



FLEXIBLE CONDUIT SYSTEMS



	Page
• About Us	1
• Certificates	2
• Production	3
• BS Steel Flexible Conduit	5
• BS PVC Coated Steel Flexible Conduit	6
• BS LSZH Conduit	7
• BS Liquid Tight Flexible Conduit	8
• BS LSZH Liquid Tight Flexible Conduit	9
• BS Brass Adaptors	10
• BS Nickel Plated Adaptors	11
• American Standard Steel Flexible Conduit	13
• American Standard Liquid Tight Flexible Conduit	14
• American Standard Fittings	15
• Stainless Steel Flexible Conduit	17
• Stainless Steel PVC Flexible Conduit	18
• Stainless LSZH Flexible Conduit	19
• Stainless Steel Liquid Tight Flexible Conduit	20
• Stainless Steel Thermoplastic Liquid Tight Conduit	21
• Stainless Steel LSZH Liquid Tight Conduit	22
• Stainless Steel Fittings	23
• Installation Guide	24
• IP Rating Guide	25

ZM GRUP has been serving in the cable management system since 2014.

ZM GRUP aim is to offer a high quality & competitively priced cable management system for the electrical market.

ZM GRUP is a fully integrated facility with 15 PVC coating machines, 4 CNC benches metal processing machines and molding room within the body of ZM GRUP.

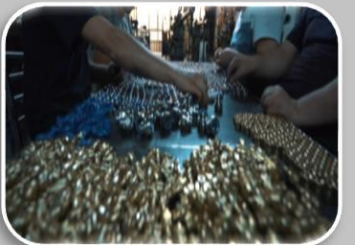
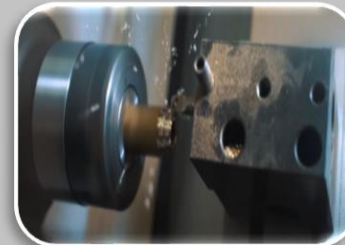
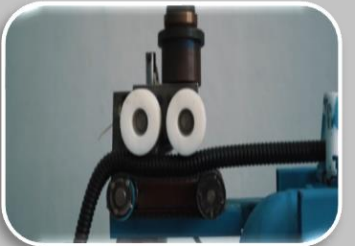
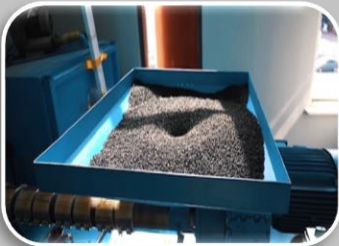
ZM GRUP offers a system that will provide the solution to the clients needs in all projects such as residential , commercial , industrial , utilities , oil & gas , airports Etc.

ZM GRUP flexible steel conduits , PVC coated , LSZH & liquid tight conduits and accessories are available in both American & British standards sizes & lengths can be manufactured to the exact customers requirements.

ZM GRUP Production covering the Turkish local market as well as more than 15 countries around the world.

ZM GRUP staff have been selected for wealth of experience.

Customer Satisfaction Is Our Aim



British Standard Flexible Conduits & Fittings



- **Flexible Material: Electro-Galvanized Steel Properties: Provides strong protection for cables**
- **Temp range: -25°C to +75° C**
- **iP Rating: 1P 40 / iP 54 with recommended adaptor.**
- **Construction: Highly flexible steel conduit offers excellent mechanical protection**
- **Features: ideal for general wiring installations and provides good**
- **flexible bending and vibration applications**



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMGB-16	16MM	13	15.5	40	50
ZMGB-20	20MM	17	20	45	25
ZMGB-25	25MM	21	24	55	25
ZMGB-32	32MM	28	32	60	15
ZMGB-40	40MM	34	38	80	10
ZMGB-50	50MM	46	51	90	10

***Other Sizes Can Be Supplied Upon Request



(See Page 10 & 11 For Details)

- Flexible Material: Electro-Galvanized Steel
- PVC colour: Black (Grey available upon request)
- IP Rating: IP54
- Features: Highly Flexible, High impact Strength and Low Smoke Density.
- Jacket Properties: Heat retardant self-extinguishing PVC Coating
- Temp range: -25°C to + 75°
- Construction: Galvanized steel core with enhanced low acid PVC Coating
- Can be used for Mechanical Protection of Cables and Wires in Tunnels, Hospitals, High Rise Buildings and Underground



