DIN-rail telemetry & valve-control unit

VADTel-IIoTu-ValveLink

Cabinet-level telemetry and valve-control unit for gas, water and heat metering nodes

Key platform fit

Cellular telemetry • Isolated RS-485 • Valve actuator control

VADTel-IIoTu-ValveLink is a DIN-rail controller for remote valve control and cabinet-level telemetry in utility metering installations. It combines cellular communication, isolated RS-485 acquisition from compatible external metering devices, cabinet tamper supervision, actuator position interfacing and dedicated outputs for pneumatic-manifold and compressor control.

Valve control

Dedicated outputs for pneumatic-manifold control and compressor actuation.

Metering-node integration

Collects live values, archives, configuration data and events from compatible RS-485 meters.

Cabinet supervision

Supports cabinet tamper input and actuator stem-position monitoring.

Field-ready form factor

DIN-rail enclosure, 12–24 V DC supply and -40...+60 °C operation.

Typical applications

- Gas metering nodes with remote shutoff
- Water distribution chambers with automated valves
- District-heating substations
- Remote valve stations

Operating role

The controller acts as the cabinet-level node between the local valve assembly, metering devices and the supervisory backend. It polls compatible meters over RS-485, supervises cabinet-level status and reports telemetry through GPRS / NB-IoT communication.

Typical connected subsystems

12/24 V supply or battery-backed cabinet power • GSM antenna • cabinet tamper switch • compressor • pneumatic manifold • actuator position board • pneumatic actuator • compatible external meters / correctors / calculators on RS-485

Technical specifications

Parameter	Value
POWER & SAFETY	
Mounting	DIN rail, cabinet installation
Supply voltage	12–24 V DC
Maximum power consumption	15 W max
Internal circuits	SELV < 30 V DC
Overvoltage category	OVC II
Pollution degree	2
Operating temperature	-40...+60 °C
CONTROL OUTPUTS	
OUT1–OUT3	3 outputs, 12/24 V DC, 5 A max each
OUT4	1 output, 12/24 V DC, 10 A max
Inductive loads	External suppression required
INPUTS & LOCAL INTERFACES	
IN-TAMPER	Dry contact, 1 input
POS-SENSE	3-wire, 3.0–4.2 V DC
I²C	3.3 V logic
COMMUNICATIONS	
Cellular	GPRS / NB-IoT (LTE Cat-NB1 / NB2)
RS-485	1 isolated port, A/B
RS-485 signal level	1.5–5 V differential
Metering scope	Compatible external meters / correctors / calculators

Metering-node functions

- Live values
- Archives
- Configuration exchange
- Event and status logs

Typical field devices

- Gas volume correctors
- Water meters
- Heat calculators
- Cabinet door switch / dry contact
- Compressor and pneumatic manifold
- Actuator position board

Integration notes

Pressure-sensor implementation is project-specific.

Output protection and suppression depend on the selected load.

Final terminal assignment follows project wiring documentation.

Standard product variant

Model: VADTel-IIoTu-ValveLink
Standard P/N: VAD-IIOTU-VLK-01
Form factor: DIN-rail controller

Application, installation and safety notes

Utility-market application fit

Gas — metering nodes with remote shutoff, gas volume correctors and cabinet telemetry.

Water — distribution chambers and metering cabinets with automated valves and compatible RS-485 metering.

Heat — heat calculators, valve stations and district-heating substations with cabinet-level telemetry.

Installation and service precautions

- Install in a protected control cabinet.
- Route power, antenna and RS-485 according to EMC practice.
- Verify compressor and actuator current against output ratings before commissioning.
- Use external suppression with inductive loads.
- Standard product version is intended for non-Ex cabinet installation.

Typical control / telemetry workflow

1 Poll meters

Read current values, archives and events from compatible RS-485 devices.

2 Monitor local state

Supervise cabinet tamper, actuator position and cabinet-level status.

3 Control valve equipment

Drive compressor and pneumatic manifold according to project logic.

4 Report telemetry

Send telemetry and event data through cellular communication to the supervisory system.

System integrator checklist

- Confirm actuator safe state and shutdown philosophy.
- Confirm compatible meter protocol map for the selected project.
- Confirm protective devices, cabinet design and field wiring.
- Confirm antenna placement and cellular service availability.

EU documentation / market release

- Product labeling and EU Declaration of Conformity apply to the supplied market variant.
- Refer to project documentation for final terminal map and installation instructions.
- WEEE disposal and product traceability follow the supplied label set.

Application limit for VADTel-IIoTu-ValveLink

VADTel-IIoTu-ValveLink is a cabinet-level controller and telemetry unit. It is not a stand-alone gas safety shutoff device; final compliance of the complete installation remains with the system integrator.

