

GAS INDUSTRY GUIDANCE ON WORK ON METER INSTALLATIONS (v5)

(applicable only to existing meter installations used to register the quantity of gas supplied to a consumer and connected to Natural Gas services of maximum operating pressure not exceeding 75 mbar)

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INTRODUCTION

When carrying out work involving a primary gas meter used to register the quantity of gas supplied to a consumer, there are legal requirements that must be complied with; there are national and industry Standards that shall be complied with; and there are established, recognised operational and management procedures that need to be adopted (see Table 1).

This Guidance has taken such requirements into account and Table 1 shows them in a simple, easy to follow format. Some requirements differ dependent upon the type of premises (domestic or commercial); the type and size of meter involved and the type of work being undertaken i.e. temporary removal and re-fitting without repositioning; repositioning but not relocating, and relocating.

Table 2 gives guidance for non-gas work that could affect the correct operation of a meter installation.

SCOPE

The Guidance does not cover the exchange of meters i.e. the replacement of a meter with a different meter (when the work is only undertaken by an Ofgem Approved Meter Installer (OAMI), who is working on behalf of a meter asset manager (MAM)).

The scope of this Guidance is limited to work on and associated with meter installations:

- in which the meter has a maximum capacity of 16 m³/h
- where the meter is used to register the quantity of gas supplied to a consumer

Note: The vast majority of these will be "primary" meter installations but there are a few "secondary" meter installations to which the Guidance will apply.

- connected to a Natural Gas service i.e. the pipe upstream of the emergency control valve (ECV) and which is operated by a gas transporter (GT) in which the maximum operating pressure does not exceed 75 mbar. These are often referred to as "low pressure services"

Note: In domestic premises, the majority of meters will be diaphragm or electronic meters of 6 m³/h capacity, but there will be some diaphragm meters of 16 m³/h capacity. In commercial premises, there will also be rotary displacement meters.

- on domestic and commercial premises

Note: The Guidance does not address industrial premises but it is recommended that the Guidance be applied in principle for such premises.

The above scope means that all meters covered by Ofgem COP 1/a are in scope. In addition, relevant meters covered by Ofgem CoP 1/b and CoP 1/c and relevant meter installations from the Ofgem MAMCOP are in scope.

The Guidance applies only in Great Britain. Otherwise, appropriate authorities will need to be consulted for equivalent requirements.

Note that, for aspects relating to Gas Safe Register registration, these will apply in Northern Ireland and the Isle of Man.

TYPE OF PREMISES

Some requirements differ dependent upon the type of premises. However, remember this is Guidance and the relevant legislation takes precedence. Working practices should always be those offering the highest level of safety.

You can find more information on the meaning of each type of premises in the ACOP and Guidance to the Gas Safety (Installation and Use) Regulations 1998 and HSL56 available from HSE Books and website.

TYPE OF WORK BEING UNDERTAKEN

It is important to understand which category of work you are doing, because legislation, standards and competencies may be different from one category to another.

The three categories of type of work being undertaken are:

- **Category A work.** Following disconnection of an existing meter e.g. at the inlet and/or outlet connections on the meter, its reconnection not resulting in any change to the position of the meter. Generally, this represents **“temporarily removing and refitting a meter”**

Note 1: Minor unintentional shifts in the position of the meter may be treated as Category A work.

*Note 2: Such disconnection/reconnection would occur, for example to enable hot working or even simply to access décor behind the meter. **It does not** include refitting involving adding or taking away any component within the meter installation, for example a length of pipe.*

- **Category B work. Repositioning** an existing meter by utilizing the existing fittings of the meter installation

*Note 1: The resultant new **position** of the meter would be in the same location, for example within the same cupboard/compartment, as the original position.*

Note 2: This does not include repositioning by adding or taking away any component within the meter installation, for example a length of pipe.

- **Category C work. Relocating** an existing meter, or repositioning an existing meter when different or additional fittings are used, or when fittings are removed.

Note: This means that the length of pipework between the outlet of the ECV and the inlet of the meter will change. This may affect, for example, pressure drop which in turn may have an impact on the performance of the whole gas installation. It is not permitted to make such alterations that would adversely affect the pressure delivered to appliances.

The definitions of “temporarily removing and refitting”, “repositioning” and “relocation” are given below.

Where a replacement meter is to be installed, i.e. a meter is to be exchanged, the relevant gas supplier has to be consulted. If a meter is substituted by another meter, whether that meter is new or second hand, it is classified as a “new” meter. This Guidance does not apply to the exchange of meters.

TYPE AND SIZE OF METER

These relate only to the type (diaphragm, electronic; rotary displacement, etc.) and to the maximum capacity of the meter. For any capacity not exceeding 6 m³/h, the relevant installation standard is BS 6400-1. For greater capacities up to 16 m³/h, the relevant installation standard is either IGEM/GM/6 Edition 2 or IGE/GM/8.

