

ioLogik 4000 Modules

⋮ Digital Input Modules

M-1800: 8 digital inputs, sink type, 24 VDC

Digital Inputs: 8 channels
Type: sink
On-state Voltage: 24 VDC nominal, 11 to 28.8 VDC
Off-state Voltage: 0 to 5 VDC
On-state Current: 6 mA/point @ 28.8 VDC (max.)
Input Impedance: 5.1K ohms (typical)
Filtering Time: 1.5 ms (typical)
Common Type: External common (single common)
Power Consumption: 35 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 15,759,240 hrs (Database: Telcordia/Bellcore)

M-1600: 16 digital inputs, sink type, 24 VDC

Digital Inputs: 16 channels
Type: sink
On-state Voltage: 24 VDC nominal, 11 to 28.8 VDC
Off-state Voltage: 0 to 5 VDC
On-state Current: 6 mA/point @ 28.8 VDC (max.)
Input Impedance: 5.1K ohms (typical)
Filtering Time: 1.5 ms (typical)
Common Type: 16 channels for 2 COMs (single common)
Power Consumption: 40 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O flat cable 20-pin
MTBF: 11,659,560 hrs (Database: Telcordia/Bellcore)

M-1450: 4 digital inputs, 110 VAC

Digital Inputs: 4 channels, 110 VAC
On-state Voltage: 120 VAC nominal, 85 to 132 VAC
Off-state Voltage: 0 to 45 VAC
On-state Current: 8 mA/point @ 132 VAC (max.)
Input Impedance: 11K ohms (typical)
Common Type: 4 channels for 2 COMs (single common)
Power Consumption: 35 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 19,482,240 hrs (Database: Telcordia/Bellcore)

M-1801: 8 digital inputs, source type, 24 VDC

Digital Inputs: 8 channels
Type: source
On-state Voltage: 24 VDC nominal, 11 to 28.8 VDC
Off-state Voltage: 0 to 5 VDC
On-state Current: 6 mA/point @ 28.8 VDC (max.)
Input Impedance: 5.1K ohms (typical)
Filtering Time: 1.5 ms (typical)
Common Type: External common (single common)
Power Consumption: 35 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 15,811,800 hrs (Database: Telcordia/Bellcore)

M-1601: 16 digital inputs, source type, 24 VDC

Digital Inputs: 16 channels
Type: source
On-state Voltage: 24 VDC nominal, 11 to 28.8 VDC
Off-state Voltage: 0 to 5 VDC
On-state Current: 6 mA/point @ 28.8 VDC (max.)
Input Impedance: 5.1K ohms (typical)
Filtering Time: 1.5 ms (typical)
Common Type: 16 channels for 2 COMs (single common)
Power Consumption: 40 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O flat cable 20-pin
MTBF: 11,694,600 hrs (Database: Telcordia/Bellcore)

M-1451: 4 digital inputs, 220 VAC

Digital Inputs: 4 channels, 220 VAC
On-state Voltage: 240 VAC nominal, 170 to 264 VAC
Off-state Voltage: 0 to 45 VAC
On-state Current: 12 mA/point @ 264 VAC (max.)
Input Impedance: 22K ohms (typical)
Common Type: 4 channels for 2 COMs (single common)
Power Consumption: 35 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 19,727,520 hrs (Database: Telcordia/Bellcore)

⋮ Digital Output Modules

M-2800: 8 digital outputs, sink type, 24 VDC, 0.5 A

Digital Outputs: 8 channels
Type: sink
Output Range: 24 VDC nominal
On-state Voltage Drop: 0.3 VDC @ 25°C (max.)
On-state Current: 1 mA per channel (min.)
Off Leakage Current: 50 µA (max.)
Current Rating: 0.5 A per channel
Common Type: 8 channels per external common (single common)
Power Consumption: 60 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 13,884,600 hrs (Database: Telcordia/Bellcore)

M-2801: 8 digital outputs, source type, 24 VDC, 0.5 A

Digital Outputs: 8 channels
Type: source
Output Range: 24 VDC nominal
On-state Voltage Drop: 0.3 VDC @ 25°C (max.)
On-state Current: 1 mA per channel (min.)
Off Leakage Current: 50 µA (max.)
Current Rating: 0.5 A per channel
Common Type: 8 channels per external common (single common)
Power Consumption: 60 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 14,340,120 hrs (Database: Telcordia/Bellcore)

M-2600: 16 digital outputs, sink type, 24 VDC, 0.3 A

Digital Outputs: 16 channels
Type: sink
Output Range: 24 VDC nominal
On-state Voltage Drop: 0.3 VDC @ 25°C (max.)
On-state Current: 1 mA per channel (min.)
Off Leakage Current: 50 µA (max.)
Current Rating: 0.5 A per channel
Common Type: 8 channels per external common (single common)
Power Consumption: 60 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O flat cable 20-pin
MTBF: 9,732,360 hrs (Database: Telcordia/Bellcore)

