

Header Technologies Selected for the Distribution Channel



DELPHI

Innovation for the Real World

Meeting USCAR Standards

Delphi's standard 064 series unsealed header connectors are USCAR* compliant. These products:

- meet USCAR design guidelines (per SAE/USCAR-12 Revision 2, December 2001)
- meet the published USCAR interface footprints
- are validated to USCAR specifications (per SAE/USCAR-2 Revision 3, April 2001)

**USCAR is the United States Council for Automotive Research.*

Typical Applications

Delphi's header products can be used in the automotive and transportation markets. They are suitable for device, in-line and board-to-wire applications in the following:

- Satellite radios
- Infotainment devices
- Automotive body modules and systems
- HVAC systems
- Electronic Control Unit
- Harsh environment

Tooling

All components in this catalog can be supplied from low volume tooling, many of which are available from high volume production tooling as well. PPAP certification can be supplied for low volume production intent tooling if requested.

Mating Connectors

Delphi also offers a complete line of :

- 064 series female mating connectors
- SICMA series female mating connectors
- CMC series female mating connectors

About Delphi

Delphi Automotive PLC (NYSE: DLP) is a leading global supplier of technologies for the automotive and commercial vehicle markets. Headquartered in Gillingham, England, Delphi operates major technical centers, manufacturing sites and customer support services in 32 countries, with regional headquarters in Bascharage, Luxembourg; São Paulo, Brazil; Shanghai, China and Troy, Michigan, U.S. Delphi delivers innovation for the real world with technologies that make cars and trucks safer as well as more powerful, efficient and connected. Visit www.delphi.com



CMC Series

CMC (Connecteur Modulaire pour Calculateur) is one of the most popular interfaces for Engine Management Electronic Control Units.

Very compact size, high density connectors.

Sealed connectors for Electronic Control Units application and suitable for harsh environment.

SICMA Series

Headers for sealed applications in harsh environment with robust design with 1,5 mm signal terminals and 2,8 mm power terminal.

Proven field experience for more than 10 years.

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Sicma Series – Sealed harsh environment

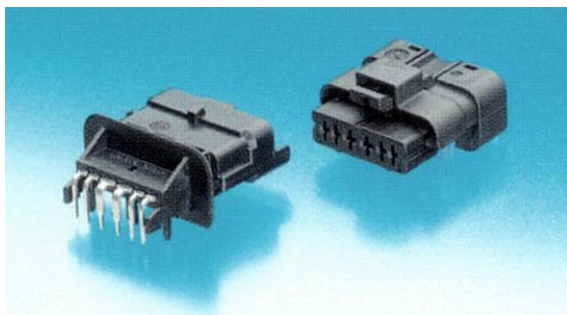
One-Row 6w Header

Header Part number:

| DPN | Type of connector | Polarization | Configuration |
|---------|-------------------|--------------|---------------------------|
| F159000 | 6w | BLACK | Right angled male housing |

Header:

| | |
|--------------------|--|
| Description: | 6w Header |
| N. Of row | 1 |
| Pitch between rows | - |
| Terminals | 1.5mm & 2.8mm Sicma |
| Sealing protection | IP68 |
| Temperature range | -40°C to +105°C |
| TPA | Integrated secondary lock device allowing detection of terminals |
| Application: | Electrical parking brake, clutchless gear box controller, liquified Petrol Gas controller, Engine management electronic control unit |



Mating connector Part number:

| DPN | Type of connector | Polarization |
|---------------|-------------------|--------------|
| 211PC069S0149 | 6w female sealed | BLACK |

Mating Connector:

| | |
|-------------------------|--|
| Description: | 6 Way Female sealed SICMA Generation 1 |
| Status: | Active |
| Family: | Mixed |
| Series: | Sicma 1.5 / 2.8 |
| Cavities: | 6 |
| Sealed: | Sealed |
| Gender: | Female |
| Temperature range [°C]: | -40 to +125 |
| Material: | PBT |
| Weight [g]: | 12.072 |
| Color: | Black |
| Application: | Inline (Wire to Wire) |

Terminals:

| DPN | Description |
|--------------|-------------------------------------|
| 211CC3S1160 | Terminal Sicma-3 Female 2.8 mm |
| 211CC2S2460P | Terminal Sicma-3Plus Female 1.5 mm |
| 211CC2S1190P | Terminal Sicma -3Plus Female 1.5 mm |
| 211CC2S1460P | Terminal Sicma-3Plus Female 1.5 mm |
| 211CC2S4190P | Terminal Sicma -3PlusFemale 1.5 mm |
| 211CC3S2460 | Terminal Sicma-3 Female 2.8 mm |
| 211CC3S1460 | Terminal Sicma-3 Female 2.8 mm |
| 211CC2S1160P | Terminal Sicma-3Plus Female 1.5 mm |
| 211CC2S2190P | Terminal Sicma-3Plus Female 1.5 mm |
| 211CC3S2160 | Terminal Sicma-3 Female 2.8 mm |
| 211CC2S2160P | Terminal Sicma-3Plus Female 1.5 mm |

064 Series Header

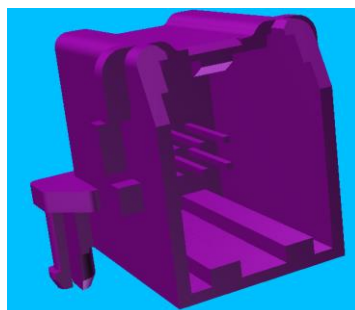
Two-Row – Single Module 8-way Unsealed - Right Angle

Header Part number:

| DPN | Type of connector | Polarization |
|----------|-------------------|--------------|
| 15420151 | 8w Micro unsealed | GRAY |

Header:

| | |
|------------------------------|------------------------------------|
| Description: | 8 Way Gray Micro Unsealed |
| Max Current | 7 amps |
| Product Type: | Connector |
| Status: | Active |
| Family: | Micro |
| Cavities: | 8 |
| Terminal(s) blade size [mm]: | 0.64 |
| Sealed: | Unsealed |
| Gender: | Male + Male |
| Temperature range [°C]: | -40 to 125 |
| Material: | High Temperature Nylon |
| Weight [g]: | 4.77 |
| Remarks: | USCAR spec. Number 064-U-008-2-B02 |
| Application: | Infotainment and BCM |



Mating connector Part number:

| DPN | Type of connector | Polarization |
|----------|--------------------|--------------|
| 13782038 | 8w female unsealed | GRAY |

Mating Connector:

| | |
|------------------------------|--|
| Description: | 8 Way Light Gray Unsealed Female Connector |
| Product Type: | Connector |
| Status: | Active |
| Family: | OCS |
| Series: | 0.64 Index Up Rear |
| Cavities: | 8 |
| Terminal(s) blade size [mm]: | 0.64 |
| Sealed: | Unsealed |
| Gender: | Female |
| Material: | Various (Assembly) |
| Weight [g]: | 3.5 |
| ELV compliant: | Yes |
| RoHs compliant: | Yes |
| Application: | Module - Parking Sensors, Switch - Window |



Terminals:

| DPN | Description |
|----------|---|
| 13767046 | Terminal OCS 0.64 IUR Female Unsealed Tin Plating Terminal, Cable Range 0.80 - 0.80 mm2 |
| 13767047 | Terminal OCS 0.64 IUR Female Unsealed Tin Plating Terminal, Cable Range 0.35 - 0.50 mm2 |
| 13767048 | Terminal OCS 0.64 IUR Female Unsealed Tin Plating Terminal, Cable Range 0.13 - 0.22 mm2 |

Sicma Series – ECU & DTB

24w Header

1/2

Header:

| | |
|-----------------|---------------------|
| Product name: | DTB 24 Way Male |
| Family | |
| Sealing Level | S2 / S1 |
| Meating Force | ≤ 70N |
| Temp. range | T2 (- 40°C + 100°C) |
| Vibration class | V1 |
| Tpa (yes/Not) | Yes |
| Cpa (yes/Not) | No |

Male housing Sealed:

| DPN | Type of connector | Polarization |
|---------------|-------------------|--------------|
| 211PL249S0033 | 24w PBT | BLACK |
| 211PL249S1033 | 24w PBT | BROWN |
| 211PL249S6033 | 24w PBT | BLUE |
| 211PL249S8033 | 24w PBT | GRAY |

Male housing Unsealed:

| DPN | Type of connector | Note | Polarization |
|---------------|-------------------|----------|--------------|
| 211PL249S0023 | 24w PBT | - | BLACK |
| 211PL249S8020 | 24w PBT | - | GRAY |
| HCCMHPE24BKAF | 24w PBT | REAR DTB | BLACK |

