AETHEREDGE™

AE series

Single-phase and three-phase smart electricity meters for utility AMI and prepayment



AE120
Single-phase smart meter



AE120K
Single-phase smart meter with integrated STS keypad



AE340
Three-phase smart meter



AE340K
Three-phase smart meter with integrated STS keypad

DOCUMENT
Product catalogue

EDITION
Edition 02 · Preliminary

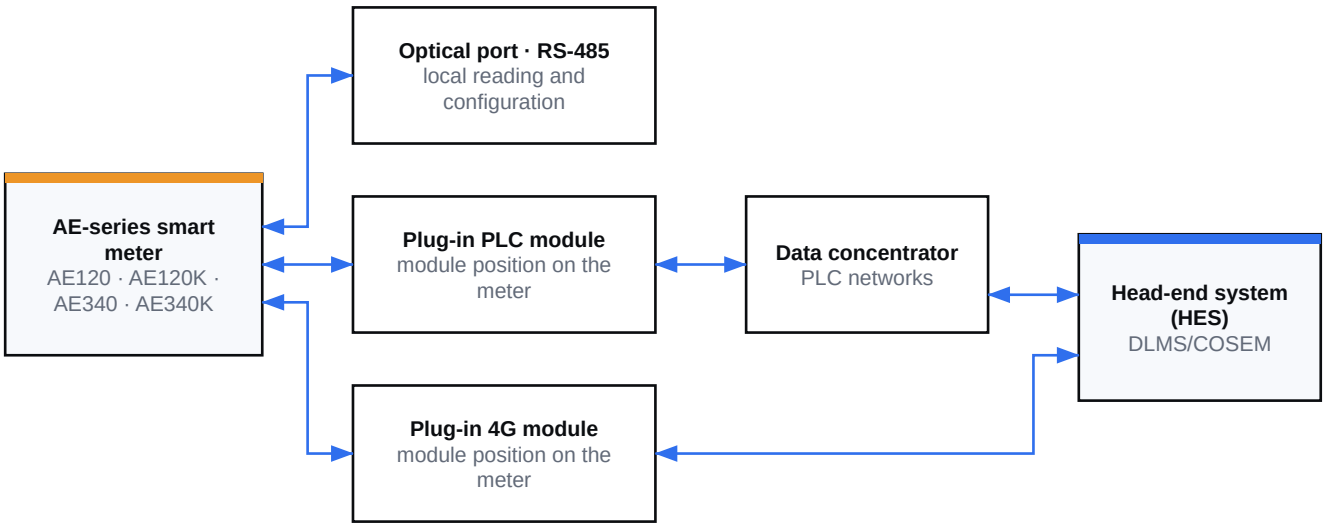
ISSUE DATE
4 November 2026

LANGUAGE
English

The AE series at a glance

The AetherEdge™ AE series comprises four direct-connected smart electricity meters on one DLMS/COSEM platform: two single-phase and two three-phase models, each available without or with an integrated STS keypad for prepayment. All four models share the same nameplate current range, accuracy classes, operating temperature range and plug-in communication concept.

Model	Phase	Integrated keypad	Typical use
AE120	Single phase	No	Residential AMI
AE120K	Single phase	Yes — 12-key STS keypad	Residential prepayment and AMI
AE340	Three phase	No	Three-phase residential and commercial AMI
AE340K	Three phase	Yes — 12-key STS keypad	Three-phase prepayment and AMI



System context for the AE series. Fitted interfaces and bearers depend on the order.

Shared platform

- Energy, demand and instantaneous measurement with four-quadrant registers and two pulse LEDs (1 000 imp/kWh, 1 000 imp/kvarh).
- Four time-of-use tariff registers with a 12-season, 100-holiday calendar; monthly and daily billing; demand and energy load profiles.
- Internal latching load switch with DLMS disconnect control, load limiting and an overcurrent reconnection sequence.
- Plug-in communication module positions for PLC and 4G, plus optical port and RS-485 for local access.
- DLMS/COSEM security with four associations, security policies 0–3 and AES-GCM-128 protection.
- Event logs, three alarm registers with push notification, and local or remote firmware transfer with signature verification.

