

# APAX-5046 APAX-5060 APAX-5080

24-ch Digital Output Module

12-ch Relay Output Module

4/8-ch High Speed Counter Module



## Specifications

### General

- **Certifications** CE, FCC class A
- **Dimensions (W x H x D)** 30 x 139 x 100 mm
- **Enclosure** ABS+PC
- **Weight** 165 g
- **Power Consumption** 2.5 W @ 24 V<sub>DC</sub> (typical)
- **Status Display** LED per channel  
On: Logic level 1  
Off: Logic level 0

### Digital Output

- **Channels** 24 (Sink Type)
- **Voltage Range** 8 ~ 35 V<sub>DC</sub>
- **Rated Current Output** 0.5 A (per channel, at signal "1")
- **Leakage Current** 0.1 mA (at signal "0")
- **Switch Rate:** Resistive load: 300 Hz (max.)  
Inductive load: max. 20 Hz (max.)  
Lamp load: max. 200 Hz (5W lamp and under 50 Ω, 24 V)

### Protection

- **2,500 V<sub>DC</sub> Isolation Between Channels and Backplane**
- **Short Circuit Protection**
- **Thermal Shutdown Protection**

### Environment

- **Operating Temperature** -10 ~ 60° C (when mounted vertically)
- **Storage Temperature** -40 ~ 70° C
- **Relative Humidity** 5 ~ 95% (non-condensing)

## Ordering Information

- **APAX-5046** 24-ch Digital Output Module
- **APAX-5001** 1-slot Backplane Module
- **APAX-5002** 2-slot Backplane Module
- **APAX-5343E** Power Supply for APAX Expansion Module

## Specifications

### General

- **Certifications** CE, FCC class A
- **Dimensions (W x H x D)** 30 x 139 x 100 mm
- **Enclosure** ABS+PC
- **Weight** 195 g
- **Power Consumption** 2 W @ 24 V<sub>DC</sub> (typical)
- **Status Display** LED per channel  
On: Logic level 1  
Off: Logic level 0

### Relay Output

- **Channels** 12
- **Relay Type** Form A (SPST)
- **Contact Rating** 5 A @ 250 V<sub>AC</sub>/30 V<sub>DC</sub> (Resistive load)
- **Switching Capacity and Lifetime of the Contact (For Resistive Load)**  
VDE: 30,000 operations (5 A @ 250 V<sub>AC</sub>, 10 operations/minute at 8° C)  
70,000 operations (5 A @ 30 V<sub>DC</sub>, 10 operations/minute at 85° C)  
UL: 60,000 operations (5 A @ 250 V<sub>AC</sub>)  
100,000 operations (5 A @ 30 V<sub>DC</sub>)  
Mechanism: 20,000,000 operations (no load, 300 operations/min)
- **Contact Resistance** 30 mΩ (max.)
- **Insulation Resistance** 1 GΩ (min.) at 500 V<sub>DC</sub>

### Protection

- **2,500 V<sub>DC</sub> Isolation Between Channels and Backplane**

### Environment

- **Operating Temperature** -10 ~ 60° C (when mounted vertically)
- **Storage Temperature** -40 ~ 70° C
- **Relative Humidity** 5 ~ 95% (non-condensing)

## Ordering Information

- **APAX-5060** 12-ch Relay Output Module
- **APAX-5001** 1-slot Backplane Module
- **APAX-5002** 2-slot Backplane Module
- **APAX-5343E** Power Supply for APAX Expansion Module

## Specifications

### General

- **Certifications** CE, FCC class A
- **Dimensions (W x H x D)** 30 x 139 x 100 mm
- **Enclosure** ABS+PC
- **Weight** 170 g
- **Power Consumption** 2.5 W @ 24 V<sub>DC</sub> (typical)
- **Status Display** LED per channel (for DI, DO channel)  
On: Logic level 1  
Off: Logic level 0

### Counter/Frequency Input

- **Channels and Mode** 8 (Up and Frequency mode)  
4 (Pulse/Direction, Up/Down, A/B phase mode)
- **Counting Range** 32-bit + 1-bit overflow/underflow
- **Minimum Pulse Width** 1 μs
- **Counter Frequency** 1 MHz (max.)
- **Input Voltage** For "0" signal: 0 ~ 3 V<sub>DC</sub>  
For "1" signal: 10 ~ 30 V<sub>DC</sub>

### Digital Input

- **Channels** 4
- **Type** Source Load
- **Input Voltage** For "0" signal: 0 ~ 3 V<sub>DC</sub>  
For "1" signal: 10 ~ 30 V<sub>DC</sub>

### Digital Output

- **Channels** 4 (Sink Type)
- **Output Voltage Range** 8 ~ 35 V<sub>DC</sub>
- **Rated Output Current** 0.5 A (per channel)

### Protection

- **2,500 V<sub>DC</sub> Isolation Between Channels and Backplane**
- **Over Voltage Protection (For DI and counter channel)**
- **Short Circuit Protection (For DO channel)**
- **Thermal Shutdown Protection (For DO channel)**

### Environment

- **Operating Temperature** -10 ~ 60° C (when mounted vertically)
- **Storage Temperature** -40 ~ 70° C
- **Relative Humidity** 5 ~ 95% (non-condensing)

## Ordering Information

- **APAX-5080** 4/8-ch High Speed Counter Module
- **APAX-5001** 1-slot Backplane Module
- **APAX-5002** 2-slot Backplane Module
- **APAX-5343E** Power Supply for APAX Expansion Module