Pin Header Male housing

| DPN | Type of connector | Polarization |
|-----------------|-------------------|--------------|
| HCCMHPE24BKA00F | 24w PBT | BLACK |
| HCCMHPE24BKA90F | 24w Pin-Header | BLACK |
| HCCMHPE24GYB90F | 24w Pin-Header | GRAY |
| HCCMHPE24BNC90F | 24w Pin-Header | BROWN |



Sicma Series – ECU & DTB

24w Header

2/2

Mating Connector:

| | |
|-----------------|---------------------|
| Product name: | DTB24 Way Female |
| Family | |
| Sealing Level | S2 / S1 |
| Meating Force | ≤ 70N |
| Temp. range | T2 (- 40°C + 100°C) |
| Vibration class | V1 |
| Tpa (yes/Not) | Yes |
| Cpa (yes/Not) | No |

Female housing Sealed:

| DPN | Type of connector | Note | Polarization |
|---------------|-------------------|----------|--------------|
| 211PC249S1033 | 24w PBT | No Slide | BROWN |
| 211PC249S8033 | 24w PBT | No Slide | GRAY |
| 211PC249S0033 | 24w PBT | No Slide | BLACK |
| 211PC249S6033 | 24w PBT | No Slide | BLUE |

Female housing Unsealed:

| DPN | Type of connector | Note | Polarization |
|---------------|-------------------|----------|--------------|
| 211PC249S0020 | 24w PBT | No Slide | BLACK |
| 211PC249S1020 | 24w PBT | No Slide | GRAY |
| 211PC249S8020 | 24w PBT | No Slide | BLACK |

Locking cam:

| DPN | Description |
|------------|-------------|
| 211A247020 | Locking cam |

Locking cam:

| DPN | Description |
|--------------|-------------------------------------|
| 211CC3S1160 | Terminal Sicma-3 Female 2.8 mm |
| 211CC2S2460P | Terminal Sicma-3Plus Female 1.5 mm |
| 211CC2S1190P | Terminal Sicma -3Plus Female 1.5 mm |
| 211CC2S1460P | Terminal Sicma-3Plus Female 1.5 mm |
| 211CC2S4190P | Terminal Sicma -3PlusFemale 1.5 mm |
| 211CC3S2460 | Terminal Sicma-3 Female 2.8 mm |
| 211CC3S1460 | Terminal Sicma-3 Female 2.8 mm |
| 211CC2S1160P | Terminal Sicma-3Plus Female 1.5 mm |
| 211CC2S2190P | Terminal Sicma-3Plus Female 1.5 mm |
| 211CC3S2160 | Terminal Sicma-3 Female 2.8 mm |
| 211CC2S2160P | Terminal Sicma-3Plus Female 1.5 mm |



Mixed Series – Radio Header

Two-Rows – Combination Module 30w Unsealed - Right Angle

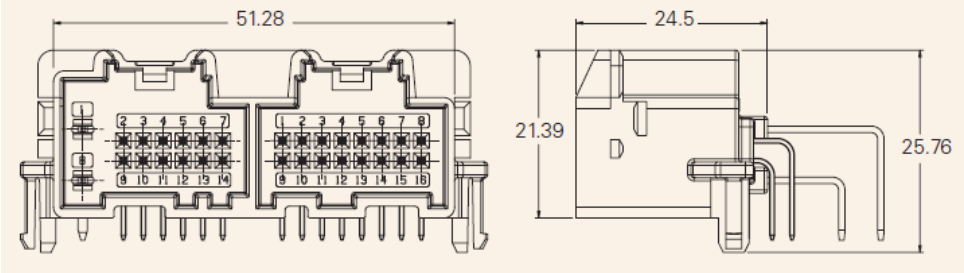
1/2

Header Part number:

| DPN | Type of connector | Polarization |
|----------|-----------------------|--------------|
| 09402549 | 30w Micro 64 unsealed | BLACK |

Header:

| | |
|------------------------------|--|
| Description: | 30 Way Black Micro 64 USCAR 120 Male |
| Product Type: | Connector |
| Status: | Active |
| Family: | Mixed |
| Series: | Mixed |
| Cavities: | 30 |
| Terminal(s) blade size [mm]: | 0.64, 1.2 |
| Sealed: | Unsealed |
| Gender: | Male |
| Material: | PBT |
| Weight [g]: | 13.21 |
| Color: | Black |
| Application: | Inline (Wire to Wire) - Infotainment and BCM |



Terminals for DPN 15464951:

| DPN | Description |
|----------|---|
| 12191134 | Female GT 280 Series Tin Plating Unsealed Terminal, Cable Range 0.50 - 0.50 mm2 |
| 15356826 | Female Micro 0.64 Gold Plating Unsealed Terminal, Cable Range 0.35 - 0.35 mm2 |
| 15304710 | Female GT 280 Series Tin Plating Unsealed Terminal, Cable Range 0.35 - 0.50 mm2 |
| 15304711 | Female GT 280 Series Tin Plating Unsealed Terminal, Cable Range 0.75 - 1.00 mm2 |
| 15427675 | Female GT 280 Series Tin Plating Unsealed Terminal, Cable Range 0.35 - 0.50 mm2 |
| 12191133 | Female GT 280 Series Tin Plating Unsealed Terminal, Cable Range 0.35 - 0.35 mm2 |
| 15359541 | Female Micro 0.64 Gold Plating Unsealed Terminal, Cable Range 0.50 - 0.80 mm2 |
| 15401440 | Female Micro 0.64 Tin Plating Unsealed Terminal, Cable Range 0.50 - 0.80 mm2 |
| 15394147 | Female Micro 0.64 Tin Plating Unsealed Terminal, Cable Range 0.35 - 0.35 mm2 |
| 12191135 | Female GT 280 Series Tin Plating Unsealed Terminal, Cable Range 0.80 - 0.80 mm2 |
| 15356827 | Female Micro 0.64 Gold Plating Unsealed Terminal, Cable Range 0.50 - 0.80 mm2 |
| 15304713 | Female GT 280 Series Tin Plating Unsealed Terminal, Cable Range 4.00 - 5.00 mm2 |
| 15304712 | Female GT 280 Series Tin Plating Unsealed Terminal, Cable Range 1.50 - 3.00 mm2 |

Mixed Series – Radio Header

2/2

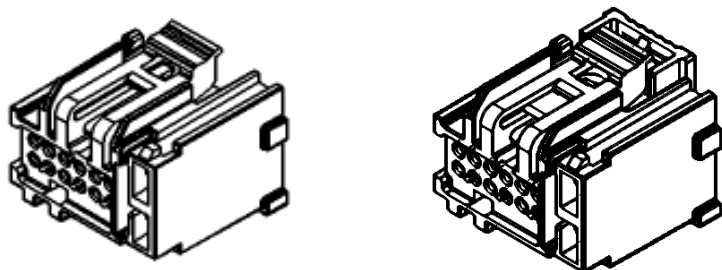
Two-Rows – Combination Module 30w Unsealed - Right Angle

16w connector Part number:

| DPN | Type of connector | Polarization |
|----------|-------------------------------|--------------|
| 15486792 | 16w female unsealed Micro HVT | BLACK |

Mating connectors:

| | |
|------------------------------|--|
| Description: | 16 Way Black Micro HVT Unsealed Female |
| Product Type: | Connector |
| Status: | Active |
| Family: | Micro HVT |
| Cavities: | 16 |
| Terminal(s) blade size [mm]: | 1.2 |
| Sealed: | Unsealed |
| Material: | PBT |
| Weight [g]: | 4.67 |
| Color: | Black |
| ELV compliant: | Yes |
| RoHs compliant: | Yes |
| Application: | Radio, Mirror, Amplifier, Module - A/C, Switch - Headlamp, Display - Multimedia |



14w connector Part number:

| DPN | Type of connector | Polarization |
|----------|----------------------------|--------------|
| 15464951 | 14w female unsealed GT 150 | BLACK |

| | |
|------------------------------|---|
| Description: | 14 Way Black GT150 Micro 64 Unsealed Female |
| Product Type: | Connector |
| Status: | Active |
| Family: | Mixed |
| Series: | Mixed |
| Cavities: | 14 |
| Terminal(s) blade size [mm]: | 0.64, 2.8 |
| Sealed: | Unsealed |
| Gender: | Female |
| Material: | PBT |
| Weight [g]: | 4.82 |
| Color: | Black |

