

ED-EDM-P9

***PROCEDURE FOR
LICENSING
ELECTRICAL CABLE
JOINTERS***

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1. Purpose

The purpose of this procedure is to describe:

- how to apply for a Electrical Jointer Licence
- how to renew to the licence, and
- how to request for a replacement licence

Electrical jointers performing electrical jointing work in Qatar electricity networks are required by KAHRAMAA to possess a valid electricity jointer licence issued by KAHRAMAA. Such licences are issued for two categories:

1. Low Voltage (LV) Jointers and
2. 11 kV Jointers.

Electrical jointing work includes underground and overhead line cables, joining lengths of cable together, fault-finding, repairing them when necessary and connecting them to overhead lines or other parts of the system.

The licences are issued by KAHRAMAA after reviewing the applications and testing the applicants to ensure that the jointers have the right qualifications for the work. This is to ensure their safety and to protect the electricity distribution and transmission networks.

2. Scope

All persons performing Electrical Jointing work in Qatar electricity networks owned by KAHRAMAA.

3. Responsibilities & Authorities

KAHRAMAA Electricity Distribution Department is responsible for processing all applications for Electrical Jointer Licences.

KAHRAMAA's authority is set out in Article No. 4 of the Emiri Resolution No. (45) – 2009.

4. Abbreviations, Definition of Terms and Key References

LV : Low Voltage

EDD : Electricity Distribution Dept

Term	Description
LV Electrical Jointer licence	Subject to particular conditions or restrictions included in the licence, a LV electrical jointer licence authorises the holder to perform electrical work on any apparatus, equipments and conductors which are normally operated at a voltage <u>not exceeding 250V</u> to the extent of the following: (a) installing, jointing and terminating cables to the extent the work requires specialised knowledge or skill; (b) electrical equipment work necessary for the work mentioned in paragraph (a).

<p>11kV Electrical Jointer licence</p>	<p>Subject to particular conditions or restrictions included in the licence, a LV electrical jointer licence authorises the holder to perform electrical work on any apparatus, equipments and conductors of any voltage to the extent of the following:</p> <p>(a) installing, jointing and terminating cables to the extent the work requires specialised knowledge or skill;</p> <p>(b) electrical equipment work necessary for the work mentioned in paragraph (a).</p>
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5. Procedure

5.1 Applying for new licence

5.1.1 You will need to fill out the application form, ***Application for Electrical Jointer Licence ED-EDM-P-9/F1 (Appendix 1)***. Take care in completing the form and provide all the information required. Incomplete or incorrect applications may be considered withdrawn. The application fee is not refunded for unsuccessful candidate.

5.1.2 Pre-requisite qualifications and experience

- The applicant must have completed at least Secondary School or similar grades and have basic and fundamental knowledge in electricity with (4-6) years experience in the concerned field.
- The applicant must be able to read, write and understand English as well as jointing instruction manuals and drawings. The applicant will have to attend and pass an oral test on English language in order to qualify for the practical test.
- The applicant must not be color blind.
- If applying for 11kV licence, the applicant must have a valid LV Jointer licence as entry level. Application directly for 11kV Jointer licence without a valid LV Jointer licence is not permitted.

5.1.3 What you need to include?

- Two passport size photographs.
- If your application is approved, then the payment receipt issued by KM Customer Service cashier for the right amount of fees as per schedule of fees in Appendix 2.

5.1.4 KAHRAMAA EDD will advise all approved applicants of the date, time and venue for the practical test. All Materials for the tests will be provided by KAHRAMAA.

5.1.5 Test procedures

The applicant must pass an interview and practical test covering at least:

