

Product catalogue

MT30 series



**Precise measurement
combined with innovative Design**

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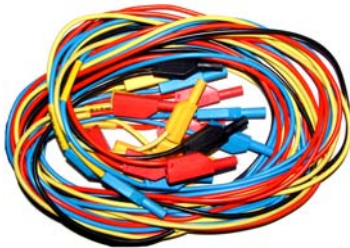
1 Basic system MT30

1.1 Three phase working standard MT30


	<p>Three phase working standard MT30 (Plastic housing)</p> <p>Order code 100319500</p> <p>Portable working standard MT30, 3ph unit (Plastic housing) <u>Supplied via mains or re-chargeable battery pack</u></p> <p>Voltage measurement upto 300V Error compensated clip-on C.T. up to 120A Accuracy for power and energy measurement < 0,2%</p> <p><u>Further accessories:</u></p> <table border="0"> <tr> <td>PC-software SSM3000 for data retrieval + MTVis</td> <td>100090702</td> </tr> <tr> <td>1 Data cable RS232</td> <td>Z08923030</td> </tr> <tr> <td>4 Voltage adapter with Omega clamp</td> <td>Z09508700</td> </tr> <tr> <td>4 Pin adapter voltage, banana plug bended</td> <td>100102400</td> </tr> <tr> <td>3 Mini test clip</td> <td>X00009329</td> </tr> <tr> <td>10 Pin for voltage/current conection</td> <td>X00004961</td> </tr> <tr> <td>6 Adapter with cable lug</td> <td>X00004963</td> </tr> <tr> <td>6 Pin adapter current, banana plug straight</td> <td>X00004962</td> </tr> <tr> <td>1 Power supply 16V</td> <td>100307100</td> </tr> <tr> <td>1 Mains cable</td> <td>100307200</td> </tr> <tr> <td>1 Mains cable (via test voltage)</td> <td>100067600</td> </tr> <tr> <td>1 Accessoires bag</td> <td>100214400</td> </tr> <tr> <td>1 Belt, black, 1,25m</td> <td>100170000</td> </tr> <tr> <td>10 Set of spare fuses,</td> <td>M00460183</td> </tr> <tr> <td>Aluminium-transportation case</td> <td>460x345x155mm</td> </tr> <tr> <td>Factory calibration report</td> <td></td> </tr> </table> <p>Further information can you find in the brochure: „Portable Working Standard Meter MT30“</p>	PC-software SSM3000 for data retrieval + MTVis	100090702	1 Data cable RS232	Z08923030	4 Voltage adapter with Omega clamp	Z09508700	4 Pin adapter voltage, banana plug bended	100102400	3 Mini test clip	X00009329	10 Pin for voltage/current conection	X00004961	6 Adapter with cable lug	X00004963	6 Pin adapter current, banana plug straight	X00004962	1 Power supply 16V	100307100	1 Mains cable	100307200	1 Mains cable (via test voltage)	100067600	1 Accessoires bag	100214400	1 Belt, black, 1,25m	100170000	10 Set of spare fuses,	M00460183	Aluminium-transportation case	460x345x155mm	Factory calibration report	
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2 Cable sets

2.1 Basic cable set


	<p>Voltage cable set for MT30 Order code 100023402</p> <p>Consist of:</p> <p><u>Voltage cables set with 4mm safety plug</u></p> <table><tr><td>1 Cable 2,5mm², 2 m lg.,red</td><td>X00007597</td></tr><tr><td>1 Cable 2,5mm², 2 m lg.,yellow</td><td>X00006907</td></tr><tr><td>1 Cable 2,5mm², 2 m lg.,blue</td><td>X00007598</td></tr><tr><td>1 Cable 2,5mm², 2 m lg.,black</td><td>X00006910</td></tr></table>	1 Cable 2,5mm ² , 2 m lg.,red	X00007597	1 Cable 2,5mm ² , 2 m lg.,yellow	X00006907	1 Cable 2,5mm ² , 2 m lg.,blue	X00007598	1 Cable 2,5mm ² , 2 m lg.,black	X00006910
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2.2 Quick connection cable MT30


	<p>Quick connection voltage cable for MT30 Order code 100023402</p> <p>Quick connection voltage cable for MT3x It serves for a quick connection of the measuring unit before testing of the meter in the field. The fixed plugs for the connection of voltage will help to avoid wiring faults in the measuring circuit at MT side. The quick connection cable set consist of a fixed detachable block for the MT system and 4mm safety plugs for connection at the unit under test. (red, yellow, blue)</p> <p><u>The scope of delivery belong:</u> Cable set MT -> Meter Voltage cable set</p>
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3 Scanning head units


