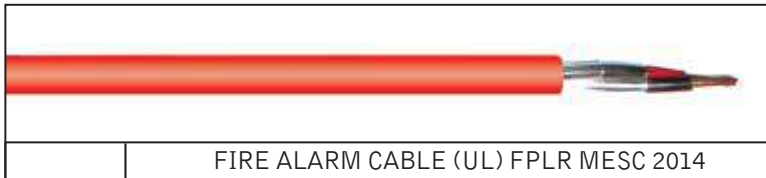


## FIRE ALARM SYSTEMS

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



**Application :** 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.
- **Jacket** : Red Coloured PVC jacketed passes the IEEE-383 Flame Test.

#### COLOUR CODE

No. of Conductors	Colour	No. of Conductors	Colour
1	Black	4	Blue
2	Red	5	Brown
3	Yellow	6	Orange

#### UNSHIELDED CABLES

Order No.	MESC CODE	Size AWG	CORES NO.	Strands X diameter No. X mm	Insulation thickness mm	Sheath thickness mm	Approx. O. D. mm	Approx. Weight Kg / Km	Packing
41001	4161-02C18AWG-U0RD6-00	18	2	1 x 1.02	0.38	0.89	5.7	42	C,6
41002	4161-02C16AWG-U0RD6-00	16	2	1 x 1.29	0.38	0.89	6.2	55	C,6
41003	4161-02C14AWG-U0RD6-00	14	2	1 x 1.63	0.51	1.01	7.7	84	8,6
41004	4161-02C12AWG-U0RD6-00	12	2	1 x 2.05	0.51	1.01	8.6	113	8,6

#### SHIELDED CABLES

Order No.	MESC CODE	Size AWG	CORES NO.	Strands X diameter No. X mm	Insulation thickness mm	Sheath thickness mm	Approx. O. D. mm	Approx. Weight Kg / Km	Packing
42001	4261-02C18AWG-U0RD6-00	18	2	1 x 1.02	0.38	0.89	6.1	53	C,6
42002	4261-02C16AWG-U0RD6-00	16	2	1 x 1.29	0.38	0.89	6.6	66	C,6
42003	4261-02C14AWG-U0RD6-00	14	2	1 x 1.63	0.51	1.01	8.1	106	8,6
42004	4261-02C12AWG-U0RD6-00	12	2	1 x 2.05	0.51	1.01	9.0	136	8,6
42005	4261-04C18AWG-U0RD6-00	18	4	1 x 1.02	0.38	0.89	6.8	78	8,6
42006	4261-04C16AWG-U0RD6-00	16	4	1 x 1.29	0.38	0.89	7.7	107	8,6
42007	4261-04C14AWG-U0RD6-00	14	4	1 x 1.63	0.51	1.01	9.3	163	8
42008	4261-04C12AWG-U0RD6-00	12	4	1 x 2.05	0.51	1.01	10.8	233	8

Packing : 6 – 1000 ft Reel.  
C – 1000 mtr Reel.  
8 – 1000 mtr Drum.

## SECURITY SYSTEMS

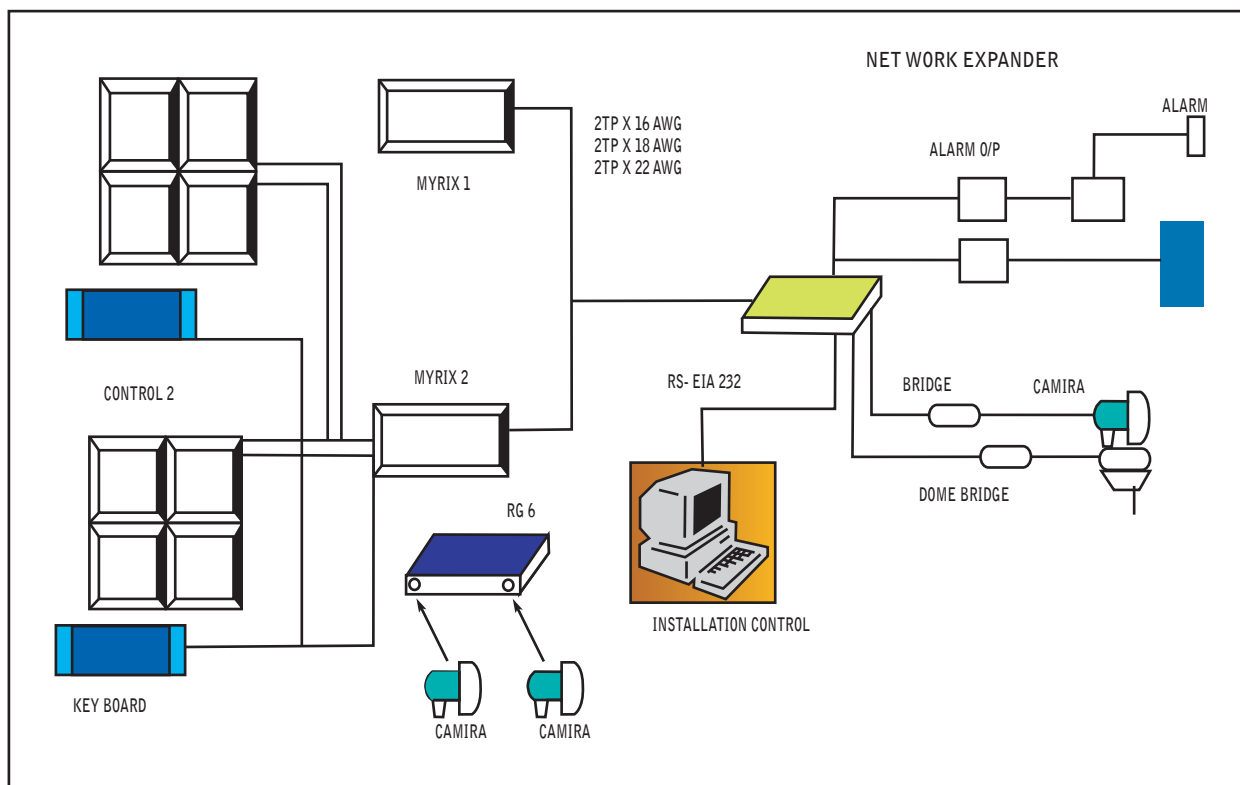
### Access Control & CCTV

This system covers two main activities like Access Control & Closed Circuit Television (CCTV). The Video Surveillance System operates on closed loop basis.

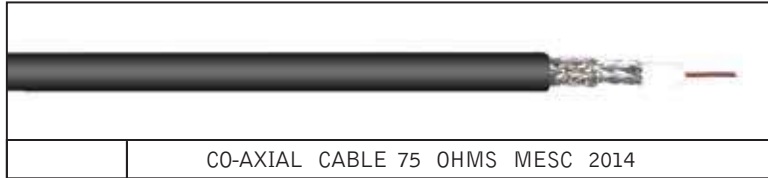
Surveillance System are used in many different applications where reliable Video Surveillance is required such as traffic monitoring centers, large commercial buildings, retail shops, city centers, banks & supermarkets.

(CCTV) Surveillance Systems can observe several patients at once in a hospital recovery room. CCTV permits an individual to watch many areas from one central location.

MESC provides the most widely used paired and coaxial cables used for such systems.



## SECURITY SYSTEMS ANALOG VIDEO CABLES



LEGEND:		
BC	⇔	Bare Copper
TC	⇔	Tinned Copper
CUWLD	⇔	Copper Covered Steel (copperweld)
PE	⇔	Solid Polyethylene
FPE	⇔	Cellular (Foam) Polyethylene
AL	⇔	Aluminum
AMT	⇔	Aluminum Mylar Tape
PVC	⇔	Polyvinyl Chloride

### RG-59/ U NEC TYPE CM

Order No.	Packing length and MESC CODE	Approx. Weight	Conductor				Insulation		Shield	Jacket		Nom. Imp.	Nom. Cap.	Nom. vel of prop.	Nominal Attenuation	
			Material	AWG	Strands X diameter	Nom. D.C. Res. at 20° C	Matl	Dia.		Material & coverage Nom. shield resistance	Matl				Dia.	MHz
		Kg.	No. x mm		ohm/Km	mm		mm		ohm	pF/m	%				
28001	1000 ft in Reel 2833-01CRG59U-U3BK6-00	10.4	CUWLD	20	1 X 0.81	147.2	FPE	3.71	100% AMT and 40% Al wire braid 55.8 Ω / Km	PVC BLACK	6.16	75	53.1	82	1	2.0
	1000 ft in Reel 2833-01CRG59U-U3BK8-00	34													10	3.3
															50	5.9
															100	8.2
															200	11.5
															400	16.1
															700	21.3
															900	24.3
															1000	25.9

