



AMX

Hardware Deferrals

Version 22.8

ADAM 6015

1. Analog contacts

For analog contacts we use ADAM contact boxes with 7 inputs. The communication is ensured by LAN network and TCP IP protocol.

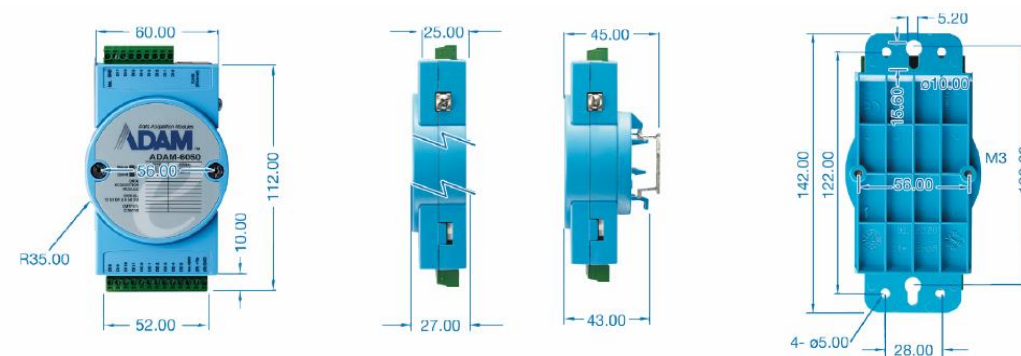
The installation must be done by an electrician because this work is not done by ATT AG.

2. Components

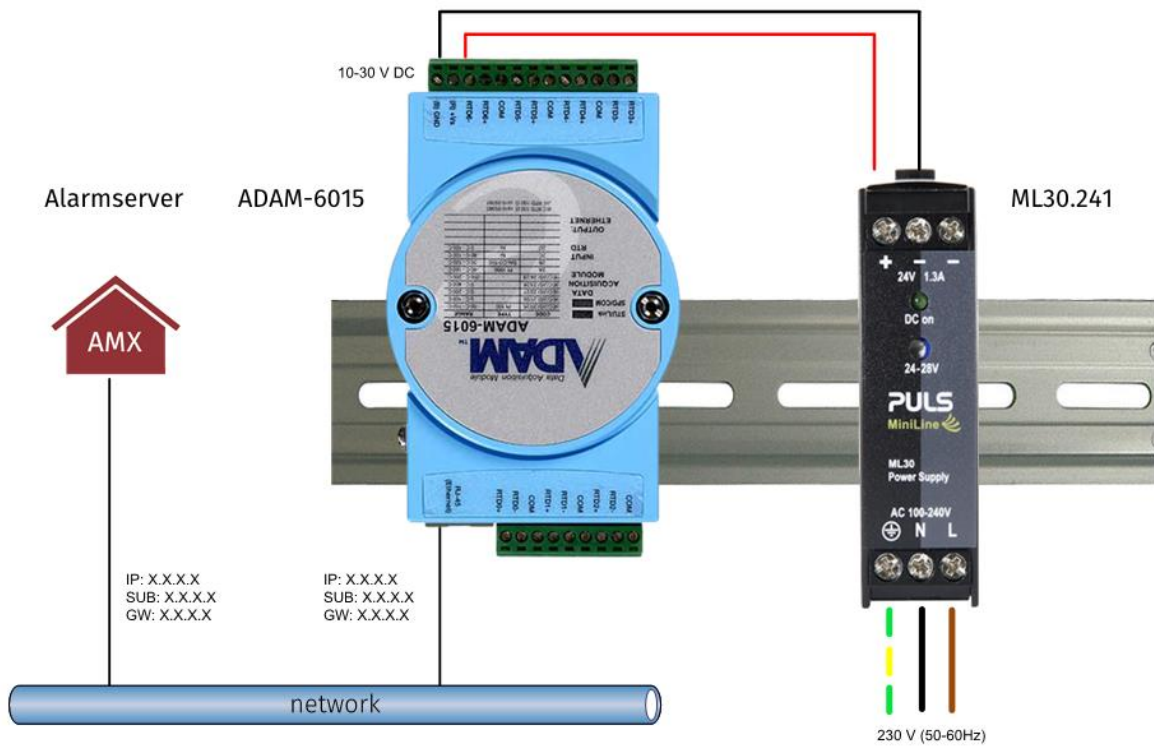
- Communication rate 10/100 MBit/s
- E/A-Typ: 7 Channel RTD Input (differential ports)
- DIN 35
- 24V supply (power supply included)



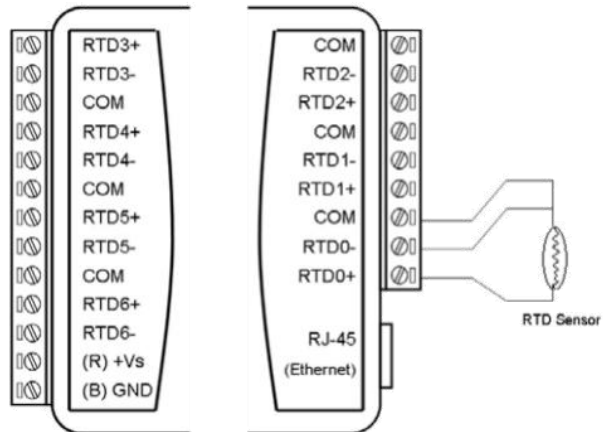
3. Dimensions



4. Installation instructions



5. Examples



Specifications

Analog Input

- **Channels** 7 (differential)
- **Input Impedance** > 10 M Ω
- **Input Connections** 2 or 3 wire
- **Input Type** Pt, Balco and Ni RTD
- **RTD Types and Temperature Ranges**

