

# TYPE MC-SG (SmartGround™) COPPER CONDUCTOR STEEL ARMOR



SmartColorID®

## ENGINEERING SPECIFICATIONS:

### Standards:

Underwriters Laboratories Standards UL-83, UL-1569 for type MC, NEMA WC 70/ICEA 5-95-658; Federal Specification A-A59544, IEEE 1202 (70,000 Btu/hr) Vertical Cable Tray Flame Test, and the National Electrical Code (NEC); ARRA 2009; Section 1605 "Buy American" Compliant

### Applications:

- Permitted use for services, feeders, and branch circuits in industrial, commercial, and multi-residential buildings
- Acceptable for power, lighting, control, and signal circuits
- Allowable in concealed or exposed systems
- Permitted use in dry locations and embedded in plaster finish on brick or other masonry except in damp or wet locations
- Utilized for environmental air-handling spaces (NEC 300.22)(C)
- Allowable in assembly occupancies (NEC 518.4)
- Permissible in theaters, audience areas of motion pictures, television studios, and similar locations (NEC 520.5)
- Allowable installations in approved raceways and cable trays (NEC 392)
- Suitable for installation under raised floors for IT equipment (NEC 645.5)
- Permitted in Class I Div. 2, Class II Div. 2, and Class III Div. 1 Hazardous Locations
- Listed for use in UL 1, 2, and 3 Hour Through-Penetration Firestop Systems
- Complies with Buy American Provisions in Section 1605 of the ARRA 2009

# MC-SG™



Listed E-301130



SmartColorID®

## CONSTRUCTION:

### Conductors:

Available in sizes 14 AWG through 10 AWG. Encore's Metal Clad Cable is constructed with soft-drawn copper, Type THHN/THWN-2 conductors rated 90°C dry. All conductors are individually wrapped with flame retardant colored protective paper with print legend and cabled together to form the cable core. The bare aluminum grounding/bonding conductor is located outside the paper wrap and is cabled with the insulated conductors and in constant contact with sheathing. Interlocked steel armor is applied over the entire assembly.

## Type MC-SG (SmartGround™) Copper Conductor Steel Armor-THHN/THWN-2 600V

Conductors			Outside Diameter Over Armor (in)	Total Weight of Type MC-Copper Conductor (lbs/1000 ft)	Allowable Ampacity (Amps)*			Standard Packaging	
AWG/No.	Type	Ground			60°C	75°C	90°C	Coil (ft)	Reel (ft)
14/2	Solid	12 Solid AL	0.430	153	15	15	15	250'	1000'
14/3	Solid	12 Solid AL	0.457	173	15	15	15	250'	1000'
14/4	Solid	12 Solid AL	0.495	200	15	15	15	250'	1000'
12/2	Solid	10 Solid AL	0.464	178	20	20	20	250'	1000'
12/3	Solid	10 Solid AL	0.494	210	20	20	20	250'	1000'
12/4	Solid	10 Solid AL	0.510	238	20	20	20	250'	1000'
10/2	Solid	8 Solid AL	0.521	226	30	30	30	250'	1000'
10/3	Solid	8 Solid AL	0.566	275	30	30	30	250'	1000'
10/4	Solid	8 Solid AL	0.616	326	30	30	30	250'	1000'

Note: Available in strand by request. Ampacities are based on Table 310.15(B)(16) of the NEC. \*Ampacities shown are for general use as specified by the NEC, Section 310.15.

For equipment marked for use at higher temperatures, the conductor ampacity shall be limited to the following per NEC 110.14(C):

60°C when terminated to equipment for circuits rated 100 amperes or less or marked for size 14 AWG through 1 AWG conductor.

75°C when terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG.

90°C for ampacity derating purposes.

When the neutral is considered current-carrying conductor, the ampacity of 4/C cables shall be reduced by a factor of 0.80 per NEC 310.15(B)(2)(a).

The above data is approximate and subject to normal manufacturing tolerances.

### Features:

The NEC 250.118 (10) (A). recognizes the combination of interlocking armor and bond wire as an equipment grounding conductor. Installation costs reduced by up to 50% over conduit and wire. Insulating anti-short bushings are supplied with each reel or coil. Suitable for type MCI-A fittings. SmartColorID® labels are spaced at regular intervals on the exterior of the metal sheathing and are removable. For ease of installation and pulling, cable is reverse wound on reels. Coils are designed to be pulled from the inside.

### Standard Conductor Color Coding

Number	120/208Y
2	Black/White
3	Black/Red/White
4	Black/Red/Blue/White

Number	277/480Y
2	Brown/Gray
2	Orange/Gray
2	Yellow/Gray
2	Purple/Gray
3	Brown/Yellow/Gray
3	Brown/Orange/Gray
4	Brown/Orange/Yellow/Gray
4	Brown/Yellow/Purple/Gray

Additional colors available subject to ERQ

### SmartColorID® Legend:



See page 104 for complete legend