Terminals for DPN 15486792:

| DPN | Description |
|----------|---|
| 15445905 | Female Micro HVT Tin Plating Unsealed Terminal, Cable Range 0.75 - 0.75 mm2 |
| 15445904 | Female Micro HVT Tin Plating Unsealed Terminal, Cable Range 0.35 - 0.50 mm2 |
| 15477038 | Lock LOCK CPA MICRO 64 RED |
| 13733783 | Female Micro HVT Tin Plating Unsealed Terminal, Cable Range 0.13 - 0.22 mm2 |

CMC Series – ECU

32w Header

1/2

Header Part number:

| DPN | Type of connector | Polarization |
|---------|-------------------|--------------|
| F670000 | 32w | BLUE |
| F270000 | 32w | BLACK |

Header:

| | |
|--------------------------|------------------------|
| Description: | 32w Header |
| Sealing protection: | IPx9K/IP68 |
| Terminals: | 24x 0,64mm & 8x 1,50mm |
| Temperature range | -40°C to +125°C |
| Terminal retention force | > 100N |
| Terminal insertion force | < 10N |
| Temperature range [°C]: | -40 to +125 |
| Connector mating force | < 60N |
| N. of mechanical coding | 4 |



32w connector- blue right lever - Part number:

| DPN | Type of connector | Polarization |
|----------|----------------------------|--------------|
| 15464951 | 14w female unsealed GT 150 | BLACK |

Mating connector:

| | |
|-------------------------|---|
| Description: | 32 Way CMC female sealed blue right lever |
| Status: | Active |
| Family: | GTS |
| Series: | Mixed |
| Cavities: | 32 |
| Temperature range [°C]: | -40 to +125 |
| Material: | PBT |

Cover Part number:

| DPN | Description |
|------------|---|
| PPI0001522 | CMC 32 Way Wire dress cover for Housing |

Terminals:

| DPN | Type of terminal | tab size (mm²) | Plating | Note |
|------------|------------------|----------------|------------|----------------------|
| PPI0001619 | 0,64 | 0,22 - 0,35 | pre tinned | for sleeve see table |
| PPI0000489 | 0,64 | 0,5 | pre tinned | for sleeve see table |
| PPI0001483 | 1,5 | 1 | pre tinned | for sleeve see table |
| PPI0001484 | 1,5 | 1,5 | pre tinned | for sleeve see table |

CMC Series – ECU

32w Header

2/2

32w connector- black left lever - Part number:

| DPN | Type of connector | Polarization |
|------------|-----------------------|--------------|
| PPI0001487 | 32w female sealed CMC | BLACK |

Mating connector:

Description: 32 Way CMC female Housing sealed black left lever
Status: Active
Family: GTS
Series: Mixed
Cavities: 32
Terminal(s) blade
size [mm]: 0.64, 1.5
Temperature range [°C]: -40 to +125
Material: PBT

32w connector- black right lever - Part number:

| DPN | Type of connector | Polarization |
|------------|-----------------------|--------------|
| PPI0001488 | 32w female sealed CMC | BLACK |

Mating connector:

Description: 32 Way CMC female Housing sealed black right lever
Status: Active
Family: GTS
Series: Mixed
Cavities: 32
Terminal(s) blade
size [mm]: 0.64, 1.5
Temperature range [°C]: -40 to +125
Material: PBT

CMC Series - ECU

48w & 64w PinHeader

Header Part number:

| DPN | Type of connector | Polar. | Configuration |
|----------|-------------------|--------|---------------------------------------|
| 17464807 | 48w | BLACK | tab: N° 8 pin da 1,5 + 40 pin da 0,64 |
| F015300 | 64w | BLACK | tab: N° 8 pin da 1,5 + 56 pin da 0,64 |

Header:

| | |
|-----------------|-------------------------------|
| Product name: | 48w & 64w PinHeader |
| Sealing Level | S2 - S3 |
| Mating Force | ≤ 75N |
| Temp. range | T3 (-40 / +125°C) |
| Vibration class | V2 |
| Tpa (yes/Not) | Yes |
| Cpa (yes/Not) | -- |
| Note: | BODY SOLDERING REFLOW VERSION |

Cover Part number:

| DPN | Description |
|------------|---|
| PPI0001522 | CMC 32 Way Wire dress cover for Housing |

Terminals:

| DPN | Type of terminal | tab size (mm²) | Plating | Note |
|------------|------------------|----------------|------------|----------------------|
| PPI0001619 | 0,64 | 0,22 - 0,35 | pre tinned | for sleeve see table |
| PPI0000489 | 0,64 | 0,5 | pre tinned | for sleeve see table |
| PPI0001483 | 1,5 | 1 | pre tinned | for sleeve see table |
| PPI0001484 | 1,5 | 1,5 | pre tinned | for sleeve see table |

Mating connector Part number:

| DPN | Type | Polar. | LEVER | Configuration |
|-------------|-------------|--------|-------------|---|
| PPI00001494 | 48w | BLACK | Black left | Body + TPA + Lever + Mating seal + Peripher. seal |
| PPI00001495 | 48w | BLACK | Black right | Body + TPA + Lever + Mating seal + Peripher. seal |
| PPI0001500 | 64w | BLACK | Black left | Body + TPA + Lever + Mating seal + Peripher. seal |
| PPI0001501 | 64w | BLACK | Black right | Body + TPA + Lever + Mating seal + Peripher. seal |
| PPI0001485 | Plug | -- | -- | White dummy for 0,64 cavity |
| PPI0001486 | Plug | -- | -- | Blue dummy for 1,5 cavity |
| F418400 | Tube sleeve | -- | -- | See Sleeve table |

Mating connector:

| | |
|-----------------|-----------------------------------|
| Product name: | 48w & 64w Female Sealed Connector |
| Sealing Level | S2 - S3 |
| Mating Force | ≤ 75N |
| Temp. range | T3 (-40 / +125°C) |
| Vibration class | V2 |
| Tpa (yes/Not) | yes |
| Cpa (yes/Not) | -- |



Sicma Series – Sealed harsh environment

Two-Rows 56w Header

Header Part number:

| DPN | Type of connector | Polar. | Configuration |
|---------|-------------------|--------|---------------------------|
| F135200 | 56w | BLACK | Right angled male housing |

Header:

| | |
|---------------------|--|
| Description: | 56w Header |
| N. Of row: | 2 |
| Pitch between rows: | 6mm |
| Sealing protection: | IP68 |
| Terminals: | 1.5mm Sicma |
| Temperature range: | -40°C to +125°C |
| TPA: | Integrated secondary lock device allowing detection of terminals |
| Application: | Electrical parking brake, clutchless gear box controller, liquified Petrol Gas controller, Engine management electronic control unit |

Terminals

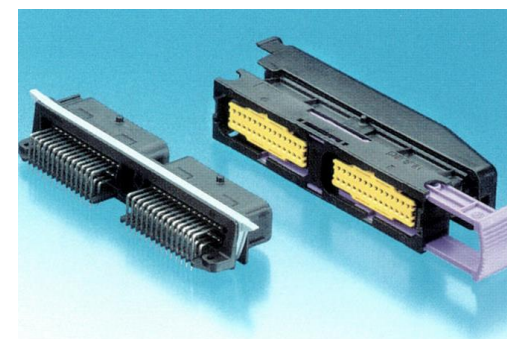
| DPN | Description |
|--------------|------------------------------------|
| 211CC2S2160P | Sicma-3Plus Female 1.5 mm Terminal |
| 211CC2S4190P | Sicma-3Plus Female 1.5 mm Terminal |
| 211CC2S1190P | Sicma-3Plus Female 1.5 mm Terminal |
| 211CC2S1460P | Sicma-3Plus Female 1.5 mm Terminal |
| 211CC2S2460P | Sicma-3Plus Female 1.5 mm Terminal |
| 211CC2S2190P | Sicma-3Plus Female 1.5 mm Terminal |

Mating connector Part number:

| DPN | Type of connector | Polarization |
|------------|-------------------------|--------------|
| PPI0001258 | 56w female sealed SICMA | BLACK |

Mating connector:

| | |
|-------------------------|-----------------------------------|
| Description: | 56 Way 1.5 mm SICMA sealed Female |
| Housing | |
| Product Type: | Connector |
| Status: | Active |
| Family: | Sicma |
| Series: | 1.5 |
| Cavities: | 56 |
| Sealed: | Sealed |
| Gender: | Female |
| Temperature range [°C]: | -40 to +125 |
| Material: | PBT |
| Weight [g]: | 88.28 |
| Color: | Black |



