On-Site Guide

And

I.E.T

Wiring Regulations

BS7671 2018

On-Site Guide

Introduction

The scope generally follows that of BS 7671. The guide includes material not included in BS 7671 and gives other sources of information. However it does not ensure compliance with BS 7671. It is a simple guide

Scope

This section shows the scope of the On- Site Guide this includes

Typical maximum earth loop impedance Ze values:

TN-C-S 0.35 Ohms
TN-S 0.8 Ohms
TT 21 Ohms

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Scope

The scope also covers typical installations:

a) Domestic and similar installations

b) Small industrial and commercial single and three Phase installations

c) Supply frequency of 50Hz

d) Nominal voltage of 230V AC Single phase 400/230V AC three phase

e) Supplied with 100A or less

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Contents

Sections

There are 11 sections

These are divided into a number of guides.

Appendix

There are 12 appendix A to L

Index

The index is at the back of the book.

Next to some guides there is a cross reference regulation number to BS7671

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Basic Protection

Basic protection is the physical barrier between persons / livestock and a live part.
E.g
Electrical insulation
Enclosures and barriers
Placing out of reach

More information can be found in the (OSG) and BS7671

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Fault Protection

Fault protection works by limiting the magnitude and duration of voltages under earth fault conditions between exposed conductive parts of equipment and between them and extraneous conductive parts or earth.

Fault protection comprises

Protective earthing
Protective equipotential bonding
Automatic disconnection in case of fault, MCBs, Fuses, RCD

More information can be found in the (OSG) and BS7671

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Live Testing (OSG 10.1)

The electricity at works regulations 1989 states that working on live conductors is permissible provided that

(a) It is unreasonable in all circumstances for it to be dead
(b) Reasonable in all circumstances for the work to be carried out
(c) That suitable precautions are taken to prevent injury

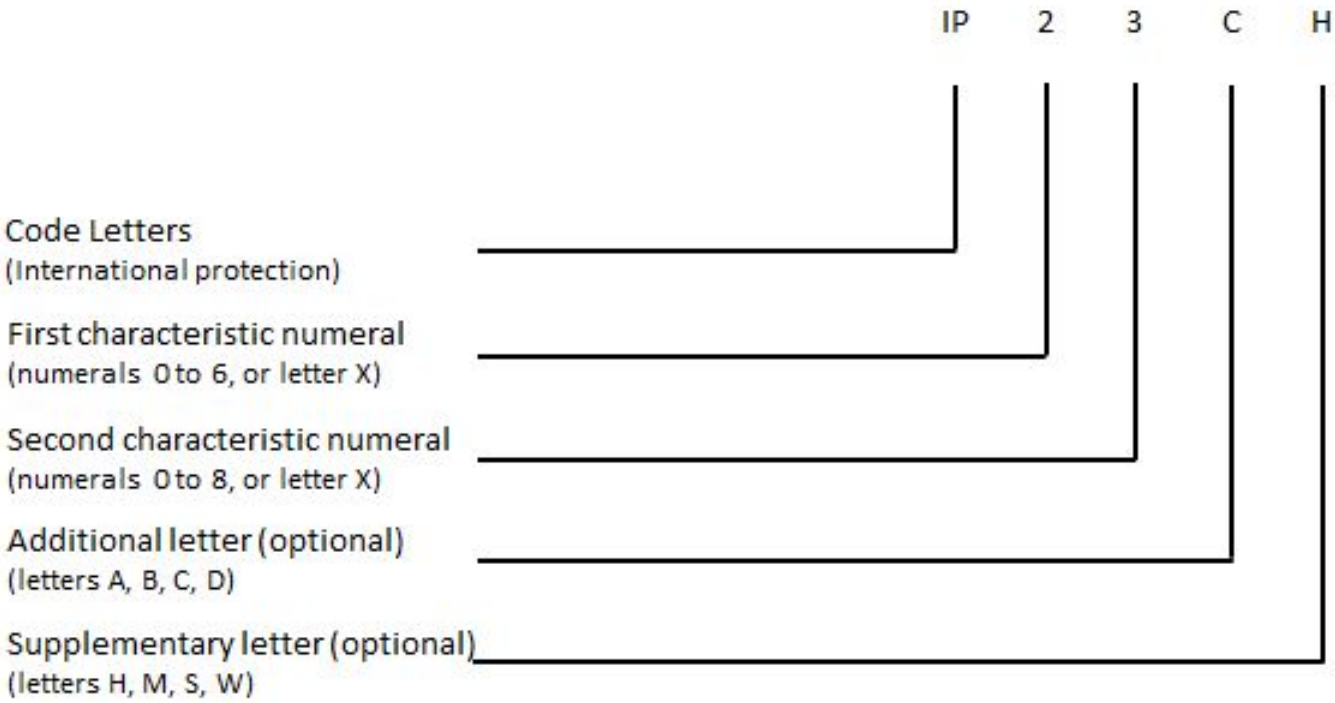
The electricity at works regulations 1989 also states that a means of isolation is required on every circuit.

International Protection Rating (IP)
OSG Appendix L

IP code International Protection Rating also known as Ingress Protection Rating

The degrees of protection provided against the intrusion of solid objects (including body parts like hands and fingers), dust, accidental contact, and water in electrical enclosures. The standard aims to provide users more detailed information than vague marketing terms such as waterproof.

International Protection Rating (IP)



Examples of IP codes

IPX4

Water splashed against the enclosure from any direction will not affect the equipment.

IPX5

Water jets directed from any direction will not affect the equipment.

Example of Combining two codes

IP4X
Penetration by foreign object ≥1.0mm in diameter shall not be possible

IPX5
Water jets directed against the enclosure from any direction will not affect the equipment.

Both of these can be combined to give a result of

IP45
Penetration by foreign object ≥1.0mm in diameter shall not be possible and Water jets directed against the enclosure from any direction will not affect the equipment.