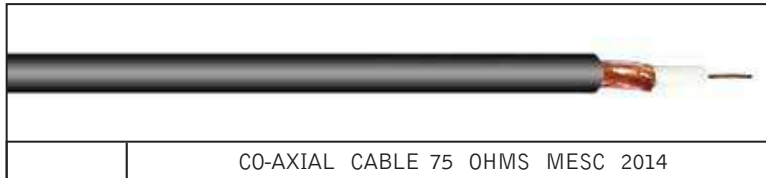
### RG-6 / U NEC TYPE CM

Order No.	Packing length and MESC CODE	Approx. Weight	Conductor				Insulation		Shield	Jacket		Nom. Imp.	Nom. Cap.	Nom. vel of prop.	Nominal Attenuation	
			Material	AWG	Strands X diameter	Nom. D.C. Res. at 20° C	Matl	Dia.		Material & coverage Nom. shield resistance	Matl				Dia.	MHz
		Kg.	No. x mm		ohm/Km	mm		mm		ohm	pF/m	%				
21004	1000 ft in Reel 2163-01CRG6/U-U2BK6-00	17.2	BC	18	1 X 1.02	21.4	FPE	4.57	100% AMT and 61% Tinned copper braid 16.4 Ω / Km	PVC BLACK	7.0	75	53.1	82	1	1.0
	1000 ft in Reel 2163-01CRG6/U-U2BK8-00	56.4													10	2.3
															50	4.9
															100	6.6
															200	9.2
															400	13.1
															700	17.4
															900	20.0
															1000	21.3

### RG-11 / U

Order No.	Packing length and MESC CODE	Approx. Weight	Conductor				Insulation		Shield	Jacket		Nom. Imp.	Nom. Cap.	Nom. vel of prop.	Nominal Attenuation	
			Material	AWG	Strands X diameter	Nom. D.C. Res. at 20° C	Matl	Dia.		Material & coverage Nom. shield resistance	Matl				Dia.	MHz
		Kg.	No. x mm		ohm/Km	mm		mm		ohm	pF/m	%				
21006	1000 ft in Reel 2163-01CRG11U-U2BK6-00	33.2	BC	14	1 X 1.63	8.5	FPE	7.24	100% AMT and 61% Tinned copper braid 9.8 Ω / Km	PVC BLACK	10-29	75	52.8	84	1	0.6
	1000 ft in Reel 2163-01CRG11U-U2BK8-00	109													10	1.6
															50	3.0
															100	4.3
															200	5.3
															400	7.6
															700	10.8
															900	13.1
															1000	14.1

# SECURITY SYSTEMS CATV CABLES



LEGEND:		
BC	⇒	Bare Copper
TC	⇒	Tinned Copper
CUWLD	⇒	Copper Covered Steel (copperweld)
PE	⇒	Solid Polyethylene
FPE	⇒	Cellular (Foam) Polyethylene
AL	⇒	Aluminum
AMT	⇒	Aluminum Mylar Tape
PVC	⇒	Polyvinyl Chloride

## RG-59/U NEC TYPE CM

Order No.	Packing length and MESC CODE	Approx Weight	Conductor				Insulation		Shield	Jacket		Nom. Imp.	Nom. Cap.	Nom. vel of prop.	Nominal Attenuation	
			Material	AWG	Strands X diameter No. x mm	Nom. D.C. Res. at 20°C ohm/Km	Matl	Core Dia. mm		Material & coverage Nom. shield resistance	Matl				Dia. mm	MHz
29001		11 36	BC	20	1 X 0.81	34	FPE	3.71	Bare Copper Braid 95% Coverage braid 8.5 Ω/ Km	PVC BLACK	6.16	75	56.8	78	1	2.0
															10	3.3
															50	6.2
															100	8.9
															200	12.8
															400	18.4
															500	20.7
1000	29.8															

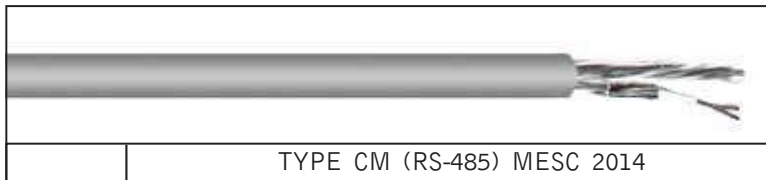
## RG6/U NEC TYPE CM

Order No.	Packing length and MESC CODE	Approx Weight	Conductor				Insulation		Shield	Jacket		Nom. Imp.	Nom. Cap.	Nom. vel of prop.	Nominal Attenuation	
			Material	AWG	Strands X diameter No. x mm	Nom. D.C. Res. at 20° C ohm/Km	Matl	Core Dia. mm		Material & coverage Nom. shield resistance	Matl				Dia. mm	MHz
21005	1000 ft in Reel 2A63-01CRG6/U-U1BK6-00 1000 ft in Reel 2A63-01CRG6/U-U1BK8-00	72.8	BC	18	1 X 1.02	24.0	FPE	4.57	2 Bare copper Braid 98% Coverage 6.6 Ω/ Km	PVC BLACK	7.35	75	53.1	78	1	0.7
															10	2.3
															50	5.6
															100	8.2
															200	11.8
															400	17.4
															700	23.6
900	27.2															
1000	28.9															

## RG11/U NEC TYPE CM

Order No.	Packing length and MESC CODE	Approx Weight	Conductor				Insulation		Shield	Jacket		Nom. Imp.	Nom. Cap.	Nom. vel of prop.	Nominal Attenuation	
			Material	AWG	Strands X diameter No. x mm	Nom. D.C. Res. at 20° C ohm/Km	Matl	Core Dia. mm		Material & coverage Nom. shield resistance	Matl				Dia. mm	MHz
21002	1000 ft in Reel 2963-01CRG11/U-U1BK6-00 1000 ft in Reel 2963-01CRG11/U-U1BK8-00	37.8 124	BC	14	1 X 1.63	8.5	FPE	7.24	Bare copper Braid 97% Coverage 3.6 Ω/ Km	Polyethylene BLACK	10.29	75	52.8	84	1	0.6
															10	1.1
															50	3.0
															100	4.3
															200	6.2
															400	9.5
															700	13.5
900	15.7															
1000	17.1															

## 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.

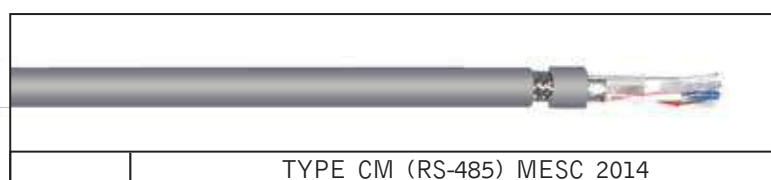
Pair No.	Color
1	White/Blue stripe and Blue/White stripe
2	White/Orange stripe and Orange/White stripe
3	White/Green stripe and Green/White stripe
4	White/Brown stripe and Brown/White stripe

Order No.	MESC CODE	UL NEC Type Voltage grade	No. of pairs	Packing length		Approx. weight	Nominal D.C.R		Nominal O.D.		Nom. Imp.	Nom. Vel of prop.	Nominal Capacitance			
				m	ft		kg	Cond.	Shield	mm			Inch	Ohms	%	c/c
																pF/m
15112	1523-01P22AWG-U2BK6-42	NEC Type CM	1	304.2	1000	22.0	48.2/km	9.5/km	7.2	0.28	120	78	36.1	11	65.6	20
15113	1523-02P22AWG-U2GY8-42	Type PLIC 300V	2	304.2	1000	32.4	48.2/km	4.6/km	9.6	0.38	120	78	36.1	11	65.6	20
15114	1523-03P22AWG-U2BK6-42		3	304.2	1000	39.7	48.2/km	4.6/km	10.6	0.42	120	78	36.1	11	65.6	20
15115	1523-04P22AWG-U2BK6-42		4	304.2	1000	48.8	48.2/km	3.6/km	11.7	0.46	120	78	36.1	11	65.6	20

C/C – Capacitance between conductors.

C/S – Capacitance between one conductor and other conductors connected to shield.

## SECURITY SYSTEMS LOW CAPACITANCE COMPUTER CABLES EIA RS-485 APPLICATIONS



**24 AWG (7 X 32)** Description : Tinned copper conductor, polyethylene insulated, twisted pairs, overall Aluminum polyester shield, with 24 AWG stranded tinned copper drain wire, overall tinned copper braid shield (90% coverage), Grey PVC jacket.

Order No.	MESC CODE	UL NEC Type Voltage grade temperature rating	No. of pairs	Packing length		Approx. weight kgs	Approx. O.D.		Nominal D.C.R		Nom. Imp. Ohms	Nom. Volt. of prop.	Nominal Capacitance			
				m	ft		mm	Inch	Cond. Ohm/km	Shield Ohm/km			c/c		c/s	
													pF/m	pF/ft	pF/m	pF/ft
15108	1522-01P24AWG-U2GY8-00	NEC CM 300V, 80°C	1	1000	3280	63	6.8	0.26	78.7	11.0	120	66	42	12.8	75.5	23.0
15111	1522-02P24AWG-U2GY8-00	NEC CM 300V, 80°C	2	1000	3280	106	10.3	0.40	78.7	7.2	120	66	42	12.8	75.5	23.0

## AUDIO & COMPUTER CABLES

**22 AWG (7 X 30)** Description : Tinned copper conductor, polyethylene insulated Black & Red under Aluminum polyester shield, Green & White under Aluminum polyester shield, common drain wire of 24 AWG stranded tinned copper with Grey PVC jacket.

