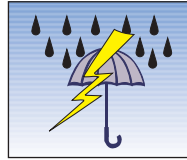


GUIDE TO IP RATINGS

IP ratings are used to designate an object's resistance to environmental ingress. For example, our IP65 equipment enclosures are totally protected against dust ingress and low pressure water jets from all directions.



General Guide to IP Ratings

The table below shows general descriptions for IP ratings. They are a guide only, for detailed information, consult the relevant Australian Standard.

Protected	IP1X	Rain Proof	IPX4
Screen Protected	IP2X	Water Tight	IPX7
Drip Proof	IPX2	Submersible	IPX8
Hose Proof	IPX6	Dust Proof	IP5X
Weatherproof	IPX3	Dust Tight	IP6X

	First Digit Solid Object Ingress	Second Digit Liquid Ingress
0	No protection	No protection
1	Protected against solid objects over 50mm eg. hands	Protected against vertically falling drops of water
2	Protected against solid objects over 12mm eg. fingers	Protected against direct sprays of water up to 15° from vertical
3	Protected against solid objects over 2.5mm eg tools	Protected against sprays up to 60° from vertical
4	Protected against solid objects over 1mm eg. wires, tools	Protected against water sprayed from all directions Limited penetration permitted
5	Protected against dust limited penetration permitted (no harmful deposits)	Protected against low pressure jets of water from all directions Limited penetration permitted
6	Totally protected against dust. ie sealed	Protected against strong jets of water. Limited penetration permitted eg: marine environments
7		Protected against effects of immersion between 150mm and 1m
8		Protected against effects of continuous submersion at a specified depth

STANDARDS & APPROVAL AGENCIES

- **ANSI** American National Standards Institution
- **ASTA** Association of Short Circuit Testing Authorities (UK)
- **BABT** British Approvals Board of Telecommunications (UK)
- **BASEC** British Approvals Service for Electric Cable (UK)
- **BASEEFA** British Approval Service for Electrical Equipment in Flammable Atmospheres
- **BEAB** British Electrotechnical Approvals Board
- **BG** Berufsgenossenschaft der Feinmechanik und Elektrotechnik (Germany)
- **BSI** British Standards Institute (UK)
- **CEBEC** Comite Electrotechnique Belge (Belgium)
- **CECC** CENELEC Electronic Components Committee
- **CEE** Commission L'Equipement Electrique (France)
- **CENELEC** European Committee for Electrotechnical Standardisation
- **CSA** Canadian Standards Association (Canada)
- **DEMKO** Danmarks Elektriske Materielkontrol (Denmark)
- **DIN** Deutsche Industrie Norm (Germany)
- **GOST** State Comittee for Standards (USSR)
- **IEC** International Electrotechnical Commission
- **IMQ** Istituto Italiano del Marchio di Qualita (Italy)
- **JETL** Japanese Electrical Testing Laboratory (Japan)
- **KEMA** National Testing Authority for Netherlands (Holland)
- **NEMKO** Norges Elektriske Materielkontrol (Norway)
- **NF** Norme Francaise (France)
- **OVE** Osterreichischer Verband fur Elektrotechnik (Austria)
- **SAA** Standards Authority of Australia (Australia)
- **SABS** South African Bureau of Standards (South Africa)
- **SECV** State Electricity Commission of Victoria (Australia)
- **SEMKO** Svenska Elektriske Materielkontrollanstalten (Sweden)
- **SETI** Sahkotarkastuskeskus (Finland)
- **SEV** Schweizerischer Elektrotechnischer Verein (Switzerland)
- **TUV** Technischer Uberwachungs Verein (Germany)
- **UL** Underwriters Laboratory (USA)
- **UTE** Union Technique L'Electricite (France)
- **VDE** Verband Deutscher Elektrotechniker (Germany)

