

4-Channel Solid State Input/Output Modules AC/DC Sensing/Control



I/O Models shown mounted on 6000-DEXB-C Backplane

SSS Series
\$50
 Basic Unit

- ✓ 4 Channels in One Module
- ✓ 4000 Vrms Isolation
- ✓ AC/DC Input and Output Modules Available
- ✓ High Speed Input Module Available

Designed to minimize space requirements, the SSS-Q series 4-channel solid state switches replace 4 individual SSS modules. Providing a connection between data acquisition systems and the real world, these modules can sense or control ac/dc power lines. Input modules sense the presence of an ac/dc voltage, and send an input signal to the acquisition system. Output modules accept an output signal from the system, and will switch ac/dc power lines on or off.

Each module contains four channels of input or outputs. Up to 6 modules may be mounted on a 6000-DEXB-C backplane for a twenty-four channel system.

Specifications

AC/DC INPUT QUAD MODULES INPUT

| Model | SSS-QI120-C | SSS-QI240-C | SSS-QID32-C |
|---|--------------|--------------|----------------|
| Nominal Input Voltage | 120 Vrms/Vdc | 240 Vrms/Vdc | 24 Vrms/48 Vdc |
| Max Input Voltage | 140 Vrms/Vdc | 280 Vrms/Vdc | 60 Vrms/Vdc |
| Min Input Voltage | 90 Vrms/Vdc | 180 Vrms/Vdc | 10 Vrms/Vdc |
| Max Input Current (@ max input voltage) | 10 mA rms | 8 mA rms | 30 mA rmsn |
| Drop out Current | 2.5 mA rms | 1.5 mA rms | 1.0 mA rms |
| Available Off-State Input | 3.0 mA rms | 2.0 mA rms | 1.0 mA rms |
| Allowable Off-State Voltage | 50 Vrms/Vdc | 120 Vrms/Vdc | 2 Vrms/Vdc |

OUTPUT

(SSS-QI120-C/QI240-C/QID32-C)

Nominal Logic Supply Voltage: 5.0 Vdc

Min Logic Voltage: 4.5 Vdc

Max Logic Voltage: 6.0 Vdc

Typical Logic Supply Current (@ nominal voltage): 10 mA dc

Max Logic Supply Current (@ max logic voltage): 14.5 mA dc

Max Logic Supply Leakage Current (@ max logic voltage): 20 µA dc

Max Output Voltage: 30 Vdc

Max Output Current: 50 mA dc

Max Output Leakage Current (@ max logic voltage): 20 µA dc

Max Output Voltage Drop (@ max Output Current): 200 mVdc

GENERAL

(SSS-QI120-C/QI240-C/QID32-C)

Operating Ambient: -30 to 80°C (-22 to 176°F)

Storage Temperature: -40 to 100°C (-40 to 212°F)

Max Turn-On Time (@ nominal input voltage): 20 ms

Max Turn-Off Time: 30 ms

Isolation: 4000 Vrms

Capacitance, Input to Output: 8 pF

Line Frequency Range: 47 to 63 Hz

**DC INPUT QUAD MODULE –
SSS-QIDF16-C**

INPUT

Max Input Voltage: 32 Vdc
Min Input Voltage: 3.3 Vdc
Input Resistance: 1 kΩ
Max Input Current (@ max input voltage): 32 mA dc
Drop out Current: 1.0 mA dc
Available Off-State Input: 1.0 mA dc
Allowable Off-State Voltage: 2.0 Vdc

OUTPUT

Nominal Logic Supply Voltage: 5.0 Vdc
Min Logic Voltage: 4.5 Vdc
Max Logic Voltage: 6.0 Vdc
Typical Logic Supply Current (@ nominal voltage): 10 mA dc
Max Logic Supply Current (@ max logic voltage): 14.5 mA dc
Max Logic Supply Leakage Current (@ max logic voltage): 20 μA dc

Max Logic Supply Leakage Current (@ max logic voltage): 20 μA dc
Max Output Voltage: 30 Vdc
Max Output Current: 50 mA dc
Max Output Leakage Current (@ max logic voltage): 20 μA dc
Max Output Voltage Drop (@ max Output Current): 200 mVdc

GENERAL

Operating Ambient: -30 to 80°C (-22 to 176°F)
Storage Temperature: -40 to 100°C (-40 to 212°F)
Max Turn-On Time (@ nominal input voltage): 300 μs
Max Turn-Off Time: 600 μs
Isolation: 4000 Vrms
Capacitance, Input to Output: 8 pF

**DC OUTPUT QUAD MODULE –
SSS-QOD60-C**

INPUT

Nominal Input voltage: 5 Vdc
Min Input voltage: 4.0 Vdc
Max Input Voltage: 6.0 Vdc
Drop out Voltage: 1.0 Vdc
Max Input Current: 15 mA dc
Typical Input Current: 10 mA dc
Nominal Input Resistance: 240 Ω