Pt 100	-50°C	~	150°C
	0°C	~	100°C
	0°C	~	200°C
	0°C	~	400°C
	-200°C	~	200°C
Pt 1000	-40°C	~	160°C

Supports both IEC 60751 ITS90 (0.0385 W/W/°C)
and JIS C 1604 (0.0392 W/W/°C)

Balco 500	-30°C	~	120°C
Ni 518	-80°C	~	100°C
	0°C	~	100°C
- **Accuracy** ± 0.1 % or better
High speed mode ± 0.5 % or better
- **Span Drift** ± 25 ppm/°C
- **Zero Drift** ± 6 μ V/°C
- **Resolution** 16-bit
- **Sampling Rate**
10 sample/ second (total)
High speed mode: 1K sample/second (total)
CMR @ 50/60 HZ 90dB
NMR @ 50/60 HZ 60dB
* high speed mode does not support CMR/NMR
- **Wire Burnout Detection**

Common Specifications

General

- **Certification** FCC, CE
- **LAN** 10/100Base-T(X)
- **Power Consumption** 2.5 W @ 24 V_{DC} (ADAM-6015)
2.7 W @ 24 V_{DC} (ADAM-6017)
1 W @ 24 V_{DC} (ADMA-6018+)
- **Connectors** 1 x RJ-45 (LAN), Plug-in screw terminal block (I/O and power)

- **Watchdog** System (1.6 second) and Communication (programmable) 10 ~ 30 V_{DC}
- **Power Input**
- **Supports Peer-to-Peer**
- **Supports GCL**
- **Supports Modbus/TCP, TCP/IP, UDP, RESTful , MQTT (D version), SNMP (D version) Protocols**
- **Protection**
 - **Isolation Protection** 2,000 V_{DC}
 - **Built-in TVS/ESD Protection**
 - **Power Reversal Protection**

Environment

- **Operating Temperature** -10 ~ 70°C (14 ~ 158°F)
-40 ~ 70°C (-40~158°F)
(D version)
- **Storage Temperature** -20 ~ 80°C (-4 ~ 176°F)
-40 ~ 85°C (-40~185°F)
(D version)
- **Operating Humidity** 20 ~ 95% RH
(non-condensing)
- **Storage Humidity** 0 ~ 95% RH (non-condensing)

ADAM 6050

1. Isolated contacts

For the isolated contacts we use the ADAM contact boxes with 12 inputs. Communication is ensured by LAN network and TCP IP protocol.

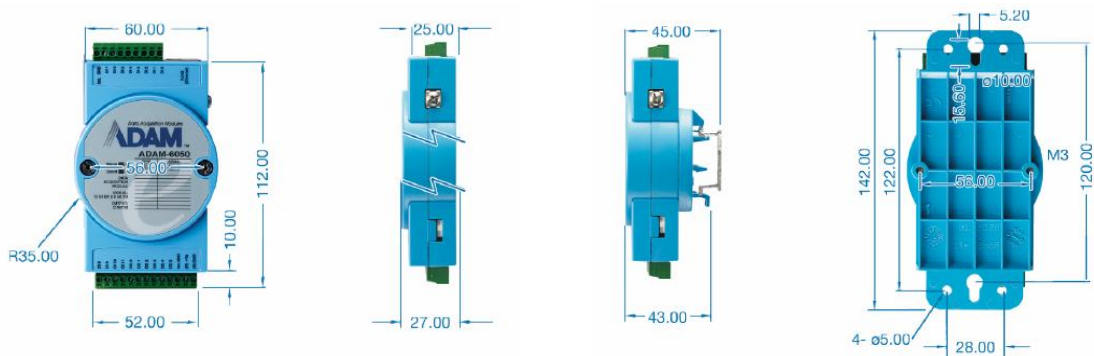
The installation must be carried out by an electrician, as this work is not carried out by ATT AG.

2. Components

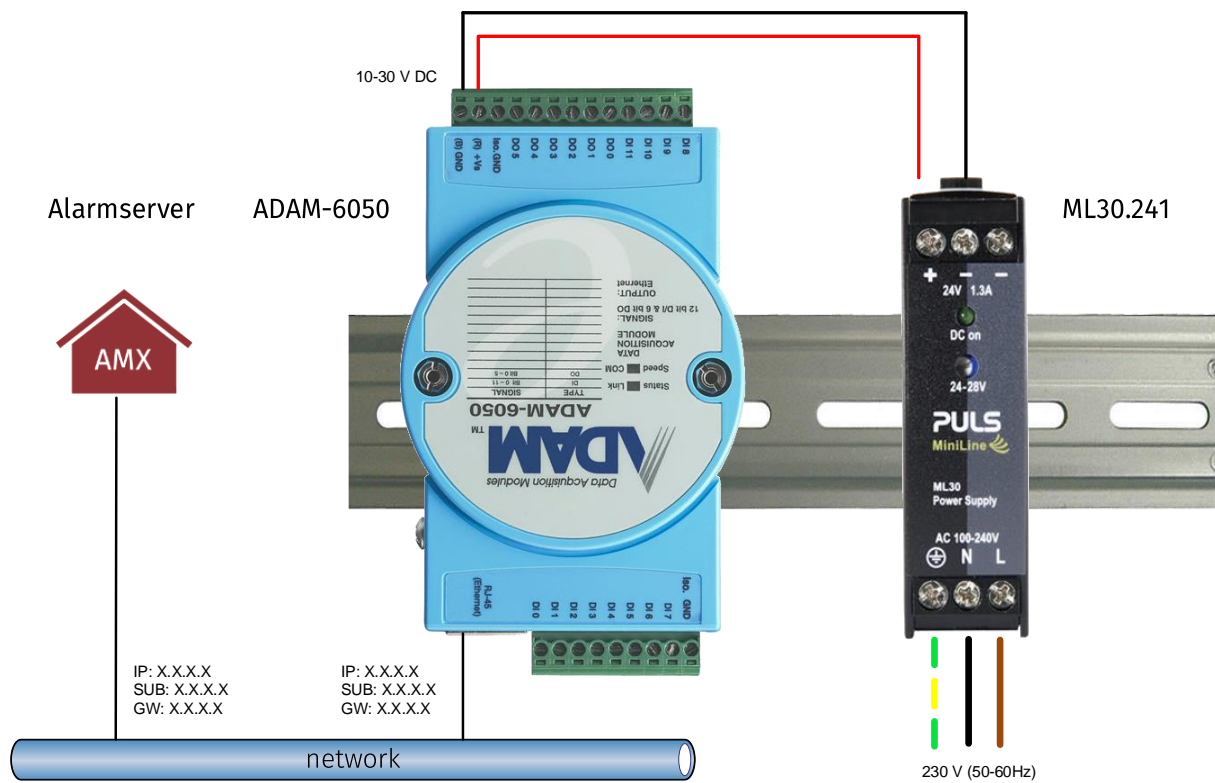
- Communication rate 10/100 MBit/s
- I/O type: 12 DI and 6 DO
- DIN 35
- Supports isolated/current leading contacts
- 24V Power Supply