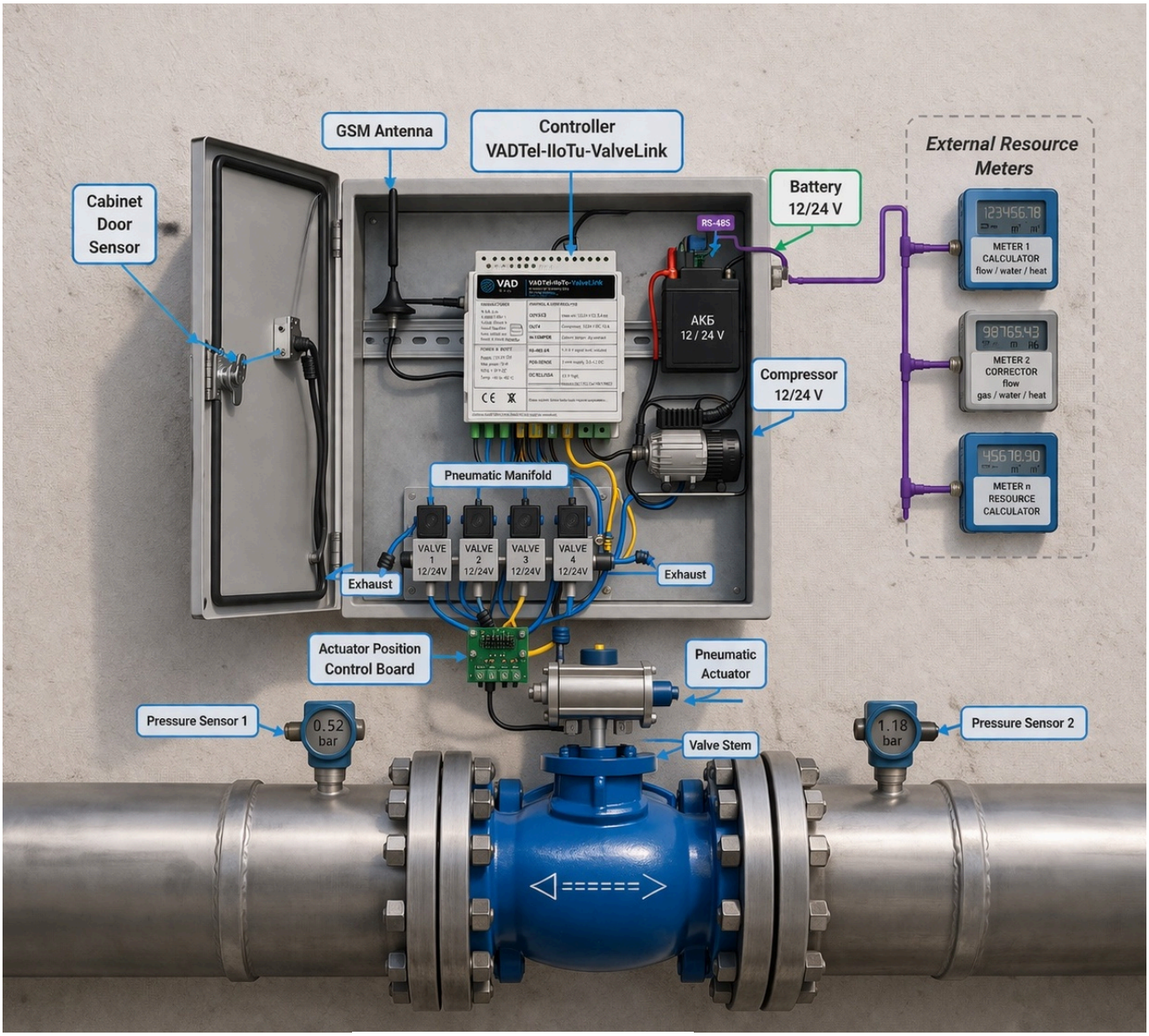
Typical cabinet-level application architecture

Controller-managed subsystems

Cabinet door sensor • GSM antenna • 12/24 V supply / battery • compressor • pneumatic manifold • actuator position board

External metering side

Compatible external resource meters, gas volume correctors, water meters, heat calculators and other RS-485 devices



Illustrative cabinet-level arrangement. Pressure sensing and the final electrical implementation depend on the project variant and wiring documentation.

IIoT Ecosystem

Cloud-based supervisory platform for valve control, device monitoring and service management

Current status
Open
Normal working position

The last command
Feb 28, 2026 16:12
Command confirmed

Last communication
Jan 27, 2026 11:02
Status: successful

Management log

History of valve state changes

Date / time	Result	Description
Mar 26 11:15	Closed	Server cmd from ctrl unit
Mar 26 11:09	Close	Cmd from control panel
Mar 25 19:12	Open	Server cmd from ctrl unit
Mar 25 19:08	Open	Cmd from control panel

Device parameters

Drive type	**Electromagnetic**
Control mode	**Local + remote**
Serial number	**KZ-220-A-0041**
Last revision	**February 19, 2026**

Diagnostics and maintenance

Valve drive — Working properly

Response time is within the norm.

Limit switches — Norm

Opening and closing states read correctly.

Service history

Date	Job	Executor
Feb 19, 2026	Emergency closure test	Eng. A. Khasanov
Oct 15, 2025	Actuator inspection	PromArmatura LLC

IIoT Ecosystem platform capabilities

- Remote valve control (open / close) through cellular communication
- Real-time device status monitoring and communication session tracking
- Management log with full audit trail of valve state changes
- Device diagnostics: valve drive health, limit switch status, response time
- Service history with maintenance records, job types and executor tracking