COMPETENCY AND REGISTRATION OF PERSONS CARRYING OUT WORK

The Category of the type of work being undertaken (see above) dictates the requirement for competency and appropriate registration of the person undertaking the work.

Note: DIY work is not addressed by this Guidance.

Notwithstanding that you must be competent to carry out the work being undertaken, you will also need to be Gas Safe Registered and, for some work, be an Ofgem Approved Meter Installer (OAMI).

NON-GAS WORK IN THE VICINITY OF A METER

Non-gas work in the vicinity of a meter but not involving the meter itself, potentially can impact upon the safety and correct operation of a meter installation. Table 2 addresses the more common aspects you should consider but the list is not comprehensive.

TIGHTNESS TESTING AND PURGING

If you disconnect a gas fitting (remember a meter is a gas fitting), all affected components have to be tightness tested and purged in accordance with the appropriate part of IGE/UP/1 (i.e. 1, 1A, 1B and 1C).

COMMUNICATING WITH MAMs

The Guidance indicates situations where you may need to contact the MAM.

Often, the contact information you need will be contained within notices and labels fitted within the meter installation or its enclosure. If it is not, or if the information proves to be out of date, you will probably be able to obtain details of the MAM by calling the Meter Number Enquiry Line on 0870 608 1524.

Before you call:

- ensure you can satisfy the Enquiry Line that you have the authority of the gas user i.e. the person paying the bill, either directly or through their agent
- have to hand the post code and house number of the premises in which the meter installation is installed.

This service provides details of the meter point reference number (MPRN), the gas supplier and the GT. You will need details of the gas supplier from whom you should be able to obtain details of the MAM.

If you are dealing with multiple meter installations, for example in a block of flats, there may well be several different gas suppliers and, hence, MAMs. You will not be given details for more than one installation at a time – you will have to call again for another installation.

DEFINITIONS

(a) Relating to premises

premises (Health and Safety at Work etc. Act (HSWA))

Includes any place, and in particular, includes:

- a) any vehicle, vessel, aircraft or hovercraft,
- b) any installation on land (including the foreshore and other land intermittently covered by water), any offshore installation, and any other installation (whether floating, or resting on the seabed or the subsoil thereof, or resting on other land covered with water or the subsoil thereof, and
- c) any tent or movable structure.

Note: "Domestic premises" means premises occupied as a private dwelling (including any garden, yard, garage, outhouse or other appurtenance of such premises which is not used in common by the occupants of more than one such dwelling), and "non-domestic premises" are construed accordingly.

(b) Relating to type of work being undertaken

disconnection

The physical detachment or uncoupling of a fitting i.e. which involves breaking into a gasway.

non-gas work

Activities not covered by the definition of "work" as given in GS(I&U)R and which is summarised below and including any action that could affect in any way the level of gas safety of a gas fitting (whether new or existing and whether or not it contains gas).

reconnection

The physical attachment or joining of a fitting.

relocating a meter

Where the position of a meter is changed involving the use of a different fitting.

repositioning a meter

Where the position of a meter is adjusted or altered using fittings that are unchanged.

temporarily removing and re-fitting a meter

Where a meter is disconnected then put back and reconnected in that previous place or position.

Work (as defined in GS(I&U)R)

In relation to a gas fitting includes any of the following activities carried out by any person, whether an employee or not:

- installing or re-connecting the fitting
- maintaining, servicing, permanently adjusting, disconnecting, repairing, altering or renewing the fitting, or purging it of air or gas
- where a fitting is not readily movable, changing its position
- removing the fitting but it does not include the connection or disconnection of a bayonet fitting or other self-sealing connector.

Note: In relation to a meter, which is a gas fitting, all the above apply.

(c) **Relating to components**

emergency control valve (ECV)

A valve, not being an "additional emergency control valve" (AECV) for shutting off the supply of gas in an emergency, intended for use by a consumer of gas and being installed at the end of a service or distribution main. The outlet of the ECV terminates, and thus defines the end of, the Network.

gas fitting

Gas pipework, valves (other than the ECV), regulators, meters, fittings, apparatus and appliances designed for use by consumers of gas for heating, lighting, cooking or other purposes for which gas can be used, but is does not mean:

- any part of a distribution main or service
- any part of a pipeline upstream of a distribution main or service
- a gas storage vessel
- a gas cylinder or cartridge designed to be disposed of when empty.

meter installation

For a domestic sized meter, i.e. one of capacity not exceeding 6 m³/h, this simple definition applies:

Installation that comprises a primary meter, valve, filter, meter regulator and associated protection devices, pliable connection, interconnecting pipework, fitting and support.