3.1 Photo electric scanning head unit TK326

	<p>Photo electric scanning head unit TK326 Order code 100102201</p> <p>for detection of rotor-disc signals on Ferraris meters and flashing LED signals on static meters. 100313300</p> <p>Including holding arrangement 100319600 Including connection spiral cable (length 6m) Z10353027</p>
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3.2 Photo electric scanning head unit TK118-05

	<p>Photo electric scanning head unit TK118-5 Order code 100201900</p> <p>LED-Scanning head TK118-05 the TK118 is designed to pick up the energy proportional impulses of the light-emitting diode on solid-state meters. A permanent magnet belongs to the TK118, thus enabling the TK118 to be magnetically attached to the meter under test. A sucker enabling the TK118 also to be attached in the correct position in front of the light-emitting diode. The TK118 scanning head can be used on the most electronic meter test devices.</p> <p><u>Dimensions</u></p> <table> <tr> <td>Diameter</td> <td>φ33mm</td> </tr> <tr> <td>Height</td> <td>28mm; incl. sucker and permanent ring-magnet</td> </tr> <tr> <td>Spiral cable</td> <td>with a length of up to 6m</td> </tr> </table>	Diameter	φ33mm	Height	28mm; incl. sucker and permanent ring-magnet	Spiral cable	with a length of up to 6m
Diameter	φ33mm						
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Spiral cable	with a length of up to 6m						

3.3 S0 pulse converter K121-01


	<p>S0 pulse converter K121-01 Order code 100004200</p> <p>S0 - Puls converter K121-01 for connection on the scanning head input of the test unit and pulse output of the meter under test. It serves for pulse detection of floating contacts as well as S0-interfaces on energy meters.</p> <p><u>Scope of delivery</u></p> <ul style="list-style-type: none"> - K121-01 Pulse converter - Coloured connection cables for connection of the pulse interface of the unit under test.
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3.4 External push button


	<p>External pushbutton Order code Z09969204</p> <p>External pushbutton for manual pulse generation</p> <p>the external Start-Stop pushbutton serves for manual pulse generation while testing a energy meter in the field. The push button need to be connected on the scanning head input of the meter testing system MT300/310 or TPZ108/308</p> <p><u>Scope of delivery</u> - External push button Z09969204</p>
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4 Measuring sensors


4.1 MT3410 Clip-on CT adapter set type 2 (120A)

	<p>Clip-on CT adapter set MT3410 Order code Z10301901</p> <p>Clip-on CT set MT3410 for MT300 / 310 Due to it's high accuracy in the upper current range these three error compensated clamps MT3410 are in particular suitable for testing of electricity meters in the field. The correction values for error compensation are located in a chip inside the connection plug. Therefore the clamp set is equipped with it's own calibration report and can be calibrated independently of the measuring unit. The clamps can be used also on various MT3x units.</p> <p><u>Technical data:</u> Measuring range from 100mA to 120A Error of measurement < 0,15% (500 mA ... 120 A) < 0,3% (100 mA ... 500 mA)</p>
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4.2 MT3414 Clip on CT adapter Type1 (12A)

	<p>MT3414 clip-on CT set Type 1 Order code Z10301701</p> <p>Clip-on CT set MT3414 for MT300 / 310 Due to it's high accuracy in the lower current range these three error compensated clamps MT3414 are in particular suitable for measuring of the operating burden on voltage transformers in the field. The correction values for error compensation are stored located in a chip inside the connection plug. Therefore the clamp set is equipped with it's own calibration report and can be calibrated independently of the measuring unit. The clamps can be used also on various MT3x units.</p> <p><u>Technical data:</u> Measuring range from 10mA to 12A Error of measurement < 0,3% (50 mA ... 12 A) < 0,6% (10 mA ... 50 mA)</p>
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4.3 MT3416 Current clamp set (300A)

	<p>MT3416 Current clamp set (300A) Order code 100319200</p> <p>Consisting of <u>three error compensated current clamps</u> designed for precise current measurements of currents up to 300A. The MT3403 current clamp serves for current measurements on cables with a diameter of up to 53mm. The MT3416 current clamp set must be get plugged direct on the CT terminal of the MT3x measuring unit.</p> <p><u>Technical Data:</u> Measuring range from 200mA to 300A</p> <p>Error of measurement</p> <table><tr><td></td><td>< 0,15% (1 A ... 300 A)</td></tr><tr><td></td><td>< 0,3% (200 mA ... 1 A)</td></tr></table>		< 0,15% (1 A ... 300 A)		< 0,3% (200 mA ... 1 A)
	< 0,15% (1 A ... 300 A)				
	< 0,3% (200 mA ... 1 A)				