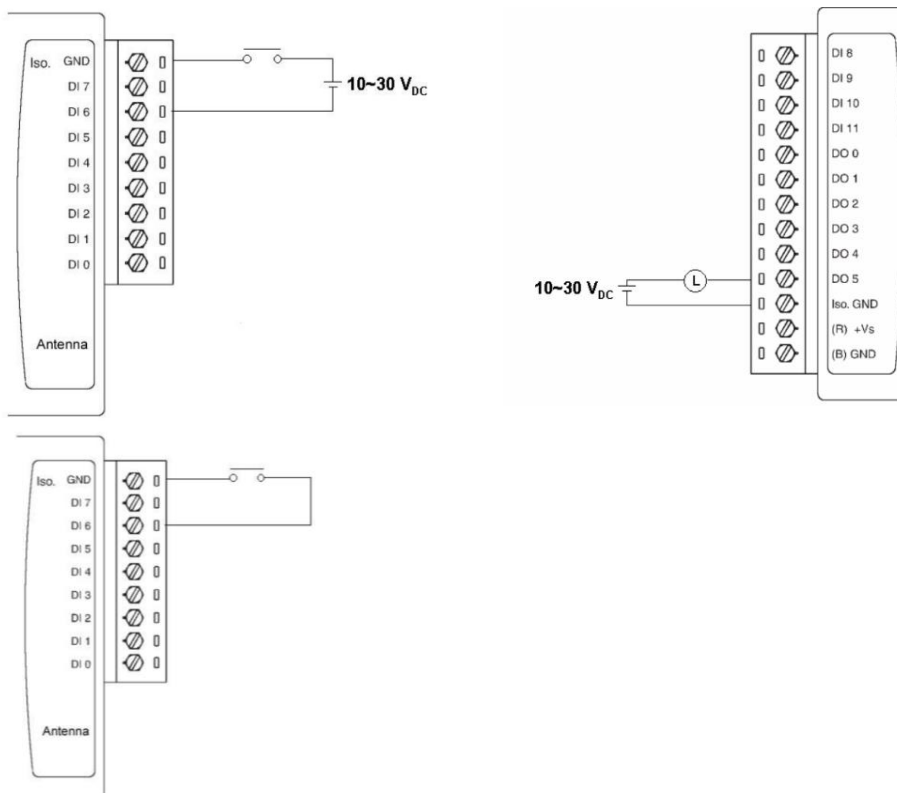
3. Dimensions



4. Installation instructions



5. Examples



6. Manufacturer Specification

Digital Input

- **Channels** 12
- **Dry Contact** Logic level 0: close to GND
Logic level 1: open
- **Wet Contact** Logic level 0: 0 ~ 3 V_{DC}
Logic level 1: 10 ~ 30 V_{DC}
- **Supports 3 kHz Counter Input (32-bit + 1-bit overflow)**
- **Keep/Discard Counter Value when Power-off**
- **Supports 3 kHz Frequency Input**
- **Supports Inverted DI Status**

Digital Output

- **Channels** 6 (sink type), open collector to 30 V, 100 mA maximum load
- **Supports 5 kHz Pulse Output**
- **Supports High-to-Low and Low-to-High Delay Output**

Common Specifications

General

- **LAN** 10/100Base-T(X)
- **Power Consumption** 2 W @ 24 V_{DC}
- **Connectors** 1 x RJ-45 (LAN), Plug-in screw terminal block (I/O and power)
- **Watchdog** System (1.6 second) and Communication (programmable)

- **Power Input** 10 ~ 30 V_{DC}
- **Supports Peer-to-Peer, GCL**
- **Supports User Defined Modbus Address**
- **Supports Modbus/TCP, TCP/IP, UDP, DHCP, SNMP, HTTP and MQTT Protocol**

Protection

- **Power Reversal Protection**
- **Isolation Protection** 2,000 V_{DC}

Environment

- **Operating Temperature** -20 ~ 70°C (-4 ~ 158°F)
D version
-40 ~ 70°C (-40~158°F)
- **Storage Temperature** -30 ~ 80°C (-22 ~ 176°F)
D version
-40 ~ 80°C (-40~176°F)
- **Operating Humidity** 20 ~ 95% RH
(non-condensing)
- **Storage Humidity** 0 ~ 95% RH
(non-condensing)

ADAM 6066

1. Isolated contacts

For the floating contacts we use ADAM 6066 contact boxes with 6 input and 6 power relays. The communication is ensured by LAN network and TCP IP protocol.