Sicma Series – Sealed harsh environment

Three-Rows 90w Header

Header Part number:

| DPN | Type of connector | Polar. | Configuration |
|----------|-------------------|--------|----------------------|
| 33508365 | 90w | BLACK | Straight male hosing |

Header:

| | |
|---------------------|---|
| Description: | 90w Header |
| N. Of row: | 3 |
| Pitch between rows: | 6mm |
| Sealing protection: | IP68 |
| Terminals: | 1.5mm Sicma |
| Temperature range: | -40°C to +125°C |
| TPA: | Integrated secondary lock device allowing detection of terminals |
| Application: | Electrical parking brake, clutchless gear box controller, liquified Petrol Gas controller, Engine management, electronic control unit |

Terminals

| DPN | Description |
|--------------|------------------------------------|
| 211CC2S2160P | Sicma-3Plus Female 1.5 mm Terminal |
| 211CC2S4190P | Sicma-3Plus Female 1.5 mm Terminal |
| 211CC2S1190P | Sicma-3Plus Female 1.5 mm Terminal |
| 211CC2S1460P | Sicma-3Plus Female 1.5 mm Terminal |
| 211CC2S2460P | Sicma-3Plus Female 1.5 mm Terminal |
| 211CC2S2190P | Sicma-3Plus Female 1.5 mm Terminal |

Mating connector Part number:

| DPN | Type of connector | Polarization |
|---------------|-------------------------|--------------|
| 211PC902S0009 | 90w female sealed SICMA | BLACK |

Mating connector:

| | |
|-------------------------|---|
| Description: | 90 Ways Female SICMA I/O Connector system |
| Product Type: | Connector |
| Status: | Active |
| Family: | Sicma |
| Series: | 1.5 |
| Cavities: | 90 |
| Sealed: | Sealed |
| Gender: | Female |
| Temperature range [°C]: | -40 to +125 |
| Material: | PBT |



CMC Series – ECU

112w Header

1/2

Header Part number:

| DPN | Type of connector | Polarization |
|-----------|-------------------|--------------|
| 1746B207M | 112w | BLACK |
| 1746B207E | 112w | BLACK |

Header:

| | |
|---------------------------|-------------------------|
| Product name: | 112w Header |
| Sealing protection: | IPx9K/IP68 |
| Terminals: | 88x 0,64mm & 24x 1,50mm |
| Temperature range: | -40°C to +125°C |
| Terminal retention force: | > 100N |
| Terminal insertion force: | < 10N |
| Connector mating force: | < 60N |

Cover Part number:

| DPN | Description |
|------------|---|
| PPI0001522 | CMC 32 Way Wire dress cover for Housing |

Terminals:

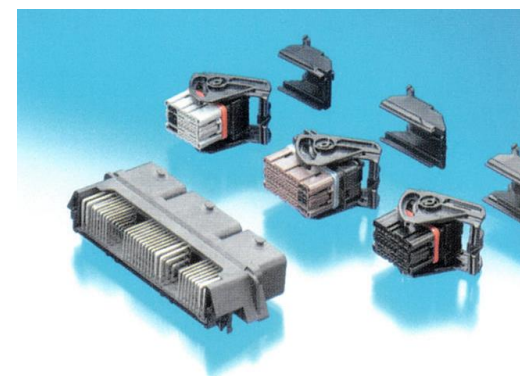
| DPN | Type of terminal | tab size (mm ²) | Plating | Note |
|------------|------------------|-----------------------------|------------|----------------------|
| PPI0001619 | 0,64 | 0,22 - 0,35 | pre tinned | for sleeve see table |
| PPI0000489 | 0,64 | 0,5 | pre tinned | for sleeve see table |
| PPI0001483 | 1,5 | 1 | pre tinned | for sleeve see table |
| PPI0001484 | 1,5 | 1,5 | pre tinned | for sleeve see table |

Mating connector Part number:

| DPN | Type of connector | Polarization |
|------------|-----------------------|--------------|
| PPI0001487 | 32w female sealed CMC | BLACK |

Mating connector:

| | |
|-------------------------|---|
| Description: | 32 Way CMC female sealed black left lever |
| Status: | Active |
| Family: | GTS |
| Series: | Mixed |
| Cavities: | 32 |
| Temperature range [°C]: | -40 to +125 |
| Material: | PBT |



CMC Series – ECU

112w Header

2/2

48w connector- brown left lever - Part number:

| DPN | Type of connector | Polarization |
|---------|-----------------------|--------------|
| F765000 | 48w female sealed CMC | BROWN |

Mating connector:

Description: 48 Way CMC female sealed brown left lever
Status: Active
Family: GTS
Series: Mixed
Cavities: 48
Temperature range [°C]: -40 to +125
Material: PBT

32w connector- gray right lever - Part number:

| DPN | Type of connector | Polarization |
|------------|-----------------------|--------------|
| PP10001489 | 32w female sealed CMC | GRAY |

Mating connector:

Description: 32 Way CMC female sealed gray keyWay right lever
Status: Active
Family: GTS
Series: Mixed
Cavities: 32
Temperature range [°C]: -40 to +125
Material: PBT

Mixed Series – ECU

Five-Rows – Combination Module 154 Way Black Sealed Male

1/2

Header Part number:

| DPN | Type of connector | Polarization |
|----------|-------------------|--------------|
| 13830808 | 154w | BLACK |

Header:

| | |
|-----------------|---|
| Description: | 154 Way Black 1.2 2.8 Sealed Male Connector |
| Status: | Active |
| Family: | Mixed |
| Series: | Mixed |
| Cavities: | 154 |
| Weight [g]: | 124.2 |
| Color: | Black |
| ELV compliant: | Yes |
| RoHs compliant: | Yes |
| Application: | Engine Control Unit, major for diesel application |

Cover Part number:

| DPN | Description |
|----------|--------------|
| 15494581 | 58 Way cover |

Terminals

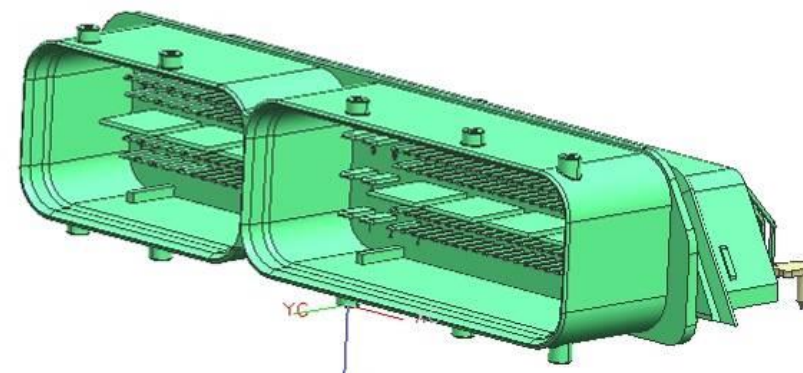
| DPN | Description |
|-------------|---|
| 13543114 | OCS 1.2 clean body Tin/Silver 0,35 – 0,50 |
| 13543115 | OCS 1.2 clean body 1.2 Tin/Silver 0,75 – 0,80 |
| 13543116 | OCS 1.2 clean body 1.2 Tin/Silver 0,80 – 1,00 |
| 15494338 | (2pcs terminal) BTS sws 2.8 Sn 0,35 – 0,50 |
| 15494339 | (2pcs terminal) BTS sws 2.8 Sn 0,60 – 1,00 |
| 15494340 | (2pcs terminal) BTS sws 2.8 Sn 1,40 – 2,50 |
| 211CC3S1161 | (1pc terminal) Sicma3 sws 2.8 Sn 0,35 – 0,50 |
| 211CC3S2161 | (1pc terminal) Sicma3 sws 2.8 Sn 1,00 – 2,50 |

58w connector Part number:

| DPN | Type of connector | Polarization |
|----------|-------------------|--------------|
| 13535331 | 58w female sealed | GRAY |

Mating connector:

| | |
|-----------------|---|
| Description: | 58 Way Gray 1.2 BTS 2.8 Sealed Female Connector |
| Status: | Active |
| Family: | Mixed |
| Series: | Mixed |
| Cavities: | 58 |
| Weight [g]: | 40.05 |
| Color: | Gray |
| ELV compliant: | Yes |
| RoHs compliant: | Yes |



Mixed Series – ECU

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Five-Rows – Combination Module 154 Way Black Sealed Male

Cover Part number:

| DPN | Description |
|----------|--------------|
| 15494581 | 58 Way cover |

Locking comb Part number:

| DPN | Description |
|----------|--------------|
| 15494573 | Locking comb |

PLR cover Part number:

| DPN | Description |
|----------|-------------|
| 15494575 | PLR cover |



96w connector Part number:

| DPN | Type of connector | Polarization |
|----------|-------------------|--------------|
| 13535335 | 96w female sealed | GRAY |

