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# INDUCTION HEATING CAPACITORS

Power capacitors

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# FUJJS 50.. - $U_n/C_n/f_n$
# FUJJS 70.. - $U_n/C_n/f_n$

## Maximum single parameters of product line

| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 4 000 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 000 V |
| **Max current** | $I_{Nmax}$ | 2 000 A |
| **Max frequency** | $f_{Nmax}$ | 2 000 Hz |
| **Design** | LIVE/DEAD CASE | |

| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,3 W/kvar |
| **Water-cooling** | WF |
| **Max. outlet water temperature** | 40°C |
| **Water flow rate** | > 8 l/min |
| **Presure drop at 8 l/min** | < 0,6 bar |
| **Water pressure** | 6 bar |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_N$ AC / 10s or 4,0x $U_N$ DC / 10s |
| **Voltage test between terminals and case** | 5 000 V AC / 10s |
| **Case** | brass welded, painted (RAL 7035) |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |

| **Type** | **$U_N$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FUJJS 5032-0,8/336/1 | 0,8 | 336 | 1,0 | 1 350 | 1 690 | 165 x 370 x 325 | 28 |
| FUJJS 5032-0,9/160/2 | 0,9 | 160 | 2,0 | 1 628 | 1 810 | 165 x 370 x 325 | 28 |
| FUJJS 5032-1,0/200/1,5 | 1,0 | 200 | 1,5 | 1 884 | 1 884 | 165 x 370 x 325 | 28 |
| FUJJS 5032-1,2/150/1,5 | 1,2 | 150 | 1,5 | 2 035 | 1 690 | 165 x 370 x 325 | 28 |
| FUJJS 5040-0,8/500/0,7 | 0,8 | 500 | 0,7 | 1 407 | 1 760 | 165 x 370 x 400 | 36 |
| FUJJS 5040-1,2/265/1 | 1,2 | 265 | 1,0 | 2 400 | 2 000 | 165 x 370 x 400 | 36 |
| FUJJS 5046-1,5/200/1 | 1,5 | 200 | 1,0 | 2 827 | 1 885 | 165 x 370 x 460 | 40 |
| FUJJS 5050-1,0/500/0,6 | 1,0 | 500 | 0,6 | 1 885 | 1 885 | 165 x 370 x 500 | 45 |
| FUJJS 5060-1,0/600/0,5 | 1,0 | 600 | 0,5 | 1 885 | 1 885 | 165 x 370 x 600 | 50 |





| **Type** | **$U_N$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FUJJS 7040-1,6/233/0,8 | 1,6 | 233 | 0,8 | 2 998 | 1 874 | 200 x 370 x 400 | 45 |
| FUJJS 7055-0,8/1000/0,24 | 0,8 | 1 000 | 0,24 | 960 | 1 200 | 200 x 370 x 550 | 60 |
| FUJJS 7060-0,8/995/0,3 | 0,8 | 995 | 0,3 | 1 200 | 1 500 | 200 x 370 x 600 | 65 |
| FUJJS 7060-1,2/530/0,5 | 1,2 | 530 | 0,5 | 2 398 | 1 998 | 200 x 370 x 600 | 65 |
| FUJJS 7060-1,8/262/0,6 | 1,8 | 262 | 0,6 | 3 200 | 1 778 | 200 x 370 x 600 | 65 |
| FUJJS 7060-1,8/294/0,5 | 1,8 | 294 | 0,5 | 2 993 | 1 663 | 200 x 370 x 600 | 65 |
| FUJJS 7060-2,0/217/0,6 | 2,0 | 217 | 0,6 | 3 272 | 1 636 | 200 x 370 x 600 | 65 |
| FUJJS 7060-2,0/255/0,6 | 2,0 | 255 | 0,6 | 3 845 | 1 923 | 200 x 370 x 600 | 65 |
| FUJJS 7090-2,0/418/0,3 | 2,0 | 418 | 0,3 | 3 150 | 1 575 | 200 x 370 x 900 | 93 |

Other voltage, power and frequency on request.
Dead case type designation FUHJS on request.
Case and connection dimensions are the same like live case design.