AE120 Single-phase smart meter



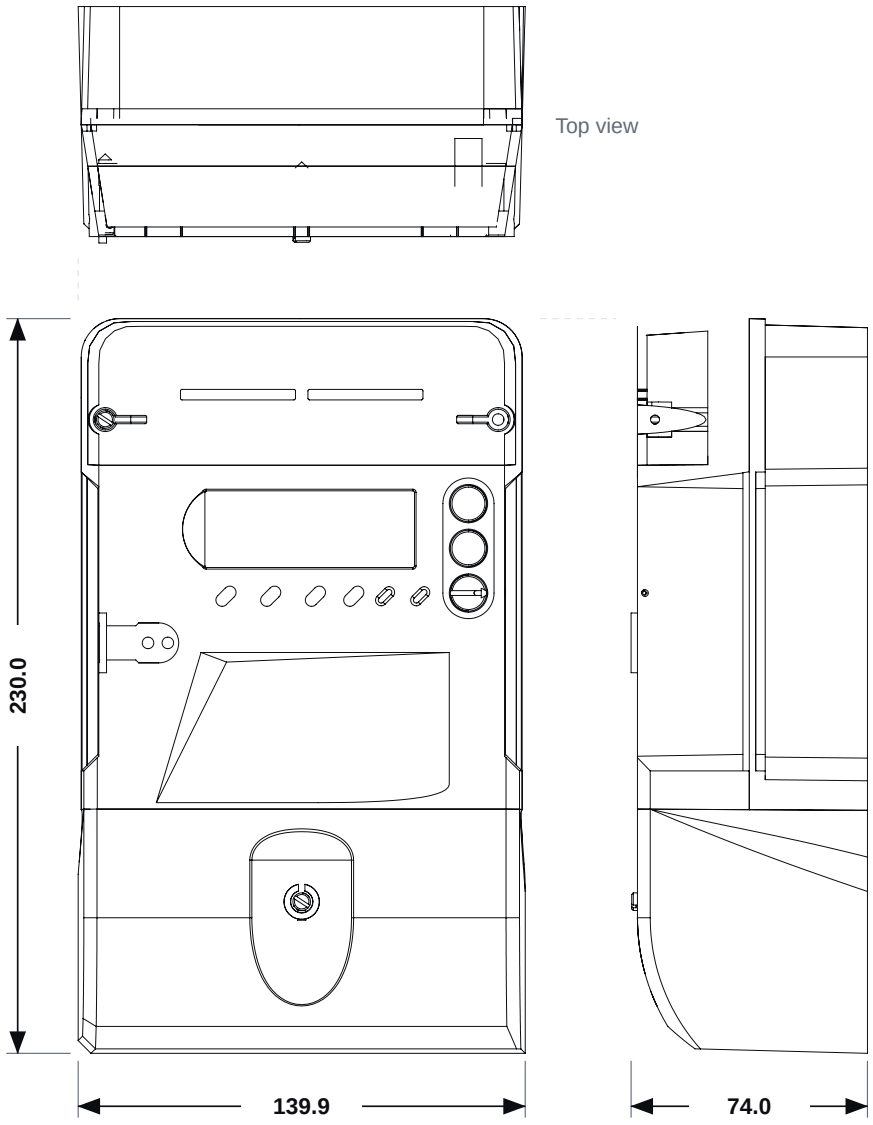
A direct-connected single-phase DLMS/COSEM meter for utility AMI, with plug-in communication, an internal load switch and local optical and RS-485 access.

Features

- Single-phase, two-wire direct connection for residential AMI.
- Plug-in PLC or 4G communication with optical and RS-485 local access.
- Internal load switch for remote and configured disconnection.
- Measurement, tariffs, profiles and events on the shared AE platform.

Specifications

Parameter	Value
Connection	Single phase, two wire (1P2W), direct connected
Voltage	220–240 V
Current	0.25–5(100) A · reference 5 A, maximum 100 A
Frequency	50/60 Hz
Accuracy	Class 1 active (IEC 62053-21) · Class 2 reactive (IEC 62053-23)
Utilisation category · impulse voltage	UC3 · Uimp 6 kV
Ingress protection · temperature	IP54 · −40 °C to +70 °C
Pulse LEDs	1 000 imp/kWh · 1 000 imp/kvarh
Interfaces	Plug-in module (PLC / 4G positions) · optical port · RS-485
Overall envelope W × H × D	139.9 × 230.0 × 74.0 mm



AE120 overall envelope in millimetres, from its own 3D assembly. Not a mounting-hole or tolerance drawing.