1. For LV jointer:

Total four joints: –

1.1 TEE joint (main cable-PILC, branch cable XLPE).

- 1.2 One STRAIGHT joint (PILC x XLPE).
 - 1.3 One TERMINATION joint, XLPE.
 - 1.4 One STRAIGHT joint (XLPE x XLPE).
2. For 11kV jointer:
Total four joints: –
- 2.1 One STRAIGHT joint (XLPE x PILC).
 - 2.2 One STRAIGHT joint (XLPE x XLPE).
 - 2.3 One indoor TERMINATION, XPLE.
3. Practical Test will be carried out at KAHRAMAA Workshop under the direct supervision of KAHRAMAA Representative.
- 5.1.6. Test result
1. The result of the test will be communicated in writing after the test completion date.
 2. A certificate (as per appendix-3) and a trade licence in laminated form with photograph (as per appendix-4) will be issued to the successful applicant by KAHRAMAA.
 3. Unsuccessful applicant will only be allowed to apply for re-test after at least three months later.
 4. The decision of KAHRAMAA shall be considered as final and any complaint against the testing method or the result shall not be entertained.
 4. During the Jointers work, all Jointers must carry the licence with them and produce on demand by KAHRAMAA Engineers/Inspectors.

5.2. Validity of the licences

The validity of each licence shall end on the last day of each Gregorian calendar year i.e. 31st December (same year).

5.3 Renewing the Licences

- 5.3.1 The old licence shall be submitted to KAHRAMAA with the necessary fees for renewal at least 15 days before expiry.
- 5.3.2 You will need to fill out the application form, **Application for Electrical Jointer Licence ED-EDM-P-9/F1 (Appendix 1)**. Take care in completing the form and provide all the information required. Incomplete or incorrect applications may be considered withdrawn. The application fee is not refunded for incomplete or incorrect applications.
- 5.3.3 KAHRAMAA reserves the right to cancel or suspend any licence at any time and may require the applicant to be re-tested without having to provide any explanations.

5.4 Replacing Lost or Damaged Licences

- 5.4.1 If at any time, a licence is lost or damaged, then an application for a replacement licence card must be made immediately.

5.4.2 You will need to fill out the application form, ***Application for Electrical Jointer Licence ED-EDM-P-9/F1 (Appendix 1)***. Take care in completing the form and provide all the information required. Incomplete or incorrect applications may be considered withdrawn. The application fee is not refunded for incomplete or incorrect applications.

5.4.3 KAHRAMAA reserves the right to reject any application for replacement without having to provide any explanations.

5.5 Cancellation of licence and re-test

KAHRAMAA reserves the right to cancel or suspend the licence at any time and may ask for re-test if required.

The Electrical Jointer licence of a jointer (LV or 11kV) may be cancelled for the following reasons:

- a. Any 11KV/LV joints (straight-joint, Termination & Tee-joints) failure due to jointer's mistake.
- b. Jointer found serious violation of KAHRAMAA safety procedures.
- c. Jointer observed to be responsible for very bad workmanship of 11KV & LV cable joints (such as cable cutting, dressing, connector tightening, not putting bimetallic net, placing wrong semi conductor tube, using wrong size of ferrule, bad crimping, bad plumbing, damage XLPE insulation, jubilee-clamp tightening, loose earth connections, etc.).

Appendix – 1

Form No. - ED-EDM-P-9/F1

ELECTRICITY DISTRIBUTION DEPARTMENT Licence Application Form for Electrical Joints LV/11kV

Tick the circle: <input type="radio"/> LV <input type="radio"/> 11kV	Date of Application (dd/mm/yy):			
Type of Application (Tick the circle):	<input type="radio"/> New	<input type="radio"/> Renew	<input type="radio"/> Replace	<input type="radio"/> Re-test

1. Sponsor Company Details

Name		CR NO	
P.O. Box:		Tel/Fax	
City		Country	

Sponsor Company must have Electrical Trade Licence from Ministry of Trade & Commerce.

2. Candidate Details

Name		ID #						
Sponsor		Birthdate						
Qualification		Tel/Fax						
P.O Box:		City		Nationality				

Applicant must not be a colour blind and have basic English language skill.
Applicant must have valid RP of the same Company.

Attachments: Valid ID/Passport copy + 2 passport size photographs + Letter showing number of years of relevant experience + secondary school (or equivalent) certificate

3. Authorized Company Representative

Company Stamp:	Representative name: Position: Signature:
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4. Office use only

Approved / Not Approved	
JASSIM ALI SHAMS	ABDULLA ALI AL DEYAB
HEAD OF OPERATION & MAINTENANCE	MANAGER ELECTRICITY DISTRIBUTION DEPT.