Note: A meter installation commences at the outlet of the ECV. Depending on the type of meter installation, it terminates at:

- *the outlet connection of the meter; or*
- *the outlet of the meter outlet adaptor if fitted; or*
- *for a semi-concealed meter with a pliable connection downstream of the meter; the outlet of the meter box outlet adaptor.*

For a meter of capacity exceeding 6 m³/h, the definition embraces many other designs. These meters are markedly fewer in number than those of less capacity and it is sufficient to say that any meter not within the definition above (which is taken from BS 6400) is covered by IGEM/GM/6 Edition 2 or IGE/GM/8.

Note: The key point for any meter installation is that it starts at the outlet flange of the ECV and finishes at some point on the consumer's side of the meter.

primary meter

Meter nearest to and downstream of a gas service for ascertaining the volume of gas supplied through that pipe by a gas supplier.

secondary meter

Meter, other than a primary meter, for ascertaining the volume of gas provided by a person for use by another person, whether or not there is also a primary meter in respect of the gas supplied.

ACRONYMS AND ABBREVIATIONS

ACoP	Approved Code of Practice
ACS	National Accreditation Scheme
AECV	Additional emergency control valve
DIY	"Do it yourself"
ECV	Emergency control valve
GS(I&U)R	Gas Safety (Installation and Use) Regulations
GT	Gas transporter
HSE	Health and Safety Executive
HSWA	Health and Safety at Work etc. Act
MAM	Meter asset manager
MAMCoP	Code of Practice for Gas Meter Asset Managers
MPRN	Meter point reference number
OAMI	Ofgem approved meter installer
Ofgem	Office of Gas and Electricity Markets.

UNITS

m³/h cubic metre per hour.

REFERENCES

Legislation

Health and Safety at Work etc. Act 1974
Gas Safety (Installation and Use) Regulations 1998.

ACoP and Guidance

HSL56 Safety in the installation and use of gas systems and appliances.

Ofgem Codes of Practice

Ofgem CoP 1/a	Code of Practice for Low Pressure Diaphragm and Electronic Meter Installations with Badged Meter Capacities not exceeding 6 m ³ /h (212 ft ³ /h)
Ofgem CoP 1/b	Code of Practice for Low Pressure Diaphragm and Rotary Displacement Meter Installations with Badged Meter Capacities exceeding 6 m ³ /h (212 ft ³ /h), but not exceeding 1076 m ³ /h (38,000 ft ³ /h)
Ofgem CoP 1/c	Code of Practice for all High Pressure and all Low Pressure Meter Installations not covered by COP/1a and COP/1b
Ofgem MAMCoP	Code of Practice for Meter Asset Managers.

BSI Standards (abbreviated titles)

BS 6400-1	Domestic-sized meter installations – low pressure Natural Gas
BS 7671	IEE Wiring Regulations.

IGEM Standards

IGEM/GM/6 Edition 2	Non-domestic meter installations. Standard designs
IGEM/GM/7A	Electrical connections for gas metering equipment
IGEM/GM/7B	Hazardous area classification for gas metering equipment
IGE/GM/8	Non-domestic meter installations
IGE/UP/1 Edition 2	Strength testing, tightness testing and direct purging of industrial and commercial gas installations
IGE/UP/1A Edition 2	Strength and tightness testing and direct purging of small low pressure industrial and commercial Natural Gas installations
IGE/UP/1B Edition 2	Tightness testing and direct purging of small Natural Gas installations.
IGEM/UP/1C	Strength testing, tightness testing and direct purging of Natural Gas and LPG meter installations

ACS modules

CCN 1	Core Domestic Gas Safety Assessment. NG
CMA 1	Meter Installer Core Gas Safety Assessment. NG
CESP 1	Emergency Core Gas Safety Assessment. NG
MET 1/2	Installation Exchange Remove and Commission Domestic Gas Meters
MET 4	Install Exchange Remove and Commission Diaphragm Gas Meters up to and including U40.