AE120K Single-phase smart meter with integrated STS keypad



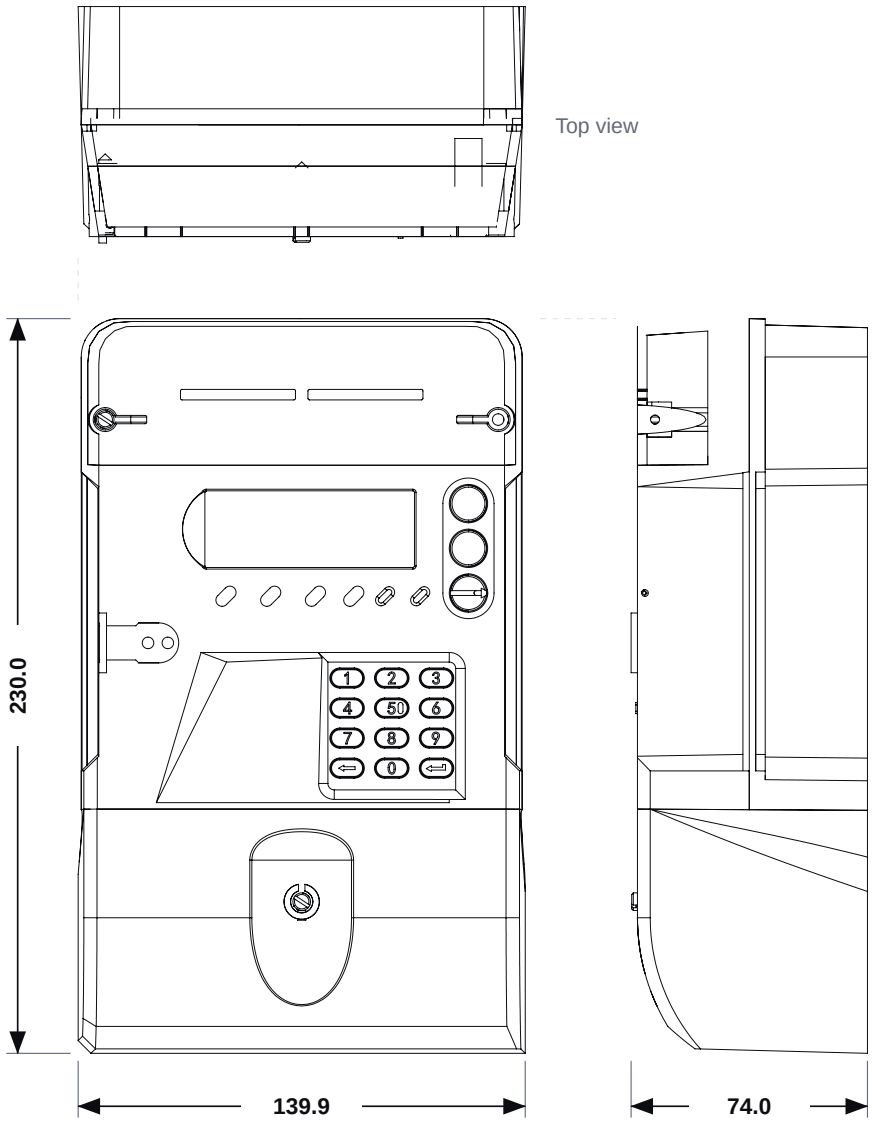
A direct-connected single-phase DLMS/COSEM meter for utility AMI and prepayment, with an integrated STS keypad, plug-in communication and an internal load switch.

Features

- Single-phase, two-wire direct connection for residential prepayment.
- Integrated 12-key STS keypad: token entry, emergency credit, friendly hours and short-code queries.
- Credit LED and audible low-credit alarms.
- Plug-in PLC or 4G communication for online AMI operation.

Specifications

Parameter	Value
Connection	Single phase, two wire (1P2W), direct connected
Voltage	220–240 V
Current	0.25–5(100) A · reference 5 A, maximum 100 A
Frequency	50/60 Hz
Accuracy	Class 1 active (IEC 62053-21) · Class 2 reactive (IEC 62053-23)
Utilisation category · impulse voltage	UC3 · Uimp 6 kV
Ingress protection · temperature	IP56 · −40 °C to +70 °C
Pulse LEDs	1 000 imp/kWh · 1 000 imp/kvarh
Interfaces	Plug-in module (PLC / 4G positions) · optical port · RS-485
Overall envelope W × H × D	139.9 × 230.0 × 74.0 mm
Prepayment	STS 20-digit tokens · integrated 12-key keypad



AE120K overall envelope in millimetres, from its own 3D assembly. Not a mounting-hole or tolerance drawing.

