



Electrical Procurement Department

Material Guide



PVC Conduits & Fittings

AHC can provide PVC RIGID CONDUIT & FITTINGS according the following **AMERICAN-NEMA STANDARDS:**

- NEMA TC2 SCH. 40 & SCH. 80 (1/2" up to 8")
- NEMA TC6 EB & DB.
- NEMA TC8 EB & DB.

Conduit



Male Adapters



Female Adapters



Standard Couplings



Clamps



End Bells



Plugs



Threaded Adapters



Spacer



Lock Nuts



Washers

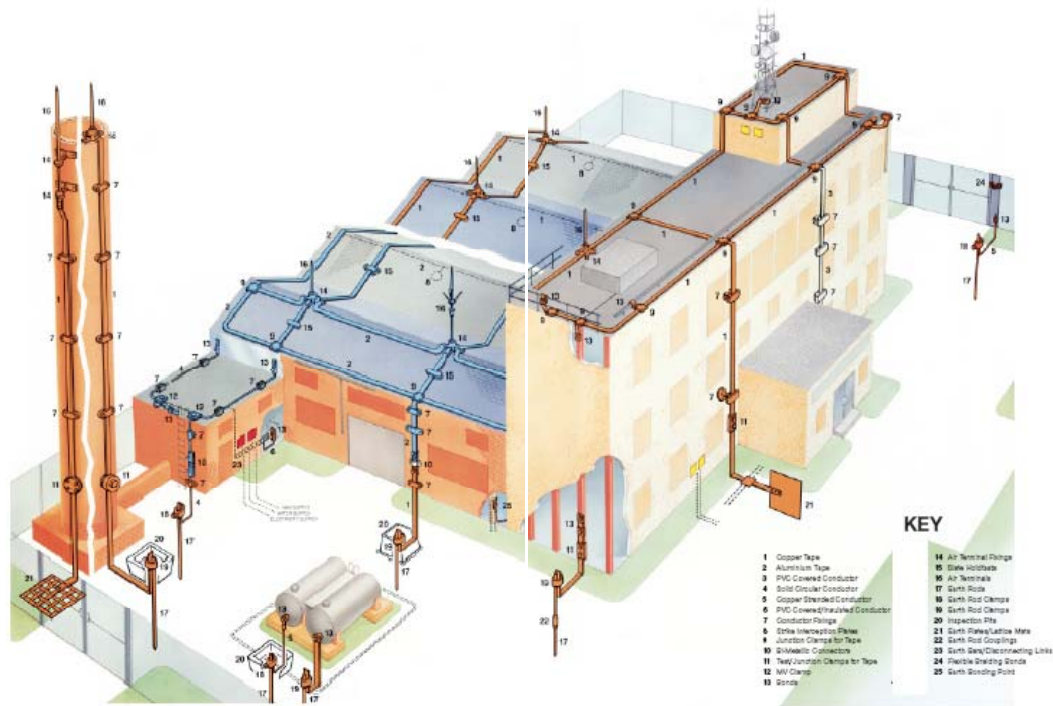


Conduit Bodies





Grounding & Lightning Protection Systems



AHC can supply all grounding & lightning protection materials mentioned in above diagram

Grounding & Bonding :

All grounding materials are comply with **BS 7430**; AHC can supply all grounding material like:

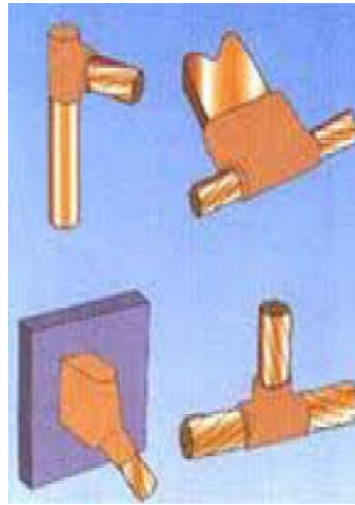
Ground rods , clamps & connectors:



