

# Energiemeting in Appartementsgebouwen

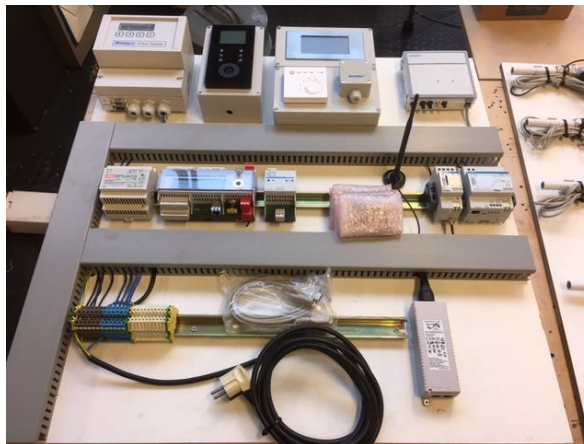


## Project Van Marcke Energiemeters:

Centrale vraag: Hoe kunnen we energiemeters van verschillende merken op een eenvoudige manier op afstand uitlezen?



### Verschillende Merken meters op Mbus



## M-Bus communicatie



## Uitlezing Energiemeters

M-Bus?

M-Bus masters

Masters met functionaliteit

Dataverwerking



## M-Bus?

M-Bus masters

Masters met functionaliteit

Dataverwerking



## M-Bus

Open Source Protocol

Tweedraads & eenvoudig

**OF Draadloos**

Seriële communicatie (RS232)

Voeding via de Master



## Ecompany

M-Bus?

**M-Bus masters**

Masters met functionaliteit

Dataverwerking



## M-Bus master

Eenvoudige type

Voeding netwerk

RS232 uitgang

Optie: display



## M-Bus master

Wat met datalogging?

Log-in functionaliteit?

Koppeling met een PC?

USB-stick voor data?

Communicatie van op afstand?

GPRS?

Internet?



M-Bus?

M-Bus masters

**Masters met functionaliteit**

Dataverwerking



## Masters met functies

Multiport 250D

Weblog 250

CMe2100

CMe3100



## Multiport 250D

Display (uitlezing individuele meters)

Multi – communicatie – port

Eenvoudige koppeling PC



## Multiport 250D



## Weblog 250

Display

Datalogging

Verschillende levels van log-in

Automatische export

Aansluiting voor USB sleutel

Internet aansluiting ( intern of extern )





## Weblog 250



## CMe2100

M-Bus master tot 8 slaves

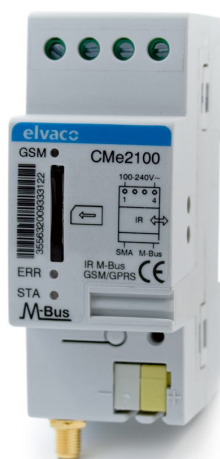
Datalogger (max 100 slaves)

Via GPRS (sim kaart)

Din-RAIL montage



## CMe2100



## CMe3100

M-Bus master tot 32 slaves

Datalogger (max. 250 slaves)

Licenties

Via TCP/IP

Din-RAIL montage



# CMe3100

Via PC bereikbaar  
Build-in Webserver  
REST / JSON  
Measurement Series

...



# CMe3100



M-Bus?

M-Bus masters

Masters met functionaliteit

**Dataverwerking**



## **Dataverwerking**

1. Display + PC connectie met export
2. Display + Internet connectie met export + USB sleutel
3. Export & config via GPRS
4. Export & config via TCP/IP



