Example Electrical Installation Inspection Report

Client :

Date of inspection :

Inspection carried out by : Electrification Consultancy

Client contact :

Report number :

TABLE OF CONTENTS SAMPLE REPORT

1 Summary of the inspection

2 Measuring instruments

3 Features of the installation

4 Installation Inspection
4.1 Visual inspection
4.2 Comment List
4.3 Insulation Resistors
4.4 Earth Propagation Resistance
4.5 Comment List
4.6 Measurement of protective lines of sockets, fittings and switches
4.7 Measuring protective lines of equipment and machines
4.8 Testing of RCDs

5 Conclusions

6 Terms and glossary

1. Summary of the inspection

This report shows the results of the research carried out, in which the installation was tested against the safety provisions for electrical installations.
The measurement results are obtained on the basis of visual inspection and inspection by measurement or testing.

The inspection is based on the Standard Operation of Electrical Installations-Low Voltage: 1998. This standard covers the use of electrical installations in the work process, the ability to operate electrical work equipment, and working on or near installations for maintenance, repairs, extensions and demolition.

By means of this report, you can demonstrate to the labour inspectorate if necessary that you have fulfilled your obligations in the context of the duty of care of the Working Conditions legislation. However, defects found must be repaired, after which a re-inspection takes place.
Conclusion

The installation has been checked on the basis of the 4th edition of the NEN 1010. The installation is broadly in good condition, but defects have been found on a number of points. A detailed remark of the defects found has been included in the report for each switching and distribution system (see comments/list)

Encoding
Behind each comment in the list of comments is a code that indicates whether the emphasis of the comment is on danger to life (L) and/or fire hazard (B) and/or effectiveness (D). This distinction can be useful in particular for the safety expert, the fire insurer and in particular for the maintenance officer.

2 Measuring instruments

During the inspection, the measurements were carried out with the measuring instruments described below.

Ground circuit resistance measurement	Made by Metrel, type MI 3102 BT, serial no. 20080306.
Measurement of earth resistance installation (Ra)	Made by Metrel, type MI 3102 BT, serial no. 20080306.
Residual current circuit breaker measurement	Made by Metrel, type MI 3102 BT, serial no. 20080306.
Insulation resistance measurement	Made by Metrel, type MI 3102 BT, serial no. 20080306.

3 Features of the installation

Purpose of the installation:
Describe the purpose of the electrical installation here...

Maintenance facilities:
The following facilities have been installed for the purpose of carrying out maintenance:

-

-

Documentation used:
The following drawings, group statements were used during the inspection:

-
-

4. Installation inspection

4.1 Visual inspections

Distribution device :
Place/space :

Points	Result	Comments
Are the drawings available and updated?		
Is the circuit diagram of the installation the same as the distribution device?		
Is a group statement affixed?		
Is there sufficient free space?		
Are the escape routes easily accessible?		
Is the arrangement of the distribution device correct?		
Have the right materials been used?		
Have the connections been entered correctly?		
Is the mechanical condition in order?		
The various switchgear and distribution devices are clearly separated from each other?		
The visible protective and earth conductors and their connections are not interrupted?		
Are the parts for operation and the like accessible		
There is no discoloration of the rails, wires or insulation material Observed?		
The active parts of the switchgear and control assemblies are sufficiently shielded?		
Light groups are not more heavily protected than 16A?		

Sight glasses in the fuse holders are present and undamaged?		
The security measures are selective?		
In the case of knife cartridges, are the shielding plates installed between the phases?		
The installation components are free of substances and materials that can pose a fire hazard?		

4.2 Comments/measures

Belonging to 4.1

Distribution device :
Place/space :

No.	Comments / Measures	Code

4.3 Insulation Resistors

Distribution device :
Place/space :

Group No.	Insulation resistance (MΩ)				Value (A)		Vein cross-section (in mm2)	Comments
	L1-PE	L2-PE	L3-PE	N-PE	Zek.	Aut.		
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								

4.4 Earth Propagation Resistance

Measured Earth Propagation Resistance: .....Ω

4.5 Circuit Impedance Measurement

Measured on Measurement	Point Z (Ω)	I (A)	Point Z (Ω)	I (A)	Point Z (Ω)	I (A)
L1 – L2						
L2 – L3						
L1 – L3						
L1 – PE						
L2 – PE						
L3 – PE						
L1 – N						
L2 – N						
L3 – N						
Acceptance criteria (overload, short circuit and fault protection)						
Conclusion						
Secure						

4.6 Comment List

Belonging to 3.3

Distribution device :
Place/space :

No.	Comments	Code

Measuring the protective lines of wall sockets and luminaires

Distribution device :
Place/space :

Name space	Number of sockets		Number of luminaires	
	present	Result (g = good)	present	Result (g = good)

4.7 Measuring the protective lines of devices and machines

Distribution device :
Place/space :

Name space	Device / machine 1)	Protection Pipe (g = good)	Comments

the measurement of whether the PE pipe is properly connected is done on the device

4.8 Testing RCDs

Distribution device :
Place/space :

Earth leakage switch for group number	Operation of the test button (g= good)	Nominal response current (in mA)	Residual current at measurement (in mA)	Response time earth leakage during measurement (in mS)	Comments

5 Conclusions

Here is the conclusion of the Inspectorate's conclusion.

6 Terms and glossary

No.	Term / Concept	Meaning
1	Operation of electrical installations low voltage	Includes the following standards BS EN 50110-1:1998 - General provisions NEN 3140:1998 — Additional Dutch provisions for low-voltage installations
2	Electrical installation	It includes all electrical equipment for the generation, transmission, conversion, distribution and use of electrical energy.
3	Tripping current and time	Current (A) or time (s) at which the protection of a device is activated.
4	Security device	A facility for safety such as an earth leakage circuit breaker.
5	NEN 1010	Safety provisions for low-voltage installations
6	Earth Propagation Resistance	The resistance of the point of measurement to 'earth' (the lower the earth propagation resistance the better).
7	Insulation resistance	Value that is a measure of protection against unwanted leakage currents (the higher the insulation resistance the better).
8	Free space	A room is used for the safe performance of operating or electrical work on switchgear or distribution equipment.
9	Emergency exit	A road intended to give the people present in a room, in case of emergency, the opportunity to reach a safe place from that space in a safe manner.
10	Circuit diagram	A diagram that accurately explains the operation of the installation.
11	Distribution device	Switchgear and controlgear control: An assembly of overcurrent protection devices for two or more parts of an installation, with or without one or more switchgear and auxiliary power components.
12	RCD	A switch whose tripping device is activated under the influence of an earth leakage protection built into it.
13	Rated response current	The maximum value specified by the manufacturer of the earth switch, at which the protection must be contacted.
14	Protection Pipe	A conduit that, in order to protect against danger in the event of indirect contact, establishes a connection of active parts with earth.
15	Socket	The current part of a socket [16]*, intended to accommodate a plug [17]*.
16	Socket	An assembly of a current and a current receiving apparatus intended for establishing and breaking connections between flexible cables and other parts of an installation or between such cables themselves.

17	Plug	The current-receiving part of a socket intended for attachment to a flexible cable or part of an appliance.