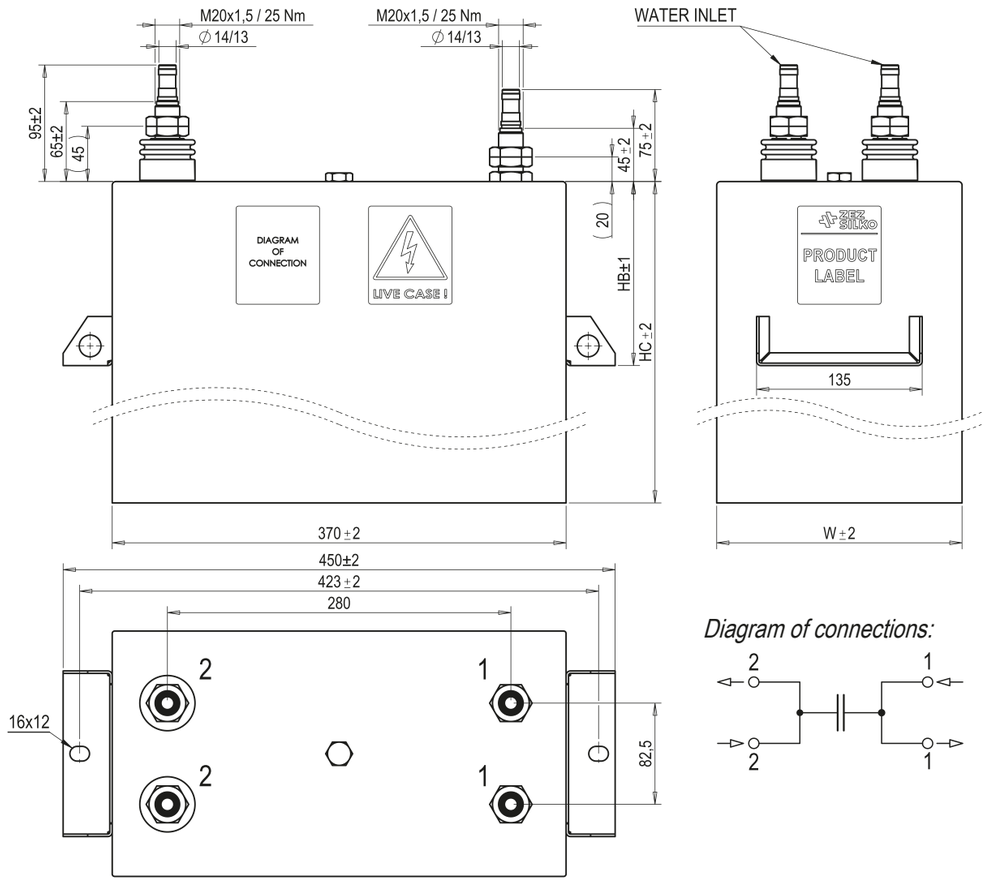


*Diagram of connections:*






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# FRJJS 52..-$U_n/C_n/f_n$


## Maximum single parameters of product line

| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 8 000 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 000 V |
| **Max current** | $I_{Nmax}$ | 4 000 A |
| **Max frequency** | $f_{Nmax}$ | 8 000 Hz |
| **Design** | LIVE/DEAD CASE | |

| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,3 W/kvar |
| **Water-cooling** | WF |
| **Max. outlet water temperature** | 40°C |
| **Water flow rate** | > 8 l/min |
| **Presure drop at 8 l/min** | < 0,4 bar |
| **Water pressure** | 6 bar |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_N$ AC / 10s or 4,0x $U_N$ DC / 10s |
| **Case** | brass welded, painted (RAL 7035) |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |

| Type | $U_N$ (kV) | $C_N$ (µF) | $f_N$ (kHz) | $Q_N$ (kvar) | $I_N$ (A) | Dimensions W x L x H (mm) | Weight (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 5225-0,6/2x48,6/5 | 0,6 | 2x 48,6 | 5,0 | 1 099 | 1 832 | 165 x 370 x 250 | 25 |
| FRJJS 5225-0,8/2x55/6 | 0,8 | 2x 55 | 6,0 | 2 654 | 3 318 | 165 x 370 x 250 | 25 |
| FRJJS 5232-0,6/2x132,5/4 | 0,6 | 2x 132,5 | 4,0 | 2 400 | 4 000 | 165 x 370 x 325 | 28 |
| FRJJS 5232-0,65/2x80/6 | 0,65 | 2x 80 | 6,0 | 2 550 | 3 923 | 165 x 370 x 325 | 28 |
| FRJJS 5232-0,8/2x45/8 | 0,8 | 2x 45 | 8,0 | 2 895 | 3 619 | 165 x 370 x 325 | 28 |
| FRJJS 5232-0,8/2x95/4 | 0,8 | 2x 95 | 4,0 | 3 056 | 3 820 | 165 x 370 x 325 | 28 |
| FRJJS 5232-0,8/2x132,5/3 | 0,8 | 2x 132,5 | 3,0 | 3 200 | 4 000 | 165 x 370 x 325 | 28 |
| FRJJS 5232-1,0/2x100/2 | 1,0 | 2x 100 | 2,0 | 2 513 | 2 513 | 165 x 370 x 325 | 28 |
| FRJJS 5232-2,0/2x25/5 | 2,0 | 2x 25 | 5,0 | 6 280 | 3 140 | 165 x 370 x 325 | 28 |
| FRJJS 5232-2,0/2x30/2 | 2,0 | 2x 30 | 2,0 | 3 016 | 1 508 | 165 x 370 x 325 | 28 |



| Type | $U_N$ (kV) | $C_N$ (µF) | $f_N$ (kHz) | $Q_N$ (kvar) | $I_N$ (A) | Dimensions W x L x H (mm) | Weight (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 5240-0,8/2x120/3 | 0,8 | 2x 120 | 3,0 | 2 900 | 3 620 | 165 x 370 x 400 | 33 |
| FRJJS 5240-0,8/2x170/2,2 | 0,8 | 2x 170 | 2,2 | 3 000 | 3 750 | 165 x 370 x 400 | 33 |
| FRJJS 5240-1,0/2x132,5/2,4 | 1,0 | 2x 132,5 | 2,4 | 4 000 | 4 000 | 165 x 370 x 400 | 33 |
| FRJJS 5240-1,5/2x62,5/3 | 1,5 | 2x 62,5 | 3,0 | 5 300 | 3 533 | 165 x 370 x 400 | 33 |
| FRJJS 5240-2,0/2x35/4 | 2,0 | 2x 35 | 4,0 | 7 040 | 3 520 | 165 x 370 x 400 | 33 |
| FRJJS 5250-0,6/2x210/2,5 | 0,6 | 2x 210 | 2,5 | 2 375 | 3 958 | 165 x 370 x 500 | 44 |
| FRJJS 5250-0,6/2x240/2,2 | 0,6 | 2x 240 | 2,2 | 2 388 | 3 980 | 165 x 370 x 500 | 44 |
| FRJJS 5250-2,0/2x50/3 | 2,0 | 2x 50 | 3,0 | 7 540 | 3 770 | 165 x 370 x 500 | 44 |
| FRJJS 5260-0,8/2x265/1,5 | 0,8 | 2x 265 | 1,5 | 3 200 | 4 000 | 165 x 370 x 600 | 52 |
| FRJJS 5260-0,8/2x348/1,2 | 0,8 | 2x 348 | 1,2 | 3 360 | 4 200 | 165 x 370 x 600 | 52 |
| FRJJS 5260-0,9/2x285/1,2 | 0,9 | 2x 285 | 1,2 | 3 481 | 3 868 | 165 x 370 x 600 | 52 |
| FRJJS 5280-1,0/2x318/1 | 1,0 | 2x 318 | 1,0 | 4 000 | 4 000 | 165 x 370 x 800 | 73 |

