

Type X3820/X382G Three Phase AC Filter Capacitor

ASC™ X382 (Three Phase) capacitors are manufactured with very high quality metallized polypropylene film, designed for long life, low dielectric losses, higher RMS current ratings, and low ESR.

The capacitors are filled with ASC™ soft gel or biodegradable vegetable based oil designed to offer excellent thermal conductivity to help reduce internal heating and extend the life of the capacitor.

The capacitor is incorporated with internal UL recognized fusing mechanisms that interrupt when pressure reaches a tested level.



X3820
 X382G

General Specifications

*Capacitance and KVAR ratings are dependent upon voltage levels, frequency and total current

** UL recognized product is limited to 620Vrms max

| Parameter | Value |
|---------------------------------|---|
| Capacitance | 3 x 13μF – 3 x 233μF* |
| Tolerance | ±5%, ±10% – Special tolerance on request |
| KVAR Ratings | Available on request* |
| Rated Voltage | 240 – 690 Vrms* |
| Temperature Range (operational) | -40/70C (custom ratings available) |
| Temperature Range (storage) | -40/85C |
| RMS Current (phase) | Up to 40 Arms – Higher values on request |
| Standards | IEC61071, IEC60831, UL810** |
| Can/ Cover | Aluminum |
| Terminals | SIGUIT (6 slots with independent screw down clamps) |
| Suggested Mounting Position | Oil – Upright, Gel – Any position |
| AFC Rating (UL810) | 10,000 A |
| Tan δ | 2 x 10 ⁻⁴ Polypropylene |
| Terminal to Terminal Test | 2.15 x Urms 10 seconds |
| Terminal to Case Test | U _{T-CASE} = 2 U ₁ +1000V or 3000V whichever is highest value |
| Reliability | 100 FIT |

