

at the heart of every project





# Introduction

MESC is considered the leading manufacturer and supplier of all types of cables to EPC contractor for mega projects in the Middle East and North Africa.

Middle East Specialized Cable Co. (MESC) was founded as a privately owned in Riyadh in 1993 to cater the growing industry of specialized cables in the region. Started rolling its machines in 1994 and selling in 1995. After consolidating its presence in KSA as the market leader, MESC succeeded in penetrating other markets in GCC, Middle East, North Africa, Europe and USA. In 2007 it became a joint stock company and its shares floated on Saudi Stock market.

Over the years, MESC has expanded its production to cover all types and ranges of cables by acquiring existing companies, establishing new companies and joint ventures. Its products range includes the Industrial, Instrumentation and process Control Cables, Special Cables (BMS), Low Voltage Power cables, Medium Voltage Power cables, Offshore

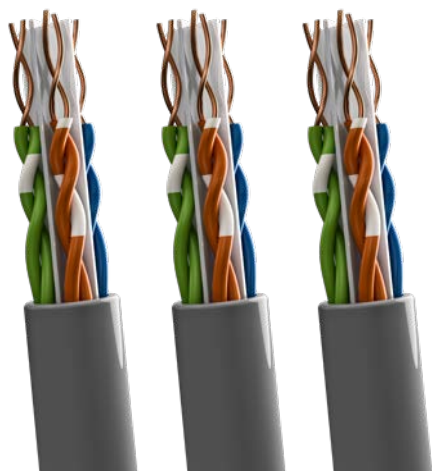
Cables, Railway Signaling and power cables and any types of customized cables manufactured as per the customers' needs and specifications.

## **MESC offers the following types of cables:**

- Instrumentation & Data
- Thermocouple Extension
- Fire Resistance
- Control
- LAN/Computer/Nurse Call/HVAC/BMS/Audio
- Telephone (Filled/Unfilled/VRB/Pilot)
- Coaxial
- Power
- Fire Alarm
- NYMHY/NYLHY
- FLEX/NYAF/SIS/NYZ
- THHN/THWN/TFFN/XHHW/THW
- NYA/THWN/Cu-XLPE/Irrigation
- LV & Control
- Miscellaneous (ABC, ATC, HDBC)

# CAT 5e UTP

TIA/EIA 568-A-5



**APPLICATIONS:** This cable is intended to be used for data transmission rate of up to 150 Mb/s

**CABLE CODE:** M662-04P24AWG-U0GY8-00  
**FOR LSHF CODE:** M662-04P24AWG-U0GY8-H0

## CONSTRUCTION

Conductor	8, twisted in 4 pairs, 24 AWG Solid annealed
Insulation	Polyethylene
Color code	White/blue+blue, white/orange+orange, white/green+green, white/brown+brown
Pair assembly	Twisted pairs assembled
Outer jacket	Grey color PVC jacket (LSHF outer sheath material can also supplied)

## CHARACTERISTICS

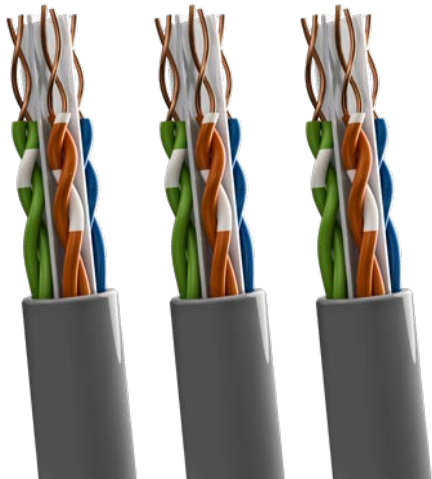
Frequency	1 – 100 MHz
Impedance	100+/- 15 $\Omega$
Direct cur conductor resistance	93.8 $\Omega$ /km
Nominal capacitance	46 pF/m
Halogen acid gas (for LSHF only)	$\leq 0.5\%$ (IEC 60754-1) (outer sheath)
Limiting Oxygen index (for LSHF only):	$\geq 30$ ASTM D2863 (outer sheath)
Cable overall diameter	5.3 mm

PRINTING TEXT (EXAMPLE):

**MESC LAN CAT5e 4PX24AWG UTP**

# LAN CAT 6 UTP

TIA/EIA 568-C.2 & UL 444



**APPLICATIONS:** These cables are intended to be used for low loss extended frequency data systems that operate up to 250 MHz, suitable for building structured cabling systems that support IP-based security and building automation systems.

