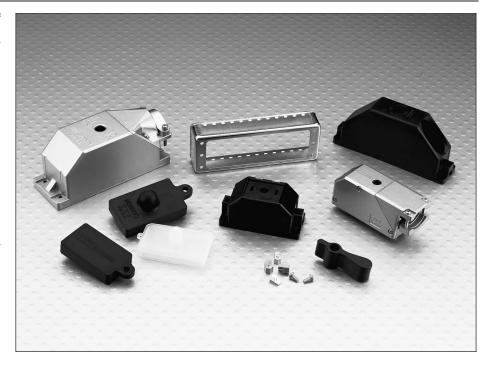
#### Accessories

annon offers a wide selection of accessories that allow the design engineers to configure the product for their exacting needs. The accessories range from the simple actuating handle to junction and backshells, as well as polarizing posts and protective covers for the contacts.

**Actuating handles** are the same for the DL1/2/3 and DLM1/2/3 series. The DL5/DLM5 and DLM6 series have specific handles. Handles are sold separately since many applications require the connector to be attached or removed only by an authorized technician.

Plastic junction shells are available for the DL1/2/3 series for encasement of the crimp contacts after complete installation into the connector. These shells also make it possible for the DL to be used as a cable-to-cable mating connector as they can be used both on the plug and the receptacle. The DL1/2/3 plastic junction shells have optional secondary cable entry capability by removing the molded in cable entry plugs. Cable clamp kits are available to affix the cable to the second entry. This second entry option is very useful in applications where the large wire sizes make the cable diameter too large to be handled from a single entry port.

**Metal Backshells** are available for the entire DL/DLM series. The metal backshells are constructed from die cast aluminum with a nickel plating to facilitate in EMI/RFI shielding of the connector system. Shielding has become a driving force because of ever increasing stringent EMI/RFI regulations.



**Polarizing posts** are available to offer a keying feature for both the DL and DLM connectors. The polarizing posts can be installed in specific orientation so that plugs of the same size connectors can only be mated in predetermined receptacles. This feature offers the designer the ability to fool-proof the attachment possibilities to protect accidental damage to the system.

**Protective covers** of plastic and anti-static rubber are available to offer contact protection from physical damage or dust. Since the DL series has a high density of contacts in an exposed area, these covers are very useful for many applications. For example: where systems have multiple connectors; when the connections are often left unattached; or when the system parts are put into storage.



#### **Accessories Selection Guide**

|                     | Actuating              |                       | ective<br>vers         | Metal Shell<br>EMI/RFI   | Plastic<br>Junction  | Cable                 | Metal                        | Polarizing           |
|---------------------|------------------------|-----------------------|------------------------|--------------------------|----------------------|-----------------------|------------------------------|----------------------|
| Connector<br>Series | Handles<br>see page 47 | Rubber<br>see page 47 | Plastic<br>see page 47 | Shielding<br>see page 49 | Shell<br>see page 46 | Clamps<br>see page 46 | Backshell<br>see pages 44-45 | Posts<br>see page 48 |
| DL1-156             | •                      | •                     | •                      | -                        | •                    | •                     | •                            | •                    |
| DL2-96              | •                      | •                     | •                      | _                        | •                    | •                     | •                            | •                    |
| DL3-60              | •                      | •                     | •                      | -                        | •                    | •                     | •                            | •                    |
| DL4-624             | -                      | •                     | -                      | -                        | -                    | -                     | -                            | -                    |
| DL4-1248            | -                      | •                     | -                      | -                        | -                    | -                     | -                            | -                    |
| DL4-2496            | -                      | •                     | -                      | -                        | -                    | -                     | -                            | -                    |
| DL5-260             | •                      | -                     | _                      | •                        | -                    | -                     | •                            | •                    |
| DLM1-156            | •                      | •                     | •                      | -                        | •                    | •                     | •                            | •                    |
| DLM2-96             | •                      | •                     | •                      | -                        | •                    | •                     | •                            | •                    |
| DLM3-60             | •                      | •                     | •                      | -                        | •                    | •                     | •                            | •                    |
| DLM5-260            | •                      | -                     | -                      | -                        | -                    | -                     | •                            | •                    |
| DLM6-360            | •                      | -                     | -                      | -                        | -                    | -                     | •                            | •                    |
| DLD1-156            | -                      | -                     | -                      | -                        | -                    | -                     | -                            | -                    |
| DLD2-96             | -                      | -                     | -                      | -                        | -                    | -                     | -                            | -                    |