Order No.	MESC CODE	UL NEC Type Voltage grade temperature rating	No. of pairs	Packing length		Approx. weight kgs	Approx. O.D.		Nominal D.C.R		Nom. Imp. Ohms	Nom. Volt. of prop.	Nominal Capacitance			
				m	ft		mm	Inch	Cond. Ohm/km	Shield Ohm/km			c/c		c/s	
													pF/m	pF/ft	pF/m	pF/ft
13001	1322-02P22AWG-U0GY8-00	NEC CM 300V, 60°C	2	1000	3280	35	6.1	0.24	49.2	54.5	45	66	115	35	203	62

**20 AWG (7 X 22)** Description : Tinned copper, polyethylene insulated Twisted pairs. Each pair individually Shielded with Aluminum polyester shield, and 22 AWG stranded tinned copper drain wire. Grey PVC jacket.

Color code : Black / Red, Black / White, Black/Green.

13002	1322-03P20 AWG-U0GY6-00	NEC CM 300V, 80°C	3	304.8	1000	26.6	0.34	0.34	34.4	45.9	50	66	98	30	180	55
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**18 AWG (19 X 30)** Description : Tinned copper, polyethylene insulated twisted pairs. Each pair individually Shielded with Aluminum polyester shield, and 20 AWG stranded tinned copper drain with Grey PVC jacket.

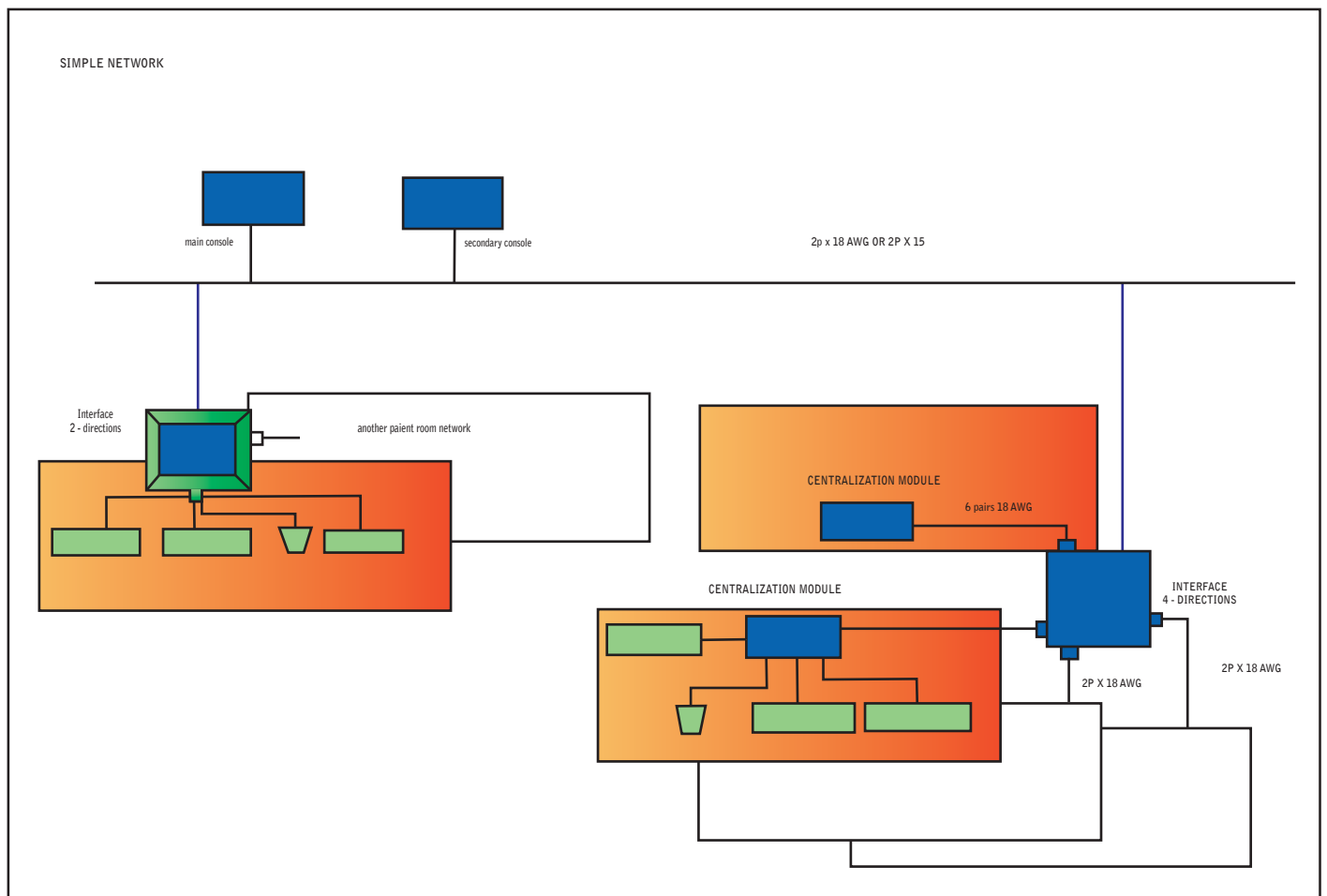
Color code : Black / Red, Black / White, Black/Green.

13003	13C2-03P18AWG-U0GY6-00	NEC CM 300V, 80°C	3	304.8	1000	38.5	10.37	0.41	21	27.2	50	66	98	30	180	55
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## NURSE CALL SYSTEMS

- Developed to help hospital staff for easier and faster communication  
(System's schématique cabling circuit is enclosed)

SCHEMATIC DIAGRAM  
NURSE CALL SYSTEM



## NURSE CALL SYSTEMS

### JE-Y(St)Y INDUSTRIAL ELECTRONIC CABLES VDE - 0815



**Application** : Suitable for measurement and control in the fields of electronics. This cable is also used for data transmission in computers. Suitable for fixed installation in dry and humid premises.

**Special Applications** : Suitable for MAXI-TERMI point connections.

Construction		Technical Data	
Conductor	: Solid plain copper.	Temperature range	
Insulation	: PVC insulation type YI-3 to VDE 0207.	Stationary	: -30 °C to +70 °C.
<b>Pair</b>	: Cores twisted into pairs. Two (2) pairs shall be a quad. Pairs colour coded as per VDE - 0815.	Flexing	: -5 °C to +50 °C.
	First Pair : Blue + Red.	Peak working voltage	: 225 Volts.
	Second Pair : Grey + Yellow.	Minimum bending radius	: 7.5 X cable diameter.
	Third Pair : Green + Brown.	Conductor resistance at 20°C	: 36.6 ohm/Km.
	Fourth Pair : White + Black.	Insulation resistance	: 100 MOhm - Km.
Units	: Four pairs bundled into a unit and wrapped with an open helix of numbered polyester tape.	Mutual Capacitance	: 100 nF/Km (cables up to 4 pairs the value can exceed by 20%.
Assembly	: Units cabled with non-hygroscopic fillers if necessary, shielded with aluminum polyester tape and stranded tinned copper drain wire for electrostatic noise rejection.	Capacitance unbalance maximum	: 200pF/100m.
Outer Sheath	: PVC type YM - 1 as per VDE - 0207 coloured grey ( blue for Intrinsically safe circuits). Outer sheath passes flame retardant test as per IEC-332-1.	R.M.S. test voltage	: 500 V core/core. 2000 V core/screen.
		Attenuation	: 1.1dB/Km at 800Hz. 3.0dB/Km at10KHz.

Size sq. mm	Order No.	MESC Code	Pairs	Strands X diameter No. X mm	Insulation thickness mm	Sheath thickness mm	Approx. O. D. mm	Approx. Weight Kg / Km
0.5	N2001	N261-01P00050-U0GY8-00	1	1 X 0.8	0.3	1.0	5.1	45
	N2002	N261-02P00050-U0GY8-00	2	1 X 0.8	0.3	1.0	5.9	60
	N2003	N261-04P00050-U0GY8-00	4	1 X 0.8	0.3	1.0	9.1	105
	N2004	N261-08P00050-U0GY8-00	8	1 X 0.8	0.3	1.0	11.4	170
	N2005	N261-12P00050-U0GY8-00	12	1 X 0.8	0.3	1.2	13.7	250
	N2006	N261-16P00050-U0GY8-00	16	1 X 0.8	0.3	1.2	15.3	315
	N2007	N261-20P00050-U0GY8-00	20	1 X 0.8	0.3	1.2	16.8	375