Other voltage, power and frequency on request.
Dead case type designation FRHJS on request.
Case and connection dimensions are the same like live case design.

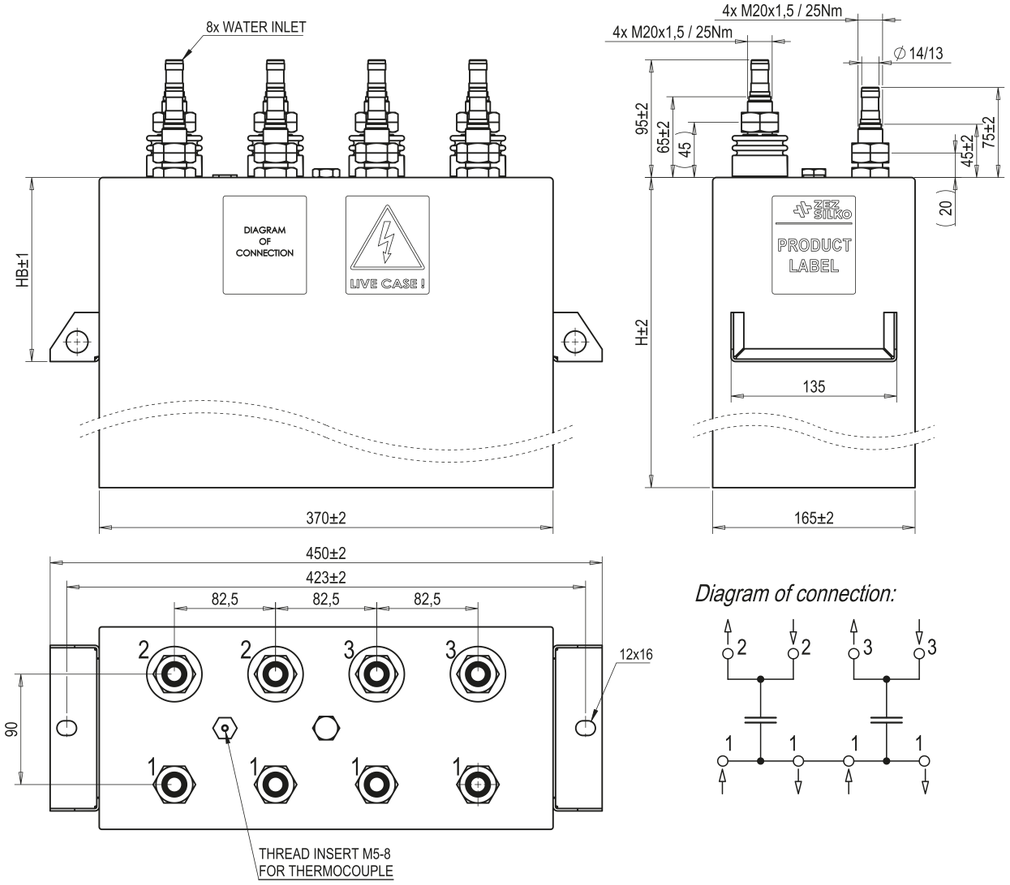



*Diagram of connection:*

# FRJJS 304..-$U_n$/$C_n$/$f_n$


## Maximum single parameters of product line

| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 2 000 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 000 V |
| **Max current** | $I_{Nmax}$ | 1 000 A |
| **Max frequency** | $f_{Nmax}$ | 4 000 Hz |
| **Design** | LIVE CASE | |

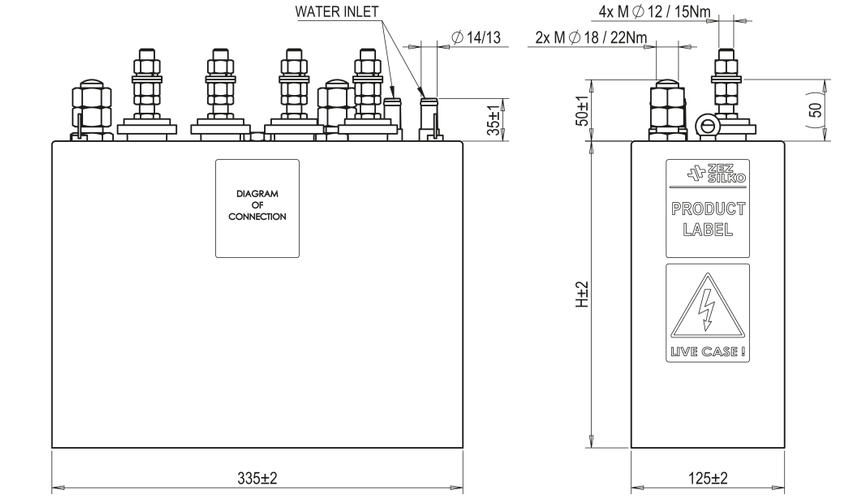
| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,3 W/kvar |
| **Water-cooling** | WF |
| **Max. outlet water temperature** | 40°C |
| **Water flow rate** | > 4 l/min |
| **Presure drop at 4 l/min** | < 0,2 bar |
| **Water pressure** | 6 bar |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_N$ AC / 10s or 4,0x $U_N$ DC / 10s |
| **Case** | brass welded, painted (RAL 7035) |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |

| **Type** | **$U_N$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 3040-0,7/80/2,5 | 0,7 | 80 | 2,5 | 616 | 880 | 125 x 335 x 250 | 16 |
| FRJJS 3040-0,8/60/3 | 0,8 | 60 | 3,0 | 724 | 905 | 125 x 335 x 250 | 16 |
| FRJJS 3040-0,8/80/1 | 0,8 | 80 | 1,0 | 322 | 402 | 125 x 335 x 250 | 16 |
| FRJJS 3040-1,0/56/2,5 | 1,0 | 56 | 2,5 | 880 | 880 | 125 x 335 x 250 | 16 |
| FRJJS 3040-1,5/40/2,5 | 1,5 | 40 | 2,5 | 1 414 | 942 | 125 x 335 x 250 | 16 |
| FRJJS 3040-1,8/28/2,5 | 1,8 | 28 | 2,5 | 1 425 | 792 | 125 x 335 x 250 | 16 |
| FRJJS 3040-2,0/21/3 | 2,0 | 21 | 3,0 | 1 583 | 792 | 125 x 335 x 250 | 16 |



| **Type** | **$U_N$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 3041-0,8/128/1,5 | 0,8 | 128 | 1,5 | 772 | 965 | 125 x 335 x 325 | 21 |
| FRJJS 3041-0,8/160/1,1 | 0,8 | 160 | 1,1 | 708 | 885 | 125 x 335 x 325 | 21 |
| FRJJS 3041-0,9/128/1,3 | 0,9 | 128 | 1,3 | 847 | 941 | 125 x 335 x 325 | 21 |
| FRJJS 3041-1,0/60/2,4 | 1,0 | 60 | 2,4 | 905 | 905 | 125 x 335 x 325 | 21 |
| FRJJS 3041-1,0/105/1,5 | 1,0 | 105 | 1,5 | 990 | 990 | 125 x 335 x 325 | 21 |
| FRJJS 3041-1,2/80/1,5 | 1,2 | 80 | 1,5 | 1 086 | 905 | 125 x 335 x 325 | 21 |
| FRJJS 3041-1,3/60/2 | 1,3 | 60 | 2,0 | 1 274 | 980 | 125 x 335 x 325 | 21 |
| FRJJS 3041-1,8/42/2 | 1,8 | 42 | 2,0 | 1 710 | 950 | 125 x 335 x 325 | 21 |
| FRJJS 3041-2,0/28/2,5 | 2,0 | 28 | 2,5 | 1 760 | 880 | 125 x 335 x 325 | 21 |

Other voltage, power and frequency on request.



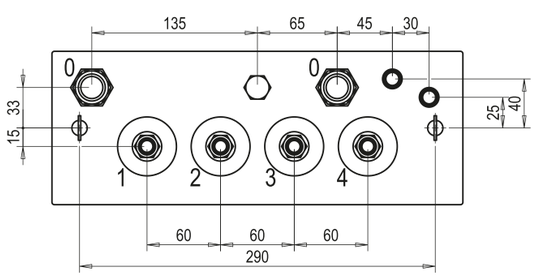
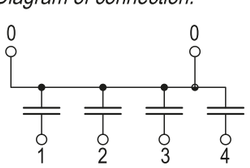




*Diagram of connection:*



# FRJJS 303.. - $U_n/C_n/f_n$
# FRJJS 306.. - $U_n/C_n/f_n$


## Maximum single parameters of product line

| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 2 500 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 000 V |
| **Max current** | $I_{Nmax}$ | 1 500 A |
| **Max frequency** | $f_{Nmax}$ | 4 000 Hz |
| **Design** | LIVE/DEAD CASE | |