Applications

AC input and output filtering

X3820/X382G

ASC Capacitors for Power Electronics



X3820/X382G (Three Phase) Specifications

| Cap [μF] | I _{TERM} * [A _{RMS}] | I _{MAX} † (10°ΔT) [A _{RMS}] | I _{PEAK} † [kA] | I _{SURGE} † [kA] | R _{th} C-E [°C/W] | ESR (1kHz) [mΩ] | Diameter "D" [mm] | Height "H" [mm] | Weight [kg] | Pieces / Box |
|-------------------|--|---|-----------------------------|------------------------------|-------------------------------|--------------------|---------------------------------------|--------------------|----------------|-----------------|
| 240 Vrms | | | 340 Vac Peak | | 516 Vsurge | | | | | |
| 3 x 75 | 56.0 | 16.0 | 1.1 | 3.3 | 6.1 | 1.5 | 75 | 157 | 0.9 | 10 |
| 3 x 140 | 56.0 | 22.0 | 1.6 | 4.8 | 4.3 | 1.2 | 85 | 179 | 1.2 | 9 |
| 3 x 200 | 56.0 | 32.0 | 2.3 | 6.8 | 3.3 | 1.0 | 100 | 179 | 2.1 | 9 |
| 3 x 233 | 104.0 | 35.0 | 3.0 | 9.0 | 2.5 | 0.7 | 116 | 179 | 2.5 | 5 |
| 450 Vrms | | | 636 Vac Peak | | 968 Vsurge | | | | | |
| 3 x 30 | 56.0 | 10.0 | 0.6 | 1.9 | 5.3 | 3.0 | 75 | 179 | 0.9 | 10 |
| 3 x 40 | 56.0 | 13.0 | 0.8 | 2.5 | 4.3 | 2.3 | 85 | 179 | 0.9 | 9 |
| 3 x 60 | 56.0 | 18.0 | 1.2 | 3.8 | 3.3 | 1.5 | 100 | 179 | 1.8 | 9 |
| 3 x 85 | 104.0 | 40.0 | 1.8 | 5.4 | 2.5 | 1.1 | 116 | 179 | 2.5 | 5 |
| 3 x 135 | 104.0 | 40.0 | 1.8 | 5.6 | 2.1 | 1.6 | 116 | 233 | 2.9 | 5 |
| 3 x 190 | 104.0 | 40.0 | 2.6 | 7.8 | 1.6 | 1.2 | 136 | 233 | 4.1 | 4 |
| 525 Vrms | | | 742 Vac Peak | | 1129 Vsurge | | | | | |
| 3 x 16 | 56.0 | 8.0 | 0.5 | 1.3 | 5.7 | 1.5 | 75 | 179 | 1.0 | 10 |
| 3 x 22 | 56.0 | 12.0 | 0.7 | 2.0 | 4.4 | 1.0 | 85 | 179 | 1.3 | 9 |
| 3 x 33 | 56.0 | 18.0 | 1.0 | 3.0 | 3.4 | 0.7 | 100 | 179 | 1.8 | 9 |
| 3 x 65 | 104.0 | 30.0 | 1.3 | 4.0 | 2.3 | 0.7 | 116 | 233 | 2.9 | 5 |
| 3 x 100 | 104.0 | 40.0 | 1.8 | 5.4 | 1.8 | 0.6 | 136 | 233 | 4.1 | 4 |
| 600 Vrms | | | 849 Vac Peak | | 1290 Vsurge | | | | | |
| 3 x 19 | 56.0 | 9.0 | 0.6 | 1.8 | 4.3 | 1.1 | 85 | 179 | 1.3 | 10 |
| 3 x 27 | 56.0 | 16.0 | 0.8 | 2.5 | 3.3 | 0.8 | 100 | 179 | 1.8 | 9 |
| 3 x 38 | 56.0 | 21.0 | 1.2 | 3.6 | 2.6 | 0.6 | 116 | 179 | 2.4 | 9 |
| 3 x 55 | 104.0 | 26.0 | 1.1 | 3.4 | 2.3 | 0.9 | 116 | 233 | 2.9 | 5 |
| 3 x 85 | 104.0 | 38.0 | 1.4 | 5.2 | 1.7 | 0.6 | 136 | 233 | 4.1 | 4 |
| **690 Vrms | | | 976 Vac Peak | | 1484 Vsurge | | (** Max UL Rating is 620 Vrms) | | | |
| 3x13 | 56.0 | 10.0 | 0.3 | 1.0 | 3.9 | 2.8 | 75 | 270 | 1.3 | 10 |
| 3x18 | 56.0 | 13.0 | 0.4 | 1.4 | 3.3 | 2.0 | 85 | 270 | 1.8 | 9 |
| 3x27 | 56.0 | 18.0 | 0.7 | 2.1 | 2.6 | 1.3 | 100 | 270 | 2.4 | 9 |
| 3x38 | 104.0 | 25.0 | 0.9 | 2.9 | 1.9 | 1.0 | 116 | 270 | 3.3 | 5 |
| 3x55 | 104.0 | 32.0 | 1.4 | 4.3 | 1.6 | 0.7 | 136 | 270 | 4.6 | 4 |