**CABLE CODE:** MA62-04P23AWG-U0GYM-00

## CONSTRUCTION

Conductor	8, twisted in 4 pairs, 23 AWG solid copper
Insulation	Polyethylene insulated
Pair assembly	Twisted pairs assembled with a center separator
Outer jacket	PVC with Grey color jacket
Color code	White/blue+blue, white/orange+orange, white/green+green, 3white/brown+brown

## CHARACTERISTICS

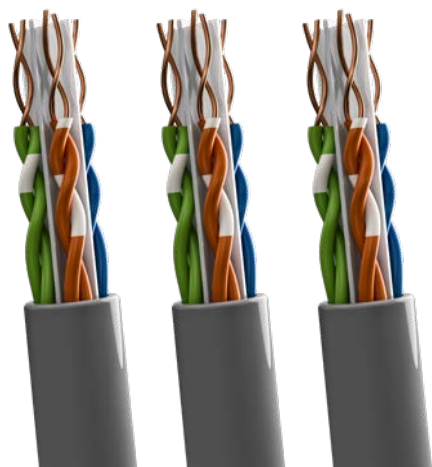
Frequency	1 - 250 MHz
Impedance	100+/- 15 $\Omega$
Flame Retardance	IEC 60332-1
Halogen acid gas	$\leq$ 17% IEC 60754-1(outer sheath)
Halogen acid gas (for LSHF only)	$\leq$ 0.5% (IEC 60754-1) (outer sheath)
Limiting Oxygen index	$\geq$ 30 ASTM D 2863 (outer sheath)
Operating temperature	-20 to +60 $^{\circ}$ C
Cable overall diameter	6.5 mm

PRINTING TEXT (EXAMPLE):

**MESC LAN CAT6 4PX23AWG UTP**

# CAT 6A, Twisted Pair, S/FTP, LSHF

TIA/EIA 568-C.2



**APPLICATIONS:** Suitable for enterprise applications designed to deliver robust standards based performance ensuring optimum bandwidth for today's high speed network applications. The cable is designed to support horizontal networking applications over distances up to 100 meters, 10GBASE-T Ethernet. Fully compliant to Category 6A requirements, including alien crosstalk (AXT).

**CABLE CODE:** MD63-04P23AWG-U2GYM-H0

## CONSTRUCTION

Conductor	8, twisted in 4 pairs, 23AWG solid annealed copper
Insulation	Foam polyethylene
Pair shield	Each pair is shielded with an aluminum polyester tape
Assembly	Shielded twisted pairs are assembled with a solid tinned copper drain and braided with tinned copper wires
Outer jacket	Flame retardant LSHF with color grey
Color code	White/blue, white/orange, white/green, white/Brown