Static Earth Receptacle



Moulds



Grounding Conductors



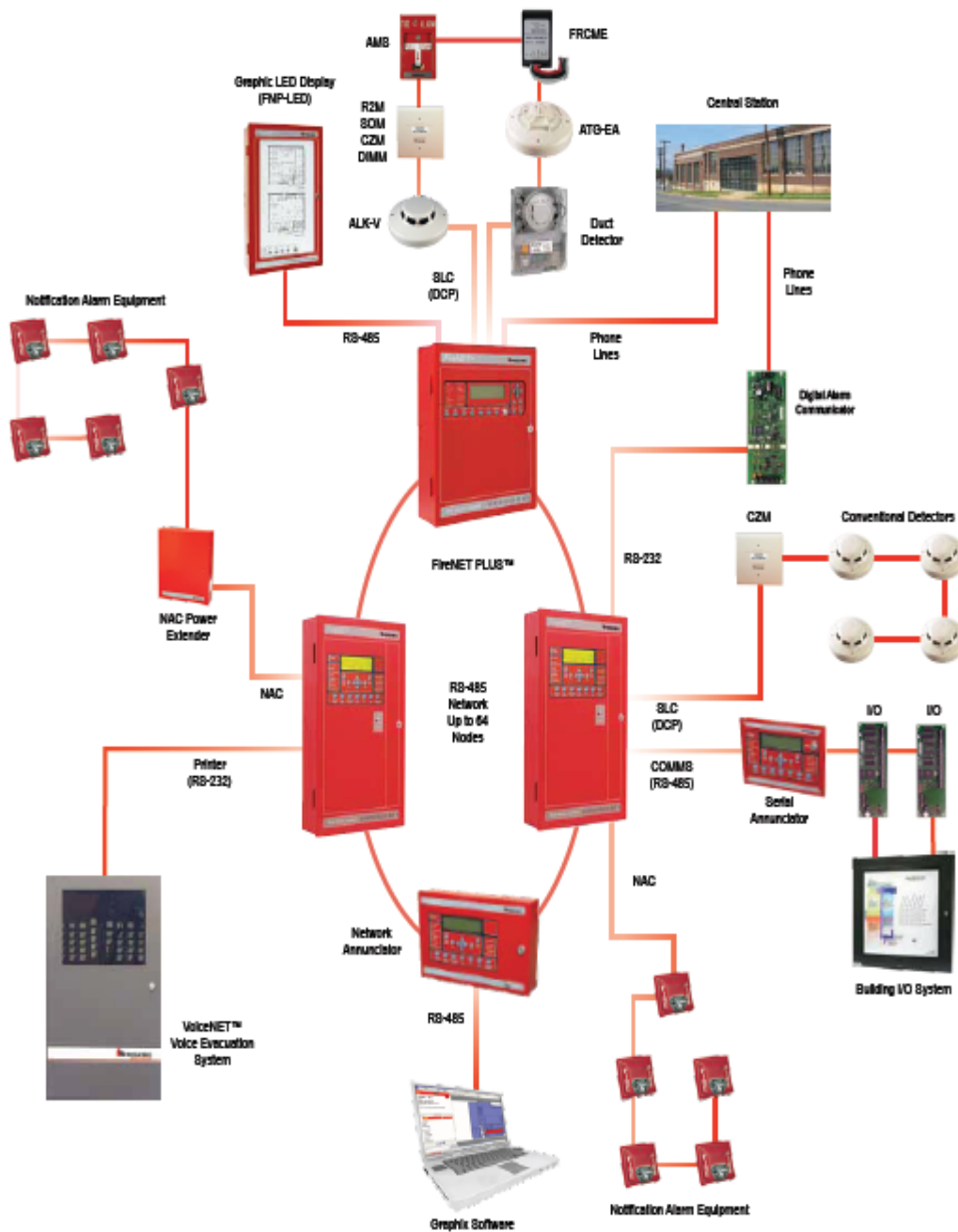
LIGHTNING PROTECTION: All material is according to **BS 6651**. AHC can supply all lightning material like air terminals, bases, connectors, clamps.....etc





Fire Alarm System

AHC can supply all material for fire alarm for both conventional & addressable systems like; Fire Alarm panels, manual pull station, heat detectors, smoke detectors, repeaters, modules, graphic display panel, sounders, horns, fire alarm cables.....etc; All materials are **UL listed & FM approved**





Lighting Poles & High Masts

Standard Lighting Poles :

AHC can supply Standard poles consisting of one-piece for a pole height of up-to 12 m, and more than one steel body of polygon section for heights more than 12 m; our pole body calculation is designed to bear maximum 4 brackets.

Standard Lighting poles are manufactured at each available size, in accordance with **EN 40, TEDAŞ, AASHTO, ILE, BSI CP 3** and International manuals.

For lighting poles, various types of brackets are available in our product range. In addition, brackets of each size and form can be manufactured as may be desired by the customer for decorative purposes.