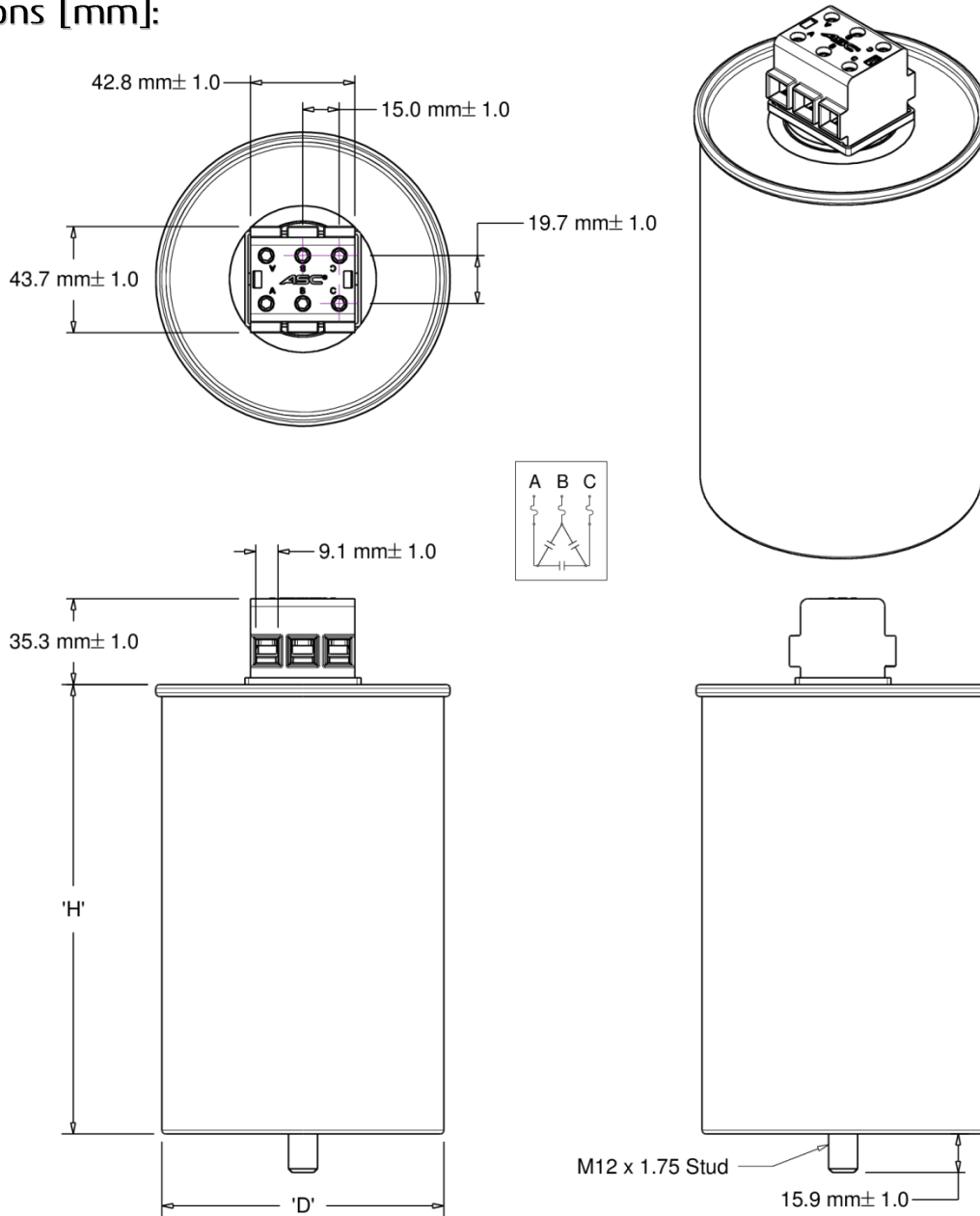
* I_{TERM} is the maximum rated pass-through terminal current. This rating is applicable when connecting multiple capacitors in parallel.

† I_{MAX}, I_{PEAK}, and I_{SURGE} current ratings are designated as maximum phase current ratings.

To convert I_{MAX} to line current, use the following formula: $I_{MAX(Line)} = I_{MAX(Phase)} * \sqrt{3}$

Note that I_{PEAK} and I_{SURGE} should not be converted to line currents with this formula because peak and surge events are rarely shared equally among the phases.

Dimensions [mm]:



X3820
X382G

Ordering Information:

| Type | Fill Material | Capacitance | Tolerance | Voltage |
|------|---------------|-------------|-----------|----------|
| X382 | O = Oil | 3X13 | 5 = ±5% | 240 |
| | G = Gel | ↕ 3X233 | 10 = ±10% | ↕ 690 |

| Examples: | Order Code |
|--|-------------------|
| Type X382, Oil Filled, 3 x 200uF ±5%, 240 Vrms | X3820 3X200-5-240 |
| Type X382, Gel Filled, 3 x 55uF ±10%, 600 Vrms | X382G 3X55-10-600 |