4.4 MT3404 Flexible current ring (100/10000A)

	<p>MT3404 Flexible current ring for 10.000A Order code 100032500</p> <p>The flexible MT3404 current sensor serves for current measurements on any conductors well as on bus bars. The MT3404 current sensor must be get plugged via the connection unit MT3412 direct on the CT terminal of the MT3x measuring unit.</p> <p><u>Technical data:</u> Measuring range from 500mA to 10.000A Error of measurement < 1,5%</p>
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4.5 MT3405 High voltage stick (40kV)

	<p>MT3405 High voltage stick Order code 100032000</p> <p>The MT3405 is a measuring adapter for primary voltage measurements on power transmission lines up to 40 kV. The MT3405 is get plugged via the connection unit MT3409 direct on the CT terminal of the MT3x measuring unit.</p> <p><u>Technical Data:</u> Measuring range up to 40,000 V Measuring accuracy < 2%</p> <p>!! Not for use in EU / No CE approval !!!</p>
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4.6 MT3406 High current stick (2000A, 50Hz)

 A red, long-handled current stick with a black clamp at the end and a red cable with a connector.	<p>MT3406 High current stick Order code 100032100</p> <p>The MT3406 is a measuring adapter for primary current measurements on power transmission lines up to 2000A / 50Hz. The MT3406 must be get plugged via the connection unit MT3409 direct on the CT terminal of the MT3x measuring unit.</p> <p><u>Technical Data:</u> Measuring range up to 2.000 A Frequency 50 Hz Measuring accuracy < 1,5% Rated working voltage 40 kV</p> <p>!! Not for use in EU / No CE approval !!!</p>
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4.7 MT3409 Connection unit for MT3405 and MT3406

 A red rectangular connection unit with six input channels and a grey cable with a connector.	<p>MT3409 Connection unit Order code 100032202</p> <p>The connection unit serves for the connection of the hot sticks types MT3405/MT3406 to the MT3x system. It is equipped with six input channels for connection of the hot sticks (max. 3x voltage and 3x current) to the MT3x system.</p>
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4.8 MT3411 Flexible current ring (200/2000A), Ring length 0,45m

 A red flexible current ring with a black cable and a connector.	<p>MT3411 Flexible current ring for 2.000A Order code 100061300</p> <p>The flexible MT3411 current sensor serves for current measurements on any conductors well as on bus bars. The MT3411 current sensor must be get plugged via the connection unit MT3412 direct on the CT terminal of the MT3x measuring unit.</p> <p><u>Technical data:</u> Measuring range from 500mA to 2.000A Error of measurement < 1,5% Ring length 0,45m</p>
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4.9 MT3415 Flexible current ring (200/2000A), Ring length 0,80m


 A flexible current ring with a red outer sheath and a black inner conductor. The ring is coiled, and a black cable with a connector is attached to one end.	MT3415 Flexible current ring for 2.000A
	Order code 100061301
	<p>The flexible MT3415 current sensor serves for current measurements on any conductors well as on bus bars. The MT3415 current sensor must be get plugged via the connection unit MT3412 direct on the CT terminal of the MT3x measuring unit.</p>
	<p><u>Technical data:</u> Measuring range from 500mA to 2.000A Error of measurement < 1,5% Ring length 0,80m</p>

4.10 MT3412 Connection unit for MT3404, MT3411 and MT3415

 A connection unit with three black input ports on the left and a grey multi-pin connector on the right. A grey cable is attached to the connector.	MT3412 Connection unit
	Order code 100032203
	<p>The connection unit serves for the connection of the flexible current sensor types MT3415/MT3411/3404 to the MT3x system. It is equipped with three inputs for connection of up to three flexible current sensors to the MT3x system.</p>

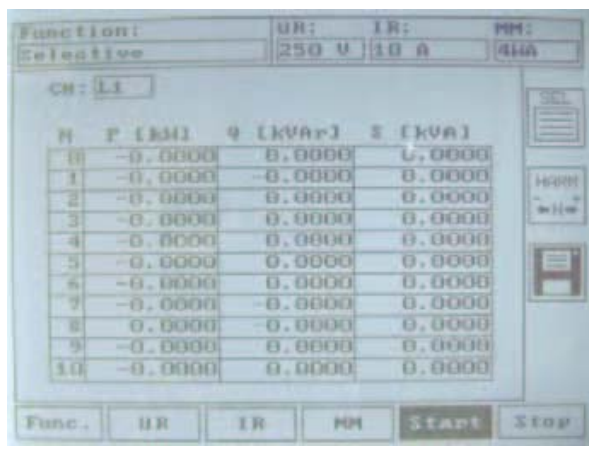
5 Calibration

5.1 DKD calibration certificate for MT300/310/320/365

 <p>The image shows a DKD calibration certificate from the Physikalisch-Technische Bundesanstalt (PTB). The certificate is issued to Zink GmbH, Hauptstraße 382, 38659 Königswinter. It covers calibration according to DIN EN 61010 for various electrical measurement quantities including voltage, current, power, and energy. The certificate is signed by Prof. Dr.-Ing. K. Kuhnert and Prof. Dr. H. Behmer.</p>	<p>DKD calibration certificate Order code 100006838</p>
	<p>System calibration according to IEC 17025. Traceable to PTB standards.</p>