**Packing:** Wooden Drums of 500/1000meters



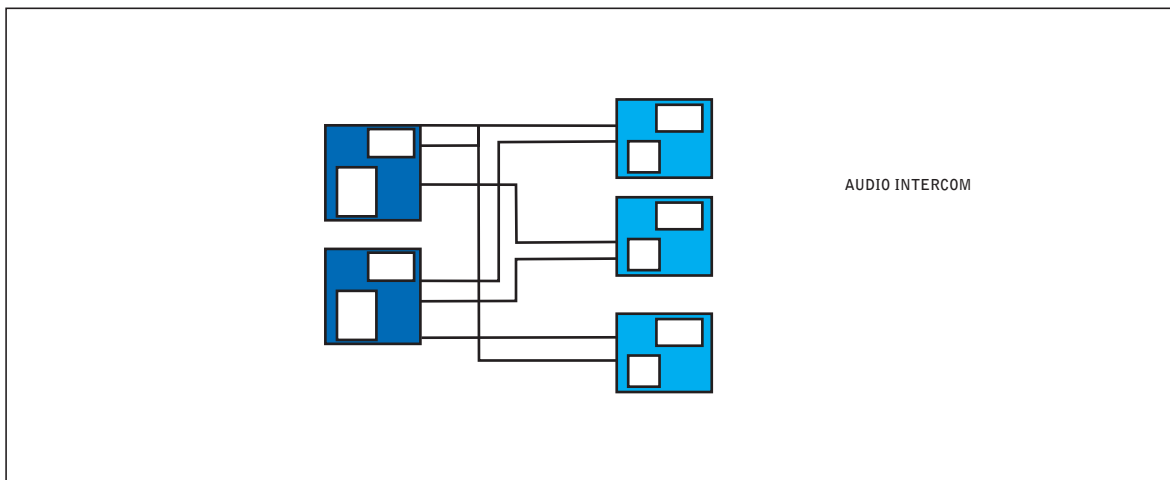
## INTERCOM SYSTEMS

- Residential - Single - Audio & Video - Multi - Audio & Video
- Business - Multi - Audio & Video
- Industrial - Multi - Audio & Video

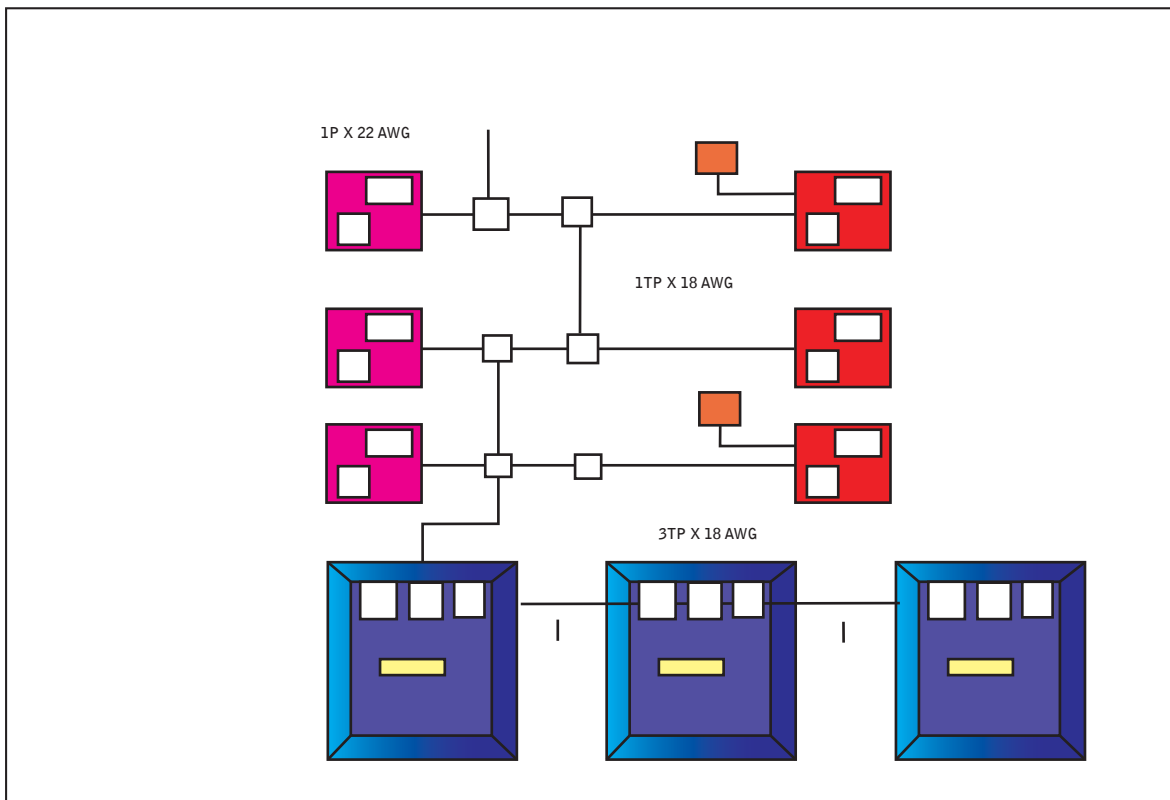
(System's schematic cabling circuit for both types are enclosed)

SINGLE LINE

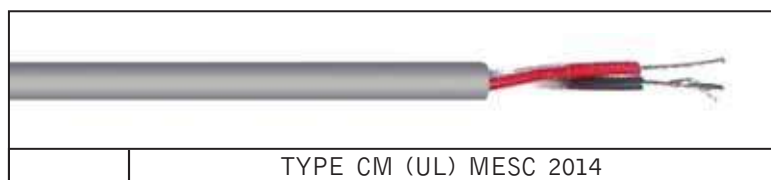
SCHEMATIC DIAGRAM  
INTERCOM SYSTEM



AUDIO & VIDEO DAIGRAM



## INTERCOM SYSTEMS AUDIO CABLES



**22AWG (7 X 30)**      Description : Stranded tinned copper, PVC insulated, twisted pair, Grey PVC jacket.  
 Color code : Red, Black.

Order No.	MESC Code	Nec Type Voltage grade	No. of Cond.	Packing length		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.	
				m	ft		kg	mm	inch	mm	Inch	mm
11003	1121-01P22AWG-U0GY8-00	NEC Type CM 300V	2	1000	3280	23	0.38	0.015	0.64	0.025	4.5	0.177

**22 AWG (7 X 30)**      Description : Stranded tinned copper, PVC insulated, twisted pairs, Grey PVC jacket.

### COLOR CODE

Pair No.	Color
1	Black & Red
2	Black & White
3	Black & green

Order No.	MESC Code	Nec Type Voltage grade	No. of Pairs	Packing length		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.	
				m	ft		kg	mm	inch	mm	Inch	mm
11004	1121-02P22AWG-U0GY8-00	NEC Type CM 300V	2	1000	3280	41	0.25	0.010	0.81	0.032	6.4	0.25
11005	1121-03P22AWG-U0GY8-00	NEC Type CM 300V	3	1000	3280	53	0.25	0.010	0.81	0.032	6.8	0.27

**18 AWG (16 X 30)**      Description : Stranded tinned copper, PVC insulated, twisted pairs, Grey PVC jacket.

11001	1191-01P18AWG-U0GY8-00	NEC Type CM 300V	1	1000	3280	40	0.36	0.014	0.81	0.032	5.6	0.22
11006	1191-02P18AWG-U0GY8-00	NEC Type CM 300V	2	1000	3280	73	0.36	0.014	0.81	0.032	8.7	0.34
11007	1191-03P18AWG-U0GY8-00	NEC Type CM 300V	3	1000	3280	96	0.36	0.014	0.81	0.032	9.3	0.36

## INTERCOM SYSTEMS AUDIO AND INSTRUMENTATION CABLES

**22 AWG (7 X 30)** Description : Stranded tinned copper, PVC insulated, twisted pair, aluminum polyester shield, 24 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black, Red.

Order No.	MESC Code	Nec Type Voltage grade	No. of pairs	Packing length		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.		Nominal Capacitance			
				m	ft		kg	mm	Inch	mm	Inch	mm	Inch	c/c		c/s
																pF/m
12053	1221-01P22AWG-U0GY6-00	NEC Type CM 300V 80 °C	1	304.8	1000	6.4	0.25	0.010	0.51	0.020	3.88	0.153	174	53	318	97

**20 AWG (7 X 30)** Description : Stranded tinned copper, PVC insulated, twisted pair, aluminum polyester shield, 22 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black, Red.

Order No.	MESC Code	Nec Type Voltage grade	No. of pairs	Packing length		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.		Nominal Capacitance			
				m	ft		kg	mm	inch	mm	Inch	mm	Inch	c/c		c/s
																pF/m
12054	1221-01P20AWG-U0GY6-00	NEC Type CM 300V 80 °C	1	304.8	1000	11.2	0.36	0.014	0.79	0.031	5.24	0.206	89	27	161	49

**22 AWG (7 X 30)** Description : Stranded tinned copper, polyethylene insulated, conductors cabled, aluminum polyester shield, 22 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black, Red, Clear.

Order No.	MESC Code	Nec Type Voltage grade	No. of Cond.	Packing length		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.		Nominal Capacitance			
				m	ft		kg	mm	inch	mm	Inch	mm	Inch	c/c		c/s
																pF/m
12055	1222-03C22AWG-U0GY6-00	NEC CM 300V 80 °C	3	304.8	1000	11.2	0.41	0.016	0.84	0.033	5.30	0.209	75	23	134	41

**20 AWG (7 X 22)** Description : Stranded tinned copper, Polyethylene insulated, conductors cabled, aluminum polyester shield, 20 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black, Red, Clear.

