

# ACS.MET 4 INITIAL & RE-ASSESSMENT EMERGENCY SERVICE PROVIDER AND GAS METER INSTALLER NON-DOMESTIC DIAPHRAGM METERS NATURAL GAS

MET4 INITIAL and RE-ASSESSMENT

## Introduction

Tests gas safety competence to install, exchange, remove and commission diaphragm type gas meters.

Candidates who have achieved CMET1 may also install meters within the scope of MET4

Candidates successfully completing this assessment may also install LP meters of capacity  $\leq 6 m^3/h$ .

CBs may adopt Competence and Criteria numbering different to that used in this document.

CB documentation may adopt wording for criteria different to that used in this document, provided the meaning is unaffected.

### Range

Primary diaphragm meters of badged capacity  $\leq$ 40m<sup>3</sup>/h. Pipework of diameter  $\leq$  2" (50 mm) diameter. LP only.

## **Pre-requisites**

CMA1 or CESP1 or CCN1 or COCN1 or CCCN1 or QCF or S/NVQ. Note: If working on meters >16m<sup>3</sup>/hr or working on installations out of scope of UP/1B TPCP1 or TPCP1A is required.

# Note : Work on meters with MP meter $\leq$ 6 m<sup>3</sup>/h require REGT1 , MP supplies $\geq$ 6 m<sup>3</sup>/h also require REGT 2.

### Exclusions

Secondary meters; meter reading; pre-payment mechanisms; meter box installation; construction of meter compartments or housings; service pipework; installation or exchange of ECV/MIV; service valves or their operation; meter removal from site and subsequent disposal; testing by OFGEM and theft of gas.

### References

- HSL56
- IGEM/GM/6 Edition 2
- GIUSP.

Where a reference point (REF) is listed in this criteria this is only a guide to where the criteria could be resourced; therefore the REF may not be exhaustive.

ACS.SMB. 003.ACDND indicates those Normative Documents that should be held by ACs. **Abbreviations** 

AC. Assessment Centre ECV. Emergency control valve GSIUR. Gas Safety (Installation & Use) Regulations I. Initial LP. Low pressure MIV. Meter inlet valve MOP. Maximum operating pressure MOV. Meter outlet valve MP. Medium pressure OP. Operating pressure Ref. Reference.

