



EMP

Electrical Motor Power



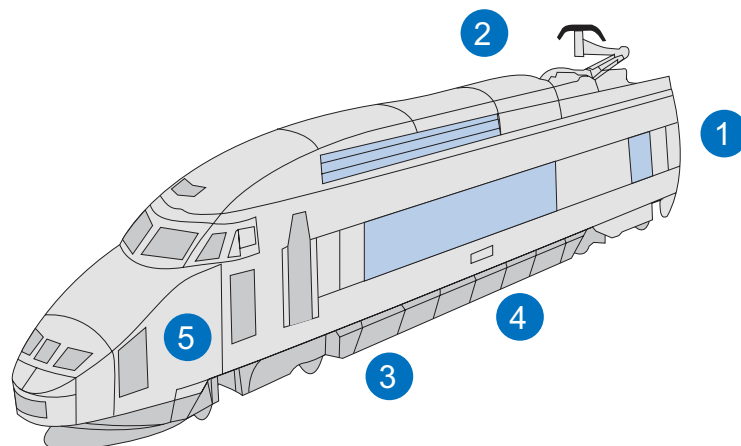
PRODUCT PROFILE

EMP (Electrical Motor Power) provides a high voltage and huge current connection for RMT applications. It's a rectangular connector, and with high strength stainless steel screw/nut mechanism, provides safety and reliability under harsh environmental application: motor power distributions.

Ampphenol EMP series product offers a wide range of current up to 700 A and 3000 V max, high voltage, various type of codings & shielding and un-shielding shells. Spring fingers on plug shell provides a better shielding effectiveness.

