

# DC Feedthrough Capacitor



Feedthrough capacitor offer high attenuation to the wide range of frequency up to 1GHz available in various configurations like C, L,  $\pi$  and T with various mounting and terminations.

## Features

- Very wide range in different mounting
- High contact reliability
- Easy to install

## Applications

- Broadband interference suppression for Shielded rooms
- Telephone exchanges, base stations
- Electrical machines and systems
- UPS Power supplies



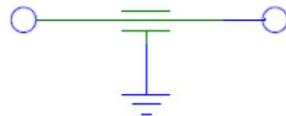
## Technical Specifications

|                               |                                   |
|-------------------------------|-----------------------------------|
| Max. Operating Voltage        | : 130 VDC                         |
| Rated Currents                | : 6 to 300A@60°C                  |
| High Potential test voltage   | : 2000 VDC line to case for 2 sec |
| Capacitance Class             | : Y4                              |
| Design Corresponding to       | : IEC/EN 60384-14                 |
| Flammability corresponding to | : UL 94 V-2 or better             |
| Temperature range             | : -40°C to +100°C(40/100/21)      |
| Enclosure/Finish/Potting      | : Brass with Nickel plating/Epoxy |
| Operating Frequency           | : DC                              |

## Approvals



## Circuit Diagram

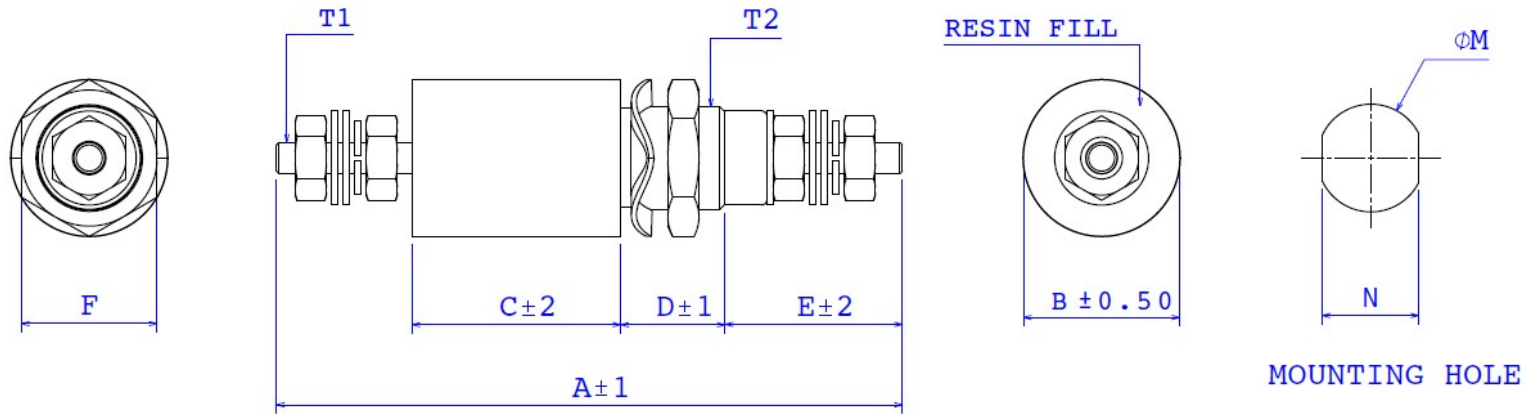


## Selection Table

| Ordering code     | Current rating<br>@60°C | LeakageCurrent*<br>@130 VAC/50Hz (mA) | Capacitance<br>(nF) | A   | B     | C  | D  | E  | F  | T1  | T2  | M    | N    |
|-------------------|-------------------------|---------------------------------------|---------------------|-----|-------|----|----|----|----|-----|-----|------|------|
| FTCDC-N00220-006A | 6A                      | 0.11                                  | 2.2                 | 64  | 20    | 20 | 10 | 20 | 13 | M3  | M10 | 10.3 | 10.3 |
| FTCDC-N00220-010A | 10A                     |                                       |                     | 64  | 20    | 20 | 10 | 20 | 13 | M3  | M10 | 10.3 | 10.3 |
| FTCDC-N0047-006A  | 6A                      | 0.24                                  | 4.7                 | 64  | 20    | 20 | 10 | 20 | 13 | M3  | M10 | 10.3 | 10.3 |
| FTCDC-N0047-010A  | 10A                     |                                       |                     | 64  | 20    | 20 | 10 | 20 | 13 | M3  | M10 | 10.3 | 10.3 |
| FTCDC-N01000-006A | 6A                      | 0.5                                   | 10nF                | 64  | 20    | 20 | 10 | 20 | 13 | M3  | M10 | 10.3 | 10.3 |
| FTCDC-N01000-010A | 10A                     |                                       |                     | 64  | 20    | 20 | 10 | 20 | 13 | M3  | M10 | 10.3 | 10.3 |
| FTCDC-N01000-016A | 16A                     |                                       |                     | 73  | 20    | 20 | 12 | 24 | 17 | M4  | M12 | 12.3 | 12.3 |
| FTCDC-N01000-032A | 32A                     |                                       |                     | 79  | 20    | 20 | 12 | 27 | 17 | M5  | M12 | 12.3 | 12.3 |
| FTCDC-N01000-063A | 63A                     |                                       |                     | 98  | 25    | 25 | 14 | 33 | 22 | M6  | M16 | 16.3 | 14.3 |
| FTCDC-N01000-075A | 75A                     |                                       |                     | 106 | 25    | 25 | 14 | 37 | 22 | M8  | M16 | 16.3 | 14.3 |
| FTCDC-N02200-016A | 16A                     | 1.1                                   | 22nF                | 73  | 28    | 20 | 12 | 24 | 17 | M4  | M12 | 12.3 | 12.3 |
| FTCDC-N02200-032A | 32A                     |                                       |                     | 79  | 28    | 20 | 12 | 27 | 17 | M5  | M12 | 12.3 | 12.3 |
