

kawi meters

by Tavo Technologies

IGNITE. MEASURE. DELIVER.

FOUR KWM MODELS · STS CERTIFIED · DLMS/COSEM · BIDIRECTIONAL NET METERING · GSM + LoRaWAN · NERC
TYPE-APPROVAL IN PROGRESS · TRADEMARKED

KWM-1P	KWM-1P+	KWM-1P-NM ■	KWM-3P-100A ■
1-phase · 40A GSM · Import	1-phase · 80A GSM+LoRa · Import	1-phase · 80A GSM+LoRa · Bidirectional	3-phase · 100A CT GSM+Modbus · 4-Quad
~\$22/unit	~\$29/unit	~\$34/unit	~\$35/unit

MINIGRID OPERATORS

DISCO NETWORKS

NET METERING
PROSUMERS ■

NERC MAP READY

METERS AS A SERVICE

Kawi Meters by Tavo Technologies Ltd · CAC registered · Abuja, Nigeria · kawimeters.com · Trademarked

PRODUCT OVERVIEW

Kawi Meters by Tavo Technologies delivers four certified smart prepaid meter models — trademarked and built for Nigeria's minigrid operators, DISCO MAP networks, and C&I; solar prosumers. All models share the Kawi Cloud platform with direct I-REC integration via Tavo Energy and Tavo.to QR consumer portal on every unit. Ignite. Measure. Deliver.

KWM-1P	KWM-1P+	KWM-1P-NM	KWM-3P
KWM-1P-40A · Standard Import	KWM-1P-80A-L · Dual Connectivity	■ BIDIRECTIONAL NET METERING KWM-1P-NM · Net Metering NEW	■ BIDIRECTIONAL NET METERING KWM-3P-100A · 4-Quadrant
Standard single-phase prepaid import meter. Minigrid residential and DISCO C1/C2 consumers.	Enhanced single-phase with GSM+LoRaWAN for remote sites and DISCO peri-urban networks.	Bidirectional single-phase net metering meter. Import and export independently measured. Export credit auto-applied to STS account.	3-phase 4-quadrant CT meter for commercial solar, BESS, DISCO C1/C2, and minigrid-DISCO grid tie.
Voltage230V AC	Voltage230V AC		Voltage3×230/400V
Current40A max	Current80A max	Import OBIS1.0.1.8.0.255	Current100A CT
AccuracyClass 1	AccuracyClass 1	Export OBIS1.0.2.8.0.255	AccuracyClass 0.5S
ConnectivityGSM/GPRS	ConnectivityGSM + LoRa	ConnectivityGSM + LoRa	ConnectivityGSM + Modbus
RatingIP54	IP ratingIP65	IP ratingIP65	IP ratingIP65
UnidirectionalNo	BidirectionalNo	Net meteringNERC NM 2021	BidirectionalYES · 4-Quadrant
[Minigrid] [DISCO R1/R2]	[Minigrid Remote] [DISCO Peri-urban]	BidirectionalYES	[Anchor Tenant] [DISCO C1/C2] [Grid Tie]
~\$2/unit or ■1,200/month	~\$29/unit or ■900/month	[C&I; Solar] [NERC Prosumer] ~\$34/unit or ■900/month	~\$35/unit or ■700/month

■0 UPFRONT — METERS AS A SERVICE	Basic ■1,200 · Standard ■900 · Platform ■700 /meter/month Hardware + SIM + cloud + net metering config + maintenance included.	TAVO.TO QR on every KWM
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FULL TECHNICAL SPECIFICATIONS — ALL FOUR KWM MODELS

Electrical Parameters

Parameter	KWM-1P-40A	KWM-1P-80A-L	KWM-1P-NM	KWM-3P-100A
Rated voltage	230V AC	230V AC	230V AC	3×230/400V AC
Voltage range	176–264V	176–264V	176–264V	3×176–264V
Max current	40A	80A	80A	100A CT
Accuracy class	Class 1	Class 1	Class 1	Class 0.5S
Active energy import	kWh	kWh	kWh (Q1+Q4)	kWh (Q1+Q4)
Active energy export	—	—	kWh (Q2+Q3)	kWh (Q2+Q3)
Reactive energy	—	—	—	kVArh (4-quad)
Bidirectional	No	No	YES ■	YES · 4-Quad
Net metering	—	—	NERC NM 2021	NERC NM 2021
Export credit rate	—	—	Configurable	Configurable
Surge withstand	6kV/3kA	6kV/3kA	6kV/3kA	6kV/3kA