12056	1222-03C20AWG-U0GY6-00	NEC Type CM 300V 80 °C	3	304.8	1000	13.8	0.41	0.016	0.84	0.033	5.66	0.223	89	27	167	51
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**16 AWG (19 X 29)** Description : Stranded tinned copper, Polyethylene insulated, conductors cabled, aluminum polyester shield, 18 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black, Red, Clear.

12057	12C2-03C16AWG-U0GY6-00	NEC Type CM 300V 80 °C	3	304.8	1000	27.4	0.73	0.029	0.79	0.031	8.27	0.326	85	26	164	50
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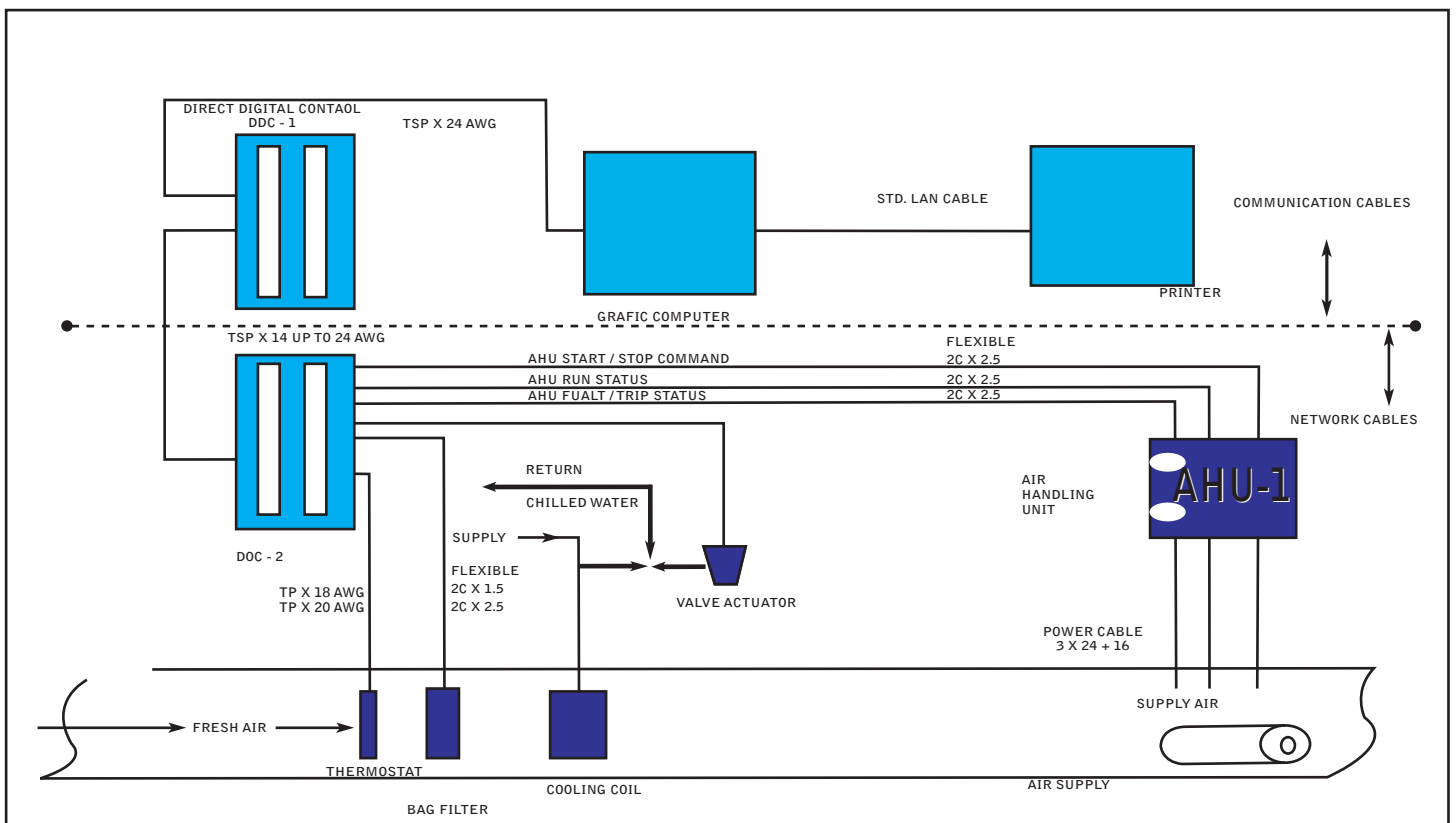
## BUILDING MANAGEMENT SYSTEMS

What is a (BMS) Building Management System ?

Building Management Systems consist of intelligent controllers which are networked together to provide comprehensive control for Heating, Ventilation and Air Conditioning (HVAC) and other building services. Information is taken from sensors or other input devices which is processed through the intelligent controllers. These then issue appropriate commands to devices such as valves and actuators. The system is viewed through a "supervisor" which is usually a PC running building management software. This software allows you to change control parameters as well as perform a wide range of energy analysis and maintenance functions.

(System's schematic building cabling circuit is shown below)

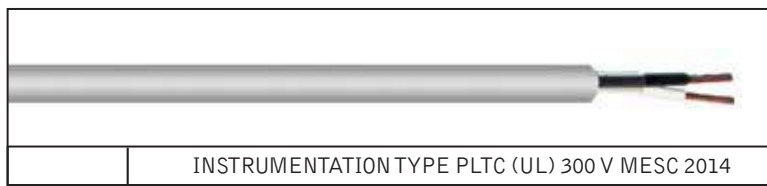
CABLING DIAGRAM



## BUILDING MANAGEMENT SYSTEMS INSTRUMENTATION / PROCESS CONTROL CABLES (TYPE PLTC 300 VOLTS) PVC INSULATED SINGLE PAIR / TRIAD UNSHIELDED

Temperature range: - 40 °C to +90 °C

Specifications: UL13



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

- Conductor : Plain copper to ASTM B3, stranded to Class B / Class C of ASTM B8.
- Insulation : Flame retardant PVC rated 90 °C as per UL13.
- Pair Colour Code : White and Black.
- Triple Colour Code : White, Black and Red.
- Assembly : Twisted pair / triple is covered with a polyester tape if required.
- 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.

### SINGLE PAIR

Size (AWG)	Order No.	MESC Code	Pairs	Strands X diameter No. X mm	Insulation thickness mm	Nominal jacket thickness mm	Approx. O.D. mm	Approx. weight Kg/Km
16	B1001	B111-01P 16AWG-U0BK8-03	1	7 X 0.488	0.38	0.89	6.8	60

### SINGLE TRIAD

size (AWG)	Order No.	MESC Code	Triples	Strands X diameter No. X mm	Insulation thickness mm	Nominal jacket thickness mm	Approx. O.D. mm	Approx. weight Kg/Km
16	B1002	B111-01T 16AWG-U0BK8-03	1	7 X 0.488	0.38	1.01	7.4	85

## BUILDING MANAGEMENT SYSTEMS INSTRUMENTATION/PROCESS CONTROL CABLES (TYPE PLTC 300 VOLTS) PVC INSULATED SINGLE PAIR / TRIAD OVERALL SHIELDED

Temperature range : - 40 °C to +90 °C  
Specifications : UL13



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

- **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.

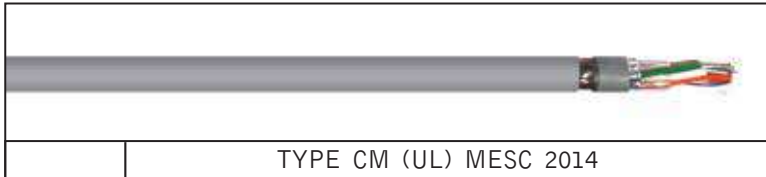
### SINGLE PAIR

Size (AWG)	Order No.	MESC Code	Pairs	Strands X diameter No. X mm	Insulation thickness mm	Nominal jacket thickness mm	Approx. O.D. mm	Approx. weight Kg/Km
20	B2001	B211-01P20AWG-U0BK8-03	1	7 X 0.307	0.38	0.89	5.8	45
18	B2002	B211-01P18AWG-U0BK8-03	1	7 X 0.386	0.38	0.89	6.3	55
16	B2003	B211-01P16AWG-U0BK8-03	1	7 X 0.488	0.38	0.89	6.9	70

### SINGLE TRIAD

Size (AWG)	Order No.	MESC Code	Triples	Strands X diameter No. X mm	Insulation thickness mm	Nominal jacket thickness mm	Approx. O.D. mm	Approx. weight Kg/Km
18	B2004	B211-01T18AWG-U0BK8-03	1	7 X 0.386	0.38	0.89	6.6	65
16	B2005	B211-01T16AWG-U0BK8-03	1	7 X 0.488	0.38	1.01	7.5	85

## BUILDING MANAGEMENT SYSTEMS LOW CAPACITANCE COMPUTER CABLES FOR EIA RS-232 AND EIA RS-422 APPLICATIONS



**24 AWG (7 X 32)** Description : Stranded tinned copper, foam polyethylene insulated, twisted pairs. Overall aluminum polyester shield, 24 AWG stranded tinned copper drain wire & overall tinned copper braid shield (65% coverage), Grey PVC jacket.