Appendix – 2: Schedule of Fees

Type of Test	Cost of Test
LV JOINTER TEST	QAR 3000.00
11kV JOINTER TEST	QAR 5000.00

*** Fees are subject to change without prior notice.*

Appendix – 3: Jointers Certificate from KAHRAMAA (Specimen copy)

Ref:

Date:

Mr.....

M/S.....

P.O. Box:

Doha - Qatar

SUB: LV/11kV JOINTERS TRADE TEST

I am pleased to advise you that, following your successful completion of jointers trade test, you have demonstrated sufficient ability to carry out cable jointing works.

This letter serves as your certificate of being a qualified LV / 11 KV Electrical Jointer within the State of Qatar.


This Certificate is valid until 31st December, 201.....

With Regards,

MANAGER
ELECTRICITY DISTRIBUTION DEPARTMENT

CC: Head of Operation & Maintenance

Appendix – 4: Specimen Copy of the Licence

PHOTO		
	<u>Electricity Network Affairs</u> <u>Electricity Distribution Dept</u>	شؤون شبكات الكهرباء إدارة التوزيع الكهربائي
رخصة لحام كابلات رقم (0000) Cable Jointing Licence No		
NAME :	الاسم:	
ID NO.:	الرقم الشخصي:	
CO.NAME:	اسم الشركة:	
AUTHORIZED TO :	<input type="checkbox"/> L.V JOINTER <input type="checkbox"/> 11KV JOINTER	مرحض لعمل:
VALIDITY:	الصلاحية:	

Reverse side:

<p>The holder must produce this licence on demand from KAHRAMAA Engineers / Inspectors while carrying out jointing work.</p>	<p>هذه الرخصة يجب أن تكون مع حاملها أثناء قيامه بأعمال اللحام ويجب ابرازها عند الطلب بواسطة مهندسي كهرباء أو المفتشين .</p>
LICENSING AUTHORITY.....	الترخيص.....

Appendix – 5: Electrical Jointer Licensing Test – Assessment Sheet

Tick the circle: <input type="radio"/> LV <input type="radio"/> 11kV		Date of Test (dd/mm/yy):			
Type of Test (Tick the circle):	<input type="radio"/> New	<input type="radio"/> Renew	<input type="radio"/> Replace	<input type="radio"/> Re-test	

Candidate Details

Name				ID #															
Sponsor				ID Validity															
Sponsor Tel./Fax				Birthdate: dd/mm/yy															
P.O Box:		City		Nationality															

Oral Test Assessment Results:

DETAIL	Pass	Fail	Remarks
1. General Knowledge	<input type="radio"/>	<input type="radio"/>	
2. Knowledge on cables	<input type="radio"/>	<input type="radio"/>	
3. Knowledge on Joints type	<input type="radio"/>	<input type="radio"/>	
4. Knowledge on Safety	<input type="radio"/>	<input type="radio"/>	
5. Knowledge on Phasing in Joints (HV)	<input type="radio"/>	<input type="radio"/>	

English Language Skill

Speak	<input type="radio"/>	<input type="radio"/>
Read	<input type="radio"/>	<input type="radio"/>
Write	<input type="radio"/>	<input type="radio"/>
Colour blind test	<input type="radio"/>	<input type="radio"/>

Allowed to proceed to Practical Test? Yes No

Name & Signature of Examiners (minimum two)

Name: _____ Signature: _____

Name: _____ Signature: _____

Name: _____

Signature: _____

Approved by Sr. Engr. Cables

Date: _____

Practical Test Assessment Results:

Tick the circle: <input type="radio"/> LV <input type="radio"/> 11kV	Date of Test (dd/mm/yy):
Candidate Name	ID #

