

## Markings on measuring instruments in legal metrology

### Part I: Markings regulated by the Verification Ordinance

The Conformity marking is regulated by the

- Common regulations of the Verification Ordinance (VO) dated 12 August 1988 (Federal Law Gazette I, page 1657), last amended by Art. 3 par. 14 of the act 13. December 2007 (Federal Law Gazette I, page 2930); in particular annex D "Register of marks and signs".
- Directive 2004/22/EC of 31 March 2004 on measuring instruments (OJ L 135 p. 1)

#### 1. EEC initial-verification

##### 1.1 Verification mark of the competent authority



The top shows the EU-country-code (here "D" for Germany) and the reference number of the competent authority (see table) as well as below the reference number of the testing body ( e.g. verification office) and respectively an "0" if the competent authority performed the examination.

##### 1.2 Year specification



Year the EEC initial verification was carried out (here 2002).

##### 1.3 Verification mark of the state-approved test centres



Above part shows the EU country code ("D" for Germany) and the reference number of the competent authority (see table); the part below shows a 3-digit reference number. The first digit means  
 1: state-approved test centres for electricity  
 2: state-approved test centres for gas,  
 3: state-approved test centres for water.

##### 1.4 EEC initial-verification of a length measuring instrument



Mark for the EEC initial-verification of a length measuring instrument according to statistical methods determined in directive 73/362/EEC (OJ L 335 S. 56) for length measuring instruments., which are putted in use under the transitional provisions of Article 77 of EO.

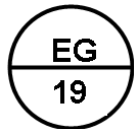
## 2. National verification

### 2.1 Verification mark of the competent authority



Winded band with letter "D" and the reference number of the competent authority (see table) and the hexangular star. Instead of the star also the reference number of the examining authority (Verification office) can be used.

### 2.2 Verification mark of the state-approved test centres



The first letter in the above part is an abbreviation for the kind of measuring instrument (E – electricity, G - gas, K – heat, W – water). The second letter is the code of the competent authority (see table). Below is a reference number (here: 19) assigned by the competent authority.

### 2.3 Year specification

Measuring instruments with a limited validity of verification



Year in which the validity of the verification ends (here 2008).

### 2.4 Year specification

Measuring instruments with an unlimited validity of verification and such for commercial transactions (meters for electricity, gas, water and heat)

**06**

Year when national verification was carried out (here 2006).

Table reference numbers and codes of the competent authorities in Germany

Bundesland	Eichaufsichtsbehörde	Ordnungs- zahl	Kennbuch- stabe
Baden-Württemberg	Mess- und Eichwesen Baden-Württemberg	22	A
Bayern	Bayerisches Landesamt für Maß und Gewicht	23	B
Berlin / Brandenburg	Landesamt für Mess- und Eichwesen Berlin-Brandenburg	1	C
Bremen	Landeseichdirektion Bremen	19	D
Hamburg/ Schleswig- Holstein/ Mecklenburg-Vorpommern	Eichdirektion Nord	7	E M
Hessen	Hessische Eichdirektion	10	F
Niedersachsen	Mess- und Eichwesen Niedersachsen (MEN)	8	G
Nordrhein-Westfalen	Landesbetrieb Mess- und Eichwesen Nordrhein-Westfalen	11	H
Rheinland-Pfalz	Landesamt für Mess- und Eichwesen Rheinland-Pfalz	4	K
Saarland	Landesamt für Umwelt- und Arbeitsschutz - Eichaufsichtsbehörde	13	L
Sachsen	Staatsbetrieb für Mess- und Eichwesen	12	R
Sachsen-Anhalt	Landeseichamt Sachsen-Anhalt	6	S
Thüringen	Landesamt für Mess- und Eichwesen Thüringen	15	T

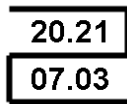
### 3 Type approval marks of the Physikalisch-Technische Bundesanstalt

#### 3.1 EEC type approval



D EC country code ("D" for Germany)  
 07 Year when the type approval was granted  
 18 Number of the annex to the Verification Ordinance  
 08 (German) instrument's category code  
 02 Serial number

#### 3.2 National type approval



20 Number of the annex to the Verification Ordinance  
 21 Chapter of the annex  
 07 Year when the type approval was granted  
 03 Serial number

#### 3.3 EC type approval (inscription)

**D07-09-007**

D "D" for Germany  
 07 Year when the type approval was granted  
 09 Number of the annex to the Verification Ordinance (Non automatic weighing instruments)  
 007 3-digit serial number

#### 3.4 EC-type examination certificate, EC-design examination certificate

**DE-07-MI001-PTB021**

DE "DE" for Germany  
 07 Year when the certificate was granted  
 MI001 instrument-specific annex of the MID, here MI-001  
 021 3- digit serial number

### 4 European marks (harmonised directives)

#### 4.1 CE marking



Consists of the symbol 'CE' according to the design laid down in the Regulation (EC) No 765/2008. The 'CE' marking shall be at least 5 mm high.