Header:

| | |
|-----------------|--|
| Description: | 96way Gray 1.2 MCP Sealed Female Connector |
| Status: | Active |
| Family: | 1.2 |
| Series: | MCP |
| Cavities: | 96 |
| Weight [g]: | 52.96 |
| Color: | Gray |
| ELV compliant: | Yes |
| RoHs compliant: | Yes |

Cover Part number:

| DPN | Description |
|----------|--------------|
| 15494614 | 96 Way cover |

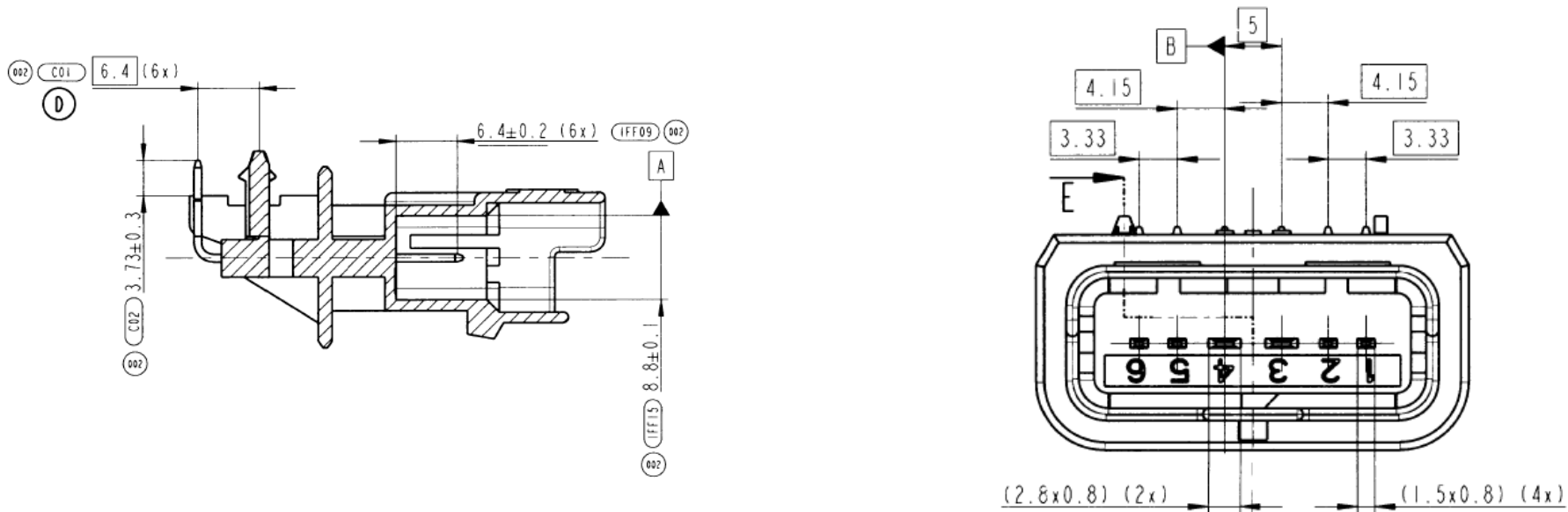
Locking comb Part number:

| DPN | Description |
|----------|--------------|
| 15494608 | Locking comb |

Dimensions

Shown in millimeters.

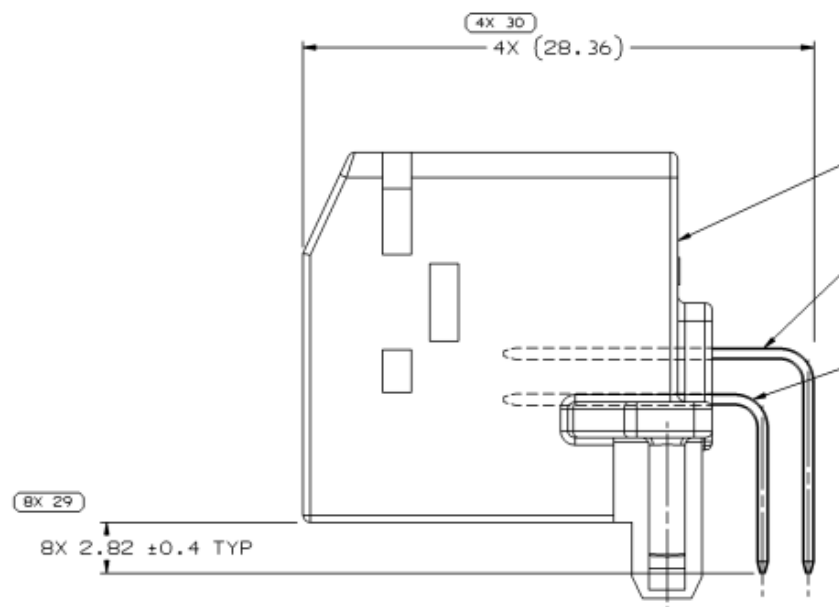
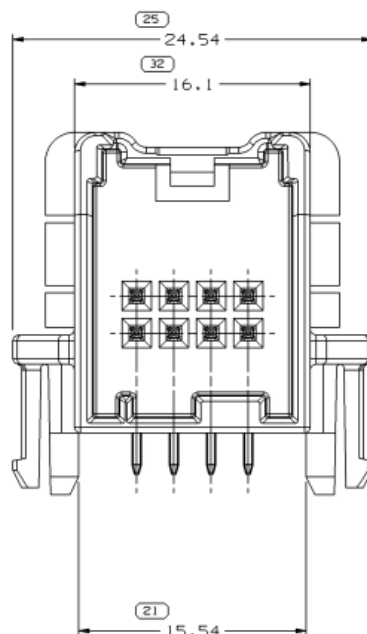
6w Header



Dimensions

Shown in millimeters.

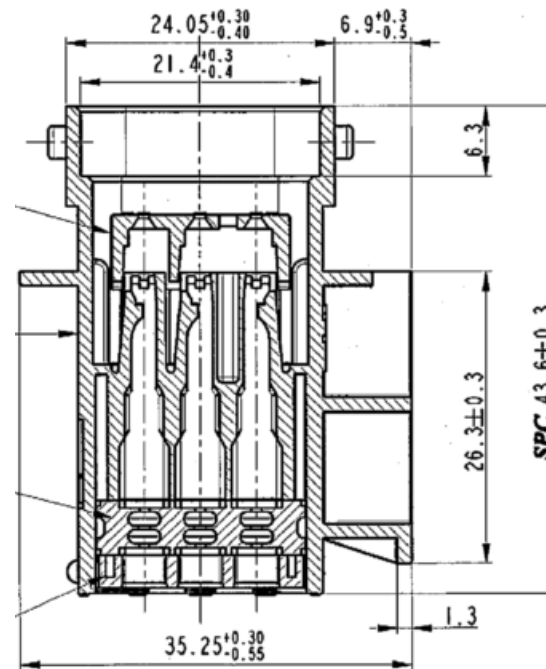
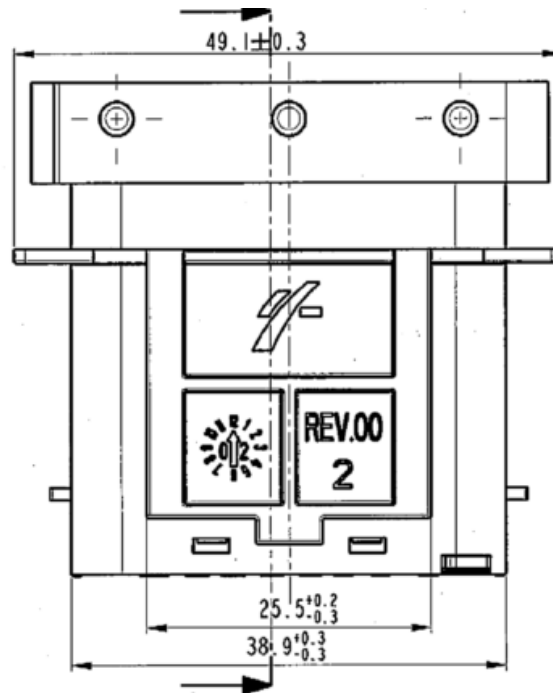
8-way Unsealed - Right Angle



Dimensions

Shown in millimeters.