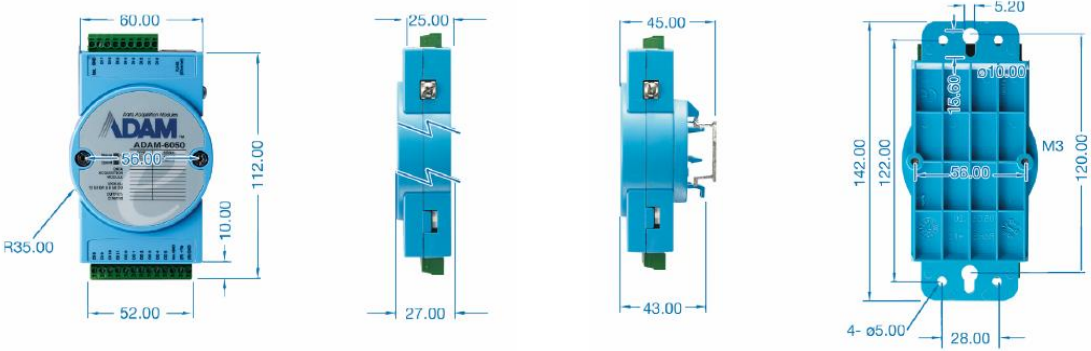
The installation must be done by an electrician, because this work is not done by ATT AG.

2. Components

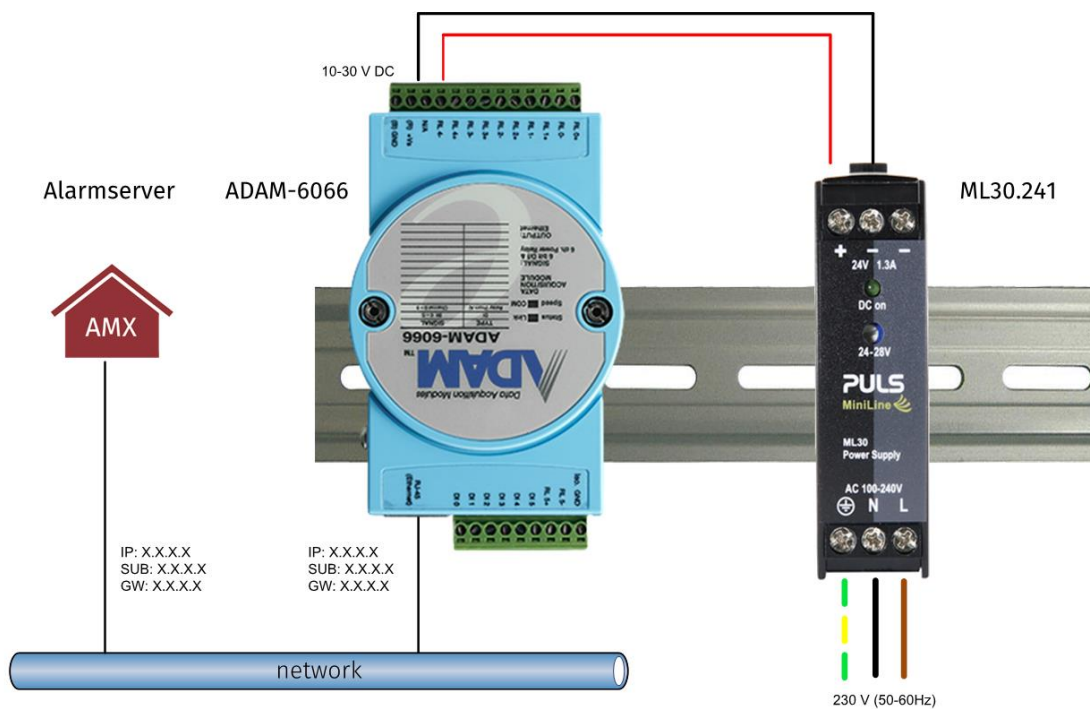
- Communication rate 10/100 MBit/s
- I/O type: 6 DI and 6 DO
- DIN 35
- Supports potential free/current carrying contacts
- 24V supply (power supply included)



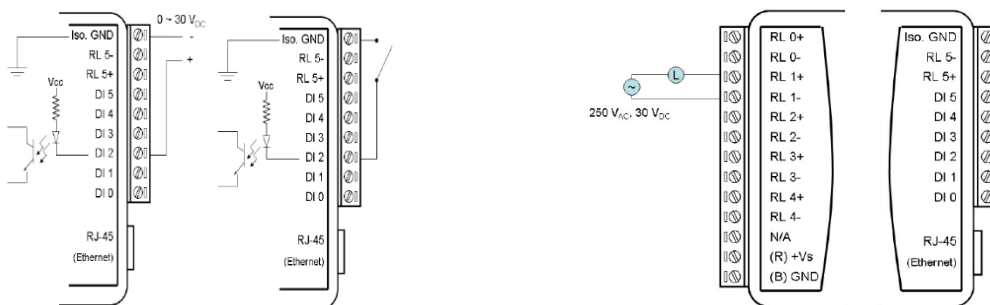
3. Dimensions



4. Installation instructions



5. Examples



6. Manufacturer Specification

General

- **LAN** 10/100Base-T(X)
- **Power Consumption** 2 W @ 24 V_{DC} (ADAM-6060)
2.5 W @ 24 V_{DC} (ADAM-6066)
- **Connectors** 1 x RJ-45 (LAN), Plug-in screw terminal block (I/O and power)
- **Watchdog Timer** System (1.6 second) and Communication (programmable)
- **Power Input** 10 ~ 30 V_{DC}
- **Supports Peer-to-Peer, GCL**
- **Supports User Defined Modbus Address**
- **Supports Modbus/TCP, TCP/IP, UDP, DHCP and HTTP Protocols**