OUTPUT

Max Line Voltage: 60 Vdc
Min Line Voltage: 3.0 Vdc
Max Off-State Voltage: 60 Vdc
Max Off-State Leakage: 1.0 mA dc
Max On-State Current: 3.0 A dc; derate 40 mA/°C above 20°C; when operating in I/O racks that share a common fuse between two channels, max on-state

current must not exceed a total of 3.75 A rms @ 20°C ambient for both channels

Min On-State Current: 10 mA dc

Max 1 Second Surge: 5 A dc

Peak On-State Voltage: 1.5 Vdc @ 25°C

Max Turn-On Time: 50 μs
Max Turn-Off Time: 100 μs

GENERAL

Operating Ambient: -30 to 80°C (-22 to 176°F)

Storage Temperature: -40 to 100°C (-40 to 212°F)

Isolation: 4000 Vrms
Capacitance, Input to Output: 8 pF

**AC OUTPUT QUAD MODULE –
SSS-QOA240-C**

INPUT

Nominal Input voltage: 5 Vdc
Min Input voltage: 4.0 Vdc
Max Input Voltage: 6.0 Vdc
Drop out Voltage: 1.0 Vdc
Max Input Current: 15 mA dc
Typical Input Current: 10 mA dc
Nominal Input Resistance: 240 Ω

OUTPUT

Nominal Line Voltage: 240 Vrms
Max Line Voltage: 280 Vrms
Min Line Voltage: 24 Vrms
Max Peak Off-State Voltage: 600 Vpeak
Max Off-State Leakage: 4.5 mA rms
Static Off-State (dv/dt): 200 V/μs

Max On-State

Current: 3.0 A rms; derate 40 mA/°C above 20°C; when operating in I/O racks that share a common fuse current must not exceed a total of 3.75 A rms @ 20°C ambient for both channels

Min On-State Current: 50 mA rms
Max 1 Cycle Surge: 100 Apeak
Peak On-State Voltage: 1.6 Vpeak

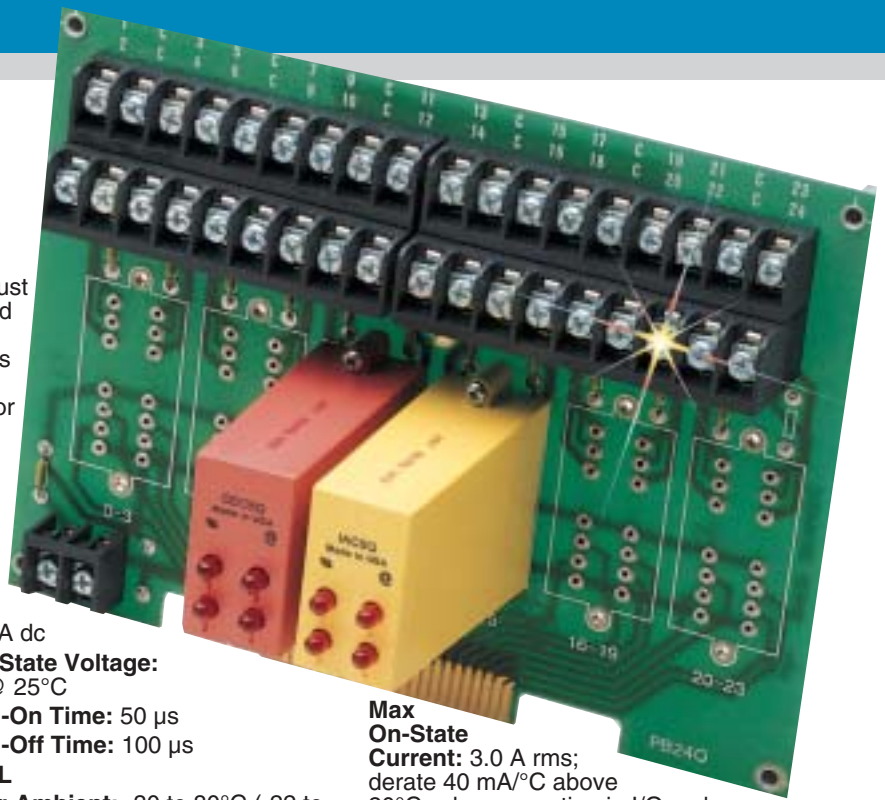
GENERAL

Operating Ambient: -30 to 80°C (-22 to 176°F)

Storage Temperature: -40 to 100°C (-40 to 212°F)

Response Time: 0.5 cycle
Isolation: 4000 Vrms

Capacitance, Input to Output: 8 pF
Line Frequency Range: 47 to 63 Hz



To Order (Specify Model Number)

| Model Number | Price | Description |
|--------------|-------|------------------------------------|
| SSS-QI120-C | \$50 | 90 to 140 Vac/dc Input |
| SSS-QI240-C | 50 | 180 to 280 Vac/dc Input |
| SSS-QIDF16-C | 65 | 3.3 to 32 Vdc Fast Switching Input |
| SSS-QID32-C | 50 | 10 to 60 Vac/dc Input |
| SSS-QOA240-C | 50 | 24 to 280 Vac Output |
| SSS-QOD60-C | 50 | 3 to 60 Vdc Output |
| 6000-DEXB | 144 | Backplane for up to 6 modules |

Ordering Example: four SSS-QI120-C 90 to 140 Vac/dc input modules, two SSS-QOA240-C 24 to 280 Vac output modules, and 6000-DEXB backplane, 4(50) + 2(50) + 144 = \$444.



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