M-2601: 16 digital outputs, source type, 24 VDC, 0.3 A

Digital Outputs: 16 channels
Type: source
Output Range: 24 VDC nominal
On-state Voltage Drop: 0.3 VDC @ 25°C (max.)
On-state Current: 1 mA per channel (min.)
Off Leakage Current: 50 µA (max.)
Current Rating: 0.5 A per channel
Common Type: 8 channels per external common (single common)
Power Consumption: 60 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O flat cable 20-pin
MTBF: 9,749,880 hrs (Database: Telcordia/Bellcore)

: Analog Input Modules

M-3802: 8 analog inputs, 4 to 20 mA, 12 bits

Analog Inputs: 8 channels
Resolution in Ranges: 12 bits, 3.91 µA/bit
Input Current Range: 4 to 20 mA (single-ended)
Data Format: 16-bit integer (2's complement)
Accuracy:
 • ±0.1%, FSR @ 25°C
 • ±0.3%, FSR @ 0°C, 60°C
Input Impedance: 120 ohms
Conversion Time: 4 ms for all channels
Power Consumption: 80 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 7,375,920 hrs (Database: Telcordia/Bellcore)

M-3810: 8 analog inputs, 0 to 10 V, 12 bits

Analog Inputs: 8 channels
Resolution in Ranges: 12 bits, 2.44 mV/bit
Input Current Range: 0 to 10 VDC (single-ended)
Data Format: 16-bit integer (2's complement)
Accuracy:
 • ±0.1%, FSR @ 25°C
 • ±0.3%, FSR @ 0°C, 60°C
Input Impedance: 500K ohms
Conversion Time: 4 ms for all channels
Power Consumption: 60 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 7,288,320 hrs (Database: Telcordia/Bellcore)

: Analog Output Modules

M-4402: 4 analog outputs, 4 to 20 mA, 12 bits

Analog Outputs: 4 channels
Resolution in Ranges: 12 bits, 3.91 µA/bit
Output Current Range: 4 to 20 mA (single-ended)
Data Format: 16-bit integer (2's complement)
Accuracy:
 • ±0.1%, FSR @ 25°C
 • ±0.3%, FSR @ 0°C, 60°C
Output Impedance: 500 ohms (max.)
Conversion Time: 2 ms for all channels
Power Consumption: 60 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 7,840,200 hrs (Database: Telcordia/Bellcore)

M-4410: 4 analog outputs, 0 to 10 V, 12 bits

Analog Outputs: 4 channels
Resolution in Ranges: 12 bits, 2.44 mV/bit
Output Current Range: 0 to 10 VDC (single-ended)
Data Format: 16-bit integer (2's complement)
Accuracy:
 • ±0.1%, FSR @ 25°C
 • ±0.3%, FSR @ 0°C, 60°C
Output Impedance: 5K ohms (max.)
Conversion Time: 2 ms for all channels
Power Consumption: 60 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 6,219,600 hrs (Database: Telcordia/Bellcore)

: Temperature Input Modules

M-6200: 2 analog inputs, RTD: PT100, JPT100

RTD Inputs: 2 channels
Sensor Types:
 • PT50, PT100, PT200, PT500, PT1000 (resistance 100 milli-ohms/bit)
 • JPT100, JPT200, JPT500, JPT1000 (resistance 10 milli-ohms/bit)
 • NI100, NI200, NI500, NI1000, NI120, CU10 (resistance 20 milli-ohms/bit)
Resolution: 0.1°C/10 milli-ohms
Data Format: 16-bit integer (2's complement)
Accuracy:
 • ±0.1%, FSR @ 25°C
 • ±0.3%, FSR @ 0°C, 60°C
Input Impedance: 500K ohms
Conversion Time: 200 ms for all channels
Diagnostics: Range over (if range over, data=Dx8000)
Power Consumption: 80 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 3,644,160 hrs (Database: Telcordia/Bellcore)

M-6201: 2 analog inputs, thermocouple

Thermocouple Inputs: 2 channels
Sensor Types: Type J/K/T/E/R/S/B/N/L/U/C/D (mV input 10 µV/bit, 2 µV/bit)
Resolution: 0.1°C/10 µV
Data Format: 16-bit integer (2's complement)
Accuracy:
 • ±0.1%, FSR @ 25°C
 • ±0.3%, FSR @ 0°C, 60°C
Input Impedance: 500K ohms
Conversion Time: 200 ms for all channels
Diagnostics: Range over (if range over, data=Dx8000)
Power Consumption: 80 mA @ 5 VDC
Isolation: I/O to logic (photocoupler isolation)
Wiring: I/O cable max. AWG14
MTBF: 3,828,120 hrs (Database: Telcordia/Bellcore)