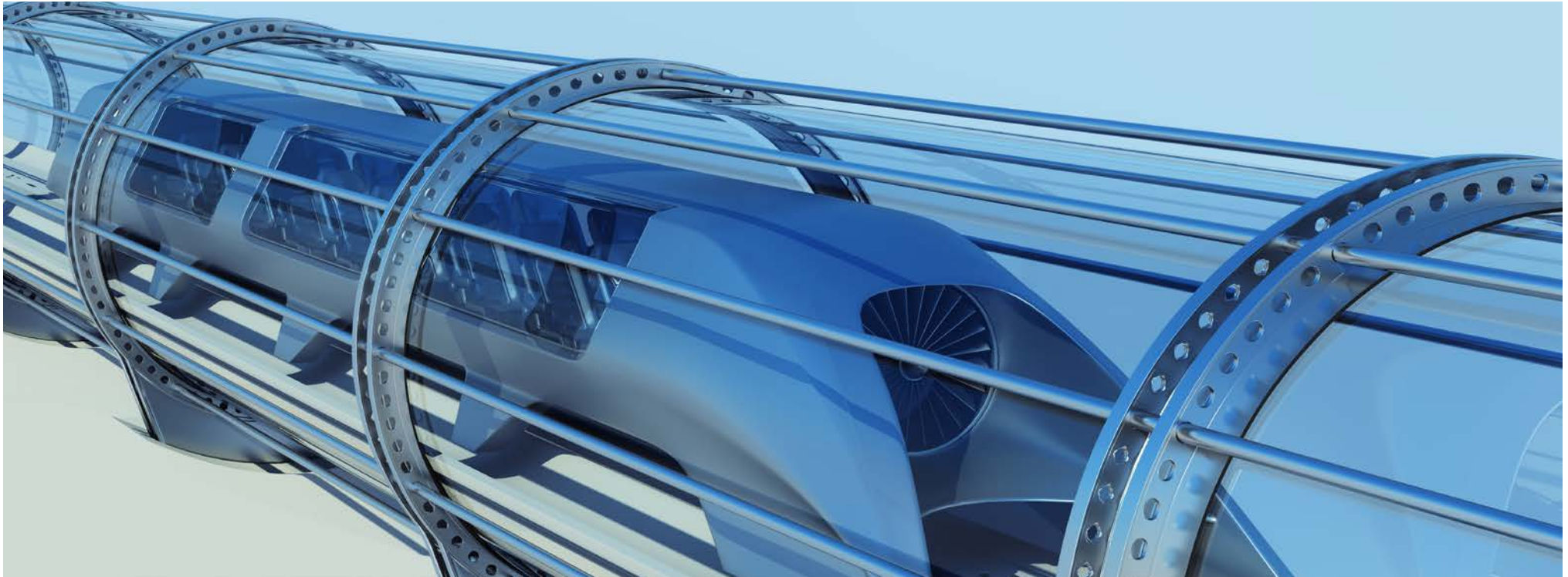
## CHARACTERISTICS

Frequency	1 – 500 MHz
Impedance	100+/- 15 Ω
Mutual Capacitance	≤ 56 nF/km
Direct cur conductor resistance	72.0 Ω/km
Min.insulation resistance	>2GΩ•km
Propagation velocity	74 %
Halogen acid gas	≤0.5% IEC 60754-1(outer sheath)
Limiting Oxygen index	≥ 30 ASTM D2863 (outer sheath)
Operating temperature	-20 to 70 °C
Cable overall diameter	8.7 mm

PRINTING TEXT (EXAMPLE):

**MESC CAT 6A 4PX23AWG LSHF EIA/TIA 568-C.2**





Frequency MHz	Attenuation, dB/100m 20 °C	PS NEXT Loss, dB	NEXT Loss, dB	RL, dB	(ELFEXT), dB	PS (ELFEXT), dB
4	3.8	65.3	63.3	23.0	55.8	52.8
10	5.9	59.3	57.3	25.0	47.8	44.8
16	7.5	56.2	54.2	25.0	43.7	40.7
20	8.4	54.8	52.8	25.0	41.8	38.8
31.25	10.5	51.9	49.9	23.6	37.9	34.9
62.5	15.0	47.4	45.4	21.5	31.9	28.9
100	19.1	44.3	42.3	20.1	27.8	24.8
200	27.6	39.8	37.8	18.0	21.8	18.8
250	31.1	38.3	36.3	17.3	19.8	16.8
500	45.3	33.8	31.8	15.2	13.8	10.8

# FIRE ALARM SYSTEMS

**FIRE ALARM CABLES (SHIELDED & UNSHIELDED) 105 °C (UL 1424)  
POWER LIMITED FIRE PROTECTIVE SIGNALLING CIRCUIT CABLES 300 V**



**APPLICATIONS:** Can be used as a fixed wiring within buildings in accordance with NEC Article 760 Power limited circuits. Also suitable as a power limited circuit cable in accordance with NEC Article 725 class 2 or 3 circuits.

## CONSTRUCTION

Conductor	Solid Annealed Copper Conductor as per ASTM B3.
Insulation	Extruded Solid PVC rated 105 °C.
Assembly	Colour coded insulated cores cabled. When the assembly is shielded an Aluminium Mylar Tape is used with a stranded tinned copper drain wire in contact with Aluminium part of the screen.
Outer jacket	Red Coloured PVC jacked passes the IEEE-383 Flame Test.

PRINTING TEXT (EXAMPLE):

**FIRE ALARM CABLE (UL) FPLR MESC 2014**

# BUILDING MANAGEMENT SYSTEM

**INSTRUMENTATION / PROCESS CONTROL CABLES  
(TYPE PLTC 300 VOLTS)  
PVC INSULATED SINGLE PAIR / TRIAD OVERALL SHIELDED**



STANDARD

**UL 13**

## TEMPERATURE RANGE :

- 40 °C to +90 °C

**APPLICATIONS:** Can be used in cable tray, conduit or direct burial application for instrumentation / process control, in dry or wet location.

## CONSTRUCTION

Conductor	Plain copper to ASTM B3 , stranded to class B of ASTM B8.
Insulation	Flame retardant PVC insulation rated 90° C as per UL13.
Pair Colour Code	White and Black.
Triple Colour Code	White, Black and Red.
Overall Shielding	Twisted pair / triple is shielded with aluminum polyester tape and a tinned copper drain wire.
Jacket	Extruded black PVC as per UL13, oil and sunlight resistant, passes flame test as per IEEE - 383 (70000 BTU). The jacket is impervious to vapour and moisture penetration.

PRINTING TEXT (EXAMPLE):

**INSTRUMENTATIONTYPE PLTC (UL) 300 V MESC 2016**

## PUBLIC ADDRESS SYSTEMS

### SPEAKER CABLES



#### 14 AWG (19 X 27)

Description Stranded tinned copper, PVC insulated, twisted pair, overall aluminum polyester shield, 16 AWG stranded tinned copper drain wire, Grey PVC jacket.