| FTCDC-N02200-063A | 63A                     |                                       |                     | 98  | 32    | 25 | 14 | 33 | 24 | M6  | M16 | 16.3 | 14.3 |
| FTCDC-N02200-075A | 75A                     |                                       |                     | 108 | 32    | 25 | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |
| FTCDC-N04700-016A | 16A                     | 2.4                                   | 47nF                | 78  | 25    | 25 | 12 | 24 | 17 | M4  | M12 | 12.3 | 12.3 |
| FTCDC-N04700-032A | 32A                     |                                       |                     | 84  | 25    | 25 | 12 | 27 | 17 | M5  | M12 | 12.3 | 12.3 |
| FTCDC-N04700-063A | 63A                     |                                       |                     | 108 | 25    | 35 | 14 | 33 | 24 | M6  | M16 | 16.3 | 14.3 |
| FTCDC-N04700-075A | 75A                     |                                       |                     | 118 | 32    | 35 | 16 | 37 | 25 | M8  | M20 | 20.3 | 18.3 |
| FTCDC-N04700-100A | 100A                    |                                       |                     | 118 | 32    | 35 | 16 | 37 | 25 | M8  | M20 | 20.3 | 18.3 |
| FTCDC-N10000-016A | 16A                     |                                       |                     | 5   | 100nF | 80 | 32 | 25 | 14 | 24  | 24  | M4   | M16  |
| FTCDC-N10000-032A | 32A                     | 86                                    | 32                  |     |       | 25 | 14 | 27 | 24 | M5  | M16 | 16.3 | 14.3 |
| FTCDC-N10000-063A | 63A                     | 108                                   | 32                  |     |       | 35 | 14 | 33 | 24 | M6  | M16 | 16.3 | 14.3 |
| FTCDC-N10000-075A | 75A                     | 118                                   | 32                  |     |       | 35 | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |
| FTCDC-N10000-100A | 100A                    | 118                                   | 32                  |     |       | 35 | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |
| FTCDC-N10000-150A | 150A                    | 134                                   | 38                  |     |       | 35 | 19 | 45 | 32 | M10 | M24 | 24.3 | 22.3 |
| FTCDC-N10000-200A | 200A                    | 134                                   | 38                  |     |       | 35 | 19 | 45 | 32 | M10 | M24 | 24.3 | 22.3 |
| FTCDC-N10000-250A | 250A                    | 153                                   | 38                  |     |       | 44 | 19 | 50 | 36 | M12 | M24 | 24.3 | 22.3 |
| FTCDC-N10000-300A | 300A                    | 165                                   | 38                  |     |       | 44 | 19 | 55 | 36 | M16 | M27 | 27.3 | 25.3 |
| FTCDC-N22000-016A | 16A                     | 11                                    | 220nF               |     |       | 80 | 32 | 25 | 14 | 24  | 24  | M4   | M16  |
| FTCDC-N22000-032A | 32A                     |                                       |                     | 86  | 32    | 25 | 14 | 27 | 24 | M5  | M16 | 16.3 | 14.3 |
| FTCDC-N22000-063A | 63A                     |                                       |                     | 108 | 32    | 35 | 14 | 33 | 24 | M6  | M16 | 16.3 | 14.3 |
| FTCDC-N22000-075A | 75A                     |                                       |                     | 118 | 32    | 35 | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |
| FTCDC-N22000-100A | 100A                    |                                       |                     | 118 | 32    | 35 | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |
| FTCDC-N22000-150A | 150A                    |                                       |                     | 134 | 38    | 35 | 19 | 45 | 32 | M10 | M24 | 24.3 | 22.3 |
| FTCDC-N22000-200A | 200A                    |                                       |                     | 134 | 38    | 35 | 19 | 45 | 32 | M10 | M24 | 24.3 | 22.3 |