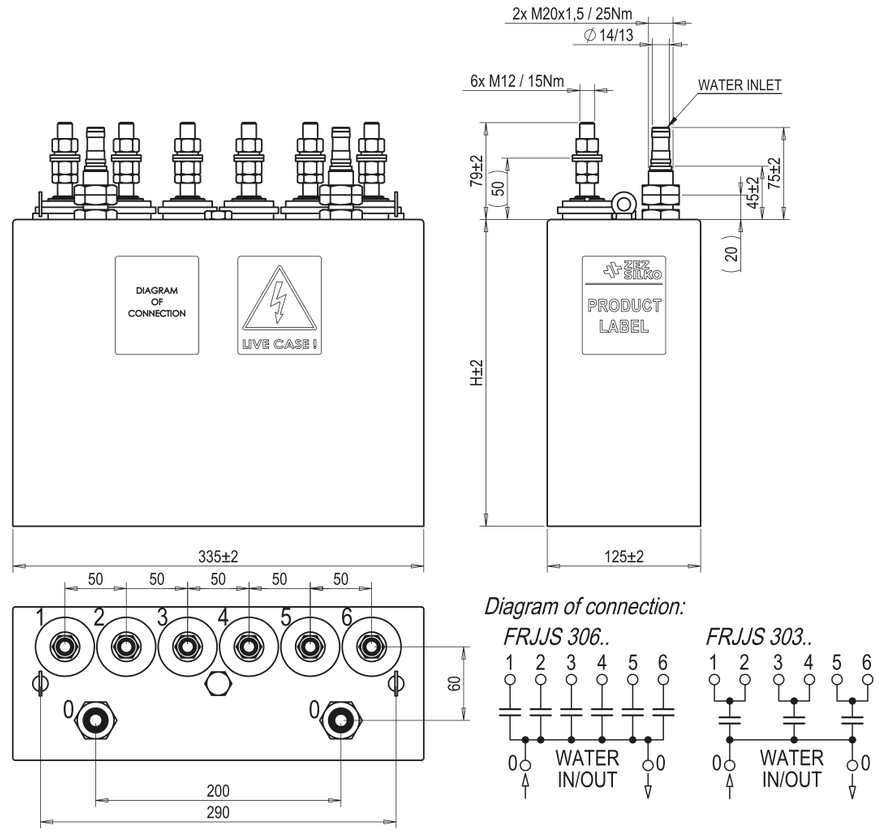
| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,3 W/kvar |
| **Water-cooling** | WF |
| **Max. outlet water temperature** | 40°C |
| **Water flow rate** | > 4 l/min |
| **Presure drop at 4 l/min** | < 0,2 bar |
| **Water pressure** | 6 bar |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_N$ AC / 10s or 4,0x $U_N$ DC / 10s |
| **Case** | brass welded, painted (RAL 7035) |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |

| **Type** | **$U_N$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 3030-0,6/128/2,4 | 0,6 | 128 | 2,4 | 695 | 1 158 | 125 x 335 x 250 | 16 |
| FRJJS 3030-0,8/103,5/2,4 | 0,8 | 103,5 | 2,4 | 1 000 | 1 250 | 125 x 335 x 250 | 16 |
| FRJJS 3030-1,0/45/4 | 1,0 | 45 | 4,0 | 1 131 | 1 131 | 125 x 335 x 250 | 16 |
| FRJJS 3030-1,0/60/3,0 | 1,0 | 60 | 3,0 | 1 131 | 1 131 | 125 x 335 x 250 | 16 |
| FRJJS 3030-1,0/72/2,4 | 1,0 | 72 | 2,4 | 1 086 | 1 086 | 125 x 335 x 250 | 16 |
| FRJJS 3030-1,2/48/3,3 | 1,2 | 48 | 3,3 | 1 433 | 1 194 | 125 x 335 x 250 | 16 |
| FRJJS 3030-1,5/36/3,3 | 1,5 | 36 | 3,3 | 1 680 | 1 120 | 125 x 335 x 250 | 16 |
| FRJJS 3030-2,0/20/4 | 2,0 | 20 | 4,0 | 2 000 | 1 006 | 125 x 335 x 250 | 16 |



| **Type** | **$U_N$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 3031-0,6/192/1,5 | 0,60 | 192 | 1,5 | 652 | 1 086 | 125 x 335 x 325 | 21 |
| FRJJS 3031-0,8/160/1,5 | 0,80 | 160 | 1,5 | 965 | 1 206 | 125 x 335 x 325 | 21 |
| FRJJS 3031-1,0/90/2,0 | 1,0 | 90 | 2,0 | 1 131 | 1 131 | 125 x 335 x 325 | 21 |
| FRJJS 3031-1,2/72/2,2 | 1,2 | 72 | 2,2 | 1 433 | 1 194 | 125 x 335 x 325 | 21 |
| FRJJS 3031-1,5/54/2,2 | 1,5 | 54 | 2,2 | 1 680 | 1 120 | 125 x 335 x 325 | 21 |
| FRJJS 3031-2,0/28/2,6 | 2,0 | 28 | 3,0 | 2 111 | 1 056 | 125 x 335 x 325 | 21 |
| FRJJS 3060-0,4/108/4 | 0,4 | 108 | 4,0 | 434 | 1 086 | 125 x 335 x 250 | 16 |
| FRJJS 3060-1,0/35,7/2,5 | 1,0 | 35,7 | 2,6 | 561 | 561 | 125 x 335 x 250 | 16 |
| FRJJS 3061-0,5/144/3 | 0,50 | 144 | 3,0 | 680 | 1 360 | 125 x 335 x 325 | 21 |
| FRJJS 3061-0,38/166,2/2 | 0,38 | 166,2 | 2,0 | 302 | 795 | 125 x 335 x 325 | 21 |

Other voltage, power and frequency on request.
Dead case type designation FRHJS on request.



# FRJJS 71..-$U_n/C_n/f_n$


## Maximum single parameters of product line

| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 7 000 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 500 V |
| **Max current** | $I_{Nmax}$ | 5 500 A |
| **Max frequency** | $f_{Nmax}$ | 20 000 Hz |
| **Design** | LIVE CASE | |

| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,3 W/kvar |
| **Water-cooling** | WF |
| **Max. outlet water temperature** | 40°C |
| **Water flow rate** | > 8 l/min |
| **Presure drop at 8 l/min** | < 0,2 bar |
| **Water pressure** | 6 bar |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_{MAX}$ AC / 10s or 4,0x $U_{MAX}$ DC / 10s |
| **Operation** | only at cooled busbar <50°C |
| **Case** | copper welded, painted (RAL 7035) |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |