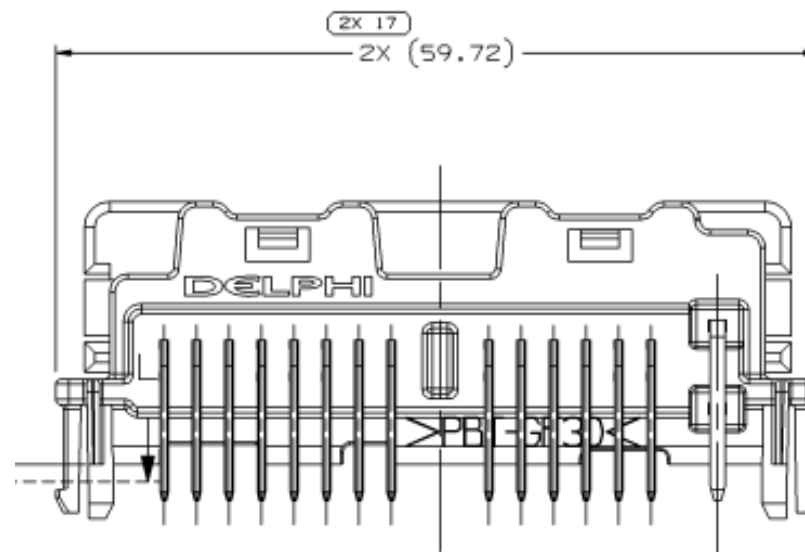
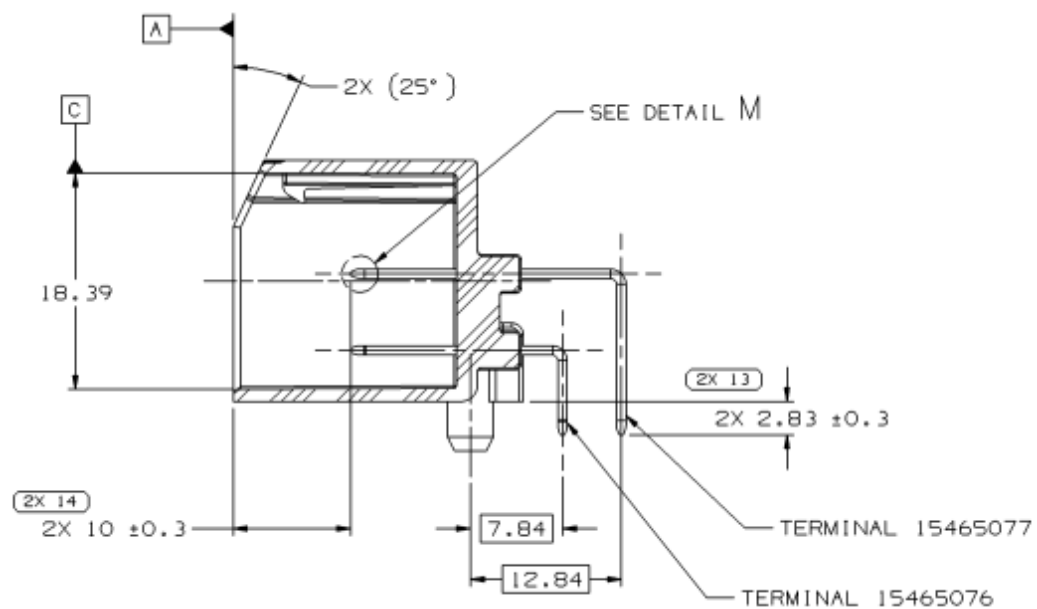
24w Header



Dimensions

Shown in millimeters.

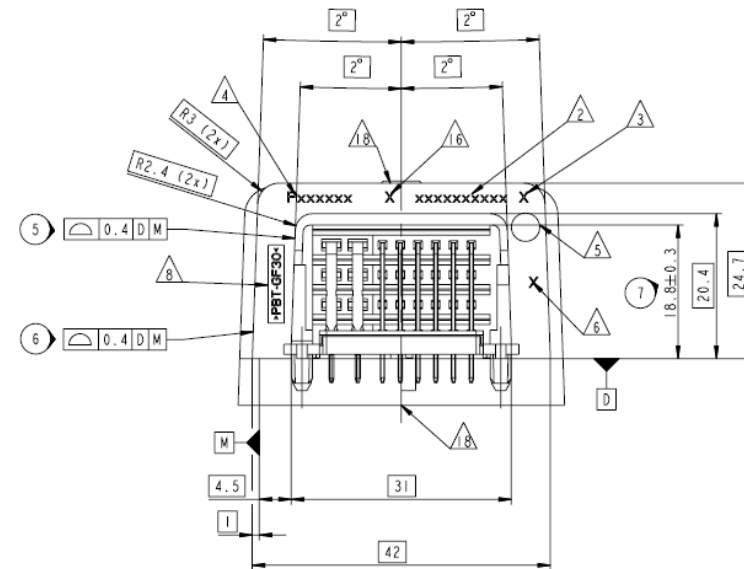
30-way Unsealed - Right Angle



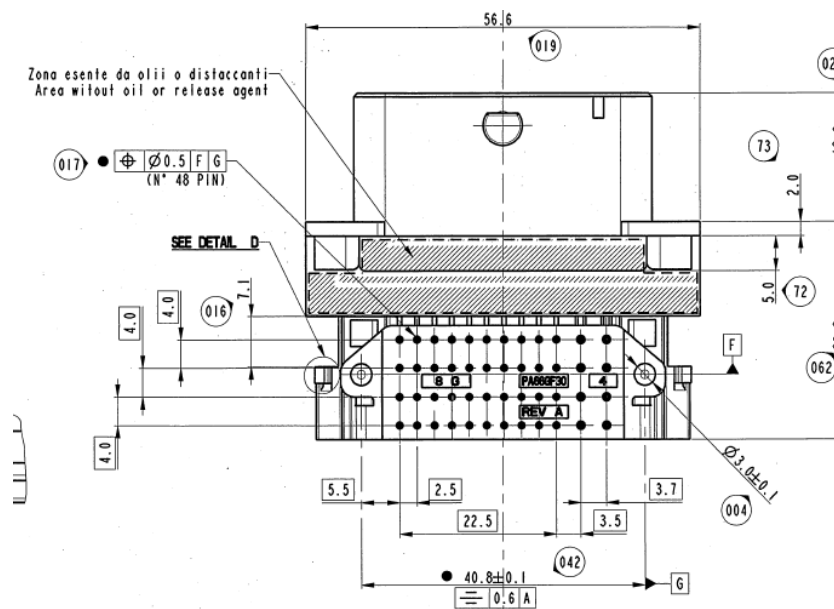
Shown in millimeters.

Technical drawing of a mechanical component with dimensions and callouts:

- Overall width: 23.2 ± 0.2
- Distance from left edge to center of feature 12: 14
- Distance from center of feature 12 to right edge: 8.6
- Feature 11: Circular feature on the left.
- Feature 12: Circular feature on the top.
- Feature 13: Feature with dimensions $\oplus 0.2$ D E.
- Feature 14: Feature with dimension 2.8.
- Feature 15: Feature with dimension 10.3 ± 0.2 .
- Feature 16: Feature with dimension 13.1 ± 0.2 .
- Feature R: Feature on the bottom left.
- Feature E: Feature on the top right.
- Feature D: Feature on the top right.



Shown in millimeters.

[illegible]

Shown in millimeters.

Shown in millimeters.

