA.
- Typical trigger level 8.5V @ 2.4mA [0 to 1].
- Debounce and edge detection by software, if needed.
- Typical frequency response 5 ... 10 kHz F_{max} .

1		Gopto	Common Opto, J1 connect to GND
2	P2.0	X0	PNP-Input 24V @ 9 mA
3	P2.1	X1	PNP-Input 24V @ 9 mA
4	P2.2	X2	PNP-Input 24V @ 9 mA
5	P2.3	X3	PNP-Input 24V @ 9 mA
6	P2.4	X4	PNP-Input 24V @ 9 mA
7	P2.5	X5	PNP-Input 24V @ 9 mA
8	P2.6	X6	PNP-Input 24V @ 9 mA
9	P2.7	X7	PNP-Input 24V @ 9 mA
10		+Vcc	Output Supply, typically +24 Vdc

General Purpose Controller with Intel 51-CPU

- Any Intel-51 compatible controller in PLCC44-socket.
- Atmel AT89S52, Philips P89C662 (6cy) with ISP.
- In System Programming: jumper **J3** to start boot loader. ISP programming with standard RS232 adapter and PC.
- Programming with ASM or C51 tools. Also Real Time Multitasking libraries available for C51.
- Cards are delivered with C51 kernel program code (switch-case multitasking) for easy start-up of the target project.
- CPU speed normally 11.0592 MHz, optional 8...24 MHz.
- 24LC16-type serial EEPROM for user data backup.
- Supply voltage up to 24 Vdc, DIN19240 or better.
- Separate supply for CPU and Outputs (production testers).
- Voltage-supervisor with 200 mS reset-pulse. Reset input.
- 8 x 24V @ 9 mA PNP opto-inputs with yellow LED's.
- 8 x 24V @ 0.1 A (0.8A) PNP SSR's with red LED's.
- IDC10, 5V Communication Bus: COM, I2C, ext. reset.
- Serial communication with external adapter, single UART.
- Two part Phoenix connectors MC 1.5-3.81mm.
- Recommended operational environment 0...50 °C.
- Robust UL circuit board, 18 x 58 x 97 mm, IP00.

Typical Applications

- Stand-alone Programmable Logic Controllers (PLC's).
- PC-based testers: product testers, wire testers.
- PC-based I/O: data loggers, access control, remote control.

Power Supply

- Normally 12 Vdc 3A to 24 Vdc 3A (DIN19240 or better).
- CPU supply, 8 to 24 Vdc, 25 to 100 mA, including the BUS.
- 5V high-quality linear regulator. Green LED.
- BUS +5V supply separated with 200mA schottky diode.
- Output supply, 12 to 24 Vdc 3 A (by load), 3 A PTC fuse.
- Transient Protector 33v 600w on output supply line.
- Connect jumper **J2** (or connector pins #22 and #23) to use CPU and outputs with same voltage supply.

21	GND	Common Ground
22	+Vcpu	Supply for CPU, 8-24 Vdc, 25 to 100 mA
23	+Vcc	Output supply, 12-24 Vdc, 3 A PTC fuse

Cn2, PNP SSR Outputs

- 4 x Dual Solid State Relays (SSR) connected as PNP outputs: common ground with power supply.
- Excellent resistance against external EMC interference.
- SSR drivers contain **no short circuit protection**.
- A short 400uS voltage spike on all outputs during reset.
- 1A fast circulation diodes parallel with outputs. Red LED's.
- Clare SSR **LAA110** for small relays, LED's and signals. Continuous output current 1 x 100mA (or 2 x 70mA).
- Optional Clare SSR **LAA710** for contactors and solenoids. Continuous Output current 1 x 800mA (or 2 x 600mA).
- Other devices available; SSR's mounted on DIL8 sockets. Also SMD SSR's available.

11		GND	Common Ground
19	P0.0	Y0	PNP-Output 24V @ 0.1 0.8A
18	P0.1	Y1	PNP-Output 24V @ 0.1 0.8A
17	P0.2	Y2	PNP-Output 24V @ 0.1 0.8A
16	P0.3	Y3	PNP-Output 24V @ 0.1 0.8A
15	P0.4	Y4	PNP-Output 24V @ 0.1 0.8A
14	P0.5	Y5	PNP-Output 24V @ 0.1 0.8A
13	P0.6	Y6	PNP-Output 24V @ 0.1 0.8A
12	P0.7	Y7	PNP-Output 24V @ 0.1 0.8A
20		+Vcc	Output Supply, typically +24 Vdc

BUS Connector IDC1

- Flat gable connected 5V BUS with 10-47kΩ pull-up resistors.
- Diode-separated 5V 50mA BUS supply for interface units.
- Up to 4-8 units may be connected on the same BUS.
- Used with various serial interfaces; single UART on CPU.
- I2C for inter-card communications; software or IRQ-based.
- 5V reset input for synchronous resetting all units on BUS.

1	+5V	+5V	+5V 50mA, separated with diode
2	P3.0	RxD	Serial RX Data, 5V TTL, pull up
3	P3.1	TxD	Serial TX Data, 5V TTL, pull up
4	RST	RST	5V Reset Input, trigger level +3.1V
5	P1.6	SCL	I2C Clock, pull up
6	P1.7	SDA	I2C Data, pull up
7	P3.2	!Int0	5V general purpose I/O, pull up
8	P3.3	!Int1	5V general purpose I/O, pull up
9	P3.4	T0	5V general purpose I/O, pull up
10	GND	GND	Common Ground