Compatible−Not Compatible





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#### Metal Backshell

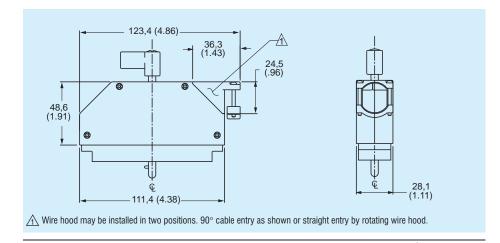
#### DL1, DLM1



- DL1, DLM1 is a two piece shell design.
- Kit consists of 2 shells, 10 screws, 1 wire hood, 1 wire clamp, 1 lock/open indication seal.

#### **Materials and Finishes**

| Shell:    | Nickel over die cast aluminum |
|-----------|-------------------------------|
| Hardware: | Stainless Steel               |



| Used On   | Part Number  | Mounting        | Entry        |
|-----------|--------------|-----------------|--------------|
| DL1, DLM1 | 249-4516-000 | Straight or 90° | 19,05 (.750) |
|           |              |                 |              |

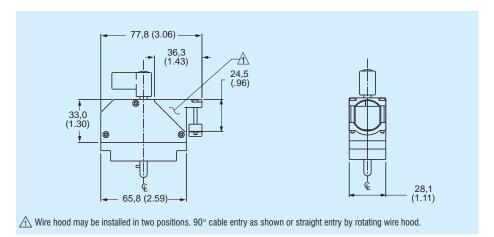
#### DL2, DLM2



- DL2, DLM2 is a two piece shell design.
- Kit consists of 2 shells, 9 screws, 1 wire hood, 1 wire clamp, 1 lock/open indication seal.

#### **Materials and Finishes**

| Shell:    | Nickel over die cast aluminum |
|-----------|-------------------------------|
| Hardware: | Stainless Steel               |



| Used On   | Part Number  | Mounting        | Max Cable<br>Entry |
|-----------|--------------|-----------------|--------------------|
| DL2, DLM2 | 249-4517-000 | Straight or 90° | 19,05 (.750)       |

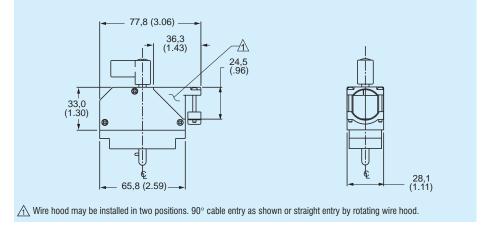
## DL3, DLM3



- DL3, DLM3 is a two piece shell design.
- Kit consists of 2 shells, 9 screws, 1 wire hood, 1 wire clamp, 1 lock/open indication seal.

#### **Materials and Finishes**

| Shell:    | Nickel over die cast aluminum |
|-----------|-------------------------------|
| Hardware: | Stainless Steel               |



| Used On Part Number |              | Mounting        | Max Cable<br>Entry |
|---------------------|--------------|-----------------|--------------------|
| DL3, DLM3           | 249-4518-000 | Straight or 90° | 19,05 (.750)       |

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22,23 (.875)

## Metal Backshell

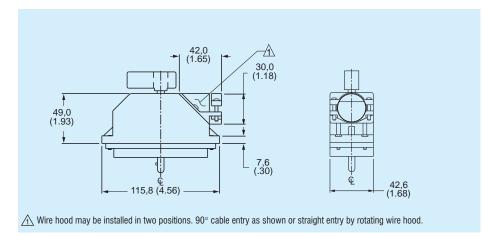
#### DL5, DLM5



- DL5, DLM5 is a one piece shell design.
- Kit consists of 1 shell, 8 screws, 1 wire hood, 1 wire clamp, 4 nuts.