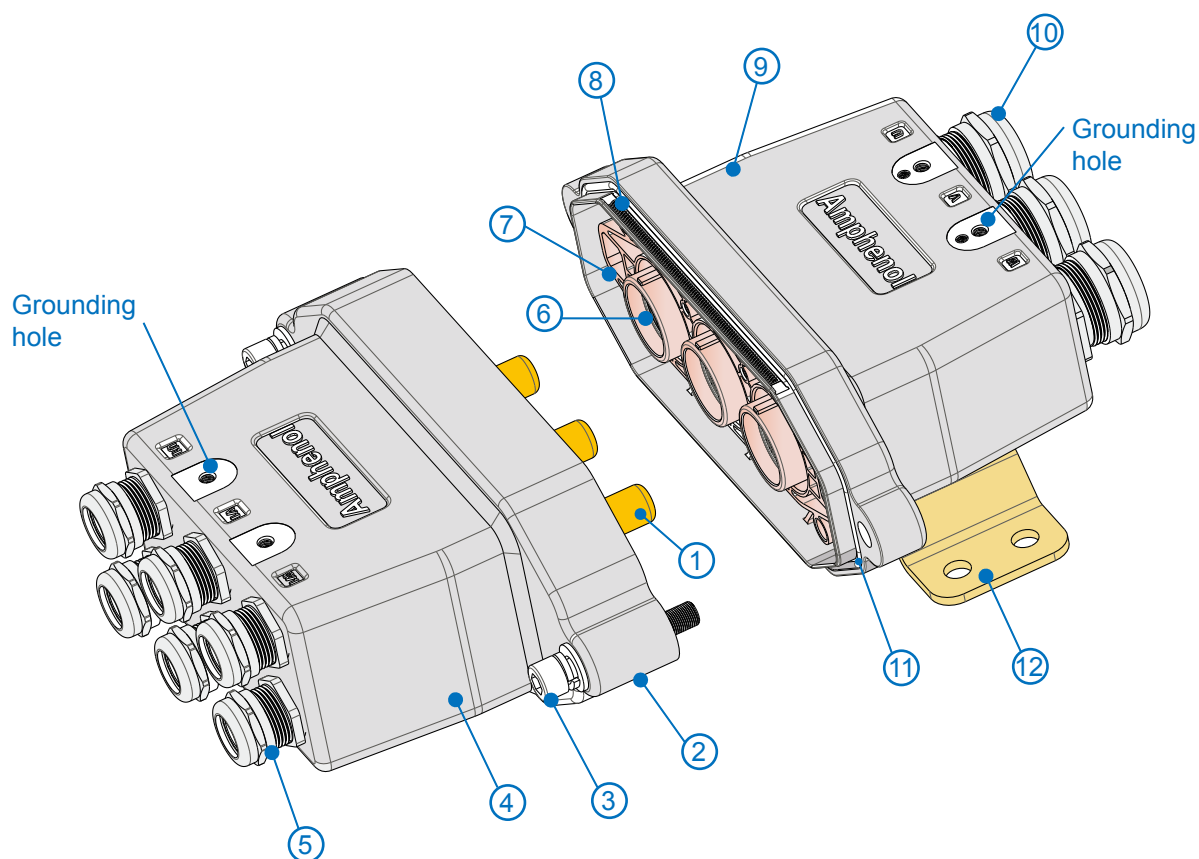


Application



- | | | | |
|---|----------------------|---|-------------------------------|
| 1 | Outdoor intervehicle | 2 | Outdoor roof |
| 3 | Outdoor underframe | 4 | Outdoor electrical box outlet |
| 5 | Indoor applications | | |

P/N	Applications					Shielding	Applicable cable cross-section (mm ²)
	1	2	3	4	5		
EMP SF 33 SC R10 DXX		√	√			√	25 to 70
EMP SM 33 PC R10 DXX		√	√			√	25 to 70
EMP SF 33 SC R18 DXX		√	√			√	150 to 240
EMP SM 33 PC R18 DXX		√	√			√	150 to 240
EMP SF 3C DXX		√	√			√	50 to 185
EMP SM 6C DXX		√	√			√	25 to 70
EMP SF 44 SC R10 DXX		√	√			√	25 to 70
EMP SM 44 PC R10 DXX		√	√			√	25 to 70



Item	Description	Material
1	Pin Contacts	High conductivity copper alloy
2	Plug shell	High strength aluminium alloy
3	Coupling kits	High strength stainless stell screw kits
4	Insert	Thermoplastics (EN45545)
5	Gland	Copper alloy with EMC spring
6	Socket contacts	High conductivity copper alloy with RADSOK® technology
7	Insert	Thermoplastics
8	Finger	Beryllium copper alloy
9	Rece. shell	High strength aluminium alloy
10	Gland	Copper alloy with EMC spring
11	O-Ring	Rubber (EN45545)
12	Bracket	High strength steel or integrated

EMP 3 in-6 out connectors

2000V 500A

Specially for power connections from inverters toward motors:
Splitting device (3 lines in, 6 lines out)

P/N: EMP SF 3C DXXX (Receptacle)
EMP SM 6C DXXX (Plug)

Contact type: D120 means 120mm²/Crimp

Material

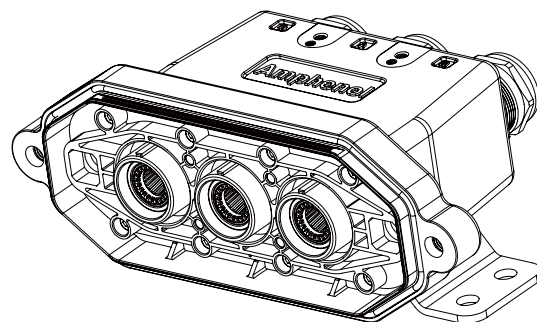
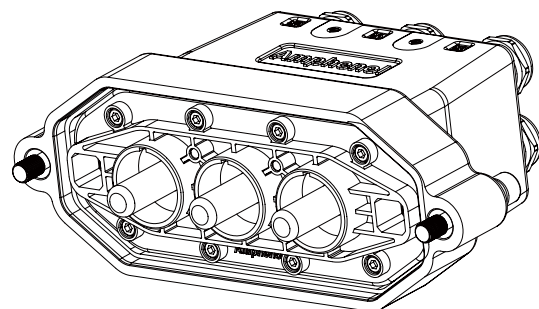
- Shell: Aluminium alloy
- Insert: Thermoplastics
- Contact: Copper alloy / silver plated / crimp type
- Cable gland: Nickel plated brass