### COLOR CODE

Pair No.	Color
1	White/Blue stripe and Blue/White stripe
2	White/Orange stripe and Orange/White stripe
3	White/Green stripe and Green/White stripe
4	White/Brown stripe and Brown/White stripe
5	White/Gray stripe and Gray/White stripe
6	Red/Blue stripe and Blue/Red stripe

Order No.	MESC Code	NEC Type Voltage grade	No. of pairs	Packing length		Approx. weight kg	Nominal D.C.R		Nominal O.D.		Nom. Imp. Ohms	Nom. vel of prop. %	Nominal Capacitance			
				m	ft		Cond.	Shield	mm	Inch			c/c		c/s	
													pF/m	pF/ft	pF/m	pF/ft
15109	1523-02P24AWG-U2GY8-42	Type CM 30V	2	1000	3280	55	78.7/km	15.1/km	7.0	0.28	100	78	41.0	12.5	72.2	22
15110	1523-06P24AWG-U2GY8-42	Type CM 30V	6	1000	3280	90	78.7/km	11.6/km	8.9	0.35	100	78	41.0	12.5	72.2	22

## LOW CAPACITANCE COMPUTER CABLES FOR EIA RS-485 APPLICATIONS

**24 AWG (7 X 32)** Description : Stranded tinned copper, polyethylene insulated, twisted pairs, overall aluminum polyester shield, 24 AWG stranded tinned copper drain wire, & overall tinned copper braid shield (90% coverage), Grey PVC jacket.

Order No.	MESC Code	NEC Type Voltage grade	No. of pairs	Packing length		Approx. weight kg	Approx. O.D.		Nominal D.C.R		Nom. Imp. Ohms	Nom. vel of prop. %	Nominal Capacitance			
				m	ft		mm	Inch	Cond.	Shield			c/c		c/s	
													pF/m	pF/ft	pF/m	pF/ft
15108	1522-01P24AWG-U2GY8-42	NEC CM 300V 80°C	1	1000	3280	63	6.8	0.26	78.7	11.0	120	66	42	12.8	75.5	23.0
15111	1522-02P24AWG-U2GY8-42	NEC CM 300V 80°C	2	1000	3280	106	10.3	0.40	78.7	7.2	120	66	42	12.8	75.5	23.0

C/C – Capacitance between conductors

C/S – Capacitance between one conductor and other conductors connected to shield

## BUILDING MANAGEMENT SYSTEMS (CONTROL , MEASUREMENT & DATA TRANSMISSION)

Temperature range: -40 °C to +90 °C

Specifications: UL Style 1015, CSA AWM, Voltage 600V



**Application :** These cables are recommended for all Indoor electrical installations and wiring of electrical equipment, within buildings.

**Conductor :** Flexible tinned copper to ASTM B33, stranded to class K of ASTM B174.

**Insulation :** Flame retardant PVC rated 90°C.

**Colour Code:** Colour Coded insulation up to 5\* conductors and Black with number print for more than 5 conductors.

**Assembly :** Insulated conductors cabled with suitable non hygroscopic fillers if necessary and wrapped with a binder tape.

**Outer Jacket:** Extruded flame retardant PVC coloured Grey.

### 16 AWG ( 26X30 AWG)

Order No.	MESC Code	No. of cores	Strands X diameter No. X mm	Insulation thickness mm	Nominal jacket thickness mm	Approx. O.D. mm	Approx. weight Kg/Km
B 1003	B191-02C16AWG-U0GY8-00	2	26X0.254	0.81	1.6	9.7	130
B 1004	B191-03C16AWG-U0GY8-00	3	26X0.254	0.81	1.6	10.2	150
B 1005	B191-04C16AWG-U0GY8-00	4	26X0.254	0.81	1.6	11.2	180
B 1006	B191-05C16AWG-U0GY8-00	5	26X0.254	0.81	1.6	12.2	205
B 1007	B191-07C16AWG-U0GY8-00	7	26X0.254	0.81	1.6	12.9	260
B 1008	B191-09C16AWG-U0GY8-00	9	26X0.254	0.81	1.6	14.9	325
B 1009	B191-12C16AWG-U0GY8-00	12	26X0.254	0.81	1.6	16.6	405

### 14 AWG ( 41X30 AWG)

B 1010	B191-02C16AWG-U0GY8-00	2	41X0.254	0.81	1.6	10.5	160
B 1011	B191-03C16AWG-U0GY8-00	3	41X0.254	0.81	1.6	11.2	190
B 1012	B191-04C16AWG-U0GY8-00	4	41X0.254	0.81	1.6	12.2	225
B 1013	B191-05C16AWG-U0GY8-00	5	41X0.254	0.81	1.6	13.2	265
B 1014	B191-07C16AWG-U0GY8-00	7	41X0.254	0.81	1.6	14.1	335
B 1015	B191-09C16AWG-U0GY8-00	9	41X0.254	0.81	1.6	16.3	420
B 1016	B191-12C16AWG-U0GY8-00	12	41X0.254	0.81	1.6	18.3	530

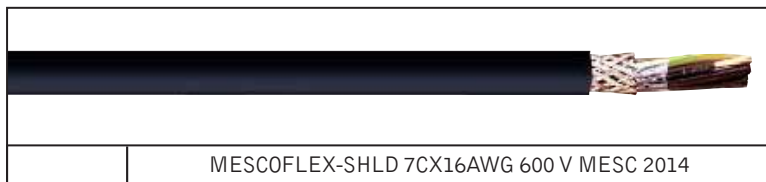
\* COLOR CODE : 1- Black      4-Orange  
 2- Brown      5- Yellow  
 3- Red



## BUILDING MANAGEMENT SYSTEMS (CONTROL, MEASUREMENT & DATA TRANSMISSION)

Temperature range: -40 °C to +90 °C

Specifications: UL Style 1015, CSA AWM, Voltage 600V



**Application :** These cables are recommended for all Indoor electrical /electronic systems, Copper wire screen provides interference free signal transmission.

**Conductor :** Flexible tinned copper to ASTM B33, standed to class K of ASTM B174.

**Insulation :** Flame retardant PVC rated 90 °C.

**Colour Code :** Colour Coded insulation up to 5\* conductors and Black with number print for more than 5 conductors.

**Assembly :** Insulated conductors assembled in concentric layers, shielded with Aluminum polyester tape with a stranded tinned copper drain wire and braided (90% coverage) with tinned copper wire.

**Outer Jacket :** Extruded flame retardant PVC coloured Grey.

### 16 AWG ( 26X30 AWG)

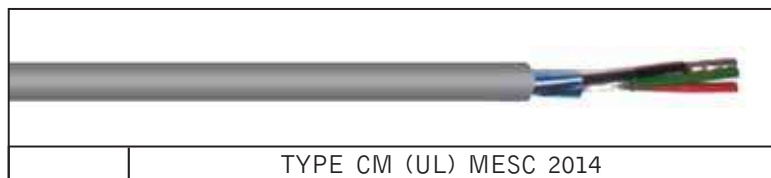
Order No.	MESC Code	No. of cores	Strands X diameter No. X mm	Insulation thickness mm	Nominal jacket thickness mm	Approx. O.D. mm	Approx. weight Kg/Km
B 5001	B591-02C16AWG-U2GY8-00	2	26X0.254	0.81	1.6	10.5	160
B 5002	B591-03C16AWG-U2GY8-00	3	26X0.254	0.81	1.6	11.1	175
B 5003	B591-04C16AWG-U2GY8-00	4	26X0.254	0.81	1.6	11.8	205
B 5004	B591-05C16AWG-U2GY8-00	5	26X0.254	0.81	1.6	12.8	245
B 5005	B591-07C16AWG-U2GY8-00	7	26X0.254	0.81	1.6	13.7	295
B 5006	B591-09C16AWG-U2GY8-00	9	26X0.254	0.81	1.6	15.7	360
B 5007	B591-12C16AWG-U2GY8-00	12	26X0.254	0.81	1.6	17.4	445

### 14 AWG ( 41X30 AWG)

B 5008	B591-02C14AWG-U2GY8-00	2	41X0.254	0.81	1.6	11.3	190
B 5009	B591-03C14AWG-U2GY8-00	3	41X0.254	0.81	1.6	11.9	210
B 5010	B591-04C14AWG-U2GY8-00	4	41X0.254	0.81	1.6	12.8	250
B 5011	B591-05C14AWG-U2GY8-00	5	41X0.254	0.81	1.6	13.8	300
B 5012	B591-07C14AWG-U2GY8-00	7	41X0.254	0.81	1.6	14.9	365
B 5013	B591-09C14AWG-U2GY8-00	9	41X0.254	0.81	1.6	17.1	455
B 5014	B591-12C14AWG-U2GY8-00	12	41X0.254	0.81	2.11	20.2	610

\* COLOR CODE : 1- Black      4-Orange  
2- Brown      5- Yellow  
3- Red

## BUILDING MANAGEMENT SYSTEMS AUDIO AND INSTRUMENTATION CABLES



**18 AWG (19 X 30)** Description : Stranded tinned copper, S-R PVC insulated, conductors cabled, aluminum polyester shield, 20 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black, Red, White, Green.