Digital Input

- **Channels** 6
- **Dry Contact** Logic level 0: close to GND
Logic level 1: open
- **Wet Contact** Logic level 0: 3 V_{DC}
Logic level 1: 10 ~ 30 V_{DC}
- **Supports 3 kHz Counter Input (32-bit + 1-bit overflow)**
- **Keep/Discard Counter Value when Power-off**
- **Supports 3 kHz Frequency Input**
- **Supports Inverted DI Status**

Relay Output (Form A)

- **Channels** 6
- **Contact Rating (Resistive)** ADAM-6060: 120 V_{AC} @ 0.5 A
30 V_{DC} @ 1 A
ADAM-6066: 250 V_{AC} @ 5 A
30 V_{DC} @ 3 A
- **Breakdown Voltage** 500 V_{AC} (50/60 Hz)
- **Relay On Time** 7 ms
- **Relay Off Time** 3 ms
- **Total Switching Time** 10 ms
- **Insulation Resistance** 1 GΩ min. at 500 V_{DC}
- **Maximum Switching Rate (at rated load)** 20 operations/minute
- **Supports Pulse Output**

Protection

- **Isolation Voltage** 2,000 V_{DC}
- **Power Reversal Protection**

Environment

- **Operating Temperature** -10 ~ 70°C (14 ~ 158°F)
- **Storage Temperature** -20 ~ 80°C (-4 ~ 176°F)
- **Operating Humidity** 20 ~ 95% RH (non-condensing)
- **Storage Humidity** 0 ~ 95% RH (non-condensing)

ADAM-6000 Series Common Specifications

General

- **Dimensions (W x H x D)** 70 x 122 x 27 mm
- **Enclosure** ABS+PC/ PC
- **Mounting** DIN 35 rail, stack, wall

ADAM 5000 L

1. Isolated contacts

Basic module ADAM 5000 L / TCP for isolated contacts with max. 4 slots, incl. Power Supply, Input 100-240VAC 1.5A, Output 24VDC 2A incl. licensing for activation.

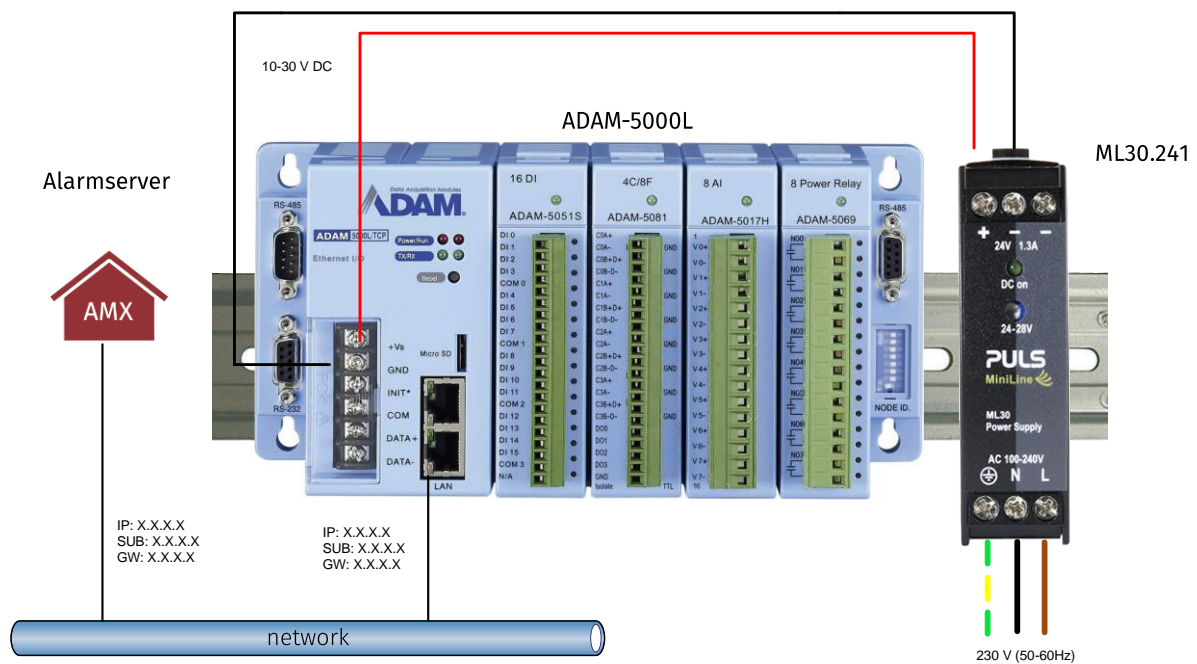
The installation must be carried out by an electrician, as this work is not carried out by ATT AG.