AE340 Three-phase smart meter



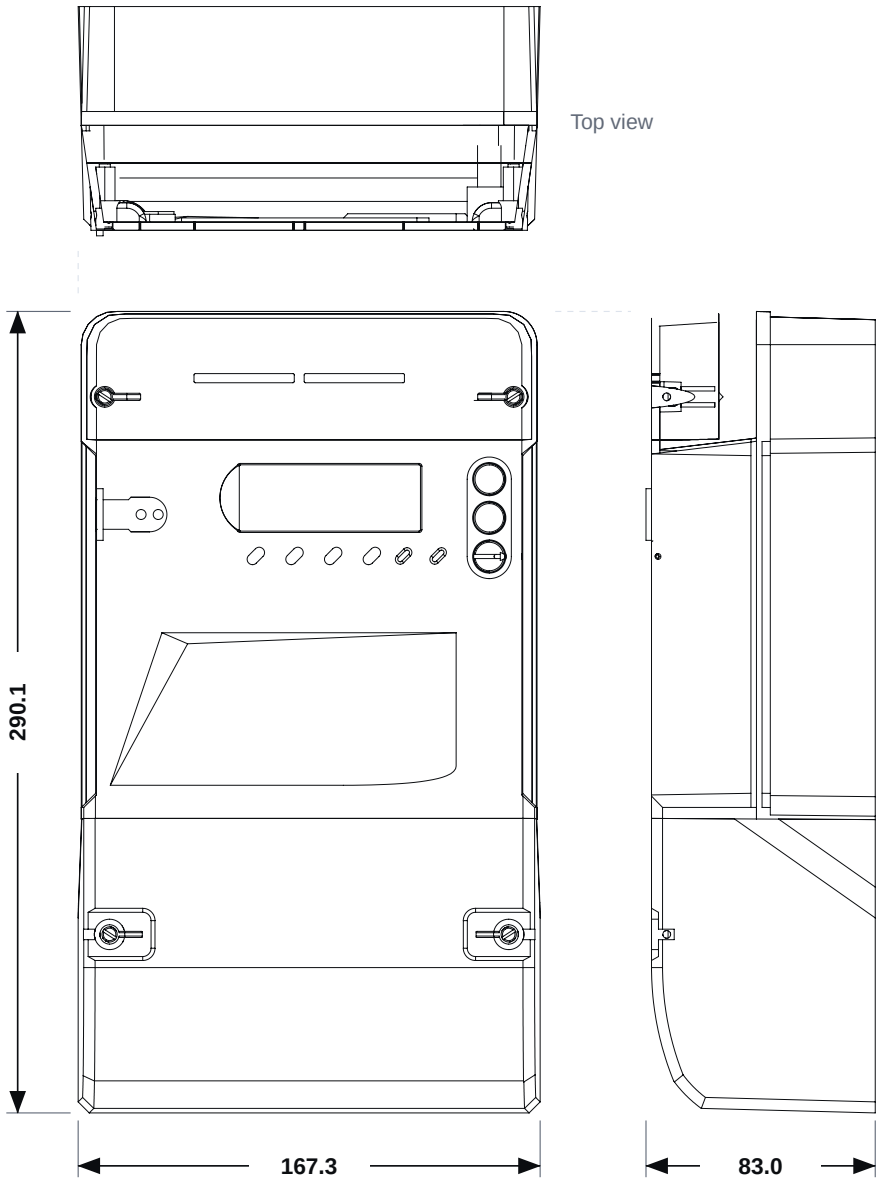
A direct-connected three-phase four-wire DLMS/COSEM meter for utility AMI, with plug-in communication, an internal load switch and local optical and RS-485 access.

Features

- Three-phase, four-wire direct connection for residential and commercial AMI.
- Per-phase voltage, current and power with power-quality event logs.
- Internal load switch for remote and configured disconnection.
- Plug-in PLC or 4G communication with optical and RS-485 local access.