TABLE 1 - GUIDELINES ON METER WORK

	CATEGORY OF TYPE OF GAS WORK BEING UNDERTAKEN IN A DOMESTIC OR COMMERCIAL PREMISES					
	A. TEMPORARILY REMOVING AND REFITTING AN EXISTING METER		B. REPOSITIONING AN EXISTING METER USING SAME FITTINGS		C. RELOCATING A METER, OR REPOSITIONING A METER USING DIFFERENT FITTINGS	
WHO CAN DO THE WORK?	GAS SAFE REGISTERED		GAS SAFE REGISTERED		GAS SAFE REGISTERED + OAMI	
DO YOU NEED TO HAVE THE WORK PRE-AUTHORISED?	NO		NO		YES. OBTAIN PRE-AUTHORISATION OF THE MAM.	
DO YOU NEED TO NOTIFY ANYONE OF THE WORK?	NO		NO		YES. NOTIFY THE MAM. The MAM may waive post notification at the time of pre-authorisation.	
WHAT ARE THE MINIMUM QUALIFICATIONS YOU NEED? (APPROPRIATE NVQs ARE EQUALLY ACCEPTABLE)	DOMESTIC	COMMERCIAL	DOMESTIC	COMMERCIAL	DOMESTIC	COMMERCIAL
	CCN 1 or CMA 1	*CCN-1 or CESP 1 or CMA 1	CCN 1 or CMA 1 + MET 1 or MET 2 as appropriate	*CCN-1 or CESP 1 or CMA 1 + MET 1 or MET 2 as appropriate	CCN 1 or CMA 1 + MET 1 or MET 2	*CCN-1 or CESP 1 or CMA 1 + MET 1 or MET 2 or MET 4 as appropriate
WHAT STANDARDS APPLY FOR INSTALLING?	BS 6400-1 or IGEM/GM/6	BS 6400-1 or IGEM/GM/6 or IGE/GM/8	BS 6400-1 or IGEM/GM/6	BS 6400-1 or IGEM/GM/6 or IGE/GM/8	BS 6400-1 or IGEM/GM/6	BS 6400-1 or IGEM/GM/6 or IGE/GM/8
WHAT STANDARDS AND QUALIFICATIONS DO YOU NEED TO TIGHTNESS TEST AND PURGE?	IGE/UP/1B CCN 1	IGE/UP/1A or IGEM/UP/1C TPCP 1/A	IGE/UP/1B CCN 1	IGE/UP/1A or IGEM/UP/1C TPCP 1/A	IGE/UP/1B CCN 1	IGE/UP/1A or IGEM/UP/1C or IGE/UP/1 TPCP 1/A or TPCP 1
DO YOU NEED TO LEAVE A RECORD OF WORK YOU HAVE DONE?	IT IS NOT MANDATORY. However some kind of permanent record on site may assist another registered engineer in the future. It is strongly recommended that a label or tie-on tag is used. This should include date, your name and contact details, and a brief detail of the work undertaken.					
ARE YOU ALLOWED TO ADJUST THE METER REGULATOR?	NO, NOT UNLESS YOU HAVE PRE-AUTHORISATION FROM THE GT.					
ARE YOU CARRYING OUT NON-GAS WORK IN THE LOCATION OF THE METER INSTALLATION?	YES? REFER TO TABLE 2.					

*Domestic sized meters only

Note: The minimum qualifications given above are intended to be used as a guide, but equally there may be other qualifications that satisfy the requirement to be competent.

TABLE 2 - GUIDELINES ON NON-GAS WORK THAT COULD AFFECT THE CORRECT OPERATION OF THE METER INSTALLATION

TYPE OF WORK	LEGISLATION AND STANDARDS TO CONSIDER (AS APPLICABLE)
THAT AFFECTS VENTILATION	BS 6400-1 IGEM/GM/7B IGEM/GM/6 IGE/GM/8
THAT AFFECTS HAZARDOUS AREA CLASSIFICATION (COMMERCIAL ONLY)	IGEM/GM/7A IGEM/GM/7B
ON ELECTRICAL EQUIPMENT AND MAINTAINING ELECTRICAL CONINUITY	BS 7671 BS 6400-1 IGEM/GM/7A
THAT AFFECTS ACCESS TO THE METER INDEX	BS 6400-1 IGEM/GM/6 IGE/GM/8 Ofgem CoPs 1/a, b, c. Ofgem MAMCoP
THAT COULD INTERFERE WITH ACCESS TO MAINTAIN THE METER INSTALLATION	BS 6400-1 IGEM/GM/6 IGE/GM/8
THAT ALTERS ACCESS TO THE ECV	GSIUR BS 6400-1
THAT COULD DAMAGE OR OBSCURE NOTICES AND LABELS	BS 6400-1 IGEM/GM/6 IGEM/GM/8

TABLE 3 – REVISION LIST

VERSION	DESCRIPTION OF REVISION
2	Numerous editorial amendments after Comments from Gas Safe Register. Table 1, all category work types, Commercial, Qualification and Standards cells updated for where domestic meters are installed in Commercial premises.
3	Table 1, Category B, Commercial, Qualifications cell updated to show that either MET 1 or MET 2 are required.
4	A note was added to Table 1 to cover those occasions when individual qualifications do not exactly match the guidance.
5	Numerous Standard references (Including those in Table 1) updated following the publication of IGEM/GM/6 Edition 2 and IGEM/UP/1C in March 2011. Revision Table added.