High Masts :

High masts with a very wide usage field can be used for lighting purposes in Squares, Intersections and roundabouts, Sea-ports, Airports, Sports areas, Bus terminals, Historical and touristic places, etc.

High masts are manufactured at each size, and the pole is only one galvanized polygonal section steel body or more than one steel body joined by the slip-joint method.

Standard Lighting poles are manufactured at each available size, in accordance with **EN 40, TEDAŞ, AASHTO, ILE, BSI CP 3** and International manuals.

Steel poles are computer designed based on current technology and meet the customer requirements of quality, safety and durability.

High masts are available in various types, which include Platform (PL), Step bolts and Rungs (PM), Ladder with safety cage (KM), Internal Ladder (IM), Raising and Lowering System (AS) types.




High masts can be manufactured as single-direction, two-direction and circular multi-directional types according to floodlight orientation, depending on the customer's requirements.



Wires & Cables

AHC can provide all types of wires & cables according to IEC & BS standards:

Low voltage wires :

Single Core Cables with Solid or Stranded Copper Conductors and PVC Insulated 


Description

- Soft annealed solid or stranded Copper conductors insulated with PVC compound rated 70 °C or 90 °C according to IEC 60227 & BS 6004.

Application

- For indoor fixed installations in dry locations, laid in conduits, as well as in steel support brackets.

Low voltage cables :

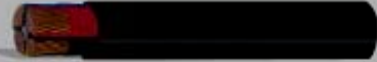
Single Core Cables, with Stranded Circular Copper Conductors, PVC Insulated and PVC Sheathed 

Description

- Soft annealed stranded Copper or Aluminium conductor.
- Insulated with PVC compound rated 70 °C and sheathed with PVC Compound layer .
- Cables are produced according to IEC 60502.

Application

- For outdoor and indoor installations in damp and wet locations. They are normally used for power distribution in urban networks, industrial plants, as well as in thermopower and hydropower stations.


Multicore Cables, with Stranded Copper Conductors PVC Insulated and PVC Sheathed 

Description

- Multicore cables of stranded Copper conductors are insulated with PVC compound rated 70°C, assembled together, covered with overall jacket of PVC compound.
- Cables are produced according to IEC 60502.

Application

- For outdoor and indoor installations in damp and wet locations.

Multicore Cables, with Stranded Copper Conductors, PVC Insulated, Steel Wire Armoured and PVC Sheathed 

Description

- Multicore cables of stranded Copper conductors are insulated with PVC compound rated 70°C, assembled together, armoured with steel wires and covered with overall jacket of PVC compound.
- Cables are produced according to IEC 60502 or BS 6346.


Application

- For outdoor installations in damp wet locations where mechanical damages are expected to occur.

Above cables can be supplied with internal XLPE insulation instead of PVC & Aluminum material instead of Copper material

Bare Copper Conductors :

Copper Conductors



Description

- Plain bare soft drawn Copper conductors as per IEC 60228 class 2.
- Plain bare hard drawn Copper conductors as per DIN 48201.

Application

- Soft drawn Copper conductors are used for grounding electrical systems, where high conductivity and flexibility are required.
- Hard drawn Copper conductors are used in overhead electrical distribution networks.

Control cables :

Control Cables with copper conductors, PVC insulated, covering sizes from 1.0 mm² up to 10 mm², in 2, 3 and 4 cores.



Auxiliary Cables with copper conductors, PVC insulated, covering sizes from 1.0 mm², up to 2.5mm² from 5 cores to 48 cores and 3 mm² & 4 mm² up to 37 cores.

Construction details in this publication pertain to Auxiliary cables with the standard number of cores (ie. 7, 12, 19, 27, 37 or 48). However, enquiries for other configurations can be considered.



The cables conform to the following cable specification, as applicable:

BS 6346 specification for PVC insulated Armoured cables, rated 600/1000V.

IEC 60502 specification for PVC or XLPE insulated Unarmoured cables, rated 600/1000V.

Armoured Control and Auxiliary cables, can be offered to IEC 60502 specifications where required.

Control and Auxiliary cables, both armoured and unarmoured, can be offered with a common/overall screen or shield. The screening material is plain annealed copper tape 0.05 mm or 0.1 mm thick as specified & the shield material is Aluminium PET laminated tape 0.05mm thickness.



