

The background image shows a red electric car parked at a charging station. A black charging cable is plugged into the car's port and connected to a wall-mounted charging unit. In the foreground, a close-up of the 2MKABLO cable is shown, with its black outer jacket and several colored inner conductors (blue, green, yellow, red, and white) visible. The cable is labeled with the text "2MKABLO H07BZ5-F".

**2MKABLO**

**CHARGING CABLES  
FOR ELECTRIC VEHICLES**

2MKABLO H07BZ5-F

# H07BZ5-F



## Areas of Use

The AC charging cable, which complies with EN 50620 and IEC 62893 standards, can be used in Mod1(single phase - domestic), Mod 2&3 (single/three phase - commercial/public) systems. They are designed for nominal voltages up to and including 450/750 V. The electric vehicle charging cable can be used safely in areas with high human density, open/closed garages, parking areas. They are also suitable for use in dry, damp or wet areas.

### Cable Construction

|                              |                                                     |
|------------------------------|-----------------------------------------------------|
| Conductor                    | Stranded Annealed Copper (Class 5)                  |
| Insulation                   | Halogen Free Polymer (EVI-2) Shore A 81             |
| Power Cores Identification   | HD 308 S2                                           |
| CC & CP Cores Identification | White Numbered Acc. to EN 50334                     |
| Lay-up                       | Cores stranded in layers (With Filler if Necessary) |
| Separator                    | Pet Tape                                            |
| Outer Sheath                 | TPU (EVM-1), RAL 9005 - Black                       |
| Reference Standard           | EN 50620 , IEC 62893-3                              |

### Technical Properties (at 20°C)

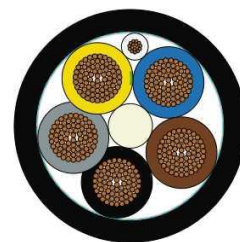
|                                    |                                                       |
|------------------------------------|-------------------------------------------------------|
| Operating Voltage                  | 450/750 V                                             |
| Test Voltage                       | 2.5 kV                                                |
| Temperature Range                  | Operating: -40°C...+90°C, Installation: -10°C...+80°C |
| Flame Retardancy                   | IEC 60332-1-2                                         |
| Smoke Density                      | IEC 61034-1/2                                         |
| Oil Resistance                     | IRM 902 Acc. to EN 60811-404                          |
| Saponification Resistance          | EN 50396                                              |
| Surface Resistance of Sheath       | EN 50395                                              |
| N-oxalic Acid Resistance           | EN 60811-404                                          |
| N-sodium hydroxide Resistance      | EN 60811-404                                          |
| Ozone Resistance at Complete Cable | EN 60811-404                                          |
| UV Resistance                      | EN 50289-4-17 Method A                                |
| Mechanical Strength                | EN 50396                                              |
| Chemicals Resistance               | EN 50620 Annex D                                      |
| Min. Bending Radius                | 6 x Cable Diameter                                    |