**Export in .csv**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O				
1	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	volume,m3,	inst-value,0,0				
2	6029786	15730403	20/10/15 15:16	0	GWP		60 warm water (30°C-90°C)	117	0	0	15730403		9716					
3	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	volume,m3,	inst-value,0,0				
4	6029786	15730404	20/10/15 15:16	0	GWP		60 warm water (30°C-90°C)	117	0	0	15730404		9361					
5	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	volume,m3,	inst-value,0,0				
6	6029786	15730405	20/10/15 15:16	0	GWP		60 warm water (30°C-90°C)	117	0	0	15730405		8937					
7	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	volume,m3,	inst-value,0,0				
8	6029786	15730406	20/10/15 15:16	0	GWP		60 warm water (30°C-90°C)	117	0	0	15730406		8734					
9	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	volume,m3,	inst-value,0,0				
10	6029786	15730407	20/10/15 15:16	0	GWP		60 warm water (30°C-90°C)	117	0	0	15730407		10090					
11	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	volume,m3,	inst-value,0,0				
12	6029786	15730408	20/10/15 15:16	0	GWP		60 warm water (30°C-90°C)	117	0	0	15730408		12812					
13	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	volume,m3,	inst-value,0,0				
14	6029786	15730409	20/10/15 15:16	0	GWP		60 warm water (30°C-90°C)	117	0	0	15730409		39705					
15	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	volume,m3,	inst-value,0,0				
16	6029786	15730410	20/10/15 15:16	0	GWP		60 warm water (30°C-90°C)	117	0	0	15730410		6748					
17	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	volume,m3,	inst-value,0,0				
18	6029786	15730411	20/10/15 15:16	0	GWP		60 warm water (30°C-90°C)	117	0	0	15730411		99					
19	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	volume,m3,	inst-value,0,0				
20	6029786	15730412	20/10/15 15:16	0	GWP		60 warm water (30°C-90°C)	117	0	0	15730412		14955					
21	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	volume,m3,	inst-value,0,0				
22	6029786	15730413	20/10/15 15:16	0	GWP		60 warm water (30°C-90°C)	117	0	0	15730413		1239					
23	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	energy,Wh,	inst-value,0,0	on-time,hour(s),	inst-value,0,0	flow-temp,'C,	inst-value,0,0
24	6029786	6151432	20/10/15 15:16	0	KAM		11 heat flow temp	116	0	0	6151432		15800	17,23	6748			
25	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	energy,Wh,	inst-value,0,0	on-time,hour(s),	inst-value,0,0	flow-temp,'C,	inst-value,0,0
26	6029786	6151433	20/10/15 15:16	0	KAM		11 heat flow temp	116	16	0	6151433		149200	114,44	6748			
27	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	energy,Wh,	inst-value,0,0	on-time,hour(s),	inst-value,0,0	flow-temp,'C,	inst-value,0,0
28	6029786	6151434	20/10/15 15:16	0	KAM		11 heat flow temp	116	0	0	6151434		54000	61,76	6748			
29	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	energy,Wh,	inst-value,0,0	on-time,hour(s),	inst-value,0,0	flow-temp,'C,	inst-value,0,0
30	6029786	6151435	20/10/15 15:16	0	KAM		11 heat flow temp	116	0	0	6151435		41800	87,76	6748			
31	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	energy,Wh,	inst-value,0,0	on-time,hour(s),	inst-value,0,0	flow-temp,'C,	inst-value,0,0
32	6029786	6151436	20/10/15 15:16	0	KAM		11 heat flow temp	116	0	0	6151436		12500	9,49	6748			
33	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	energy,Wh,	inst-value,0,0	on-time,hour(s),	inst-value,0,0	flow-temp,'C,	inst-value,0,0
34	6029786	6151437	20/10/15 15:16	0	KAM		11 heat flow temp	116	0	0	6151437		193700	204,78	6748			
35	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	energy,Wh,	inst-value,0,0	on-time,hour(s),	inst-value,0,0	flow-temp,'C,	inst-value,0,0
36	6029786	6151438	20/10/15 15:16	0	KAM		11 heat flow temp	116	0	0	6151438		27600	18,33	6748			
37	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	energy,Wh,	inst-value,0,0	on-time,hour(s),	inst-value,0,0	flow-temp,'C,	inst-value,0,0
38	6029786	6151439	20/10/15 15:16	0	KAM		11 heat flow temp	116	0	0	6151439		175300	140,43	6748			
39	Serial-number	device-identification	created	value-data-count	manufacturer	version	device-type	access-number	status	signature	fabrication-no,	inst-value,0,0	energy,Wh,	inst-value,0,0	on-time,hour(s),	inst-value,0,0	flow-temp,'C,	inst-value,0,0
40	6029786	6151440	20/10/15 15:16	0	KAM		11 heat flow temp	116	0	0	6151440		20600	30,25	6748			

**Eenvoudig verwerkt**

A	B	C	D	E	F	G	H
1	Willems Tecno Naamsesteenweg	Datum Uitlezing	20/10/15 15:16				
2							
3	Appartement	SN Calorimeter	SN Warmwaterteller	Index warmte (kWh)	Index Koud Water (Liter)	Index Warm Water (Liter)	Infocode
4		0001	61511437	15730413	1937	4850	1239
5		0002	61511435	15730403	418	19090	9716
6		0101	61511439	15730408	1753	15900	12812
7		0102	61511438	15730411	276	480	99
8		0201	61511441	15730409	1763	34310	39705
9		0202	61511440	15730405	208	12020	8937
10		0301	61511436	15730406	125	9770	8734
11		0302	61511442	15730404	677	13070	5361
12		0401	61511433	15730410	1492	10000	6748
13		0402	61511432	15730407	158	9400	10090
14		0501	61511434	15730412	540	33620	14955
15	Boiler	61511463	///	7180	///	///	///
16							
17							
18							
47							

Normale weergave Een bestemming kiezen en op ENTER drukken of Plakken kiezen Som = 0

## Dataverwerking

LET OP : Export in .csv is NIET voldoende !!

- Eenvoudige conversie
- Conversie met kostenverdeling
- Derde partij voor incasso



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