Light Fixtures

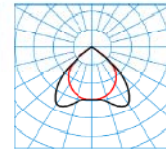
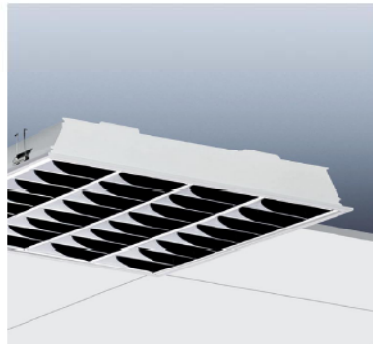
AHC can supply all types of interior & exterior light fixtures based IEC 60598, BS EN 60598, DIN 49780, or BS 4533.

Recessed luminaries

Application

Offices, sales areas, showrooms and financial institutions. Especially recommended for SE workstations.

Universal luminaire system that can be installed in cut-out recess openings and in system ceilings comprising concealed or exposed grids (support profiles 15 mm/24 mm) in 600 mm module.



Degree of protection	IP 20
Safety class	I
Hot wire test	960 ° C
Shock resistance	0.2 J
LFEC	F3
Cibse	BZ 2
Socket	G13
LOR	0,65

Batten luminaries

Recommended areas

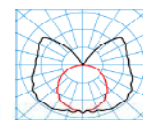
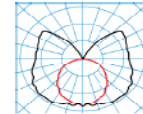
Especially recommended for production facilities, workshops, assembly halls and storage facilities. Versions without reflector suitable for non-specific, passive or tertiary building areas with general illumination requirements, e.g. storage rooms, technical rooms or ancillary rooms without continuously occupied workplaces. Suitable for direct mounting on stable, low vibration ceiling systems.

Luminaire body

Sheet steel, white, end caps made of polycarbonate (PC). Basic body 40 mm wide.

Control gear option

Versions .../14/24..., .../28/54... and .../35/49/80... in Multi-Lamp technology allow operation of 15 lamps with different wattages. With electronic control gear (E), Multi-Lamp.



Degree of protection	IP 20
Safety class	I
Hot wire test	850 ° C
Shock resistance	0.2 J
Cibse	BZ 6
Socket	G5
LOR	0,96

Weather-proof surface-mounted luminaries

Recommended areas

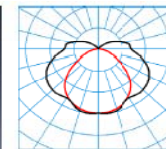
Ceiling- and wall-mounted luminaires for standard use in damp or corrosive environments and covered exterior areas.

Optical system

PLEXIGLAS diffuser, smooth clear exterior surface, with internal prisms and fine-grained front planes, made in one piece. Safe retention of the diffuser by means of rocker fasteners made of glass-fibre reinforced polyamide.

Luminaire body

Glass-fibre reinforced polyester resin, very low inflammability, light-grey. Gear tray can be hung without using tools. Multiple front-plane knock-out openings for mains supply and further wiring. Additional ceiling-oriented feeding options. Grommets are enclosed loose.



Degree of protection	IP 66
Degree of protection	IP 65
Safety class	I
Hot wire test	850 ° C
Hot wire test	650 ° C
Shock resistance	6 J
Shock resistance	0.2 J
Cibse	BZ 6
Socket	G13
LOR	0,68

Down lights

Recommended areas

Entrance areas, corridors, conference rooms, cafeterias, lounges, hotels, restaurants and residential areas.

Optical system

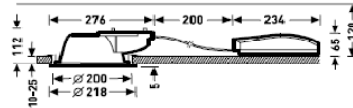
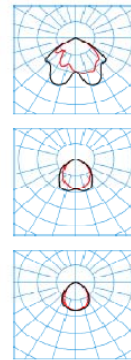
Highly specular, ultra-pure aluminium reflector, individually anodised, for narrow/wide beam light distribution.

Luminaire body

Galvanised sheet steel ceiling flange, white powder-coated, fixed solidly to reflector. Recessed ceiling installation via quick-release catches.

Control gear options

With electronic control gear (E)



Degree of protection	IP 20
Safety class	I
Hot wire test	850 °C
Shock resistance	0,2 J
LFEC	F3
Cibse	BZ 2
Socket	G24q-2
LOR	0,65

High Bay Light Fixtures

Recommended areas

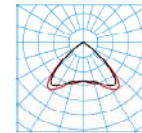
High rooms, halls, storage facilities, production sites, trade fair and exhibition halls.

Optical system

Reflector made of high-purity aluminium for rotationally symmetrical direct light distribution. Wide-angle light distribution.