| Ordering code     | Current rating @60°C | LeakageCurrent* @130 VAC/50Hz (mA) | Capacitance (nF) | A   | B      | C   | D  | E  | F  | T1  | T2  | M    | N    |      |      |
|-------------------|----------------------|------------------------------------|------------------|-----|--------|-----|----|----|----|-----|-----|------|------|------|------|
| FTCDC-N22000-250A | 250A                 | 11                                 | 220nF            | 153 | 38     | 44  | 19 | 50 | 36 | M12 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-N22000-300A | 300A                 |                                    |                  | 165 | 38     | 44  | 21 | 55 | 36 | M16 | M27 | 27.3 | 25.3 |      |      |
| FTCDC-N47000-063A | 63A                  | 23.5                               | 470nF            | 117 | 25     | 44  | 14 | 33 | 22 | M6  | M16 | 16.3 | 14.3 |      |      |
| FTCDC-N47000-075A | 75A                  |                                    |                  | 127 | 25     | 44  | 14 | 37 | 22 | M8  | M20 | 20.3 | 18.3 |      |      |
| FTCDC-N47000-100A | 100A                 |                                    |                  | 127 | 25     | 44  | 16 | 37 | 22 | M8  | M20 | 20.3 | 18.3 |      |      |
| FTCDC-N47000-150A | 150A                 |                                    |                  | 143 | 32     | 44  | 16 | 45 | 27 | M10 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-N47000-200A | 200A                 |                                    |                  | 143 | 32     | 44  | 19 | 45 | 27 | M10 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-N47000-250A | 250A                 |                                    |                  | 163 | 38     | 54  | 19 | 50 | 36 | M12 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-N47000-300A | 300A                 |                                    |                  | 175 | 38     | 54  | 21 | 55 | 36 | M16 | M27 | 27.3 | 25.3 |      |      |
| FTCDC-01000N-063A | 63A                  |                                    |                  | 50  | 1000nF | 127 | 32 | 55 | 14 | 33  | 27  | M6   | M16  | 16.3 | 14.3 |
| FTCDC-01000N-075A | 75A                  |                                    |                  |     |        | 137 | 32 | 55 | 16 | 37  | 27  | M8   | M20  | 20.3 | 18.3 |
| FTCDC-01000N-100A | 100A                 | 137                                | 32               |     |        | 55  | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |      |      |
| FTCDC-01000N-150A | 150A                 | 153                                | 32               |     |        | 55  | 19 | 45 | 40 | M10 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-01000N-200A | 200A                 | 153                                | 32               |     |        | 55  | 19 | 45 | 40 | M10 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-01000N-250A | 250A                 | 174                                | 32               |     |        | 65  | 19 | 50 | 40 | M12 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-01000N-300A | 300A                 | 186                                | 38               |     |        | 65  | 21 | 55 | 46 | M16 | M27 | 27.3 | 25.3 |      |      |
| FTCDC-02200N-063A | 63A                  | 110                                | 2200nF           |     |        | 129 | 32 | 54 | 14 | 33  | 27  | M6   | M20  | 20.3 | 18.3 |
| FTCDC-02200N-075A | 75A                  |                                    |                  | 137 | 32     | 54  | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |      |      |
| FTCDC-02200N-100A | 100A                 |                                    |                  | 137 | 32     | 54  | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |      |      |