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMPVC-16	16MM	13	15.5	40	50
ZMPVC-20	20MM	17	21.6	45	25
ZMPVC-25	25MM	21	26	55	25
ZMPVC-32	32MM	28	34	60	15
ZMPVC-40	40MM	34	39.5	90	10
ZMPVC-50	50MM	46	53	100	10

***Other Sizes Can Be Supplied Upon Request



(See Page 10 & 11 For Details)

- **Flexible Material:** Electro-Galvanized Steel Jacket
- **Properties:** Heat resistant, LSOH, Halogen Free Coating
- **Colour:** Black (Grey also available upon request)
- **Temperature Range:** -25°C to +105°CIP
- **Rating:** 1 P 54 (When installed with suitable water tight adaptors)
- **Construction:** Highly Flexible Steel Conduit with LSOH , Halogen Free
- **Coating Features:** Do not emit Hazardous Gases when Heated or in Flames. Highly Flexible, High impact Strength and Low Smoke Density. Can be used for Mechanical Protection of Cables and Wires in Tunnels, Hospitals, High Rise Buildings and Underground



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMLS-16	16MM	13	16.5	40	50
ZMLS-20	20MM	17	21.6	45	25
ZMLS-25	25MM	21	26	55	25
ZMLS-32	32MM	28	34	60	15
ZMLS-40	40MM	34	39.5	90	10
ZMLS-50	50MM	46	53	100	10

***Other Sizes Can Be Supplied Upon Request



(See Page 10 & 11 For Details)

- **Flexible Material:** Electro-Galvanized Steel Jacket.
- **Properties:** Excellent mechanical strength with flexible capabilities, this jacket is resistant to oil, acid and sea water.
- **PVC colour:** Black (Grey also available upon request)
- **Temp range:** -25°C to +105° C.
- **IP Rating:** IP 67 (When installed with suitable water tight adaptor).
- **Construction:** Highly Flexible Steel Conduit with Cotton Filling and FR PVC Coating.
- **Features:** Complete Protection against most Liquid and Moisture Vapour.



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMLS-LIQ-16	16MM	13	16.5	40	50
ZMLS-LIQ-20	20MM	17	21.6	45	25
ZMLS-LIQ-25	25MM	21	26	55	25
ZMLS-LIQ--32	32MM	28	34	60	15
ZMLS-LIQ--40	40MM	34	39.5	80	10
ZMLS-LIQ--50	50MM	46	53	90	10

***Other Sizes Can Be Supplied Upon Request



(See Page 11 For Details)

- **Flexible Material:** Electro-Galvanized Steel Jacket
- **Properties:** Excellent mechanical strength with flexible capabilities, this jacket is resistant to oil, acid, sea water, heat, low smoke and halogen free.
- **PVC colour:** Grey (Black also available upon request)
- **Temp range:** -25°C to +150° C
- **IP Rating:** IP 67 (When installed with suitable water tight adaptor)
- **Resistance To Flame:** Flame dies in 30 seconds after ignition source is removed
- **Construction:** Highly Flexible Steel Conduit with Cotton Filling and LSOH PVC Coating
- **Features:** Complete Protection against most Liquid and Moisture Vapour



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMLIQ-16	16MM	13	15.5	40	50
ZMLIQ-20	20MM	17	21.6	45	25
ZMLIQ-25	25MM	21	26	55	25
ZMLIQ-32	32MM	28	34	60	15
ZMLIQ-40	40MM	34	39.5	90	10
ZMLIQ-50	50MM	46	53	100	10

***Other Sizes Can Be Supplied Upon Request



(See Page 11 For Details)

Male Adaptor With Screw



Item Code	Size
ZMADP-016	16 MM
ZMADP-020	20 MM
ZMADP-025	25 MM
ZMADP-032	32 MM
ZMADP-040	40 MM
ZMADP-050	50 MM

Material: Brass
Finish : Self Colour

Female Adaptor With Screw



Item Code	Size
ZMADP-F-016	16 MM
ZMADP-F-020	20 MM
ZMADP-F-025	25 MM
ZMADP-F-032	32 MM
ZMADP-F-040	40 MM
ZMADP-F-050	50 MM