#### **Materials and Finishes**

| Shell:    | Nickel over die cast aluminum |
|-----------|-------------------------------|
| Hardware: | Stainless Steel               |



|         |             |          | Max Cable |
|---------|-------------|----------|-----------|
| Used On | Part Number | Mounting | Entry     |

Straight or 90°

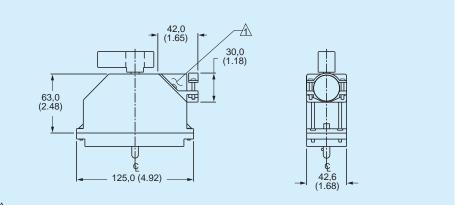
#### DLM6



- DLM6 is a one piece shell design.
- Kit consists of 1 shell, 8 screws, 1 wire hood, 1 wire clamp, 4 nuts.

#### **Materials and Finishes**

| Shell:    | Nickel over die cast aluminum |
|-----------|-------------------------------|
| Hardware: | Stainless Steel               |



| Used On | Part Number  | Mounting        | Max Cable<br>Entry |
|---------|--------------|-----------------|--------------------|
| DLM6    | 249-4515-000 | Straight or 90° | 28,00 (1.102)      |
|         |              |                 |                    |



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DL5, DLM5

249-4501-000

### Plastic Junction Shell Kits DL1, DL2, DL3

#### DL1-J/S



DL2-J/S

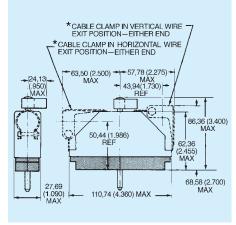


DL3-J/S

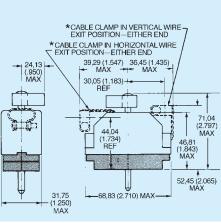
 $\label{eq:decomposition} \textbf{DL3} - \textbf{Dimensions}$ 

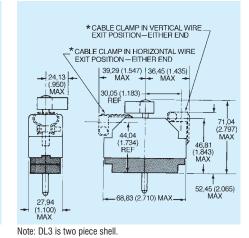


DL1 – Dimensions



DL2 – Dimensions





Note: DL1 shell is single piece.

- Stainless steel cable clamps.
- Thermoplastic UL 94V-1 rated.
- Straight, 90° or 45° cable entry.

Note: DL2 is two piece shell.

- Accommodates up to 22,22 (.875) cable.
- For use with crimp contact connectors.
- Knockout plug provides alternate second entry.
- Complete with 4 attaching screws and nuts.
- · Complete with one cable clamp kit.

#### **Junction Shell Kit**

| Used On   | J/S Kit   | Part Number  | Mounting        | Max. Cable<br>Entry |
|-----------|-----------|--------------|-----------------|---------------------|
| DL1, DLM1 | DL1-J/S   | 249-1950-000 | Straight or 90° | 22,23 (.875)        |
| DL2, DLM2 | DL2-J/S   | 249-1985-000 | Straight or 90° | 14,20 (.560)        |
| DL2, DLM2 | DL2-2-J/S | 249-2238-000 | Straight or 90° | 15,90 (.625)        |
| DL2, DLM2 | DL2-4-J/S | 249-2238-001 | Straight or 90° | 22,23 (.875)        |
| DL2, DLM2 | DL2-1-J/S | 249-1985-001 | 45°             | 15,90 (.625)        |
| DL3, DLM3 | DL3-J/S   | 249-2060-000 | Straight or 90° | 14,20 (.560)        |
| DL3, DLM3 | DL3-3-J/S | 249-2237-000 | Straight or 90° | 15,90 (.625)        |
| DL3, DLM3 | DL3-4-J/S | 249-2237-001 | Straight or 90° | 22,23 (.875)        |
| DL3, DLM3 | DL3-2-J/S | 249-2060-001 | 45°             | 15,90 (.625)        |