| FTCDC-02200N-150A | 150A                 |                                    |                  | 153 | 38     | 54  | 19 | 45 | 40 | M10 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-02200N-200A | 200A                 |                                    |                  | 153 | 38     | 54  | 19 | 45 | 40 | M10 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-02200N-250A | 250A                 |                                    |                  | 174 | 38     | 65  | 19 | 50 | 40 | M12 | M27 | 27.3 | 25.3 |      |      |
| FTCDC-02200N-300A | 300A                 |                                    |                  | 186 | 38     | 65  | 21 | 55 | 46 | M16 | M32 | 32.3 | 30.3 |      |      |
| FTCDC-03300N-063A | 63A                  |                                    |                  | 165 | 3300nF | 129 | 32 | 54 | 16 | 33  | 27  | M6   | M20  | 20.3 | 18.3 |
| FTCDC-03300N-075A | 75A                  | 137                                | 32               |     |        | 54  | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |      |      |
| FTCDC-03300N-100A | 100A                 | 137                                | 32               |     |        | 54  | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |      |      |
| FTCDC-03300N-150A | 150A                 | 153                                | 38               |     |        | 54  | 19 | 45 | 40 | M10 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-03300N-200A | 200A                 | 153                                | 38               |     |        | 54  | 19 | 45 | 40 | M10 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-03300N-250A | 250A                 | 174                                | 38               |     |        | 65  | 19 | 50 | 40 | M12 | M27 | 27.3 | 25.3 |      |      |
| FTCDC-03300N-300A | 300A                 | 186                                | 38               |     |        | 65  | 21 | 55 | 46 | M16 | M32 | 32.3 | 30.3 |      |      |
| FTCDC-04700N-063A | 63A                  | 470                                | 4700nF           |     |        | 145 | 38 | 70 | 16 | 33  | 27  | M6   | M20  | 20.3 | 18.3 |
| FTCDC-04700N-075A | 75A                  |                                    |                  | 153 | 38     | 70  | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |      |      |
| FTCDC-04700N-100A | 100A                 |                                    |                  | 153 | 38     | 70  | 16 | 37 | 27 | M8  | M20 | 20.3 | 18.3 |      |      |
| FTCDC-04700N-150A | 150A                 |                                    |                  | 174 | 57     | 75  | 19 | 45 | 40 | M10 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-04700N-200A | 200A                 |                                    |                  | 174 | 57     | 75  | 19 | 45 | 40 | M10 | M24 | 24.3 | 22.3 |      |      |
| FTCDC-04700N-250A | 250A                 |                                    |                  | 184 | 57     | 75  | 19 | 50 | 40 | M12 | M27 | 27.3 | 25.3 |      |      |
| FTCDC-04700N-300A | 300A                 |                                    |                  | 196 | 57     | 75  | 21 | 55 | 46 | M16 | M32 | 32.3 | 30.3 |      |      |

## Mechanical Dimensions



## Insertion Loss

| Capacitance (nF) | Frequency(Hz) | 0.03M | 0.1M | 1M | 10M | 100M | 1G |
|------------------|---------------|-------|------|----|-----|------|----|
| 2.2              | Atten. dB     | -     | -    | -  | 8   | 38   | 45 |
| 4.7              |               | -     | -    | -  | 14  | 43   | 60 |
| 10               |               | -     | -    | 3  | 21  | 45   | 70 |
| 22               |               | -     | -    | 6  | 25  | 45   | 70 |
| 47               |               |       | 2    | 15 | 34  | 50   | 80 |
| 100              |               | 2     | 5    | 20 | 40  | 65   | 80 |
| 220              |               | 4     | 11   | 27 | 45  | 80   | 80 |
| 470              |               | 9     | 16   | 33 | 33  | 80   | 80 |
| 1000             |               | 15    | 22   | 40 | 42  | 80   | 80 |
| 2200             |               | 20    | 30   | 45 | 47  | 85   | 90 |
| 3300             |               | 30    | 40   | 50 | 52  | 85   | 90 |
| 4700             |               | 38    | 40   | 52 | 57  | 85   | 90 |