#### 4.2 Green sticker



Green sticker at least 12.5 mm × 12.5 mm square bearing a capital letter 'M' printed in black. May only be fixed together with the 'CE' marking to non-automatic weighing instruments which meet the requirements of the directive 2009/23/EC and which were subject to conformity assessment procedures.

#### 4.3 Metrology marking



Consists of the capital letter 'M' and the last two digits of the year of its affixing, surrounded by a rectangle. The height of the rectangle shall be equal to the height of the 'CE' marking. May only be fixed together with the 'CE' marking to devices which meet the requirements of the directive 2004/22/EC and which were subject to conformity assessment procedures

#### 4.4 Identification number of the notified body

**0103**

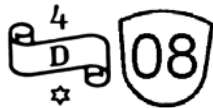
The identification number given by the Commission, if prescribed a notified body by the conformity assessment procedure.

## 5 Examples of marking on measuring instruments

### 5.1 Main verification mark

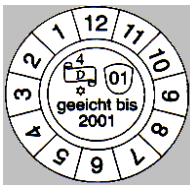
Verified measuring instruments under German law are marked with the main verification mark.

- Example 1:



Verification by a competent authority of measuring instruments with a limited validity of verification. The main verification mark consists of verification mark with year-specification.

- Example 2:



Verification by a competent authority. Main verification mark for measuring instruments with a validity of less than a year with an additional indication of months.

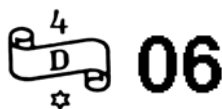
Example 3:



Like example 1. The main verification mark can be labelled with the inscription "Geeicht bis ....." (verification valid until ...).

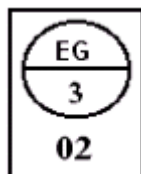
The colour of the verification mark depends on the last digits of the year-specification.

- Example 4:



Verification by a competent authority of measuring instruments with an unlimited validity of verification and measuring instruments for commercial transactions (meters for electricity, gas, water and heat). The main verification mark consists of verification mark with year-specification.

- Example 5



Verification by state-approved test centres. The year-specification shows the last two digits of the year, the verification was performed (here 2002).

- Example 6



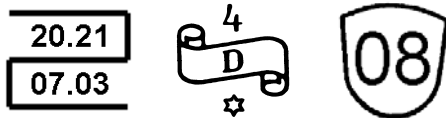
EEC initial-verification by a competent authority of measuring instruments with a limited validity of verification. The main verification mark consists of verification mark with year-specification.

5.2 Measuring instruments, which are subject to the separate directives relating to directive 2009/34/EC (kod. 71/316/EEC)



Measuring instruments which conform to a several EEC-directive and which passed the EEC verification (initial verification) by a competent authority (Eichbehörde).

5.3 Measuring instruments, which are subject to the national requirements



Measuring instruments with type approval verified by a competent authority (Eichbehörde) with main verification mark as in example 1.

5.4 Measuring instruments, which are subject to the directive 2009/23/EC



Non-automatic weighing instruments, carried out an EC declaration of type conformity or an EC verification

06 the last two digits of the year in which the CE marking was affixed,

0103 Notified body, which carries out the EC surveillance and EC verification.

A binding arrangement for the "green M" is not required. To prefer is a sequence as No. 5.5 for MID-Geräte. (WELMEC-Guide 2.7)

5.5 Measuring instruments, which are subject to the directive 2004/22/EC (MID)



Measuring instruments, which are subject to the MID and whose conformity with all regulations of the directive is explained.

0103 Notified body, which carries out the conformity assessment (except Modul A, B, C).

## Part II: Markings of other European Economic Area countries

According to § 80 of the Verification Ordinance the PTB has decided at the request for several approved types a comparable level of protection of the consumer, competition and other areas protected in the public interest. General information on the relevant measuring instruments are available on the Internet of the PTB from the database "MICert."