2. Components

- Provides C and .NET library for application development
- 4 I/O slots for up to 64 points and 8 I/O slots for up to 128 points of data monitoring and control
- Simultaneous access from 8 host PCs possible
- Remote configuration via Ethernet possible
- ARM 32-Bit RISC CPU
- Requires additional plug-in modules 5051 or 5060



3. Installation instructions



Dimensions: 231 x 110 x 75 mm

Plug-in module 5051



Components

- 16 digital inputs
- Circuit type: Pull-up current: 0.5 mA (source type)
- Input voltage: 30 Vmax
- Power consumption: 0.53 W
- Logic level 0: +1V max
- Logic level 1: +3.5 to 30V Pull up

Plug-in module 5060



Components

- 2 Form A and 4 Form C Relays
- Breakdown voltage: 500 VAC (50/60 Hz)
- Switching capacity: AC 125V @ 0.6A, DC 30V @ 2A
- Insulation resistance: 1000 MW min. at 500 VDC
- Relay switch-off time (typical): 1 ms
- Relay activation time (typical): 3 ms
- Total switching time: 10 ms
- Power consumption: 0.7 W

4. Examples

ADAM 5051

Application Wiring

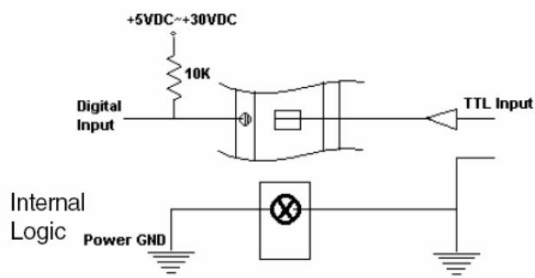


Figure 4.7 TTL Input (ADAM-5051/5051D)

ADAM 5060

Application Wiring

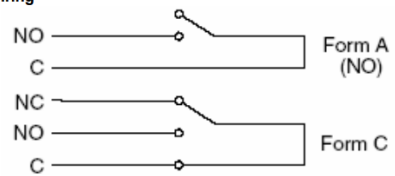


Figure 5.2 Relay Output

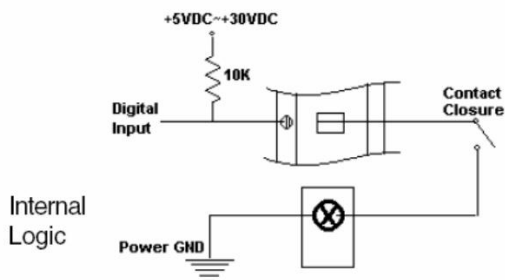


Figure 4.8 Contact Closure Input (ADAM-5051/5051D)

5. Manufacturer Specification

Control System

- **CPU** Cortex M4
- **I/O Slots** ADAM-5000L/TCP: 4
ADAM-5000/TCP: 8
- **Memory** Flash ROM: 1 MB
- **Operating System** Real-time OS
- **LED Indicators** Power (3.3 V)
RUN
Communication (Link, Active, 10/100 Mbps, Tx, Rx)
- **Storage** 1 x MicroSD slot

Communications (Ethernet)

- **Data Transfer Rate** Up to 100 Mbps
- **Event Response Time** < 5 ms
- **Interface** 2 x RJ-45 sharing one MAC Address
- **Wiring** UTP, category 5 or greater

Communications (Serial)

- **Comm. Distance** RS-485: 1.2 km (4000 feet)
RS-232: 15 m
- **Comm. Protocol** Modbus/RTU
- **Data Transfer Rate** Up to 115.2 kbps
- **Interface** 1 x DB9-M for RS-485
1 x DB9-F for RS-485
1 x DB9-F for RS-232 (System Monitoring)
- **Max. Nodes** 15 (in RS-485 daisy-chain network for Remote I/O connection)

Power

- **Power Consumption** 4.0 W @ 24 V_{DC} (ADAM-5000L/TCP)
(not including I/O modules)
5.0 W @ 24 V_{DC} (ADAM-5000/TCP)
(not including I/O modules)
- **Power Input** Unregulated 10 ~ 30 V_{DC}

Software

- **API** VS.NET Llass Library
- **Windows Utility** Network setting, I/O configuration & calibration, data stream, alarm setting
- **Modbus/TCP OPC Server**

Protection

- **Communication Line Isolation** 3.000 V_{DC}
- **I/O Module Isolation** 3.000 V_{DC}
- **LAN Communication** 1.500 V_{DC}
- **Overvoltage Protection** Yes
- **Power Reversal Protection** Yes

General

- **Certification** CE, FCC class A
- **Connectors** 1 x DB9-M/DB9-F/screw terminal for RS-485 (communication)
1 x DB9-F for RS-232 (internal use)
1 x Screw-terminal for power input
2 x RJ-45 for LAN
- **Dimensions (W x H x D)** ADAM-5000L/TCP: 231 x 110 x 75 mm
ADAM-5000/TCP: 355 x 110 x 75 mm
- **Enclosure** ABS+PC
- **Mounting** DIN-rail, wall

Environment

- **Operating Humidity** 5 ~ 95%, non-condensing
- **Operating Temperature** - 10 ~ 70°C (14 ~ 158°F)
- **Storage Temperature** - 25 ~ 85°C (-13 ~ 185°F)

Ordering Information

- **ADAM-5000L/TCP** 4-slot Ethernet-based Distributed DA & C System
- **ADAM-5000/TCP** 8-slot Ethernet-based Distributed DA & C System

MOXA NPort 5110

1. RS232 IP converter

For the conversion of the serial interfaces to TCP/IP packets the MOXA Nport 5110 series with 1 x RS232 input and 1 x TCP/IP output is used. Thus e.g. the ESPA 4.4.4 telegrams can be transmitted over longer distances to the alarm server.