## Cable Clamp Kit (For optional second entry)

| C/C Kit   | Part Number                                  | Mounting  | Max. Cable<br>Entry   |
|-----------|--|---|---|
| DL1-C/C   | 218-0179-000                                 | Straight or 90°   | 22,23 (.875)  |
| DL2-C/C   | 218-0180-000                                 | Straight or 90°   | 14,20 (.560)  |
| DL2-1-C/C | 218-0181-000                                 | 45°   | 15,90 (.625)  |
| DL2-2-C/C | 218-0181-001                                 | Straight or 90°   | 15,90 (.625)  |
| DL2-3-C/C | 218-0200-000                                 | Straight or 90°   | 22,23 (.875)  |
|           | DL1-C/C<br>DL2-C/C<br>DL2-1-C/C<br>DL2-1-C/C | DL1-C/C 218-0179-000 DL2-C/C 218-0180-000 DL2-1-C/C 218-0181-000 DL2-2-C/C 218-0181-001 | DL1-C/C         218-0179-000         Straight or 90°           DL2-C/C         218-0180-000         Straight or 90°           DL2-1-C/C         218-0181-000         45°           DL2-2-C/C         218-0181-001         Straight or 90° |



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## **Actuating Handle Kit**

#### DL1/2/3 & DLM1/2/3



- Provides a convenient method of actuating the contacts and cam for locking the connector.
- Kit provides actuating handle and attaching screw.
- Pointer on handle denotes "locked" and "open" positions.

#### DL5, DLM5



Handle Material: Glass-filled thermoplastic

#### DLM6



| Handle for:       | Part Number  |
|-------------------|--------------|
| DL1/2/3, DLM1/2/3 | 204-0016-000 |
| DL5, DLM5         | 204-4501-000 |
| DLM6              | 204-4500-000 |

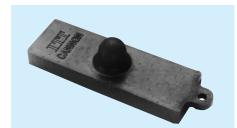
## **Protective Covers**

#### Protective Covers - Rubber

- Fits snugly over mating faces.
- Prevents foreign matter from permeating contact cavities.

# Material: Anti-static synthetic rubber – ASTM2BC520A14B14Z1.

## DL, DLM Plug



| Description | Part Number  |
|-------------|--------------|
| DL1-156P    | 039-0242-000 |
| DL2-96P     | 039-0244-000 |
| DL3-60P     | 039-0246-000 |
| DL4-624P    | 039-0239-000 |
| DL4-1248P   | 039-0235-000 |
| DI 4-2496P  | 039-0237-000 |

## DL, DLM Receptacle



| Description | Part Number  |
|-------------|--------------|
| DL1-156R    | 039-0243-000 |
| DL2-96R     | 039-0245-000 |
| DL3-60R     | 039-0247-000 |
| DL4-624R    | 039-0240-000 |
| DL4-1248R   | 039-0236-000 |
| DL4-2496R   | 039-0238-000 |

#### Protective Covers – Plastic

- Fits snugly over mating faces.
- Prevents foreign matter from permeating contact cavities.

## Material: Polyethylene.

## DL, DLM Plug



| ٠ | Description | Part Number  |
|---|-------------|--------------|
| • | DL1-156P    | 025-0852-000 |
|   | DL2-96P     | 025-0857-000 |
|   | DI 3-60P    | 025-0850-000 |

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#### **Polarizing Posts**

#### Corner Mounting\* for DL1/2/3, DLM6



Kit Number: 320-0021-006

- Kit contains 2 posts and 2 No. 4-40x9/32 pan head screws.
- Order 1 kit per connector.

| Description | Material        | Finish/Treatment             |
|-------------|-----------------|------------------------------|
| Post        | Zinc            | Yellow chromate over cadmium |
| Screw       | Stainless Steel | Passivated                   |

\* Corner mounting polarization is accomplished by replacing the nut with polarizing posts.