(URL [http://www.ptb.de/de/dienstleistungen/\\_datenbanken.htm](http://www.ptb.de/de/dienstleistungen/_datenbanken.htm)). The certificates stored in the database are available to the participants of MICert.

### 1. Slovakia

#### 1.1 Verification mark, affixed by the test centre of the company Premagas s.r.o., Stará Turá, Slovakia (verification of gas meter)



figure 1: adhesive stamp

Verification mark „M“ with No „41“ and the last two digits of the year when the verification was carried out, („07“ for 2007)



figure 2 and 3: seal

„M“ with in scripted „41“ like in fig. 1.

other side of the seal with the year of the verification („07“ for 2007)



figure 4: stamp on the Verification certificate

“Premagas s.r.o. Stará Turá M 41 Autorizované metrologické pracoviško”

#### 1.2 Verification mark, affixed by the test centre of the company Elster s.r.o., Stará Turá, Slovakia (verification of water meter)



figure 1 and 2: seal

Verification mark „M“ with No „28“ of the competent body

other side of the seal with the year of the verification („07“ for 2007)

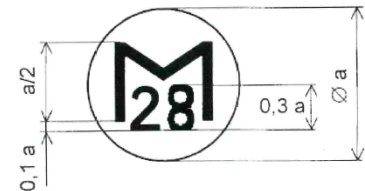


figure 3: Verification mark dimensions

#### 1.3 Verification mark, affixed by the test centre of the company Sensus Metering Systems a.s., Stará Turá, Slovakia (verification of flow meter as element of heat meters)



Bild 1 und 2: seal

Verification mark „M“ with No „10“ of the competent body



other side of the seal with the year of the verification („08“ for 2008)

## 2. The Netherlands

- 2.1 Verification mark, affixed by the Measuring body of the company Premagas s.r.o., Stará Turá, Slovakia (verification of meters with rotary pistons)

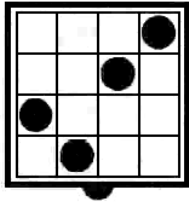


figure 1: Verification mark



figure 2: mark of the year of verification (xx = the two last digits)

Remark:

The transitional flowrate  $Q_t$  has to be affixed at the type plate of the measuring instrument.

## 3. Austria

- 3.1 Verification mark, affixed by the accredited "Eichstelle" No. 574 of the company BECOM Electronics GmbH, 7442 Lockenhaus, Austria (verification of electrical energy meters)



„574“: No. of the accredited "Eichstelle"

„008“: mark of the year (the last three digits of the year when the verification was carried out)

remark: The verification mark must be added only by the "Eichstelle" No. 574

## 4. Czech Republic

- 4.1 Verification mark, affixed by the Metrological centre of the company ABB s.r.o., Prag, Czech Republic (verification of instrument transformers)



Verification mark with „K 19“ for the metrological centre in Brno of the company ABB s.r.o., Prag, and the two last digits of the year of verification

## 5. Poland

- 5.1 Verification mark, affixed by the Polish verification authority in Ostroleka, Poland, which the tests in the laboratory for instrument transformers from ABB Sp z o.o., Przasnysz, supervised (verification of instrument transformers)



figure 1 and 2: seal

"PL" in a label, on the left of the label the numeral "1" and on the right "5" for the verification authority in Ostroleka and on one side of the seal the number "12" above the label.



figure 3: plate

"1 PL 5" and under it a circle with the last two digits of the year, when the verification was carried out, here in 2010

## 6. Hungary

- 6.1 Verification mark, affixed by the „Hungarian Trade Licensing Office (MKEH)” in Cooperation with the Metrological Centre of Ganz Meter Company Ltd. in Gödöllő, Hungary. (verification of electrical energy meters)



figure 1 and 2: seal

Above, the "Holy Crown", left and right next to the last the two last digits of the year of verification ("11" for 2011), under it a number for the inspector (here 63). Other side: the last three digits of the year of verification (here 2011).



figure 3

Symbol of the "Holy Crown"

## 7. Switzerland

- 7.1 Verification mark, affixed by the swiss authorised verification laboratory E15 for instrument transformers of the company Pfiffner Messwandler AG, Lindenplatz 17, 5042 Hirschthal, Switzerland (verification of instrument transformers)



figure 1 and 2: seal

Confederate cross and number of the authorised verification laboratory „15“. Other side: the last two digits of the year of verification (here 2012)



figure 3: verification mark  
Verification mark of the swiss authorised verification laboratory „E15“.