Order No.	MESC Code	NEC Type Voltage grade	No. of cores	Packing length		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.		Nominal Capacitance			
				m	ft		kg	mm	inch	mm	Inch	mm	Inch	pF/m	pF/ft	pF/m
12050	12C1-04C18AWG-U0GY8-00	Type CM 300V	4	1000	3280	80	0.25	0.010	0.89	0.035	6.3	0.248	230	70	394	120

**18 AWG (16 X 30)** Description : Stranded tinned copper, PVC insulated, twisted pairs, Grey PVC jacket.  
Color code : Red, Black.

Order No.	MESC Code	NEC Type Voltage grade	No. of pairs	Packing length		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.	
				m	ft		kg	mm	inch	mm	Inch	mm
11008	1191-01P18AWG-U0GY8-00	Type CM 300V	1	1000	3280	39	0.36	0.014	0.81	0.032	5.4	0.212

**14 AWG (19 X 27)** Description : Stranded tinned copper, polyethylene insulated, twisted pairs, aluminum polyester shield, 16 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black, clear

Order No.	MESC Code	NEC Type Voltage grade	No. of pairs	Packing length		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.		Nominal Capacitance			
				m	ft		kg	mm	inch	mm	Inch	mm	Inch	pF/m	pF/ft	pF/m
12049	12C2-01P14AWG-U0GY8-80	Type CL2 600V	1	1000	3280	102	0.81	0.032	0.89	0.035	9.1	0.358	79	24	154	47

**18 AWG (16 X 30)** Description : Stranded tinned copper, polyethylene insulated, twisted pairs, aluminum polyester shield. 20 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black, clear

12047	1292-01P18AWG-U0GY8-80	Type CM 300V	1	1000	3280	40	0.46	0.018	0.71	0.028	5.8	0.228	79	24	144	44
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**18 AWG (16 X 30)** Description : Stranded tinned copper, polyethylene insulated, conductors cabled, aluminum polyester shield, 20 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black, Red, clear.

Order No.	MESC Code	NEC Type Voltage grade	No. of cores	Packing length		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.		Nominal Capacitance			
				m	ft		kg	mm	inch	mm	Inch	mm	Inch	pF/m	pF/ft	pF/m
12018	1292-03C18AWG-U0GY8-80	NEC Type CM 300V	3	1000	3280	58	0.46	0.018	0.84	0.033	6.4	0.252	79	24	157	48

C/C - Capacitance between conductors.

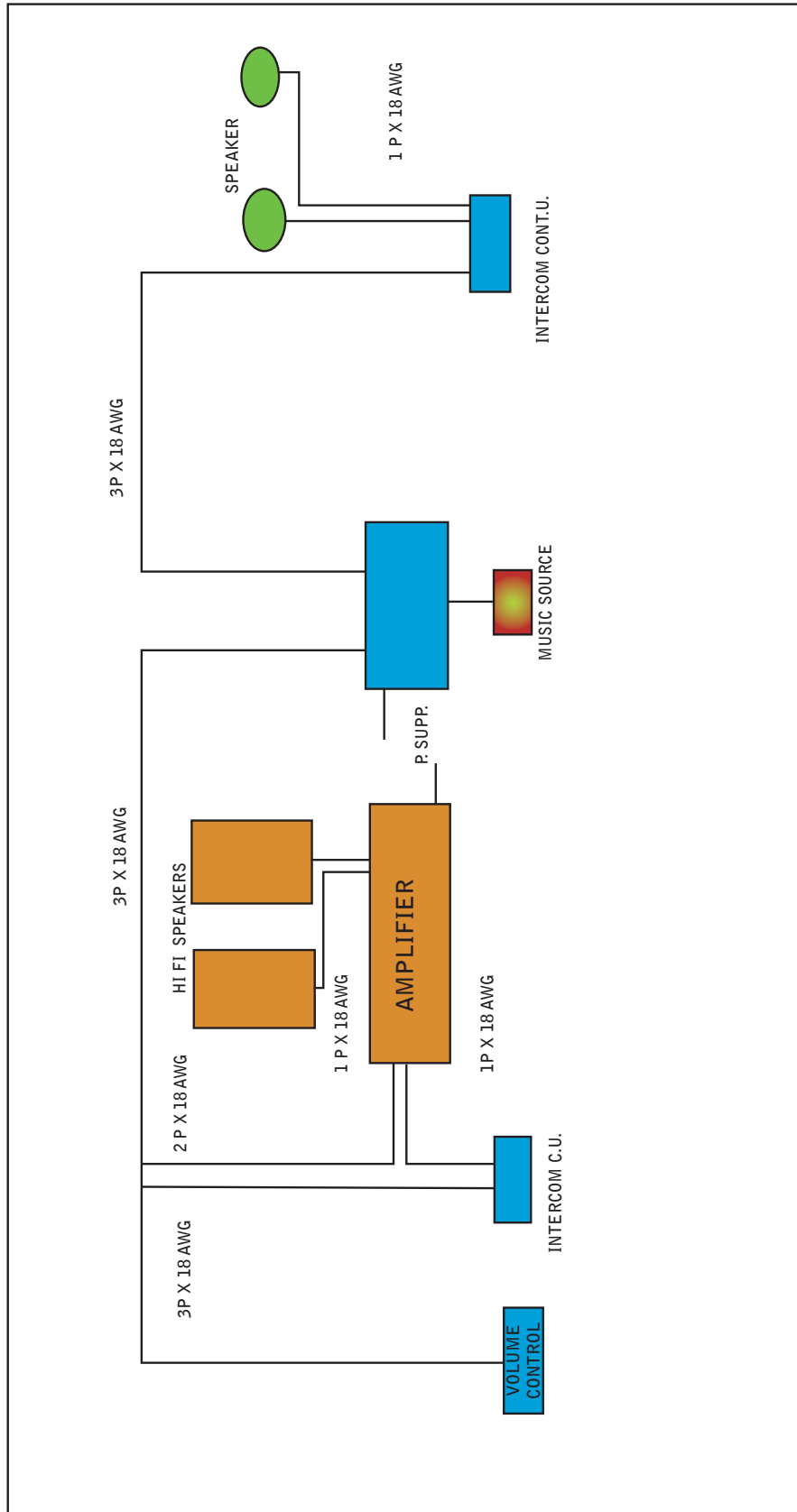
C/S - Capacitance between conductors and other conductors connected to shield.



## PUBLIC ADDRESS SYSTEMS SOUND (Speaker + Microphone) CLOCK & PAGING

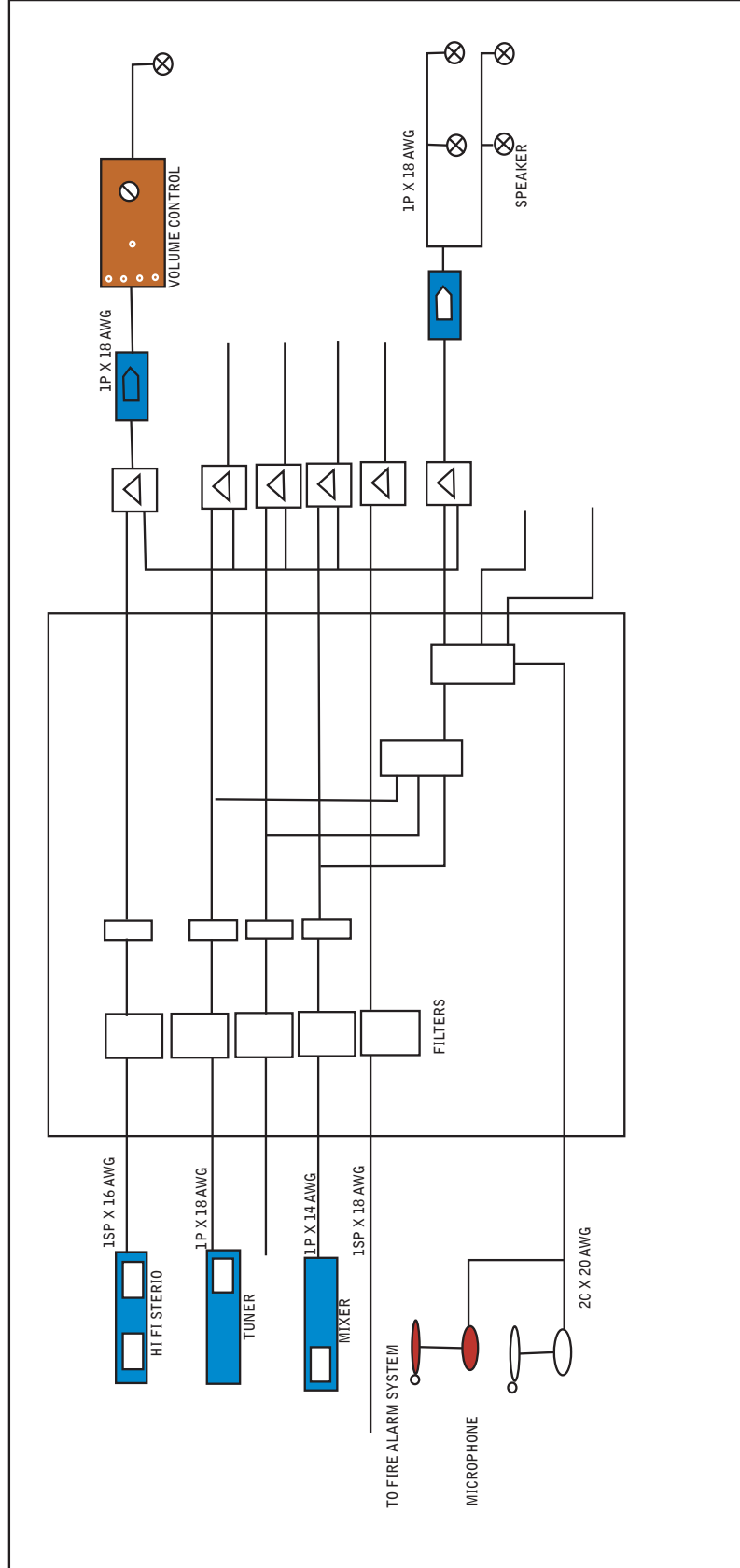
- Common applications are as follows :
  - Residential
  - Business
  - Amusement centers
  