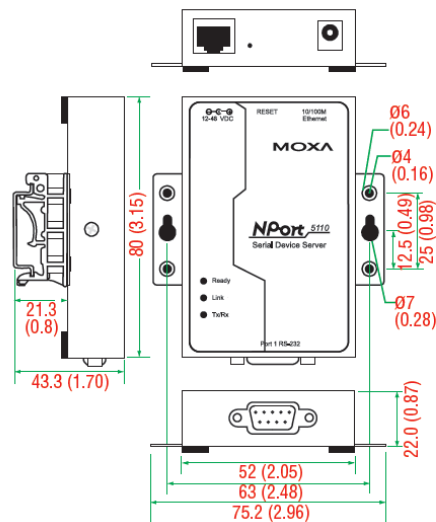
The installation must be carried out by an electrician, as this work is not carried out by ATT AG.

2. Components

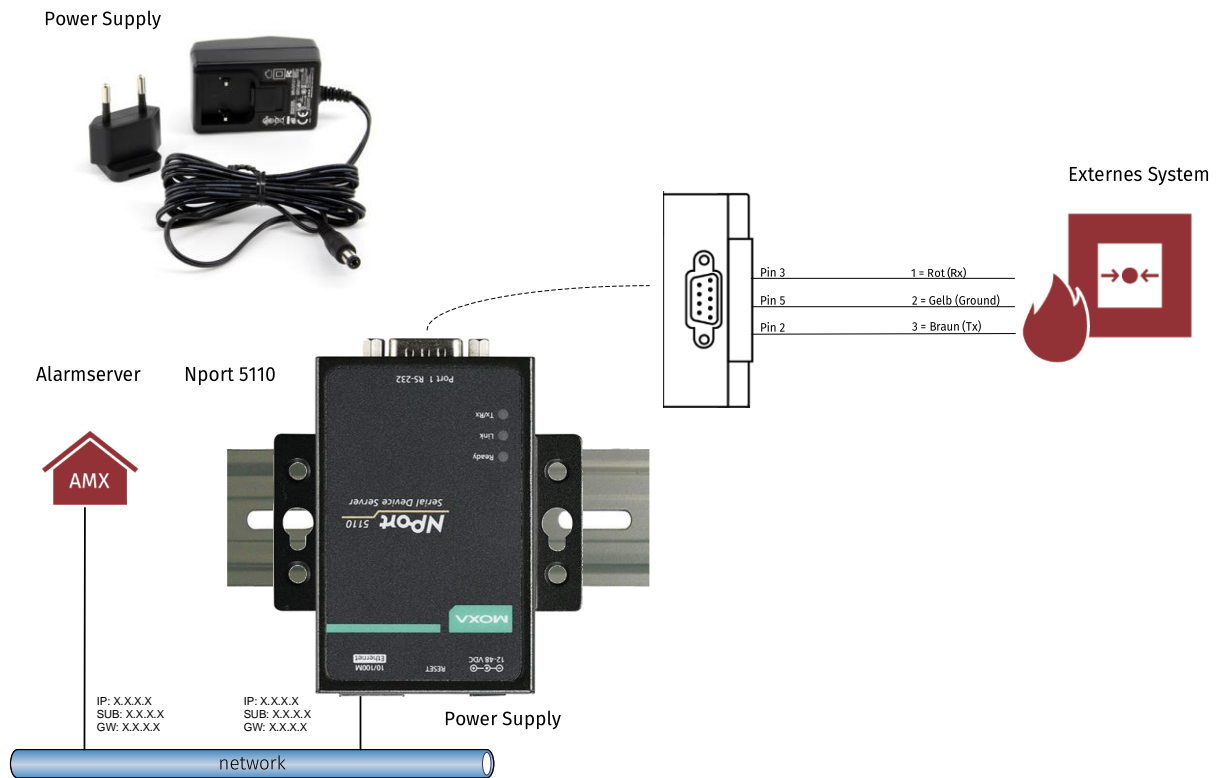
- Communication rate 10/100 MBit/s
- DIN 35
- 24V power supply



3. Dimensions



4. Installation instructions



ML30.241 – Power supply

For each component (ADAM 6050/6060/6066/5000 and Beckhoff system) one power supply must be used.

1. Components

- DIN 35
- Input: AC 100-240V (-15%/+10%) / DC 110V-300V (-20%/+25%)
- DC Output: 24-28Vdc / 1.3-1.1A
- 30 W



Dimensions: 23 x 75 x 91mm

All in one Modem / Watchdog

1. SMS transmission and receiving

With the 3G modem, the alarm server sends fault messages via GSM SMS. A SIM card must be installed for this (customer-side). SMS can also be received and processed.

2. Network Monitoring

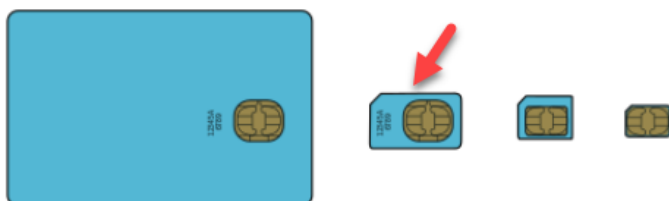
The network monitoring additionally allows a watchdog function. If the alarm server is no longer pinable (ICMP), a relay is opened or closed.

3. Components

- TCP/IP connection
- Slot SIM card (excl. SIM card)
- Protocol: GSM/EDGE/UMTS/HSPA
- 24V power supply
- 2 x digital inputs
- 2 x digital outputs (100mA at 5V DC)
- External antenna



SIM (2FF)



LTE Router RUT 955

1. Cellular Router

The RUT955 is a highly reliable industrial LTE Cat 4 router that offers high performance and GNSS positioning capabilities. In alarm applications, the RUT955 router is used as a failover modem.