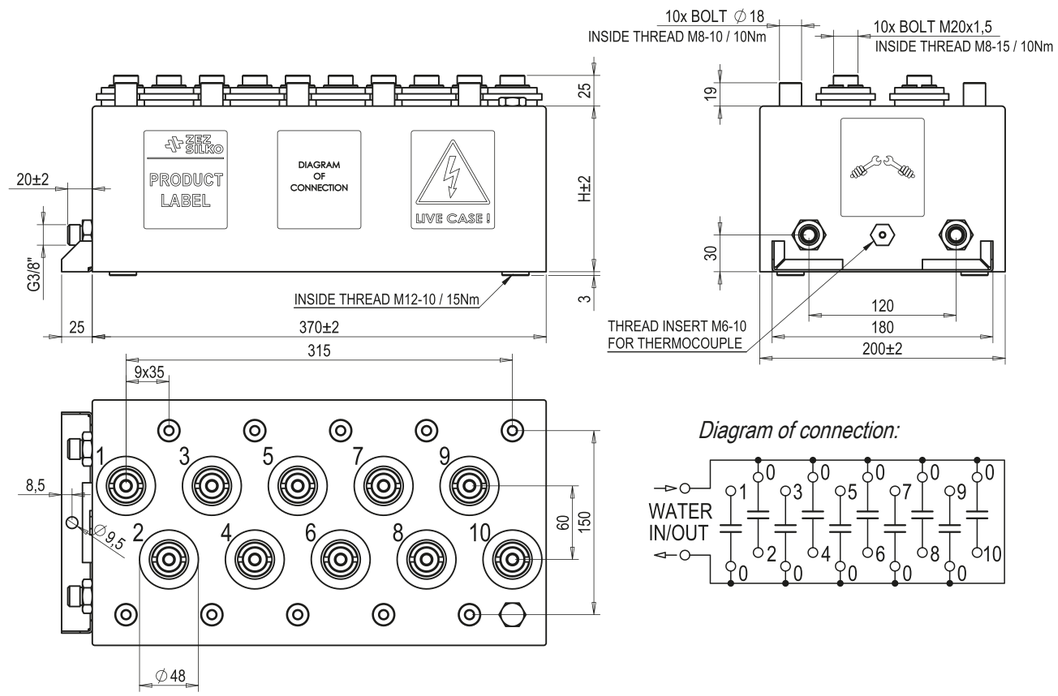
| **Type** | **$U_N$ / $U_{MAX}$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 7102-0,8/10x5/16 | 0,8 / 1,0 | 50 | 16 | 3 220 | 4 025 | 200 x 370 x 135 | 18 |
| FRJJS 7102-1,0/10x3,0/20 | 1,0 / 1,5 | 30 | 20 | 3 770 | 3 770 | 200 x 370 x 135 | 18 |
| FRJJS 7102-1,5/10x2,0/20 | 1,5 / 1,8 | 20 | 20 | 5 655 | 3 770 | 200 x 370 x 135 | 18 |
| FRJJS 7103-0,8/10x14,5/6 | 0,8 / 0,9 | 145 | 6 | 3 498 | 4 373 | 200 x 370 x 175 | 24 |
| FRJJS 7103-1,0/10x8/8 | 1,0 / 1,2 | 80 | 8 | 4 020 | 4 020 | 200 x 370 x 175 | 24 |
| FRJJS 7103-1,0/10x5,57/12 | 1,0 / 1,2 | 55,7 | 12 | 4 200 | 4 200 | 200 x 370 x 175 | 24 |
| FRJJS 7103-1,0/10x6,4/10 | 1,0 / 1,3 | 64 | 10 | 4 021 | 4 021 | 200 x 370 x 175 | 24 |
| FRJJS 7103-1,0/10x11/6 | 1,0 / 1,1 | 110 | 6 | 4 147 | 4 147 | 200 x 370 x 175 | 24 |
| FRJJS 7103-1,3/10x3,2/16 | 1,3 / 1,5 | 32 | 16 | 5 437 | 4 182 | 200 x 370 x 175 | 24 |
| FRJJS 7103-2,0/10x1,5/16 | 2,0 / 2,4 | 15 | 16 | 6 032 | 3 016 | 200 x 370 x 175 | 24 |
| FRJJS 7103-2,0/10x2,2/10 | 2,0 / 2,4 | 22 | 10 | 5 520 | 2 760 | 200 x 370 x 175 | 24 |