Material: Brass
Finish : Self Colour

***Other Sizes Can Be Supplied Upon Request

Male Adaptor Without Screw



Item Code	Size
ZMADP-1-016	16 MM
ZMADP-1-020	20 MM
ZMADP-1-025	25 MM
ZMADP-1-032	32 MM
ZMADP-1-040	40 MM
ZMADP-1-050	50 MM

Material: Brass
Finish : Self Colour

Female Adaptor Without Screw



Item Code	Size
ZMADP-F01-016	16 MM
ZMADP-F01-020	20 MM
ZMADP-F01-025	25 MM
ZMADP-F01-032	32 MM
ZMADP-F01-040	40 MM
ZMADP-F01-050	50 MM

Material: Brass
Finish : Self Colour

Brass Nickel Plated Adaptor



Item Code	Size
ZMBNP-016	16 MM
ZMBNP-020	20 MM
ZMBNP-025	25 MM
ZMBNP-032	32 MM
ZMBNP-040	40 MM
ZMBNP-050	50 MM

Material: Brass
Finish : Nickel Plated

Zinc Nickel Plated Adaptor



Item Code	Size
ZM-ZNC-016	16 MM
ZM-ZNC-020	20 MM
ZM-ZNC-025	25 MM
ZM-ZNC-032	32 MM
ZM-ZNC-040	40 MM
ZM-ZNC-050	50 MM

Material: Zinc
Finish : Nickel Plated

Liquid Tight Nickel Plated Brass Adaptor



Item Code	Size
ZMLNP-016	16 MM
ZMLNP-020	20 MM
ZMLNP-025	25 MM
ZMLNP-032	32 MM
ZMLNP-040	40 MM
ZMLNP-050	50 MM

Material: Brass
Finish : Nickel Plated

Liquid Tight Adaptor Zinc Die Cast



Item Code	Size
ZMLLP-ZNC-016	16 MM
ZMLLP-ZNC-020	20 MM
ZMLLP-ZNC-025	25 MM
ZMLLP-ZNC-032	32 MM
ZMLLP-ZNC-040	40 MM
ZMLLP-ZNC-050	50 MM

Material: Brass
Finish : Zinc Die Cast

***Other Sizes Can Be Supplied Upon Request

American Standard Flexible Conduits & Fittings



- Galvanized steel flexible conduit is suitable for concealed, exposed or approved raceways.
- The flexible conduit is manufactured with a continuous spiral wound strip of corrosion rust resistant, hot dipped galvanized steel.
- The natural color type RWS conduit features a smooth metal interior for easy wire pulling.
- The flexible steel conduit is wire temperature rated, and has superior crush proof qualities.



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMGFCH2	½"	16.2	19.9	65	30
ZMGFCH3	¾"	21.3	25.2	75	30
ZMGFCH4	1"	27.1	32.1	100	15
ZMGFCH5	1¼"	35.5	40.5	125	15
ZMGFCH6	1½"	40.6	46.3	150	10
ZMGFCH7	2"	51.2	58	175	7.5

***Other Sizes Can Be Supplied Upon Request



(See Page 15 For Details)

- Galvanized Steel strips (0.3MM thickness), helically wound. Square lock flexible conduit with heavy smooth PVC cover coating, strong square lock, IP Rating: IP66 + IP67 + IP68, Available in Black and Gray Colors.
- PVC Cover will have minimal wrinkle when Bend.
- Resistant to Oils and greases.
- Temperature Range - 20C to + 55 C
- UV resistant and Suitable for external Use.
- The PVC is keyed into the corrugations of the inner steel flexible core, which prevents the PVC from wrinkling when the conduit is bent to its minimum bend radius. The PVC coating provides a smooth outer surface onto which liquid tight compression fittings can be secured.