Specifications

Parameter	Value
Connection	Three phase, four wire (3P4W), direct connected
Voltage	3 × 220/380 V to 3 × 240/415 V
Current	0.25–5(100) A · reference 5 A, maximum 100 A
Frequency	50/60 Hz
Accuracy	Class 1 active (IEC 62053-21) · Class 2 reactive (IEC 62053-23)
Utilisation category · impulse voltage	UC3 · Uimp 6 kV
Ingress protection · temperature	IP54 · −40 °C to +70 °C
Pulse LEDs	1 000 imp/kWh · 1 000 imp/kvarh
Interfaces	Plug-in module (PLC / 4G positions) · optical port · RS-485
Overall envelope W × H × D	167.3 × 290.1 × 83.0 mm



AE340 overall envelope in millimetres, from its own 3D assembly. Not a mounting-hole or tolerance drawing.

AE340K Three-phase smart meter with integrated STS keypad



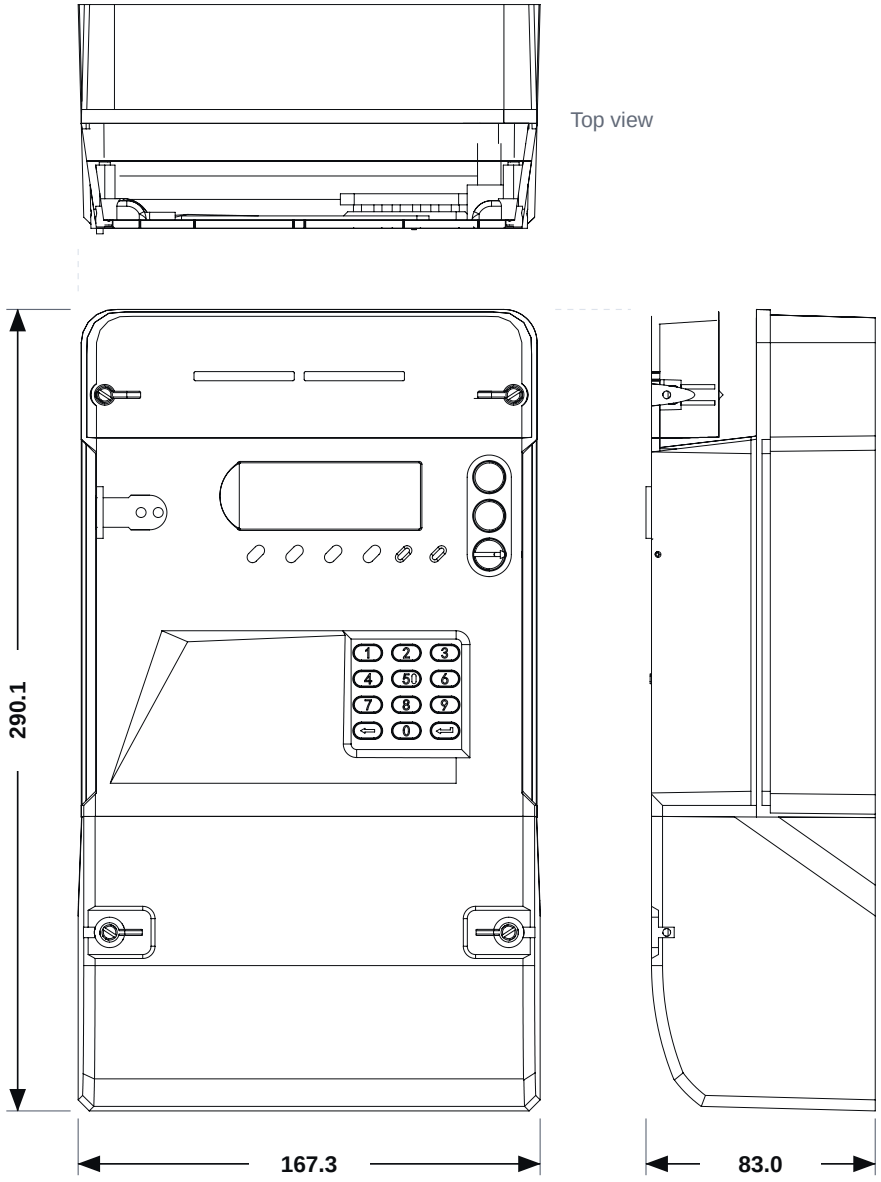
A direct-connected three-phase four-wire DLMS/COSEM meter for utility AMI and prepayment, with an integrated STS keypad, plug-in communication and an internal load switch.