- Common fields are :
  - Intercom / Paging
  - Audio / Security
  - Sound & Background Music
  
- For clock network same cables can be used  
(System's schematic building cabling circuits is enclosed)

PUBLIC ADDRESS SYSTEM

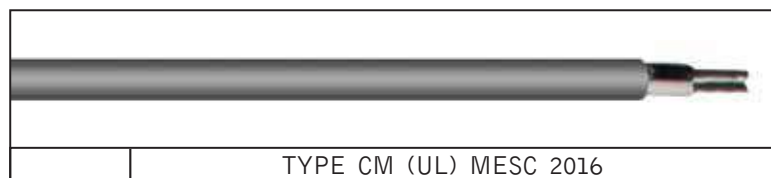


PUBLIC ADDRESS SYSTEM

SINGLE LINE DIAGRAM



## 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.

Order No.	MESC Code	NEC Type Voltage grade	No. of Cond.	Packing lengths		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.		Nominal Capacitance			
				m	ft		kg	mm	inch	mm	Inch	mm	Inch	c/c		c/s
													pF/m	pF/ft	pF/m	pF/ft
12060	12C1-01P14AWG-U0GY8-00	NEC Type CL3 300V	2	1000	3280	75	0.36	0.014	0.64	0.025	6.9	0.271	249	76	449	137

C/C – Capacitance between conductors.

C/S – Capacitance between one conductor and other conductors connected to shield.

## COMMUNICATION & CONTROL CABLES



**20 AWG (7 X 28)** Description : Stranded tinned copper, PVC insulated, twisted pair, Grey PVC jacket.  
Color code : Black & Red.

Order No.	MESC Code	NEC Type Voltage grade Temp	No. of Cond.	Packing length		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.	
				m	ft		kg	mm	inch	mm	Inch	mm
11002	1121-01P20AWG-U0GY6-00	NEC Type CM 300V,90C	2	304.8	1000	9	0.38	0.015	0.64	0.025	4.5	0.180

**16 AWG (19 X 29)** Description : Stranded tinned copper, PVC insulated, twisted pair, Grey PVC jacket.  
Color code : Black & White.

11009	11C1-01P16AWG-U0GY6-00	NEC Type CM 300V,90C	2	304.8	1000	18	0.58	0.023	0.81	0.032	6.9	0.274
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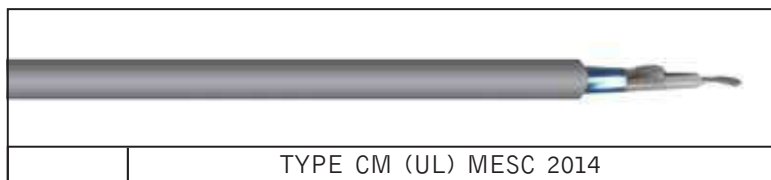
**14 AWG (42 X 30)** Description : Stranded tinned copper, PVC insulated, twisted pair Gray PVC jacket.  
Color code : Black, White.

11010	1191-01P14AWG-U0GY6-00	CL3,600V	2	304.8	1000	28	0.81	0.032	0.81	0.032	8.7	0.340
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**12 AWG (65 X 30)** Description : Stranded tinned copper, PVC insulated, twisted pair Gray PVC jacket.  
Color code : White & Black.

11011	1191-01P12AWG-U0GY6-00	CL3,600V	2	304.8	1000	38	0.81	0.032	0.89	0.035	8.6	0.386
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## PUBLIC ADDRESS SYSTEMS ANALOG VIDEO & AUDIO CABLES



**12 AWG (19 X 25)** Description : Stranded tinned copper, polyethylene insulated, twisted pair, aluminum polyester shield, 14 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black, clear.

Order No.	MESC Code	NEC Type Voltage grade	No. of Pairs	Packing lengths		Approx. weight	Insulation thickness		Jacket thickness		Nominal O.D.		Nominal Capacitance				
				m	ft		kg	mm	inch	mm	Inch	mm	Inch	c/c		c/s	
														pF/m	pF/ft	pF/m	pF/ft
12058	12C2-01P12AWG-U0GY8-80	NEC Type CL2 600V 80C	1	1000	3280	150	0.94	0.037	1.02	0.040	10.8	0.42	82	25	161	49	

**16 AWG (19 X 29)** Description : Stranded tinned copper, polyethylene insulated, twisted pair, aluminum polyester shield, 18 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black & clear.

12052	12C2-01P16AWG-U0GY8-75	NEC Type CL2 600V 80C	1	1000	3280	81	0.81	0.032	0.81	0.032	7.87	0.31	75	23	144	44
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**20 AWG (7 X 28)** Description : Stranded tinned copper, polyethylene insulated, twisted pair, aluminum polyester shield, 20 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black & clear.

12051	1222-01P20AWG-U0GY8-90	NEC Type CM 300V 80C	1	1000	3280	35	0.41	0.016	0.71	0.028	5.5	0.216	88	27	160	48
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C/C – Capacitance between conductors.

C/S – Capacitance between one conductor and other conductors connected to shield.

**22 AWG (7 X 28)** Description : Stranded tinned copper, polyethylene insulated, twisted pair, aluminum polyester shield, 22 AWG stranded tinned copper drain wire, Grey PVC jacket.  
Color code : Black & clear.

12059	1222-01P22AWG-U0GY6-80	NEC Type CM 300V 80C	1	304.8	1000	8.1	0.41	0.016	0.64	0.025	4.74	0.186	79	24	154	47
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C/C – Capacitance between conductors.

C/S – Capacitance between one conductor and other conductors connected to shield.

## MICROPHONE CABLES

### Specifications : UL444



### Construction

- Conductor : Tinned copper to ASTM B33, stranded to class M of ASTM.
- Insulation : PVC
- Color code : 2 CORE - BLACK, RED.  
3 CORE - BLACK, WHITE RED.  
4 CORE - BLACK, WHITE, RED, GREEN
- Braiding : Insulated cores cabled and wrapped with a polyester tape. The entire assembly is shielded with a tinned copper braid of size 34 AWG with a 85% coverage.
- Jacket : Extruded grey PVC

### Technical Data

Order No.	Size (AWG)	MESC Code	Cores	Strands X diameter No, Xmm	Nom. Insulation thickness Mm	Nom. jacket thickness Mm	Approx. O.D. Mm	Nominal capacitance cond/shld	Approx. weight Kg/Km
15116	18AWG	15M1-02C18AWG-U2GY6-00	2	0.38	0.69	6.6	250	450	65
15117	16AWG	15M1-02C16AWG-U2GY6-00	2	0.38	0.69	7.7	295	550	90
15118	16AWG	15M1-04C16AWG-U2GY6-00	4	0.38	0.69	8.1	550	550	125



## COMPUTER CABLES EIA RS 422

Specifications: UL444



### Construction

- Conductor : Tinned copper to ASTM B33, stranded to class B of ASTM B8.
- Insulation : Foamed polyethylene.
- Pair Colour Code : Black/red & black/white.
- Pair Twisting : All pairs twisted to counter electromagnetic noise.
- Individual Shielding : tinned copper drain wire of size 24 AWG, for maximum electrostatic noise and crosstalk rejection. All pair shields are cables with non-hygroscopic fillers if necessary and the entire assembly is wrapped with a polyester tape.
- Jacket : Extruded grey PVC.

### Technical Data

Order No.	Size (AWG)	MESC Code	Pairs	Strands X diameter No, Xmm	Nom. jacket thickness mm	Approx. O.D. mm	Nominal cond resistance	Nominal Imped-ance	Nominal Vel. of propagation	Nominal capacitance cond/cond	Nominal capacitance cond/shid	Approx. weight Kg/Km
13003	24	1323-02P24AWG-U0GY6-00	2	7X0.244	0.58	9.2	6.0	100	78%	41	76	45