PERFORMANCE CRITERIA			Ι	R
1a.	determine pressure in service as LP		✓	
	OQ Related to service pressures > 75mbar			
1.	check ECV operates correctly		✓	
2.	note and confirm connected appliances to internal supply are of the 'standard		~	
	type'			
3.	check meter and installation components are fit for use and purpose and regulator		$\checkmark$	$\checkmark$
	has been factory set at an appropriate pressure to suit the installation and sealed			
	with manufacturer's mark			,
3(a).	Preparation check of meter components for obstructions		✓	✓
3(b).	check pressure test records of components		✓	
4.	isolate gas supply prior to work		<b>√</b>	
5.	remove plug/cap from ECV		✓	
6.	Connect diaphragm meter , ECV/MIV and regulator via bracket, semi-rigid		~	
7	Connection, ittings, washers		./	
7.	confect use temporary continuity bond		v	./
7a	check the meter and associated pipework and nithings use			v
	(renair das escane on meter union on installation) see practical provisions			
	(repair gas escape on meter union on installation ) see practical provisions			
			./	
8.	re-establish gas supply		v	
9.	check work carried out is gas tight		✓	✓
10.	purge meter and re-light appliance(s)		✓	•
10a.	check regulator locks up at a pressure <30 mbar with no gas flowing		<ul><li>✓</li></ul>	<b>v</b>
11.	Check regulator OP		v	v
10	a hannan an shan Gaulta an an Pina			
12a	observe meter for faulty operation		✓	•
120	check valves, controls, filters, regulators for correct and safe operation		✓	•
120	identify gas safety faults on valves, controls, filters, regulators		•	•
120	identify suitable unsuitable meter locations		V	•
12e	disconnect and coal motor		• •	v
12.	apply appropriate labels and complete warping notices / cortificates		• •/	./
13.	apply appropriate labels and complete warning notices/ certificates		v	v
1 1 / 1			~	
14.			✓	
14. KNO		REF	✓ I	R
14. KNO	WLEDGE AND UNDERSTANDING	REF	✓ I	R
14. KNO 1.	WLEDGE AND UNDERSTANDING Incorrect meter locations Provisions and clearances required around meters	REF	✓ I ✓	R
14. KNO 1. 1a	WLEDGE AND UNDERSTANDING         Incorrect meter locations         Provisions and clearances required around meters	REF	✓ I ✓ ✓	R
14. <b>KNO</b> 1. 1a 1b	WLEDGE AND UNDERSTANDING         Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated	REF	✓ I ✓ ✓	R
14. <b>KNO</b> 1. 1a 1b	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated	REF	✓ I ✓ ✓ ✓ ✓	R
14. <b>KNO</b> 1. 1a 1b 1d	explain operation and use of ECCV/MIV         WLEDGE AND UNDERSTANDING         Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations	REF	✓ I ✓ ✓ ✓ ✓ ✓	R
14. <b>KNO</b> 1. 1a 1b 1d 2.	explain operation and use of ECCV/MIV         WLEDGE AND UNDERSTANDING         Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient	REF	✓ I ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	R
14. <b>KNO</b> 1. 1a 1b 1d 2. 2a	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load	REF	✓ I ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	R
14. <b>KNO</b> 1. 1a 1b 1d 2. 2a 3.	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge	REF	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	R
14. KNO 1. 1a 1b 1d 2. 2a 3. 4.	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge provision of an MOV	REF	✓ I ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	R
14. <b>KNO</b> 1. 1a 1b 1d 2. 2a 3. 4.	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge provision of an MOV	REF	✓ I ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	R
14. <b>KNO</b> 1. 1a 1b 1d 2. 2a 3. 4. 6.	explain operation and use of ECCV/MIV         WLEDGE AND UNDERSTANDING         Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling			R
14. <b>KNO</b> 1. 1a 1b 1d 2. 2a 3. 4. 6. 7.	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together		I       I <t< td=""><td>R</td></t<>	R
14. <b>KNO</b> 1. 1a 1b 1d 2. 2a 3. 4. 6. 7.	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together		✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	R
14.         1.         1a         1b         1d         2.         2a         3.         4.         6.         7.         9.	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels		✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	R
14.         1.         1a         1b         1d         2.         2a         3.         4.         6.         7.         9.         10.	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time		V           V	R
14.         1.         1a         1b         1d         2.         2a         3.         4.         6.         7.         9.         10.         11.	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time         procedure for meter installation when gas service is not connected to gas i.e.	REF	V           V	R
14.         1.         1a         1b         1d         2.         2a         3.         4.         6.         7.         9.         10.         11.	wLEDGE AND UNDERSTANDING         Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time         procedure for meter installation when gas service is not connected to gas i.e.         Reg.33		✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	R
14.         1.         1a         1b         1d         2a         3.         4.         6.         7.         9.         10.         11.         12.	WLEDGE AND UNDERSTANDING         Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time         procedure for meter installation when gas service is not connected to gas i.e.         Reg.33         unsafe meter installations		✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	R
14.         1.         1a         1b         1d         2.         2a         3.         4.         6.         7.         9.         10.         11.         12.	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time         procedure for meter installation when gas service is not connected to gas i.e.         Reg.33         unsafe meter installations			R
14.         1.         1a         1b         1d         2.         2a         3.         4.         6.         7.         9.         10.         11.         12.         14.	wLEDGE AND UNDERSTANDING         Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time         procedure for meter installation when gas service is not connected to gas i.e.         Reg.33         unsafe meter installations	REF	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	R
14.         14.         1         1a         1b         1d         2.         2a         3.         4.         6.         7.         9.         10.         11.         12.         14.         (i)	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time         procedure for meter installations <b>HSL56:</b> Reg.12       Meters – General provisions 12 (1) to (6)		V       V	R
14.         14.         1         1a         1b         1d         2.         2a         3.         4.         6.         7.         9.         10.         11.         12.         14.         (i)         (iii)	wLEDGE AND UNDERSTANDING         Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time         procedure for meter installations         HSL56:         Reg.12 Meters – General provisions 12 (1) to (6)         Reg.13 Meter Housings 13 (1) to (4)			R
14.         14.         1         1a         1b         1d         2.         2a         3.         4.         6.         7.         9.         10.         11.         12.         14.         (i)         (iii)         (iii)	WLEDGE AND UNDERSTANDING         Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time         procedure for meter installation when gas service is not connected to gas i.e.         Reg.3         unsafe meter installations         HSL56:         Reg.12 Meters – General provisions 12 (1) to (6)         Reg.13 Meter Housings 13 (1) to (4)         Reg.16 Primary meters 16 (1) and (2)	REF	V       V	R
14.         KNO         1.         1a         1b         1d         2.         2a         3.         4.         6.         7.         9.         10.         11.         12.         14.         (i)         (iii)         (iii)         15	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time         procedure for meter installation when gas service is not connected to gas i.e.         Reg.33         unsafe meter installations         HSL56:         Reg.12 Meters - General provisions 12 (1) to (6)         Reg.13 Meter Housings 13 (1) to (4)         Reg.16 Primary meters 16 (1) and (2)         completion of commissioning reports	REF		R
14.         1.         1a         1b         1d         2.         2a         3.         4.         6.         7.         9.         10.         11.         12.         14.         (i)         (iii)         15         16	<b>WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time         procedure for meter installation when gas service is not connected to gas i.e.         Reg.33         unsafe meter installations         HSL56:         Reg.12 Meters – General provisions 12 (1) to (6)         Reg.13 Meter Housings 13 (1) to (4)         Reg.16 Primary meters 16 (1) and (2)         completion of commissioning reports         recognition of meter installations not in scope of IGEM/GM/6 Edition 2 &		V       V <t< td=""><td>R ✓ ✓</td></t<>	R ✓ ✓
14. <b>KNO</b> 1. 1a 1b 1d 2. 2a 3. 4. 6. 7. 9. 10. 11. 12. 14. (i) (ii) (iii) 15 16	<b>EXPLAIN OPERATION WLEDGE AND UNDERSTANDING</b> Incorrect meter locations         Provisions and clearances required around meters         Permission requirements for meters & regulators when relocated         the use of pliable connections in meter installations         determine the meter capacity is sufficient         the requirements and understanding of load         volume of gas which has to be passed by a meter to effect a satisfactory purge         provision of an MOV         ECVs/MIVs when meter is installed remotely from dwelling         where primary meters serving different parts of a building are grouped together         safety notices and labels         providing gas supply to installation pipework/appliances for first time         procedure for meter installations         HSL56:         Reg.12       Meters – General provisions 12 (1) to (6)         Reg.13       Meter Housings 13 (1) to (4)         Reg.16       Primary meters 16 (1) and (2)         completion of commissioning reports       recognition of meter installations not in scope of IGEM/GM/6 Edition 2 & MET4 i.e.:			R ✓ ✓

(ii) not of Standard Design (iii) outside pressure and design capacity scopes				
(iii) outside pressure and design canacity scopes	(ii)	not of Standard Design		
	(iii)	outside pressure and design capacity scopes		
having non-standard appliances fitted downstream		having non-standard appliances fitted downstream		