Mechanical and Climatical

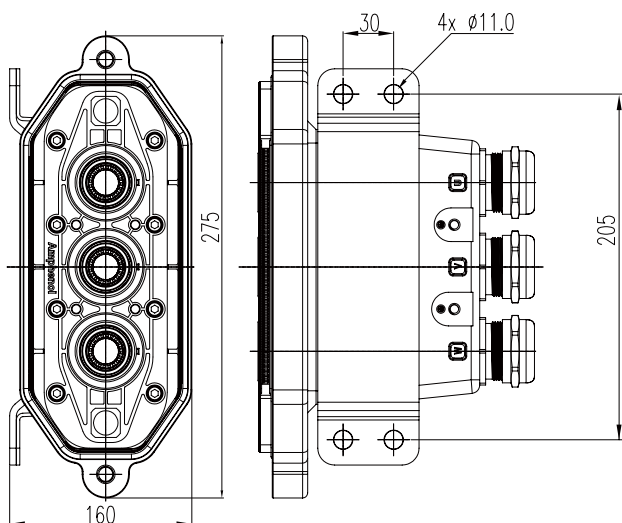
- Vibrations and Shocks: Category 1, Class B (EN61373)
- Operating temperature: -55°C to 125°C
- IP Class: IP67
- Durability: 500 cycles

Electrical data

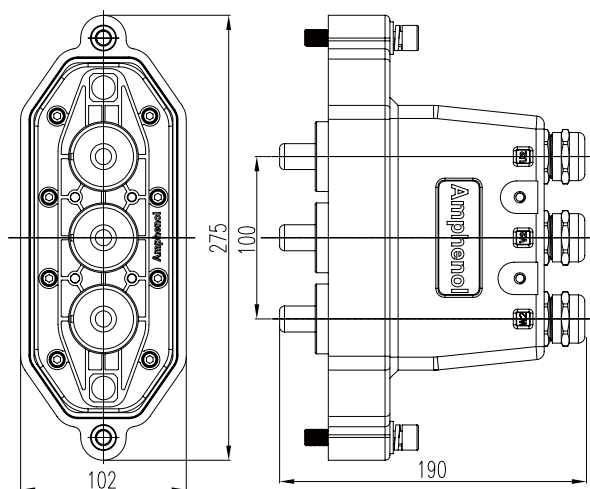
- Rated voltage: 2000 V r.m.s
- Rated current: 500A max.
- Receptacle side-3 cables: 50 to 185 mm²
- Plug side- 6 cables: 25 to 70 mm²
- Insulation resistance: 5000 MΩ Min.
- Contact resistance: <0.3 mΩ



Dimensions (mm)



EMP SF 3C DXXX Receptacle



EMP SM 6C DXXX Plug

Linear power connections for motors 3 lines in, 3 lines out

P/N: EMP SF 33 SC R10 DXX (Receptacle)

EMP SM 33 PC R10 DXX (Plug)

Contact type: D70 means 70mm²/Crimp

Material

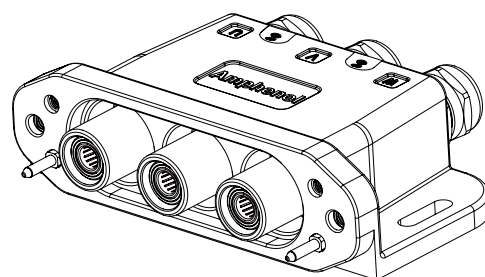
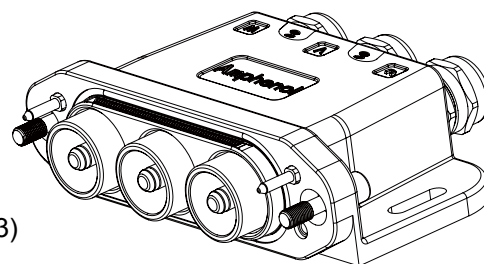
- Shell: Aluminium alloy
- Insert: Thermoplastics
- Contact: Copper alloy / silver plated / crimp type
- Cable gland: Nickel plated brass