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZZLTC13	½"	16.31	21.34	85	30
ZZLTC14	¾"	21.34	26.67	100	30
ZZLTC15	1"	27.08	33.4	120	30
ZZLTC16	1¼"	35.81	42.16	150	15
ZZLTC17	1½"	40.64	48.26	180	15
ZZLTC18	2"	51.94	60.33	220	15

***Other Sizes Can Be Supplied Upon Request



(See Page 15 For Details)

Straight Flexible Squeeze Connector



Item Code	Size
ZMSSC-050	½"
ZMSSC-075	¾"
ZMSSC-100	1"
ZMSSC-125	1¼"
ZMSSC-150	1½"
ZMSSC-200	2"

Material: Zinc Die Cast
Finish : Zinc

90° Flexible Squeeze Connector



Item Code	Size
ZASC-050	½"
ZASC-075	¾"
ZASC-100	1"
ZASC-125	1¼"
ZASC-150	1½"
ZASC-200	2"

Material: Zinc Die Cast
Finish : Zinc

Straight Liquid Tight Connector



Item Code	Size
ZSLT-050	½"
ZSLT-075	¾"
ZSLT-100	1"
ZSLT-125	1¼"
ZSLT-150	1½"
ZSLT-200	2"

Material: Zinc Die Cast
Finish : Zinc

***Other Sizes Can Be Supplied Upon Request

90° Liquid Tight Connector



Item Code	Size
ZALT-050	½"
ZALT-075	¾"
ZALT-100	1"
ZALT-125	1¼"
ZALT-150	1½"
ZALT-200	2"

Material: Zinc Die Cast
Finish : Zinc

Stainless Steel Flexible Conduits & Fittings



- **Material: Stainless steel Grades SS 316/304**
Uncovered flexible conduit
- **Temperature:**
Static Temp: -65°C to +350°C
Flexing Temp: -45°C to +250°C
- **Fire Performance:**
Inherent low fire hazard Resistance to flame propagation.
- **Flexibility & Fatigue Life :**
Very High Flexibility – Very High Fatigue Life.
- **IP Rating :**
IP40 (with recommended Adaptors).
- **Characteristics :**
Oil & Chemical Resistance
Abrasion Resistance



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMSSF-16	16MM	13MM	15.5MM	40MM	50MM
ZMSSF-20	20MM	17MM	20MM	45MM	25MM
ZMSSF-25	25MM	21MM	24MM	55MM	25MM
ZMSSF-32	32MM	28MM	32MM	60MM	15MM
ZMSSF-40	40MM	34MM	38MM	80MM	10MM

***Other Sizes Can Be Supplied Upon Request



(See Page 23 For Details)

- **Material:** Stainless Steel Grades SS 316/304 PVC covered flexible conduit.
- **Temperature:**
Static Temp: -25°C to +70°C
Flexing Temp: -5°C to +90°C
- **Fire Performance:**
Flame dies in less than 30 seconds after ignition source is removed.
- **Flexibility & Fatigue Life :**
Very High Flexibility – Very High Fatigue Life.
- **IP Rating :**
IP54- (with recommended adaptors).
- **Characteristics :**
High mechanical strength



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMSSPVC-16	16MM	13MM	16.5MM	40MM	50MM
ZMSSPVC-20	20MM	17MM	21.6MM	45MM	25MM
ZMSSPVC-25	25MM	21MM	26MM	55MM	25MM
ZMSSPVC-32	32MM	28MM	34MM	60MM	15MM
ZMSSPVC-40	40MM	34MM	39.5MM	90MM	10MM

***Other Sizes Can Be Supplied Upon Request



(See Page 23 For Details)

Stainless Steel (LSZH) Covered Flexible Conduit – Grades SS 316/ 304

- **Material:** Stainless Steel AISI 316L/304 low smoke zero halogen covered flexible conduit.
- **Temperature:**
Static Temp: -20°C to +90°C
Flexing Temp: -5°C to +105°C
- **Fire Performance:**
Limited fire hazard, flame retardant (BS EN61386)
low smoke, zero halogen.
- **Flexibility & Fatigue Life :**
Very High Flexibility – Very High Fatigue Life.
- **IP Rating :**
IP54-(with recommended adaptors).
- **Characteristics :**
High mechanical strength.