## Cross Section

| Configuration<br>(mm <sup>2</sup> ) | CC/CP (1&2&3)<br>Cores<br>(mm <sup>2</sup> ) | Cable Diameter<br>Min.<br>(±%10) [mm] | Cable Diameter<br>Max.<br>(±%10) [mm] | Conductor<br>Resistance Max.<br>[Ohm/km] | Copper Weight<br>(Approx.)<br>[kg/km] | Cable Weight<br>(Approx.)<br>[kg/km] |
|-------------------------------------|----------------------------------------------|---------------------------------------|---------------------------------------|------------------------------------------|---------------------------------------|--------------------------------------|
| 3G1.5                               | 1~3 x 0,5~1                                  | 8,6                                   | 10,2                                  | 13,30                                    | 44,40                                 | 104,7                                |
| 3G2.5                               | 1~3 x 0,5~1                                  | 9,3                                   | 10,7                                  | 7,98                                     | 71,65                                 | 141,8                                |
| 3G4                                 | 1~3 x 0,5~1                                  | 10,6                                  | 11,5                                  | 4,95                                     | 109,74                                | 196,5                                |
| 3G6                                 | 1~3 x 0,5~1                                  | 12,1                                  | 12,3                                  | 3,30                                     | 165,94                                | 272,5                                |
| 3G10                                | 1~3 x 0,5~1                                  | 14,4                                  | 14,5                                  | 1,91                                     | 276,44                                | 414,3                                |
| 3G16                                | 1~3 x 0,5~1                                  | 16,8                                  | 16,9                                  | 1,21                                     | 440,82                                | 613,0                                |
| 3G25                                | 1~3 x 0,5~1                                  | 21,1                                  | 21,2                                  | 0,78                                     | 703,88                                | 950,5                                |
| 3G35                                | 1~3 x 0,5~1                                  | 23,4                                  | 23,5                                  | 0,55                                     | 995,00                                | 1278,7                               |
| 4G2.5                               | 1~3 x 0,5~1                                  | 10,4                                  | 12,1                                  | 7,98                                     | 94,15                                 | 173,5                                |
| 4G4                                 | 1~3 x 0,5~1                                  | 11,6                                  | 13,2                                  | 4,95                                     | 142,56                                | 246,3                                |
| 4G6                                 | 1~3 x 0,5~1                                  | 13,2                                  | 14,2                                  | 3,30                                     | 211,03                                | 336,0                                |
| 4G10                                | 1~3 x 0,5~1                                  | 15,8                                  | 15,9                                  | 1,91                                     | 355,47                                | 524,6                                |
| 4G16                                | 1~3 x 0,5~1                                  | 18,7                                  | 18,8                                  | 1,21                                     | 549,45                                | 771,9                                |
| 4G25                                | 1~3 x 0,5~1                                  | 23,6                                  | 23,7                                  | 0,78                                     | 869,53                                | 1218,5                               |
| 4G35                                | 1~3 x 0,5~1                                  | 26,2                                  | 26,3                                  | 0,55                                     | 1199,05                               | 1618,7                               |
| 5G2.5                               | 1~3 x 0,5~1                                  | 12,0                                  | 13,7                                  | 7,98                                     | 113,64                                | 217,6                                |
| 5G4                                 | 1~3 x 0,5~1                                  | 13,1                                  | 14,9                                  | 4,95                                     | 181,01                                | 301,7                                |
| 5G6                                 | 1~3 x 0,5~1                                  | 14,9                                  | 16,3                                  | 3,30                                     | 270,62                                | 414,3                                |
| 5G10                                | 1~3 x 0,5~1                                  | 17,5                                  | 17,8                                  | 1,91                                     | 462,82                                | 637,6                                |
| 5G16                                | 1~3 x 0,5~1                                  | 20,7                                  | 20,8                                  | 1,21                                     | 729,01                                | 937,8                                |
| 5G25                                | 1~3 x 0,5~1                                  | 26,5                                  | 26,6                                  | 0,78                                     | 1187,11                               | 1491,9                               |
| 5G35                                | 1~3 x 0,5~1                                  | 29,1                                  | 29,2                                  | 0,55                                     | 1687,75                               | 1989,2                               |

| Core No | HD 308 S2 Power Conductors Color Code |       |       |       |       |      |
|---------|---------------------------------------|-------|-------|-------|-------|------|
| 3       | Yellow                                | Green | Blue  | Brown |       |      |
| 4       | Yellow                                | Green | Brown | Black | Grey  |      |
| 5       | Yellow                                | Green | Blue  | Brown | Black | Grey |

# S1BZ5-F



## Areas of Use

The AC charging cable, which complies with IEC 62893-4-1 standard, can be used in Mod1(single phase - domestic), Mod 4 4 EV charging high powered electric vehicle charging stations. They are designed for nominal voltages up to and including 0.6/1 kV. The electric vehicle charging cable can be used safely in areas with high human density, open/closed garages, parking areas. They are also suitable for use in dry, damp or wet areas.