A - A

27.72 \pm 0.1

24.72 \pm 0.1

18.72 \pm 0.1

15.72 \pm 0.1

(18.5)

G

C

6

3

17

J2

$\varnothing 4$

6.7 \pm 0.2 SC
(56x)

0.63

0.4 J1-J2
(56x)

R0.9

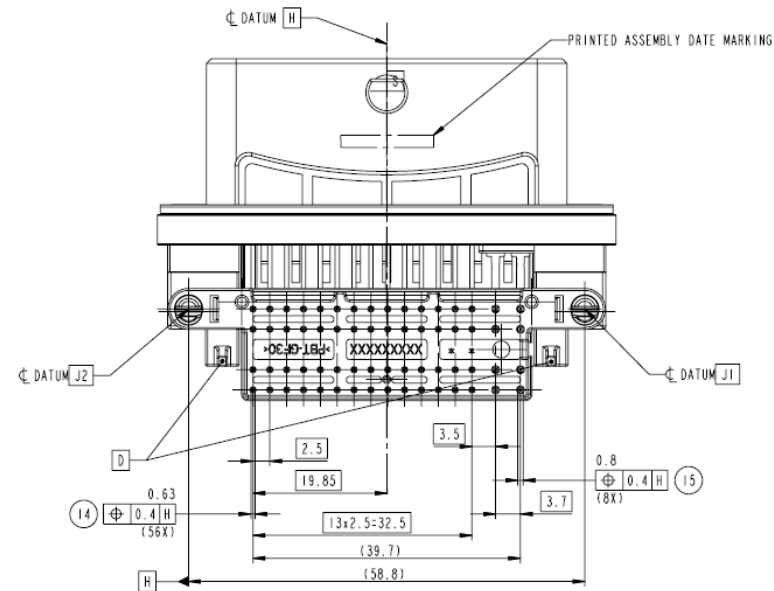
R0.9

R0.9

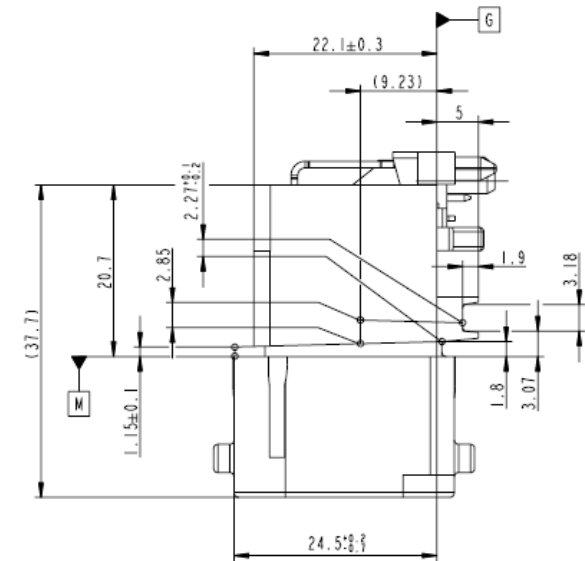
R0.9

90° \pm 0.5°

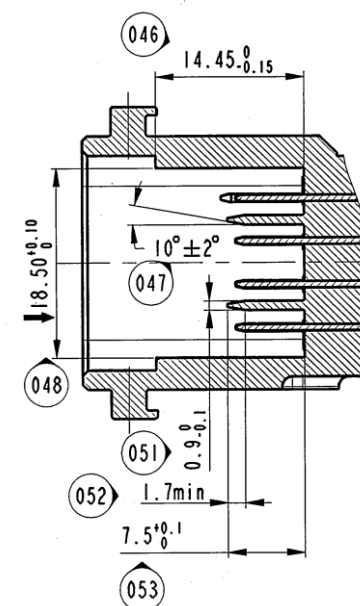
3x2+6=12



Shown in millimeters.



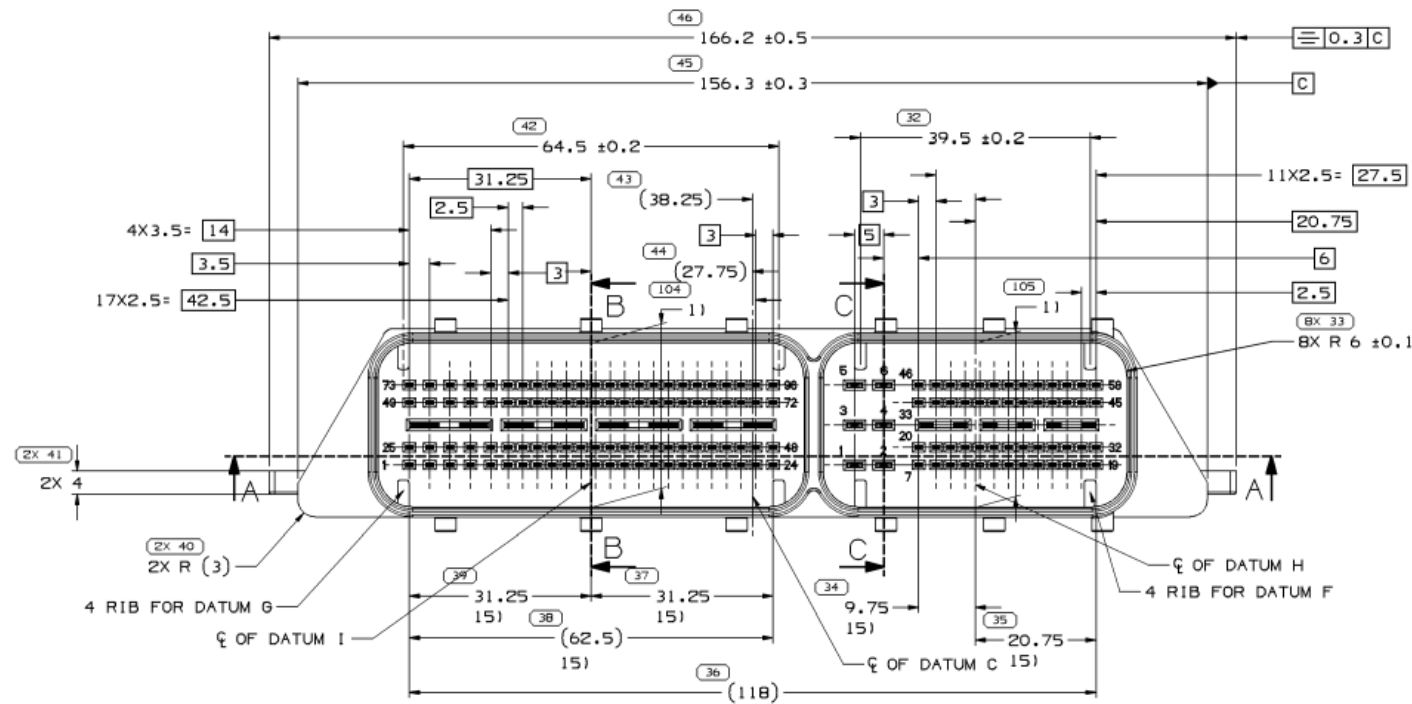
Shown in millimeters.

[illegible]

Dimensions

Shown in millimeters.

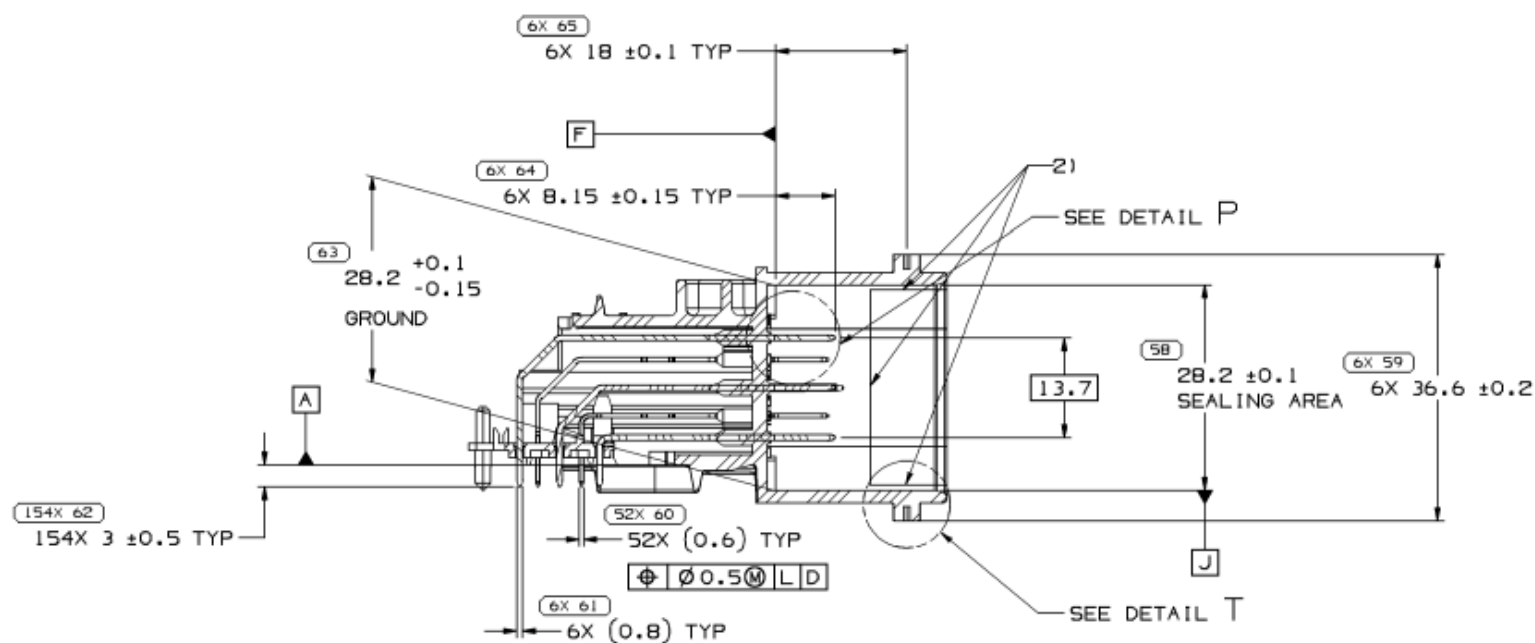
154w Header



Dimensions

Shown in millimeters.