| **Type** | **$U_N$ / $U_{MAX}$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 7104-0,8/10x19,7/3,3 | 0,8 / 1,0 | 197 | 3,3 | 2 614 | 3 268 | 200 x 370 x 200 | 28 |
| FRJJS 7104-1,5/10x4,6/10 | 1,5 / 1,8 | 46 | 10 | 6 500 | 4 333 | 200 x 370 x 200 | 28 |
| FRJJS 7104-2,0/10x2,4/10 | 2,0 / 2,4 | 24 | 10 | 6 032 | 3 016 | 200 x 370 x 200 | 28 |
| FRJJS 7104-2,0/10x4,5/4 | 2,0 / 2,0 | 45 | 4 | 4 524 | 2 260 | 200 x 370 x 200 | 28 |
| FRJJS 7105-0,8/10x23,5/4 | 0,8 / 0,9 | 235 | 4 | 3 780 | 4 725 | 200 x 370 x 250 | 32 |
| FRJJS 7105-0,8/10x29,6/2 | 0,8 / 1,0 | 296 | 2 | 2 383 | 2 976 | 200 x 370 x 250 | 32 |
| FRJJS 7105-1,0/10x16,5/4 | 1,0 / 1,2 | 165 | 4 | 4 147 | 4 147 | 200 x 370 x 250 | 32 |
| FRJJS 7105-1,0/10x20/3 | 1,0 / 1,1 | 200 | 3 | 3 770 | 3 770 | 200 x 370 x 250 | 32 |
| FRJJS 7106-0,8/10x32/3 | 0,8 / 1,0 | 320 | 3 | 3 860 | 4 825 | 200 x 370 x 400 | 47 |
| FRJJS 7106-0,8/10x36/2,5 | 0,8 / 1,0 | 360 | 2,5 | 3 619 | 4 524 | 200 x 370 x 400 | 47 |
| FRJJS 7106-0,8/10x50/2 | 0,8 / 0,9 | 500 | 2 | 4 021 | 5 026 | 200 x 370 x 400 | 47 |
| FRJJS 7106-0,8/10x68/1,1 | 0,8 / 0,8 | 680 | 1,1 | 3 008 | 3 760 | 200 x 370 x 400 | 47 |
| FRJJS 7106-1,0/10x36/2 | 1,0 / 1,1 | 360 | 2 | 4 524 | 4 524 | 200 x 370 x 400 | 47 |
| FRJJS 7106-1,0/10x45/1,5 | 1,0 / 1,0 | 450 | 1,5 | 4 240 | 4 240 | 200 x 370 x 400 | 47 |
| FRJJS 7106-1,0/10x57,7/1 | 1,0 / 1,0 | 577 | 1 | 3 625 | 3 625 | 200 x 370 x 400 | 47 |
| FRJJS 7106-1,325/10x32/1,4 | 1,325 / 1,325 | 320 | 1,4 | 4 942 | 3 730 | 200 x 370 x 400 | 47 |

Other voltage, power and frequency on request.



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# FRJJS 73..-$U_n$/$C_n$/$f_n$


## Maximum single parameters of product line

| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 5 000 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 000 V |
| **Max current** | $I_{Nmax}$ | 5 000 A |
| **Max frequency** | $f_{Nmax}$ | 20 000 Hz |
| **Design** | LIVE CASE | |

| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,3 W/kvar |
| **Water-cooling** | WF |
| **Max. outlet water temperature** | 35°C |
| **Water flow rate** | > 8 l/min |
| **Presure drop at 8 l/min** | < 0,2 bar |
| **Water pressure** | 6 bar |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_{MAX}$ AC / 10s or 4,0x $U_{MAX}$ DC / 10s |
| **Operation** | only at cooled busbar <50°C |
| **Case** | brass welded, painted (RAL 7035) |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |

| **Type** | **$U_N$ / $U_{MAX}$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 7302-0,52/10x3,9/20 | 0,52 / 1,5 | 39 | 20,0 | 1 325 | 2 548 | 200 x 370 x 200 | 26 |
| FRJJS 7302-0,8/10x14,5/6 | 0,8 / 0,9 | 145 | 6,0 | 3 498 | 4 373 | 200 x 370 x 200 | 26 |
| FRJJS 7302-0,8/10x19,7/3,3 | 0,8 / 0,9 | 197 | 3,3 | 2 614 | 3 268 | 200 x 370 x 200 | 26 |
| FRJJS 7302-1,0/10x3,2/16 | 1,0 / 1,5 | 32 | 16,0 | 3 215 | 3 215 | 200 x 370 x 200 | 26 |
| FRJJS 7302-1,0/10x5,2/12 | 1,0 / 1,5 | 52 | 12,0 | 3 920 | 3 920 | 200 x 370 x 200 | 26 |
| FRJJS 7302-1,0/10x6,4/10 | 1,0 / 1,3 | 64 | 10,0 | 4 021 | 4 021 | 200 x 370 x 200 | 26 |
| FRJJS 7302-1,0/10x8/8 | 1,0 / 1,2 | 80 | 8,0 | 4 020 | 4 020 | 200 x 370 x 200 | 26 |
| FRJJS 7302-1,0/10x11/6 | 1,0 / 1,1 | 110 | 6,0 | 4 147 | 4 147 | 200 x 370 x 200 | 26 |
| FRJJS 7302-2,0/10x4,5/4 | 2,0 / 2,0 | 45 | 4,0 | 4 524 | 2 260 | 200 x 370 x 200 | 26 |





| **Type** | **$U_N$ / $U_{MAX}$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 7304-0,8/10x16,5/5 | 0,8 / 1,4 | 165 | 5,0 | 3 318 | 4 147 | 200 x 370 x 400 | 47 |
| FRJJS 7304-0,8/10x23,5/4 | 0,8 / 1,2 | 235 | 4,0 | 3 780 | 4 725 | 200 x 370 x 400 | 47 |
| FRJJS 7304-0,8/10x29,6/2 | 0,8 / 1,1 | 296 | 2,0 | 2 383 | 2 976 | 200 x 370 x 400 | 47 |
| FRJJS 7304-0,8/10x32/3 | 0,8 / 1,0 | 320 | 3,0 | 3 860 | 4 825 | 200 x 370 x 400 | 47 |
| FRJJS 7304-0,8/10x36/2,5 | 0,8 / 1,0 | 360 | 2,5 | 3 619 | 4 524 | 200 x 370 x 400 | 47 |
| FRJJS 7304-0,8/10x50/2 | 0,8 / 0,9 | 500 | 2,0 | 4 021 | 5 026 | 200 x 370 x 400 | 47 |
| FRJJS 7304-0,8/10x68/1,1 | 0,8 / 0,8 | 680 | 1,1 | 3 008 | 3 760 | 200 x 370 x 400 | 47 |
| FRJJS 7304-1,0/10x16,5/4 | 1,0 / 1,4 | 165 | 4,0 | 4 147 | 4 147 | 200 x 370 x 400 | 47 |
| FRJJS 7304-1,0/10x20/3 | 1,0 / 1,3 | 200 | 3,0 | 3 770 | 3 770 | 200 x 370 x 400 | 47 |
| FRJJS 7304-1,0/10x36/2 | 1,0 / 1,1 | 360 | 2,0 | 4 524 | 4 524 | 200 x 370 x 400 | 47 |
| FRJJS 7304-1,0/10x45/1,5 | 1,0 / 1,0 | 450 | 1,5 | 4 240 | 4 240 | 200 x 370 x 400 | 47 |
| FRJJS 7304-1,0/10x57,7/1 | 1,0 / 1,0 | 577 | 1,0 | 3 625 | 3 625 | 200 x 370 x 400 | 47 |
| FRJJS 7304-1,325/10x32/1,4 | 1,325 / 1,325 | 320 | 1,4 | 4 942 | 3 730 | 200 x 370 x 400 | 47 |