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMSSLS-16	16MM	13MM	16.5MM	40MM	50MM
ZMSSLS-20	20MM	17MM	21.6MM	45MM	25MM
ZMSSLS-25	25MM	21MM	26MM	55MM	25MM
ZMSSLS-32	32MM	28MM	34MM	60MM	15MM
ZMSSLS-40	40MM	34MM	39.5MM	90MM	10MM

***Other Sizes Can Be Supplied Upon Request



(See Page 23 For Details)

- **Material:** Stainless Steel Grades SS 316/304
- **Jacket properties:** Excellent mechanical strength with flexible capabilities, this jacket is resistant to oil, acid and sea water.
- **Temperature:**
Static Temp: -20°C to +105°C
Flexing Temp: -5°C to +105°C
- **Fire Performance:**
Flame retardant (BS EN 61386)
- **Flexibility & Fatigue Life :**
Medium Flexibility – Medium Fatigue Life.
- **IP Rating :**
IP67 (with recommended adaptor).
- **UV Resistance :**
Very High (Black)



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMSSPVCLT-16	16MM	13MM	16.5MM	50MM	50MM
ZMSSPVCLT-20	20MM	16MM	21.6MM	65MM	25MM
ZMSSPVCLT-25	25MM	21MM	26MM	100MM	25MM
ZMSSPVCLT-32	32MM	28MM	34MM	135MM	15MM
ZMSSPVCLT-40	40MM	34MM	39MM	150MM	10MM

***Other Sizes Can Be Supplied Upon Request



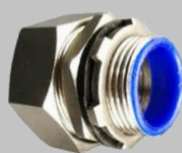
(See Page 23 For Details)

- **Material:** Stainless Steel Grades SS 316/ 304
String Packing with Thermoplastic Rubber Covering
- **Temperature:**
Static Temp: -20°C to +105°C
Flexing Temp: -5°C to +105°C
- **Fire Performance:**
Flame retardant (BS EN 61386)
- **Flexibility & Fatigue Life :**
Medium Flexibility – Medium Fatigue Life.
- **IP Rating :**
IP67 (with recommended adaptor)
- **UV Resistance :**
Very High (Black)
High (Grey)



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMSSTPLT-16	16MM	13MM	16.5MM	50MM	50MM
ZMSSTPLT-20	20MM	16MM	21.6MM	65MM	25MM
ZMSSTPLT-25	25MM	21MM	26MM	100MM	25MM
ZMSSTPLT-32	32MM	28MM	34MM	135MM	15MM
ZMSSTPLT-40	40MM	34MM	39MM	150MM	10MM

***Other Sizes Can Be Supplied Upon Request



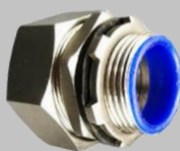
(See Page 23 For Details)

- **Material:** Stainless Steel Grades SS 316/304
Core - String Packing with LS0H PVC Covering
- **Temperature:**
Static Temp: -20°C to +90°C
Flexing Temp: -5°C to +105°C
- **Fire Performance:**
Limited Fire hazard, flame retardant (BS EN 61386)
low smoke , zero halogen.
- **Flexibility & Fatigue Life :**
Medium Flexibility – Medium Fatigue Life.
- **IP Rating :**
IP67 (with recommended adaptor).
- **UV Resistance :**
High



Item Code	Size	Internal Diameter (MM)	External Diameter (MM)	Min. Bend Radius (MM)	Coil Packing (M)
ZMSSLSLT-16	16MM	13MM	16.5MM	50MM	50MM
ZMSSLSLT-20	20MM	16MM	21.6MM	65MM	25MM
ZMSSLSLT-25	25MM	21MM	26MM	100MM	25MM
ZMSSLSLT-32	32MM	28MM	34MM	135MM	15MM
ZMSSLSLT-40	40MM	34MM	39MM	150MM	10MM

***Other Sizes Can Be Supplied Upon Request



(See Page 23 For Details)

Stainless Steel Flexible Adaptor

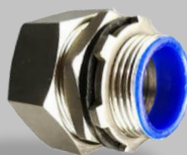


Item Code	Size
ZMSSA-016	16 MM
ZMSSA-020	20 MM
ZMSSA-025	25 MM
ZMSSA-032	32 MM
ZMSSA-040	40 MM

- Temperature Range:
Static Temp: -50°C To +350°C
Dynamic Temp: -45°C To +250°C
- IP Rating :
IP40 (with recommended conduit).
- Degree Of Mechanical Protection:
Very High
- Materials: Stainless Steel SS 316/304 fixed body fitting for uncovered conduit