6 Software option

6.1 Selective power measurement



The screenshot shows the 'Function:' menu set to 'Selective'. The 'UR:' field is '250 V' and 'IR:' is '10 A'. The 'MM:' field is '444'. The 'CH:' field is 'L1'. Below this is a table with columns 'H', 'P [kW]', 'Q [kVar]', and 'S [kVA]'. The table contains 11 rows of data, all showing zero values.

H	P [kW]	Q [kVar]	S [kVA]
0	-0.0000	0.0000	0.0000
1	-0.0000	-0.0000	0.0000
2	-0.0000	0.0000	0.0000
3	-0.0000	0.0000	0.0000
4	-0.0000	0.0000	0.0000
5	-0.0000	0.0000	0.0000
6	-0.0000	0.0000	0.0000
7	-0.0000	-0.0000	0.0000
8	0.0000	-0.0000	0.0000
9	-0.0000	0.0000	0.0000
10	-0.0000	0.0000	0.0000

At the bottom of the interface are buttons for 'Func.', 'UR', 'IR', 'MM', 'Start', and 'Stop'.

Selective power measurement option


Order code [100078801](#)

For simultaneous measurement of active, reactive and apparent power on each harmonic value in voltage or current

The following values are measured:

- Active power
- Reactive power
- Apparent power

6.2 Printer option



The image shows a beige DPU-414 thermo printer. A roll of paper is partially unrolled and is printing text. The printer has a 'FEED' button and an 'ON LINE' indicator.

Thermo printer

Order code [100078803](#)


Printer option
the mobile thermo printer serves for printing of measuring results directly on site. The printer must get plugged directly on the RS232 interface of the MT300/310/320 unit.

Scope of delivery

- Thermo printer
- RS232 connection cable
- Mains cable
- Rechargeable battery
- 2x rolls of paper

7 Transport case for MT30

7.1 Standard aluminium case

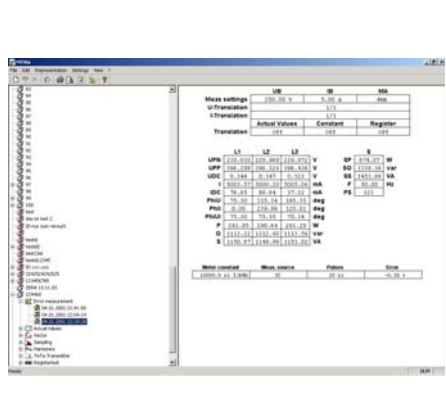
	<p>Standard aluminium case</p> <p><i>Order code</i> 100023930</p> <p><i>Dimensions</i> HxWxD 150x500x380mm</p> <p>for transportation of the measuring instrument including scanning head unit, MT3410 clamp set, cable set and S0 - Pulse converter K121-01</p> <p><i>Including in the basic delivery</i></p>
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7.2 Nylon business bag

	<p><u><i>Alternative to aluminium case 100023930</i></u></p> <p>Nylon business bag</p> <p><i>Order code</i> 100023950</p> <p><i>Dimensions</i> HxWxD 190x450x390mm</p> <p>the high-quality nylon transport case can be used as carrier bag as well as shoulder bag. It can be used as alternativ to the aluminum transport case. The different compartments of the bag enable to stow the standard accessories of the MT3xx well.</p>
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8 Windows software

8.1 MTVis Data management software



The screenshot shows the MTVis software interface. On the left is a tree view of the project structure. The main area displays a list of data points with columns for 'Name', 'Unit', 'Value', and 'Error'. Below the list is a summary table with columns for 'Name', 'Unit', 'Value', and 'Error'.

Name	Unit	Value	Error
U1	V	1.00	0.01
U2	V	1.00	0.01
U3	V	1.00	0.01
U4	V	1.00	0.01
U5	V	1.00	0.01
U6	V	1.00	0.01
U7	V	1.00	0.01
U8	V	1.00	0.01
U9	V	1.00	0.01
U10	V	1.00	0.01
U11	V	1.00	0.01
U12	V	1.00	0.01
U13	V	1.00	0.01
U14	V	1.00	0.01
U15	V	1.00	0.01
U16	V	1.00	0.01
U17	V	1.00	0.01
U18	V	1.00	0.01
U19	V	1.00	0.01
U20	V	1.00	0.01

MTVis Windows software
Order code [X00012330](#)

* Subject to alterations !