Mechanical and Climatical

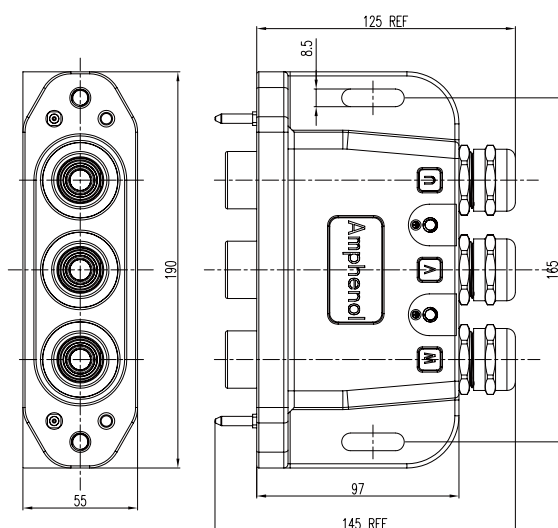
- Vibrations and Shocks: Category 1, Class B (EN61373)
- Operating temperature: -55°C to 125°C
- IP Class: IP67
- Durability: 500 cycles

Electrical data

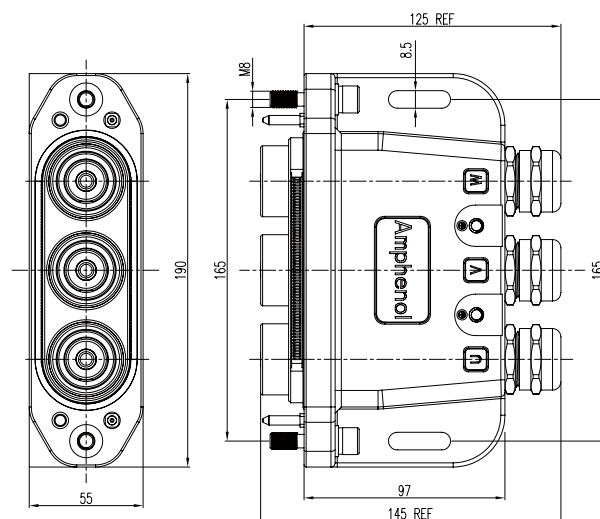
- Rated voltage: 3000 V r.m.s
- Rated current: 250A max.
- Cables: 25 to 70 mm²
- Insulation resistance: 5000 MΩ Min.
- Contact resistance: <0.3 mΩ



Dimensions (mm)



EMP SF 33 SC R10 DXX Receptacle



EMP SM 33 PC R10 DXX Plug

EMP 3 IN 3 OUT

4000V 700A

Linear power connections for motors 3 lines in, 3 lines out

P/N: EMP SF 33 SC R18 DXXX (Receptacle)

EMP SM 33 PC R18 DXXX (Plug)

Contact type: D150 - cable diameter 150mm²

Material

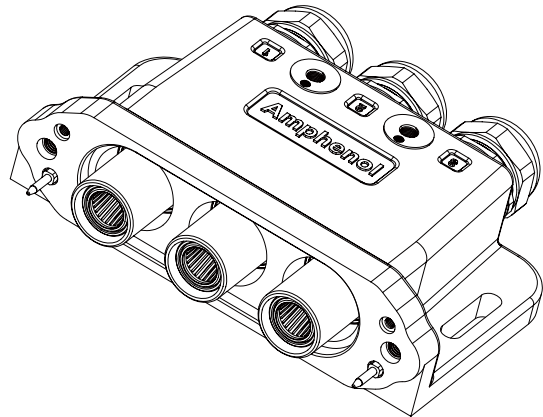
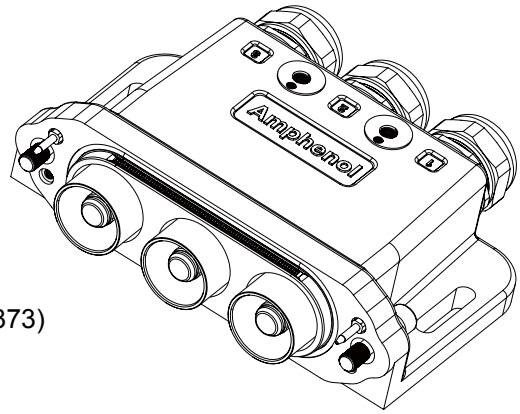
- Shell: Aluminium alloy
- Insert: Thermoplastics
- Contact: Copper alloy / silver plated / crimp type
- Cable gland: Nickel plated brass