Features

- Three-phase, four-wire direct connection for prepayment.
- Integrated 12-key STS keypad: token entry, emergency credit, friendly hours and short-code queries.
- Per-phase measurement with power-quality event logs.
- Plug-in PLC or 4G communication for online AMI operation.

Specifications

Parameter	Value
Connection	Three phase, four wire (3P4W), direct connected
Voltage	3 × 220/380 V to 3 × 240/415 V
Current	0.25–5(100) A · reference 5 A, maximum 100 A
Frequency	50/60 Hz
Accuracy	Class 1 active (IEC 62053-21) · Class 2 reactive (IEC 62053-23)
Utilisation category · impulse voltage	UC3 · Uimp 6 kV
Ingress protection · temperature	IP54 · −40 °C to +70 °C
Pulse LEDs	1 000 imp/kWh · 1 000 imp/kvarh
Interfaces	Plug-in module (PLC / 4G positions) · optical port · RS-485
Overall envelope W × H × D	167.3 × 290.1 × 83.0 mm
Prepayment	STS 20-digit tokens · integrated 12-key keypad



Top view

Front view

Right side view

AE340K overall envelope in millimetres, from its own 3D assembly. Not a mounting-hole or tolerance drawing.

Model comparison

Parameter	AE120	AE120K	AE340	AE340K
Phase and connection	1P2W · direct connected	1P2W · direct connected	3P4W · direct connected	3P4W · direct connected
Voltage	220–240 V	220–240 V	3 × 220/380 V to 3 × 240/415 V	3 × 220/380 V to 3 × 240/415 V
Current	0.25–5(100) A	0.25–5(100) A	0.25–5(100) A	0.25–5(100) A
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Accuracy	Class 1 active · Class 2 reactive	Class 1 active · Class 2 reactive	Class 1 active · Class 2 reactive	Class 1 active · Class 2 reactive
Utilisation category · impulse voltage	UC3 · Uimp 6 kV	UC3 · Uimp 6 kV	UC3 · Uimp 6 kV	UC3 · Uimp 6 kV
Operating temperature	−40 °C to +70 °C	−40 °C to +70 °C	−40 °C to +70 °C	−40 °C to +70 °C
Ingress protection	IP54	IP56	IP54	IP54
Integrated STS keypad	No	Yes	No	Yes
Prepayment functions	—	Token entry, emergency credit, friendly hours	—	Token entry, emergency credit, friendly hours
Communication	Plug-in PLC / 4G · optical · RS-485	Plug-in PLC / 4G · optical · RS-485	Plug-in PLC / 4G · optical · RS-485	Plug-in PLC / 4G · optical · RS-485
Overall envelope W × H × D (mm)	139.9 × 230.0 × 74.0	139.9 × 230.0 × 74.0	167.3 × 290.1 × 83.0	167.3 × 290.1 × 83.0

Ratings follow the product nameplates. Confirm the nameplate of the delivered meter and the ordered configuration.

Selecting a model

1. Choose single phase (AE120, AE120K) or three phase, four wire (AE340, AE340K) for the supply arrangement.
2. Choose a K model where customers recharge credit by STS token on the meter; choose AE120 or AE340 for online AMI operation.
3. Specify the plug-in communication module (PLC or 4G) and the utility configuration with the order.

Documentation

Each model has a user manual and a datasheet in English, Korean, Spanish, German, French, Russian and Arabic. Ask Archai for the documents that match your ordered configuration.

Standards referenced

IEC 62053-21 — Static meters for AC active energy (classes 0.5, 1 and 2).

IEC 62053-23 — Static meters for reactive energy (classes 2 and 3).

IEC 62052-11 — Metering equipment: general requirements, tests and test conditions.

IEC 62056 series — DLMS/COSEM electricity-metering data exchange.

IEC 62055-41 — STS application-layer protocol for one-way token carrier systems.

IEC 62055-51 — Physical-layer protocol for one-way numeric and magnetic-card token carriers.

Referenced documents identify the technical context. They are not certification claims; applicable approvals and test reports are confirmed for each order. IEC 62055 references apply to the K models.

Contact Archai

For quotations, configurations and documentation for the AE series, contact Archai Electronics Inc.

sales@archai.co.kr
www.archai.co.kr

ARCHAI

This preliminary edition is subject to change without notice. Product photographs show supplied samples; confirm ratings on the nameplate of the delivered meter.

ARCHAI-AE-CAT · 2026-11-04 · © 2026 Archai Electronics Inc.