154w Header



Shown in millimeters.

Technical drawing of a DELPHI 28046497 electronic component, showing a top view with dimensions and callouts.

Key features and dimensions:

- Component label: DELPHI 28046497
- Material: PBT GF30
- Top surface features: Numerous pins (callouts 71, 81, 91, 101, 111, 121) and a central label.
- Bottom surface features: Mounting holes (callouts 26, 25) and a central label.
- Dimensions:
 - Overall width: 78.3
 - Central width: 78.3
 - Height: 32.5
 - Mounting hole diameter: $\varnothing 3.5$
 - Mounting hole spacing: $\varnothing 0.4$
 - Mounting hole diameter: $\varnothing 3.5$
 - Mounting hole spacing: $\varnothing 0.4$
 - Mounting hole diameter: $\varnothing 3.5$
 - Mounting hole spacing: $\varnothing 0.4$
- Surface finish requirements: Ra 3 AT ADHESIVE (SEE NOTE 3)), Ra 3.5
- Notes: SEE NOTE 3)

Cross Reference

| P/N | DPN | Description |
|--------------|----------|--|
| 9402549 | 9402549 | 30 Way Black Micro 64 USCAR 120 Unsealed Male Connector Assembly |
| 12191133 | 12191133 | 280 GT |
| 12191134 | 12191134 | 280 GT |
| 12191135 | 12191135 | 280 GT |
| 13535331 | 13535331 | Low Harshness equal or more 32 ways ECU |
| 13535335 | 13535335 | Low Harshness equal or more 32 ways ECU |
| 13543114 | 13543114 | 120 OCS |
| 13543115 | 13543115 | 120 OCS |
| 13543116 | 13543116 | 120 OCS |
| 13733783 | 13733783 | 120 MICRO |
| 13767046 | 13767046 | 064 OCS |
| 13767047 | 13767047 | 064 OCS |
| 13767048 | 13767048 | 064 OCS |
| 13782038 | 13782038 | Cockpit Unslid equal or less 10 ways |
| 13830808 | 13830808 | 154 Way Black 1.2 2.8 Sealed Male Connector Assembly |
| 15304710 | 15304710 | 280 GT |
| 15304711 | 15304711 | 280 GT |
| 15304712 | 15304712 | 280 GT |
| 15304713 | 15304713 | 280 GT |
| 15356826 | 15356826 | 064 MICRO |
| 15356827 | 15356827 | 064 MICRO |
| 15359541 | 15359541 | 064 MICRO |
| 15394147 | 15394147 | 064 MICRO |
| 15401440 | 15401440 | 064 MICRO |
| 15420151 | 15420151 | Body cntrlr-Stand alone Hdr insert mold |
| 15427675 | 15427675 | 280 GT |
| 15445904 | 15445904 | 120 MICRO |
| 15445905 | 15445905 | 120 MICRO |
| 15464951 | 15464951 | 14 Way Black GT 150 Micro 64 Unsealed Female Connector |
| 15477038 | 15477038 | Cockpit Unslid more than 10 ways |
| 15486792 | 15486792 | Others Multimedia |
| 15494338 | 15494338 | 280 BTS |
| 15494339 | 15494339 | 280 BTS |
| 15494340 | 15494340 | 280 BTS |
| 15494573 | 15494573 | Low Harshness equal or more 32 ways ECU |
| 15494575 | 15494575 | Low Harshness equal or more 32 ways ECU |
| 15494581 | 15494581 | Low Harshness equal or more 32 ways ECU |
| 15494608 | 15494608 | Low Harshness equal or more 32 ways ECU |
| 15494614 | 15494614 | Low Harshness equal or more 32 ways ECU |
| 17464807 | 33503457 | ECU and BSM-Stand alone Header |
| 17468207M | 33503824 | ECU and BSM-Stand alone Header |
| 211A247020 | 10740114 | Low Harshness less 32 ways wipers alt |
| 211CC2S1160P | 10863984 | 150 SICM3 |
| 211CC2S1190P | 13602481 | 150 SICM3 |
| 211CC2S1460P | 13764604 | 150 SICM3 |
| 211CC2S2160P | 10863985 | 150 SICM3 |

| P/N | DPN | Description |
|---------------|----------|---|
| 211CC2S2190P | 33511808 | 150 SICM3 |
| 211CC2S2460P | 13764602 | 150 SICM3 |
| 211CC2S4190P | 33501712 | 150 SICM3 |
| 211CC3S1160 | 10781041 | 280 SICM3 |
| 211CC3S1161 | 10740375 | 150 SICM3 |
| 211CC3S1460 | 13567906 | 150 SICM3 |
| 211CC3S2160 | 10726549 | 150 SICM3 |
| 211CC3S2161 | 10740376 | 150 SICM3 |
| 211CC3S2460 | 33501949 | 150 SICM3 |
| 211PC069S0049 | 10768569 | Body chassis Sld equal or less 10 ways |
| 211PC249S0020 | 13751295 | Cockpit Unslid more than 10 ways |
| 211PC249S0033 | 10820454 | High Harshness Injector engine sensors |
| 211PC249S1020 | 13751296 | Low Harshness less 32 ways wipers alt |
| 211PC249S1033 | 13841561 | Cockpit Sealed more than 10 ways |
| 211PC249S6033 | 33500315 | High Harshness Injector engine sensors |
| 211PC249S8020 | 13751294 | Low Harshness less 32 ways wipers alt |
| 211PC249S8033 | 13841588 | Low Harshness less 32 ways wipers alt |
| 211PC902S0009 | 10776517 | High Harshness Injector engine sensors |
| 211PL249S0023 | 15396450 | High Harshness Injector engine sensors |
| 211PL249S0033 | 15470023 | 24 Way Male sealed SICMA Connector black-gromet green |
| 211PL249S1033 | 13949170 | 24 Way Male sealed SICMA Connector brown-gromet green |
| 211PL249S6033 | 33500327 | Low Harshness less 32 ways wipers alt |
| 211PL249S8020 | 33503783 | Low Harshness less 32 ways wipers alt |
| 211PL249S8033 | 13949173 | 24 Way Male sealed SICMA Connector grey-gromet green |
| F015300 | 33504510 | ECU and BSM-Stand alone Header |
| F135200 | 33511394 | ECU and BSM-Stand alone Header |
| F159000 | 33508361 | ECU and BSM-Stand alone Header |
| F270000 | 33503151 | ECU and BSM-Stand alone Header |
| F418400 | 13779855 | Single wire sealing |
| F670000 | 33503152 | ECU and BSM-Stand alone Header |
| F765000 | 33500419 | High Harshness Injector engine sensors |
| F965000 | 13956254 | Low Harshness equal or more 32 ways ECU |
| HCCMHPE24BKAF | 33500426 | Cockpit Unslid more than 10 ways |
| PPI0000489 | 13648598 | 064 GTS 1 |
| PPI0001258 | 13669859 | High Harshness Injector engine sensors |
| PPI0001483 | 13741954 | 150 GTS 2 |
| PPI0001484 | 13749482 | 150 GTS 2 |
| PPI0001485 | 13768626 | Wire Sealing-Special application |
| PPI0001486 | 13826722 | Special sealing products-Special applic |
| PPI0001487 | 13741940 | High Harshness Injector engine sensors |
| PPI0001488 | 13851306 | High Harshness Injector engine sensors |
| PPI0001489 | 33500494 | High Harshness Injector engine sensors |
| PPI0001493 | 33500498 | 32 Way CMC female sealed blue keyWay right lever |
| PPI0001500 | 13722628 | Low Harshness equal or more 32 ways ECU |
| PPI0001501 | 13648596 | Low Harshness equal or more 32 ways ECU |
| PPI0001522 | 13851307 | CMC 32 Way Wire dress cover for Housing |
| PPI0001526 | 13648597 | Low Harshness equal or more 32 ways ECU |
| PPI0001538 | 13956254 | CMC 48 Way Wire dress cover for Housing |
| PPI0001619 | 13955989 | 064 GTS 1 |

Notes

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