#### Corner Mounting\* for DL5, DLM5



Kit Number: 320-4502-000

- Kit contains 4 posts and 4 M3x8 screws.
- Order 1 kit per connector.

| Description | Material        | Finish/Treatment |
|-------------|-----------------|------------------|
| Post        | Zinc            | Nickel           |
| Screw       | Stainless Steel | Passivated       |

#### Center Mounting for DL1/2, DLM1/2



Kit Number: 320-0021-005

- Kit contains 2 posts and 2 No. 2-56x3/16 fil. head screws.
- Order 1 kit per connector.

| Description | Material | Finish/Treatment            |
|-------------|----------|-----------------------------|
| Post        | Zinc     | Clear chromate over cadmium |
| Screw       | Steel    | Clear chromate over cadmium |

#### Corner Mounting\* for DLM1/2/3



Kit Number: 320-4505-000

- Kit contains 4 posts and 4 M2.5x12 screws.
- Order 1 kit per connector.
- For metal backshells.

| Description | Material        | Finish/Treatment |
|-------------|-----------------|------------------|
| Post        | Zinc            | Nickel           |
| Screw       | Stainless Steel | Passivated       |
|             |                 |                  |

 $\hbox{$^*$ Corner mounting polarization is accomplished by replacing the nut with polarizing posts.}$ 

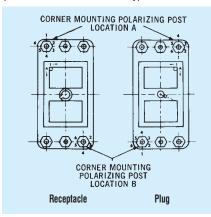
### Recommended Key Nomenclature

- Polarizing posts are a customer installed option.
- Recommended key nomenclature can be used for simple, opposite corner polarization.
- It is recommended that customers use their own configuration drawings.

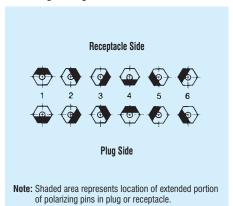
#### Example

DL1-156RW4B32C describes a Size 1 receptacle connector with 156 front insertable/removable square post  $50\mu$  in. gold contacts with polarization position 3 at location A and position 2 at location B. (C  $\Rightarrow$  corner polarization). Receptacle DL1-156RW4B32C would mate with plug DL1-156PW4A32C

## Corner Polarizing Post Layouts (for customer reference only)



## Reference views for Polarizing Arrangements



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Dimensions are shown in mm (inch) Dimensions subject to change

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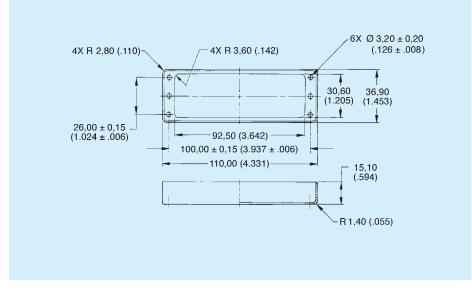
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 $\oplus$ 

## Metal Shells for EMI/RFI Shielding (Optional for DL5-260 Connector)

Plug

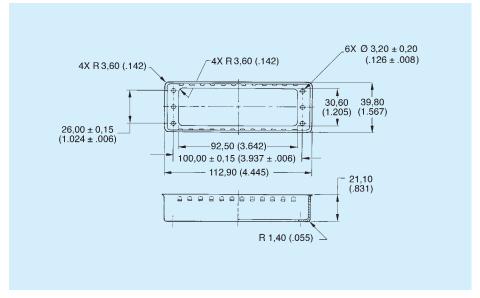




| Description | Part Number  | Material | Finish |
|-------------|--------------|----------|--------|
| Plug Shell  | 248-4500-000 | Steel    | Nickel |

#### Receptacle





| Description      | Part Number  | Material | Finish |
|------------------|--------------|----------|--------|
| Receptacle Shell | 248-4501-000 | Steel    | Nickel |



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Dimensions are shown in mm (inch)
Dimensions subject to change

49

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