Mechanical and Climatical

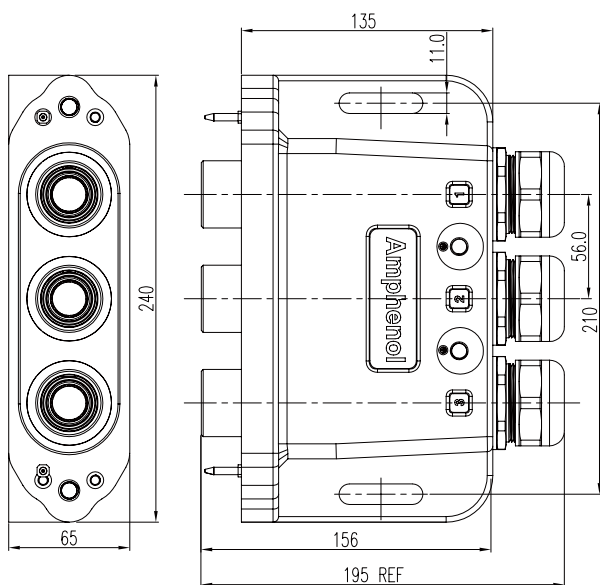
- Vibrations and Shocks: Category 1, Class B (EN61373)
- Operating temperature: -55°C to 125°C
- IP Class: IP67
- Durability: 500 cycles

Electrical data

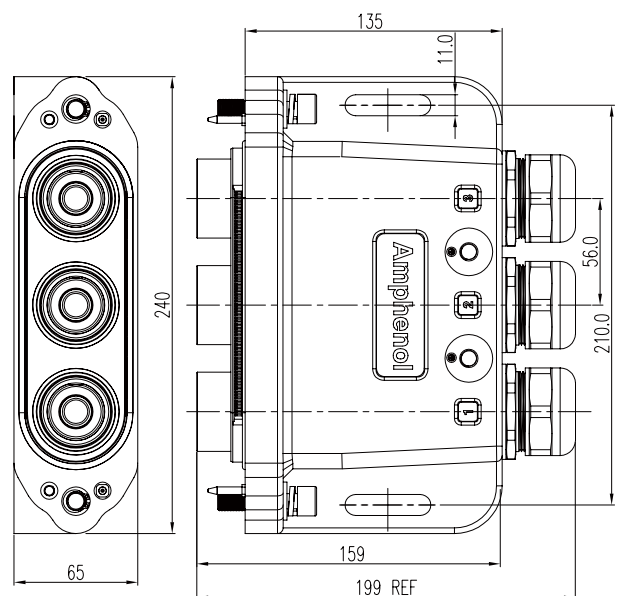
- Rated voltage: 4000 V r.m.s
- Rated current: 700A max.
- cables: 150 to 240 mm²
- Insulation resistance: 5000 MΩ Min.
- Contact resistance: <0.15 mΩ



Dimensions (mm)



EMP SF 33 SC R18 DXXX Receptacle



EMP SM 33 PC R18 DXXX Plug

EMP 4 IN 4 OUT

3000V 250A

Linear power connections for motors 4 lines in, 4 lines out

P/N: EMP SF 4CR10 DXX (Receptacle)

EMP SM 4CR10 DXX (Plug)

Contact type: D70 means 70mm²/Crimp

Material

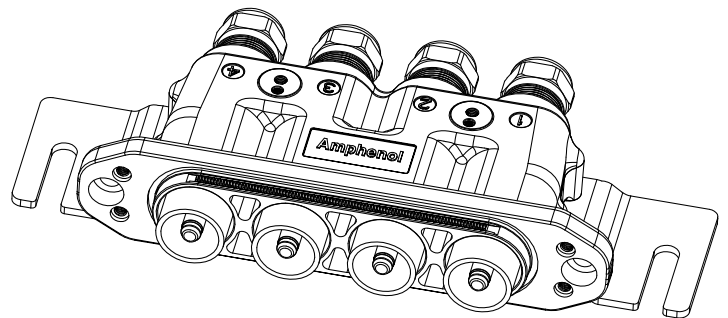
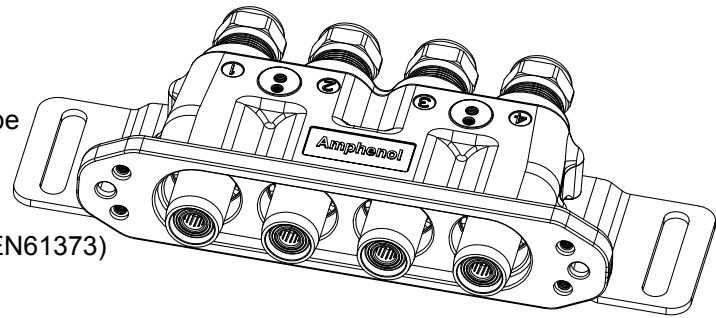
- Shell: Aluminium alloy
- Insert: Thermoplastics
- Contact: Copper alloy / silver plated / crimp type
- Cable gland: Nickel plated brass