Luminaire body

Sturdy die-cast housing with integrated cooling ribs, graphite-grey-coated, closed using spring-loaded latches made of reinforced thermoplastic in conformance with the degree of protection. Mains cable via high-strength cable gland. 1-point suspension with centrally integrated hooked screw.



Road Lighting



street lighting fittings are manufactured in UV stabilised technopolymer providing a high mechanical strength and corrosion resistance. With a full cut-off reflector for zero upward light pollution, it is suitable for local and side street road lighting, minor roads, residential estates, commercial and industrial complexes.

Pole top and side entry mounting suitable for straight arms Ø60-76mm or curved arms Ø42-60mm externally adjustable 0° to +20°.

- Polyamide body and cover RAL 7035.
- Automatic isolating switch, on cover removal.
- Die cast aluminium pole clamp finished RAL 7035 with stainless steel locking screw, suitable for Ø42-76mm poles.
- Quick hand release gear tray, no tools required. 2x2.5mm² terminal block.
- Reflector in polished and anodized aluminium. IP66 optical compartment.
- Toughened clear safety glass, also available in frosted (etched) glass. Silicone gasket factory injection bonded direct to glass.
- Quick and easy re-lamping.
- Stainless steel external screws.



Wiring Devices

AHC can supply all types of sockets & switches based on IEC (International Electric Code) & BS (British Standard)

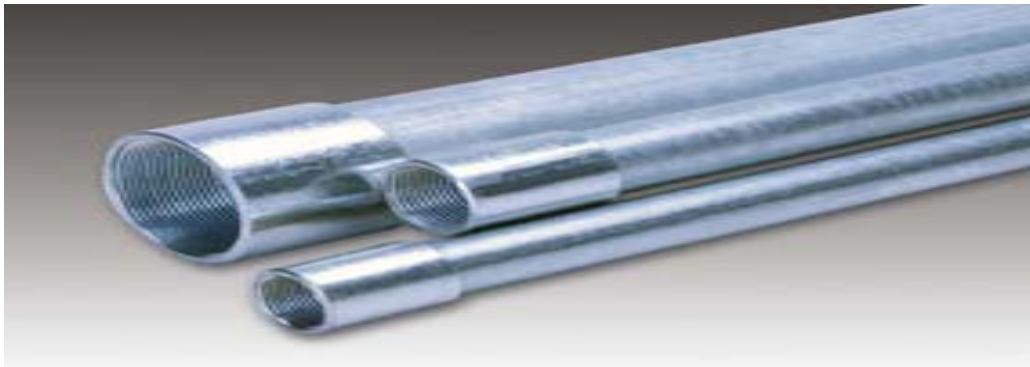




Metal Conduits & Fittings

AHC can supply all types of metal conduits & fittings based on the following standards:

Rigid Galvanized Steel (RGS): According to DIN 49020, DIN 49005, DIN 40430, IEC 61035, BS 4568, or ANSI C80.1



Intermediate Metal Conduit (IMC) : According to UL 1242, DIN 49020, DIN 49005, DIN 40430, IEC 61386, IEC 61035, BS 4568 or ANSI C80.6

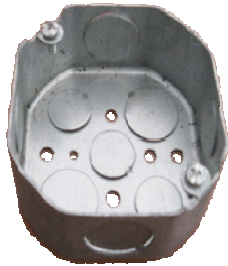


Electrical, Zinc-Coated Steel Metallic Tubing (EMT) : According to UL 797, NEMA C80.3, DIN 49020, DIN 49005, DIN 40430, IEC 61386, IEC 6103 or BS 4568.



Metal Fittings, Accessories & Boxes

AHC can supply all types of Metal Fittings, Accessories & Boxes for all types of Metal Conduits (EMT, IMC & RGS)





Cable Trays

AHC can supply all types of Cable trays, ladders, racks, supports & fittings based on the following standards:

- A. ANSI/NFPA 70 - National Electrical Code.
- B. ASTM A123 - Specification for Zinc (Hot Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars, and Strip.
- C. ASTM A653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot Dip Process, Structural (Physical) Quality.
- D. ASTM A1011 - Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High Strength Low Alloy with Improved Formability.
- E. ASTM A1008 - Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
- F. ASTM B633 - Specification for Electrodeposited Coatings of Zinc on Iron and Steel.
- G. NEMA VE 1 - Metallic Cable Tray Systems.
- H. NEMA VE 2 - Cable Tray Installation Guidelines.