Stainless Steel Liquid Tight Adaptor

- Temperature Range:
Static Temp: -50°C To +350°C
Dynamic Temp: -45°C To +250°C
- IP Rating :
IP67 (with recommended conduit).
- Degree Of Mechanical Protection:
Very High
- Materials: Stainless Steel SS 316/304 fixed body fitting for flexible conduit

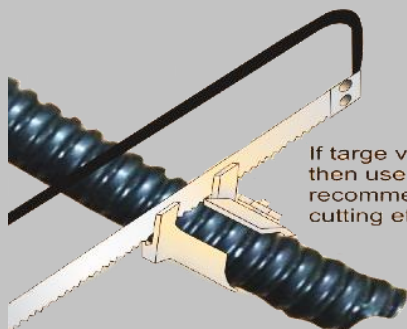
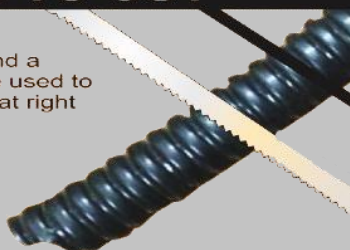


Item Code	Size
ZMSSLNP-016	16 MM
ZMSSLNP-020	20 MM
ZMSSLNP-025	25 MM
ZMSSLNP-032	32 MM
ZMSSLNP-040	40 MM

***Other Sizes Can Be Supplied Upon Request

HOW TO CUT

The conduit has to be held firmly by hand and a fine teeth saw is to be used to cut it. It has to be cut at right angles and any burrs should be trimmed either with a file or a sharp pair of strips.



If large volume is to be cut, then use of a vice is recommended to reduce cutting efforts.

PROCEDURE TO USE



◀ FLEXIBLE CONDUIT



◀ TOP COVER



◀ ADAPTOR



◀ LOCK NUT

PROCEDURE



* Top Cover of adaptor assembly is to be fixed tightly on to the flexible conduit.



* The adaptor is to be inserted in a clockwise direction to the assembled flexible conduit with top cover



* Finally the threaded end is to be screwed with the lock nut provided.

INGRESS PROTECTION MARKING

IP65

SOLID PROTECTION

- | | | |
|---|--|--|
| 0 | | Non protected |
| 1 | | Protected against a solid object greater than 50 mm, such as a hand. |
| 2 | | Protected against a solid object greater than 12 mm, such as a finger. |
| 3 | | Protected against a solid object greater than 2.5 mm, such as a screwdriver. |
| 4 | | Protected against a solid object greater than 1 mm, such as most screws and wires. |
| 5 | | Dust protected. Prevents ingress of dust sufficient to cause harm. |
| 6 | | Dust tight. no ingress of dust. |

WATER PROTECTION

- | | | |
|---|--|--|
| 0 | | Non protected |
| 1 | | Protected against vertical dripping water. Limited liquid entry. |
| 2 | | Protected against vertical dripping water when tilted up 15°. Limited liquid entry. |
| 3 | | Protected against spraying water at an angle 60°. Limited liquid entry. |
| 4 | | Protected against splashes of water at any angle. Limited liquid entry. |
| 5 | | Protected against low pressure water jets from any directions. Limited liquid entry. |
| 6 | | Protected against high pressure water jets from any directions. Limited liquid entry. |
| 7 | | Protected against the effects immersion of water between 15 cm and 1 m for 30 minutes. |
| 8 | | Protected against the effects immersion of water under pressure for long periods. |
| 9 | | Protected from close-range, powerful, high-temperature water jets. |



The IP rating system is defined in international standard IEC 605029. IP ratings are used to classify and define of ingress protection on electrical devices against solids and water. By defining a rating, the IP system ensures specific levels of overate when products are faced with varying elements.



FLEXIBLE CONDUIT SYSTEMS

FACTORY

Kiraztarla Köyü No:1/1
Çilimli / DÜZCE - TURKEY

Phone: +90 0380 536 50 69
Phone: +90 532 059 34 81

Email: proje@zmgrup.com
Web: www.zmelectricals.com