Mechanical and Climatical

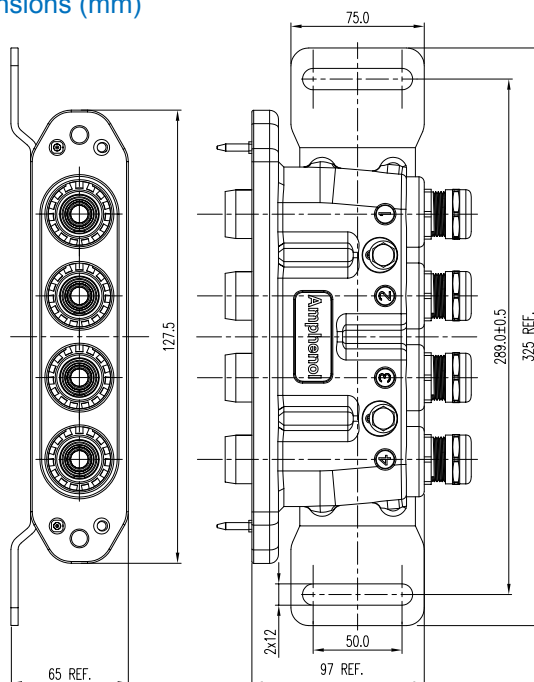
- Vibrations and Shocks: Category 1, Class B (EN61373)
- Operating temperature: -55°C to 125°C
- IP Class: IP67
- Durability: 500 cycles

Electrical data

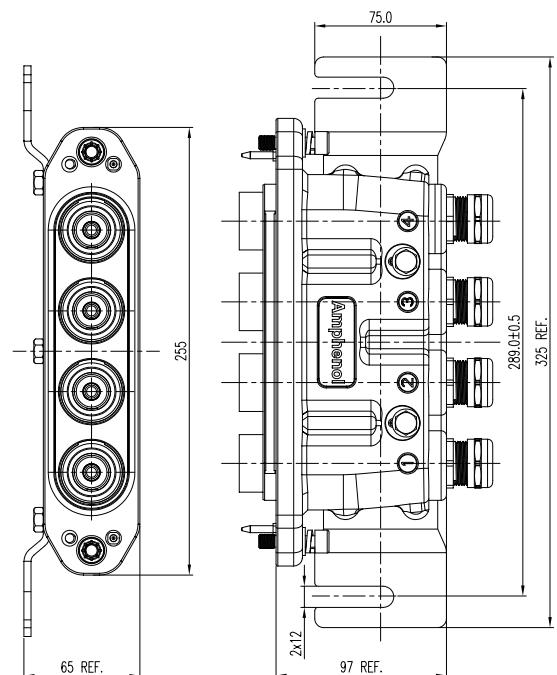
- Rated voltage: 3000 V r.m.s
- Rated current: 250A max.
- cables: 25 to 70 mm²
- Insulation resistance: 5000 MΩ Min.
- Contact resistance: <0.3 mΩ



Dimensions (mm)



EMP SF 4C R10 DXX Receptacle



EMP SM 4C R10 DXX Plug

TOOLS

Extraction tools



EMP3-6 R R16
(For EMP SF 3C DXX & EMP3-3-R18)



EMP3-6 R R10
(For EMP SM 6C DXXX)



EMP3-3 R R10
(For EMP 3-3-R10 & EMP4-4-R10)

Crimping tools



AHP1130C2 (DIN)
(Cable size: 10 to 240 mm²)



APMS240-10
(Cable size: 10 to 240 mm²)

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