Power Modules

M-7001: System power module

System Input Voltage: 24 VDC, 11 to 28.8 VDC
Field Power Input Voltage: 24 VDC (±20%)
Current for I/O Modules: 1.5 A @ 5 VDC (Max.)
System Bus Output Voltage: 5 VDC (Max.)
Field Power Contacts Current: 10 A (Max.)
MTBF: 19,569,840 hrs (Database: Telcordia/ Bellcore)

M-7002: Field power module

Field Power Input Voltage:
 • DC: 5 VDC, 24 VDC, 48 VDC
 • AC: 110 VAC, 220 VAC
Current for Field Power Contacts: 10 A (Max.)
MTBF: 75,528,720 hrs (Database: Telcordia/ Bellcore)

M-7804: 0 VDC

Channels: 8
Mode: 0 VDC
MTBF: 73,750,440 hrs (Database: Telcordia/ Bellcore)

M-7805: 24 VDC

Channels: 8
Mode: 24 VDC
MTBF: 73,750,440 hrs (Database: Telcordia/ Bellcore)

Modular I/O Accessories

TB 1600: Screw-locking terminal block with 20-pin connector for DIN rail mounts

- 20 pins, one-to-one assignment
- Connector pitch: 3.81 mm
- DIN rail mount
- Dimensions: 77.5 x 67.5 x 51 mm (3.05 x 2.66 x 2.01 in)
- RoHS compliant



20-to-20-pin flat cable

- Connects between the TB 1600 and ioLogik 4000 series
- Length: 500 mm
- Number of Pins: 20



M-8001-PK: Removable terminal block

- Terminal block for the ioLogik 4000 series
- Packaging: 9 pcs in one box



M-8003-PK: Marker with 0 to 9 numbering

- Marker for the ioLogik 4000 series
- Packaging: 100 pcs in one box



Ordering Information

Available Models

- M-1800:** Modular remote I/O module with 8 DIs, sink type, 24 VDC, RTB, -10 to 60°C operating temperature
- M-1801:** Modular remote I/O module with 8 DIs, source type, 24 VDC, RTB, -10 to 60°C operating temperature
- M-1600:** Modular remote I/O module with 16 DIs, sink type, 24 VDC, 20-pin, -10 to 60°C operating temperature
- M-1601:** Modular remote I/O module with 16 DIs, source type, 24 VDC, 20-pin, -10 to 60°C operating temperature
- M-1450:** Modular remote I/O module with 4 DIs, 110 VAC, RTB, -10 to 60°C operating temperature
- M-1451:** Modular remote I/O module with 4 DIs, 220 VAC, RTB, -10 to 60°C operating temperature
- M-2800:** Modular remote I/O module with 8 DOs, sink type, 24 VDC, RTB, -10 to 60°C operating temperature
- M-2801:** Modular remote I/O module with 8 DOs, source type, 24 VDC, RTB, -10 to 60°C operating temperature
- M-2600:** Modular remote I/O module with 16 DOs, sink type, 24 VDC, 20-pin, -10 to 60°C operating temperature
- M-2601:** Modular remote I/O module with 16 DOs, source type, 24 VDC, 20-pin, -10 to 60°C operating temperature
- M-2450:** Modular remote I/O module with 4 Relays, 230 VAC/24 VDC, RTB, -10 to 60°C operating temperature
- M-3802:** Modular remote I/O module with 8 AIs, 4-20 mA, RTB, -10 to 60°C operating temperature
- M-3810:** Modular remote I/O module with 8 AIs, 0-10 VDC, RTB, -10 to 60°C operating temperature
- M-4402:** Modular remote I/O module with 4 AOs, 4-20 mA, RTB, -10 to 60°C operating temperature
- M-4410:** Modular remote I/O module with 4 AOs, 0-10 VDC, RTB, -10 to 60°C operating temperature
- M-6200:** Modular remote I/O module with 2 RTDs, RTB, -10 to 60°C operating temperature
- M-6201:** Modular remote I/O module with 2 TCs, RTB, -10 to 60°C operating temperature
- M-7001:** Modular remote I/O module with 24 VDC system power input, RTB, -10 to 60°C operating temperature
- M-7002:** Modular remote I/O module with 5/24/48 VDC or 110/220 VAC field power input, RTB, -10 to 60°C operating temperature
- M-7004:** Modular remote I/O module with 8 channels 0 VDC output, RTB, -10 to 60°C operating temperature
- M-7005:** Modular remote I/O module with 8 channels 24 VDC output, RTB, -10 to 60°C operating temperature

Optional Accessories

- TB 1600:** Screw-locking terminal block with 20-pin connector for DIN rail mounts
- 20-to-20-pin flat cable:** 20-pin to 20-pin flat cable, 500 mm
- M-8001-PK:** Removable terminal block, 9 pcs per pack
- M-8003-PK:** Marker with 0 to 9 numbering, white color, 100 pcs
- M-8004-PK:** Black marker, 100 pcs