Communication and Connectivity

Parameter	KWM-1P-40A	KWM-1P-80A-L	KWM-1P-NM	KWM-3P-100A
GSM module	Quectel EC21	Quectel EC21	Quectel EC21	Quectel EC21
Data protocol	DLMS/COSEM	DLMS/COSEM	DLMS/COSEM	DLMS/COSEM
Push interval	15 min	15 min	15 min	15 min
Import OBIS	1.0.1.8.0.255	1.0.1.8.0.255	1.0.1.8.0.255	1.0.1.8.0.255
Export OBIS	—	—	1.0.2.8.0.255	1.0.2.8.0.255
LoRaWAN	—	Class A/C	Class A/C	—
Modbus RTU	—	—	—	RS-485
TLS encryption	TLS 1.2	TLS 1.2	TLS 1.2	TLS 1.2
OTA firmware	SHA-256	SHA-256	SHA-256	SHA-256
Tavo.to QR code	Front panel	Front panel	Front panel	Front panel

Physical, Environmental and Prepayment

Parameter	KWM-1P-40A	KWM-1P-80A-L	KWM-1P-NM	KWM-3P-100A
Dimensions (approx)	170×100×60mm	170×100×65mm	170×100×65mm	280×200×80mm
IP protection	IP54	IP65	IP65	IP65
Operating temp	-25 to +70°C	-25 to +70°C	-25 to +70°C	-25 to +70°C
Prepayment std	STS IEC 62055-41	STS IEC 62055-41	STS IEC 62055-41	STS IEC 62055-41
Tamper detection	Mag + cover	Mag + cover	Mag + cover	Mag + neutral + cover
Remote disconnect	Yes	Yes	Yes	Yes
Warranty target	5 years	5 years	5 years	5 years

■ BIDIRECTIONAL NET METERING

KWM-1P-NM and KWM-3P-100A measure energy in both directions per NERC NM 2021. Export credit auto-applied to STS prepayment account. Export data flows to Tavo Energy marketplace for I-REC issuance — creating clean revenue for every prosumer site.

USE CASES

· C&I; solar rooftop (factory, hospital, university) · Minigrid-DISCO grid tie-in · Behind-the-meter BESS · NERC-eligible prosumer · Telecom tower solar · Community solar shared array

COMPLIANCE AND CERTIFICATIONS

IEC 62052-11	IEC 62053-21	IEC 62053-22	IEC 62055-41	IEC 62056	IEC 61000-4
General Req.	Class 1	Class 0.5S	STS Prepay	DLMS/COSEM	EMC Series

NERC NM 2021	SON S-Mark	NERC Type-App.	NCC Radio	RoHS
Net Metering	Nigeria filing	In progress	Pre-approved	Lead-free

DEPLOYMENT MARKET GUIDE

Market segment	KWM model	Bidirectional?	MaaS tier
Minigrid household	KWM-1P-40A	No	Basic ■1,200/mo
Minigrid remote / weak GSM	KWM-1P-80A-L	No	Standard ■900/mo
C&I; solar rooftop prosumer	KWM-1P-NM	YES ■	Standard ■900/mo
NERC net metering customer	KWM-1P-NM	YES ■	Standard ■900/mo
DISCO R1/R2 residential (MAP)	KWM-1P-40A	No	NERC MAC rate
DISCO C1/C2 commercial (MAP)	KWM-3P-100A	YES ■	NERC MAC rate
Minigrid anchor tenant / SME	KWM-3P-100A	YES ■	Platform ■700/mo
Minigrid-DISCO grid tie-in	KWM-3P-100A	YES ■	Platform ■700/mo
BESS / battery storage	KWM-3P-100A	YES ■	Platform ■700/mo

How to order All four KWM models available outright or via MaaS subscription. Pilot MOQ: 50 units. Production MOQ: 500 units. Trademark registered. Net metering models NERC NM 2021 compliant.

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Kawi Meters is a registered trademark of Tavo Technologies Ltd. Specs subject to change. NERC type-approval and SON S-Mark filings in progress. Version 1.0 — June 2026.