Color code Black & White.

PRINTING TEXT (EXAMPLE):

**TYPE CM (UL) MESC 2016**

## INTERCOM SYSTEMS

### AUDIO CABLES



#### 22AWG (7 X 30), 18 AWG (16 X 30)

Description Stranded tinned copper, PVC insulated, twisted pair, Grey PVC jacket.

Color code Red, Black.

PRINTING TEXT (EXAMPLE):

**TYPE CM (UL) MESC 2016**

## SECURITY SYSTEMS

### EI RS-485 APPLICATIONS



#### 22 AWG (7 X 30)

Description Stranded tinned copper, foam polyethylene insulated, twisted pairs overall aluminum polyester shield, 22 AWG stranded tinned copper drain wire, overall tinned copper braid shield (90% coverage).

Color code Black PVC jacket

PRINTING TEXT (EXAMPLE):

**TYPE CM (RS-485) MESC 2014**



# CO-AXIAL CATV CABLES

RG-59/U, RG-6/U, RG-11/U



NOMINAL ATTENUATION	MHz	Packing Length & MESC Code (@ 1000FT IN REEL)									
		1	10	50	100	200	400	700	900	1000	
2133-01CRG59U-U3BK6-00	dB/100m	2.0	3.3	5.9	8.2	11.5	16.1	21.3	24.3	25.9	
2133-01CRG6/U-U3BK6-00	dB/100m	1.6	3.0	4.9	6.6	9.2	13.1	17.4	20.0	21.3	
2133-01CRG11U-U3BK6-00	dB/100m	1.0	2.0	3.0	3.9	5.6	7.9	11.5	12.5	13.1	

## DIMENSIONS AND WEIGHT DETAILS

PACKING LENGTH & MESC CODE (@ 1000FT IN REEL)

MESC Code	Approx. Weight, kg	Conductor				Insulation		Shield	Jacket		Nom. Imp. ohm	Nom. Cap. pF/km	Nom. Vel. Of Prop., %
		Material	Size (AWG)	Strands X Diameter, No. x mm	Nom. DC Res. @ 20 °C, ohm/km	Material	Diameter, mm		Material	Diameter, mm			
2133-01CRG59U-U3BK6-00	11	CUWELD	20	1 x 0.81	147.2	FPE	3.71	100% AMT & 67% AL. wire braid 36.3 Ω/km	PVC BLACK	6.16	75	53.1	82
2133-01CRG6/U-U3BK6-00	14	CUWELD	18	1 x 1.02	93.1	FPE	4.59	100% AMT & 61% AL. wire braid 33.1 Ω/km	PVC BLACK	7.0	75	53.1	82
2133-01CRG11U-U3BK6-00	27	CUWELD	14	1 x 1.63	36.3	FPE	7.25	100% AMT & 61% AL. wire braid 23.4 Ω/km	PVC BLACK	10.3	75	53.1	82

PRINTING TEXT (EXAMPLE):

**CO-AXIAL CABLE CATV RG6/U 75 OHM MESC**

# CO-AXIAL CATV CABLES 75 OHMS

RG-6/U



NOMINAL ATTENUATION	MHz	Frequency (MHz)									
		1	10	50	100	200	400	700	900	1000	
2A63-01CRG6/U-U1BK8-00	dB/100m	0.7	2.3	5.6	8.2	11.8	17.4	23.6	27.2	28.9	

## DIMENSIONS AND WEIGHT DETAILS

PACKING LENGTH & MESC CODE (@ 1000FT IN REEL)

MESC Code	Approx. Weight, kg	Conductor				Insulation		Shield	Jacket		Nom. Imp. ohm	Nom. Cap. pF/km	Nom. Vel. Of Prop., %
		Material	Size (AWG)	Strands X Diameter, No. x mm	Nom. DC Res. @ 20 °C, ohm/km	Material	Diameter, mm		Material	Diameter, mm			
2A63-01CRG6/U-U1BK8-00	22.2	BC	18	1 x 1.02	24.0	FPE	4.57	2 bare copper wire braid 98% coverage 6.6 Ω/km	PVC BLACK	7.35	75	53.1	78

## LEGEND

BC	Soft annealed plain copper	CUWELD	Nylon	FPE	Cellular (Foam) Polyethylene	AMT	Aluminum Mylar Tape
TC	Polyvinyl Chloride	PE	Solid Polyethylene	AL	Aluminum	PVC	Polyvinyl Chloride

PRINTING TEXT (EXAMPLE):

**CO-AXIAL CABLE CATV RG6/U 75 OHM MESC**