DETAIL	Pass	Fail	Remarks
1. Cable preparation (Details)	<input type="radio"/>	<input type="radio"/>	
2. Measurement	<input type="radio"/>	<input type="radio"/>	
3. Crimping	<input type="radio"/>	<input type="radio"/>	
4. Tube Shrinking	<input type="radio"/>	<input type="radio"/>	
5. Earthing for Joint	<input type="radio"/>	<input type="radio"/>	
6. Compound Mixing (Tee Joint) & Sealing	<input type="radio"/>	<input type="radio"/>	
7. LV Straight Joint 4C 300/300 XLPE - PILC	<input type="radio"/>	<input type="radio"/>	
8. LV Tee Joint 4C 300/35 XLPE - PILC	<input type="radio"/>	<input type="radio"/>	
9. LV Termination 4C 300 XLPE	<input type="radio"/>	<input type="radio"/>	
10. 11KV Transition Joint 3C 240 XLPE 3C 300 PILC	<input type="radio"/>	<input type="radio"/>	
11. 11KV Straight Joint 3C 240/240 XLPE	<input type="radio"/>	<input type="radio"/>	
12. 11KV Indoor Termination 3C 240 XLPE	<input type="radio"/>	<input type="radio"/>	
13. 11KV Pole Termination	<input type="radio"/>	<input type="radio"/>	

PRACTICAL TEST RESULT

Passed

Failed

Name & Signature of Examiners (minimum two)

Name: _____

Signature: _____

Name: _____

Signature: _____

Name: _____

Signature: _____

Approved by Sr. Engr. Cables

Date: _____

Note: Checklist for practical test must be completed for each candidate and attached for Senior Engineer review.

Practical Test Checklist

Candidate Name:		Date of Test (dd/mm/yy):	
No.	Detail	Description	Done?
1	Cable preparation	1) Align the cable and cut to the required length. 2) Remove the outer sheath, 3) Clean degrease the end of outer sheath.	<input type="radio"/> <input type="radio"/> <input type="radio"/>
2	Measurement	Measure the cable, mark and cut the layers of outer sheath, armour, inner sheath in such a way as mentioned in the installation procedure of the joint/termination.	<input type="radio"/>
3	Crimping	1) Clean, degrease the lug barrels, ferrules, file off burs, and crimp with suitable tool. 2) Apply sealing mastic tape around lug barrel.	<input type="radio"/> <input type="radio"/>
4	Tube shrinking	1) Slide stress control tubes over each core positioning it so that it overlaps the semicon as specified in jointing procedure. 2) Start the shrinking of tubes with the torch lamp (Ensure that tubes shrunk uniformly and free from wrinkles and voids).	<input type="radio"/> <input type="radio"/>
5	Earthing for joint	Ensure shield continuity and earthing continuity by proper earth connection, shielding and firm contact.	<input type="radio"/>
6	Compound mixing(Tee joint)& sealing	1) Proper mixing and pouring of resin and hardener should be done , 2) The joint should not be disturbed till the compound is set.	<input type="radio"/> <input type="radio"/>
7	LV straight joint 4C 300/300 XLPE - PILC	1) Remove the outer serving according to the dimensions specified. 2) Prepare PILC cable by proper plumbing and firm contact for the earth braid 3) Provide armour to lead sheath bond. 4) Care must be taken while removing the lead sheath so that underlying insulating paper is not damaged 5) For XLPE cable side unwind the Armour, cut. 6) Prepare XLPE cable as per the measurements given in the jointing procedure. 7) Clean, degrease the lug barrels, ferrules, file off burs, and crimp with suitable tool. 8) Apply sealing mastic tape around lug barrel 9) Slide stress control tubes over each core positioning it so that it overlaps the semicon as specified in jointing procedure. 10) Start the shrinking of tubes with the torch lamp(Ensure that tubes shrunk uniformly and free from wrinkles and voids) 11) Ensure shield continuity and earthing continuity by proper earth connection ,shielding and firm contact 12) Fix properly the mould for mechanical protection of joint 13) Place the outer sleeve and heat shrunk it for proper sealing.	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
8	LV Tee joint 4C 300/300 XLPE - PILC	1) Remove the outer serving according to the dimensions specified. 2) Prepare PILC cable by proper plumbing and firm contact for the earth braid 3) Provide armour to lead sheath bond.	<input type="radio"/> <input type="radio"/> <input type="radio"/>

		11) Align the cores with terminating points 12) Crimp the lugs with suitable tool. 13) Apply sealing mastic and lug seal. 14) Shrink the creepage extension sheds (2 nos.) at the distances as per the jointing procedure.	○ ○ ○ ○
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