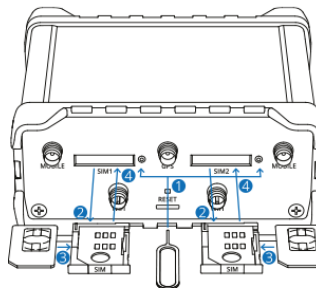
Components

- Mobile module (4G LTE)
- Two SIM slots
- Width: 110mm Height: 50mm Depth: 100mm
- Weight: 287g



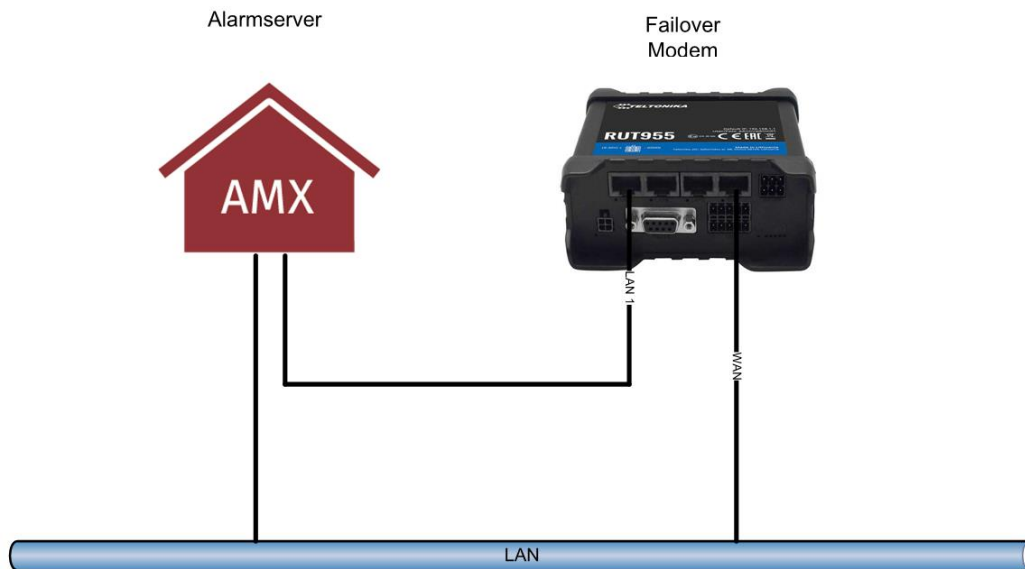
SIM card

With the RUT955 you can use two SIM cards from different providers at the same time.

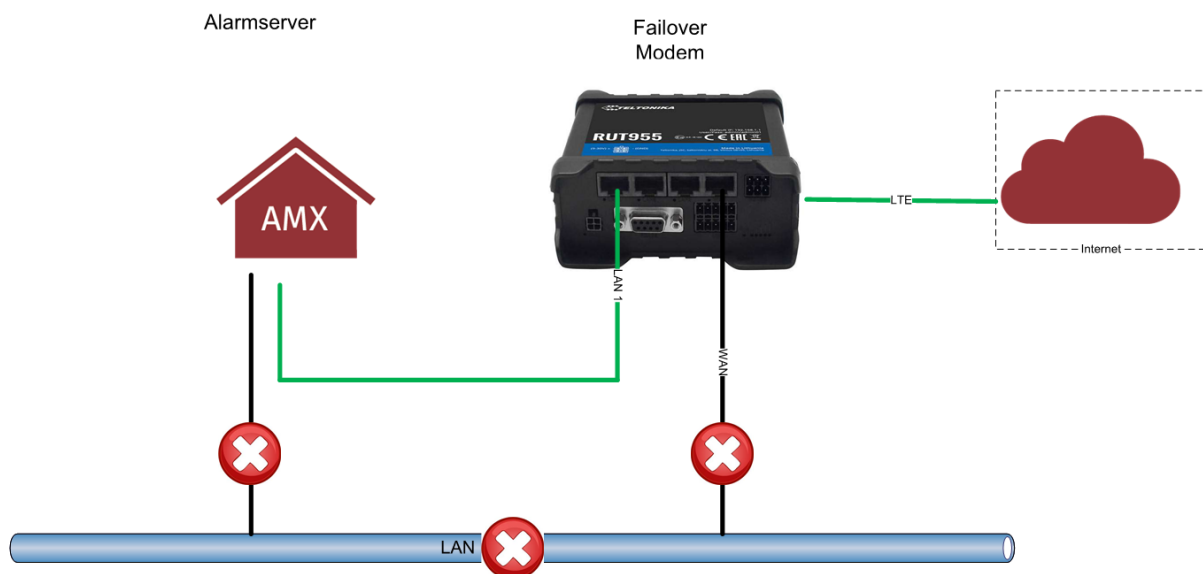


2. Installation instructions

Wiring



The network connection is established by the AMX and the RUT955 to the internal network respectively. The AMX alarm server and the RUT955 are connected to each other via a direct connection.



In the event of a network interruption or if the network connection in the internal network can no longer be established, the failover takes effect via the direct connection from the AMX to RUT955. A connection to the Internet can then be established via the SIM card inserted in the modem.

ANTENNAS

For the RUT955, both mobile antennas must be connected, otherwise the RUT955 will have no to poor reception.



No. Description

- | | |
|---|---------------------------------|
| 1 | LTE auxiliary antenna connector |
| 2 | GPS antenna connector |
| 3 | LTE main antenna connector |
| 4 | USB connector |
| 5 | Wi-Fi antenna connectors |
| 6 | Reset button |



3. Dimensions