| Cable Construction           |                                                     |
|------------------------------|-----------------------------------------------------|
| Conductor                    | Stranded Annealed Copper (Class 5)                  |
| Insulation                   | Halogen Free Polymer (EVI-2) Shore A 81             |
| Power Cores Identification   | HD 308 S2                                           |
| CC & CP Cores Identification | DIN47100                                            |
| Lay-up                       | Cores stranded in layers (With Filler if Necessary) |
| Seperator                    | Pet Tape                                            |
| Outer Sheath                 | TPU (EVM-1), RAL 9005 - Black                       |
| Reference Standard           | IEC 62893-4-1 Type IEC 126                          |

| Technical Properties (at 20°C) |                                                       |
|--------------------------------|-------------------------------------------------------|
| Operating Voltage              | 0.6/1 kV                                              |
| Test Voltage                   | 3.5 kV                                                |
| Temperature Range              | Operating: -40°C...+90°C, Installation: -10°C...+80°C |
| Flame Retardancy               | IEC 60332-1-2                                         |
| Smoke Density                  | IEC 61034-1/2                                         |
| Oil Resistance                 | IRM 902 Acc. to EN 60811-404                          |
| Insulation & Sheath Mat. Test  | IEC 62893-1                                           |
| Impact Test at -35°C           | IEC 62893-2                                           |
| Shrinkage Test                 | IEC 62893-1                                           |
| UV Resistance                  | IEC 62893-2                                           |
| Mechanical Strength            | IEC 62893-4-1                                         |
| Crush Resistance               | IEC 62893-2                                           |
| Chemicals Resistance           | IEC 62893-2                                           |
| Min. Bending Radius            | 6 x Cable Diameter                                    |

## Cross Section

| Configuration<br>(mm <sup>2</sup> )   | Cable Diameter<br>(±%10)<br>[mm] | Conductor Resistance<br>Max.<br>[Ohm/km] | Copper Weight<br>(Approx.)<br>[kg/km] | Cable Weight<br>(Approx.)<br>[kg/km] |
|---------------------------------------|----------------------------------|------------------------------------------|---------------------------------------|--------------------------------------|
| 3G16 + 3x(2×0.75)                     | 19,2                             | 1,24                                     | 456,6                                 | 693,0                                |
| 2×35 + 1G16 + 3x(2×0.75)              | 22,9                             | 0,57                                     | 778,1                                 | 1184,9                               |
| 2×35 + 1G16 + 1x(4×0.75) + 2x(2×0.75) | 22,9                             | 0,57                                     | 791,2                                 | 1198,2                               |
| 2×35 + 1G25 + 3x(2×0.75)              | 23,4                             | 0,57                                     | 858,0                                 | 1277,0                               |
| 2×50 + 1G25 + 3x(2×0.75)              | 27,5                             | 0,39                                     | 1110,8                                | 1676,5                               |
| 2×70 + 1G35 + 3x(2×0.75)              | 31,1                             | 0,27                                     | 1550,6                                | 2267,8                               |
| 2×70 + 1G35 + 6×0.75                  | 31,1                             | 0,27                                     | 1550,7                                | 2253,8                               |
| 2×95 + 1G50 + 3x(2×0.75)              | 36,6                             | 0,21                                     | 2106,5                                | 3074,8                               |
| 5G50 + 6×1.5                          | 38,0                             | 0,39                                     | 2222,8                                | 3016,8                               |

| DIN-47100 CC&CP Conductors Color Code For Multicore |            |         |            | DIN-47100 CC&CP Conductors Color Code For Pairs |              |              |
|-----------------------------------------------------|------------|---------|------------|-------------------------------------------------|--------------|--------------|
| Core No                                             | Core Color | Core No | Core Color | Core No                                         | Core Color A | Core Color B |
| 1                                                   | White      | 6       | Pink       | 1                                               | White        | Brown        |
| 2                                                   | Brown      | 7       | Blue       | 2                                               | Green        | Yellow       |
| 3                                                   | Green      | 8       | Red        | 3                                               | Grey         | Pink         |
| 4                                                   | Yellow     | 9       | Black      | 4                                               | Blue         | Red          |
| 5                                                   | Grey       | 10      | Violet     | 5                                               | Black        | Violet       |

| Core No | HD 308 S2 Power Conductors Color Code |       |       |       |       |      |
|---------|---------------------------------------|-------|-------|-------|-------|------|
| 2       |                                       |       | Brown | Blue  |       |      |
| 3       | Yellow                                | Green | Brown | Blue  |       |      |
| 4       | Yellow                                | Green | Brown | Black | Grey  |      |
| 5       | Yellow                                | Green | Blue  | Brown | Black | Grey |

# 2MKABLO

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