Other voltage, power and frequency on request.

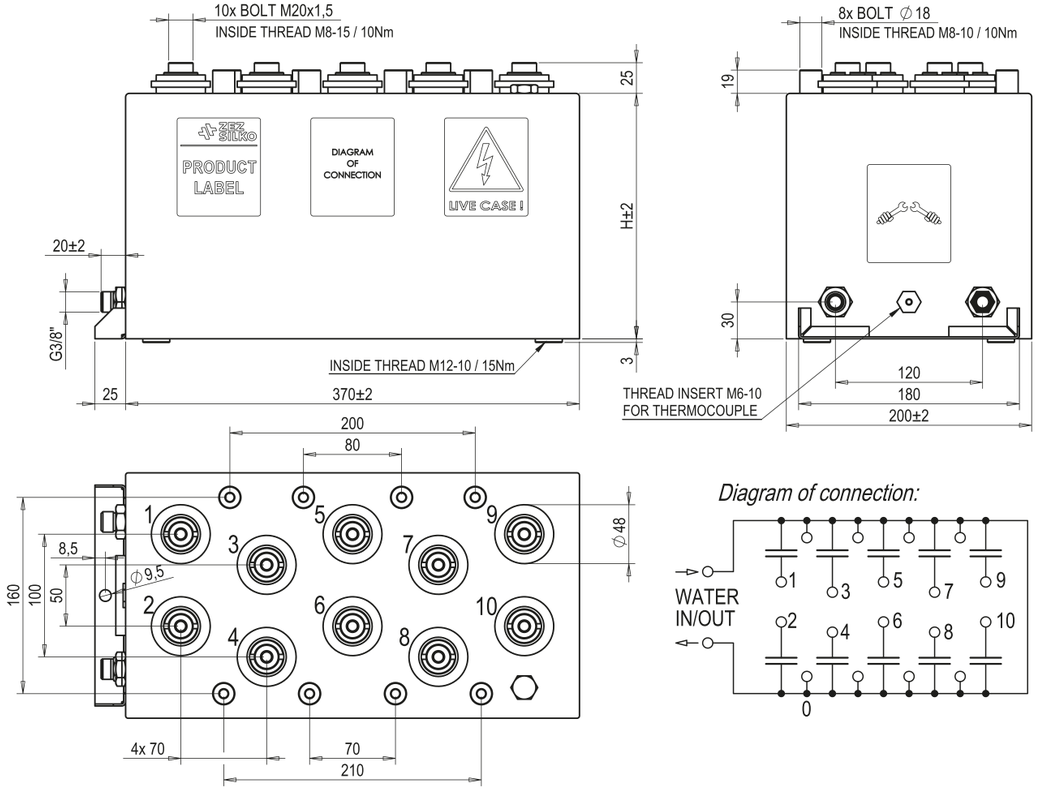



*Diagram of connection:*

# FRJJS 76..-$U_n/C_n/f_n$


## Maximum single parameters of product line

| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 6 000 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 000 V |
| **Max current** | $I_{Nmax}$ | 3 000 A |
| **Max frequency** | $f_{Nmax}$ | 5 000 Hz |
| **Design** | LIVE CASE | |

| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,3 W/kvar |
| **Water-cooling** | WF |
| **Max. outlet water temperature** | 35°C |
| **Water flow rate** | > 5 l/min |
| **Presure drop at 5 l/min** | < 0,1 bar |
| **Water pressure** | 6 bar |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_N$ AC / 10s or 4,0x $U_N$ DC / 10s |
| **Operation** | only at cooled busbar <50°C |
| **Case** | brass welded, painted (RAL 7035) |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |

| Type | $U_N$ (kV) | $C_N$ (µF) | $f_N$ (kHz) | $Q_N$ (kvar) | $I_N$ (A) | Dimensions W x L x H (mm) | Weight (kg) | Brackets |
|---|---|---|---|---|---|---|---|---|
| FRJJS 7620-0,8/6x24/4 | 0,8 | 145 | 4,0 | 2 316 | 2 895 | 200 x 370 x 200 | 21 | No |
| FRJJS 7620-0,8/6x31/3 | 0,8 | 186 | 3,0 | 2 246 | 2 805 | 200 x 370 x 200 | 21 | No |
| FRJJS 7625-0,8/6x38/2,4 | 0,8 | 228 | 2,4 | 2 200 | 2 750 | 200 x 370 x 250 | 26 | No |
| FRJJS 7625-1,0/6x30/2,4 | 1,0 | 180 | 2,4 | 2 714 | 2 714 | 200 x 370 x 250 | 26 | No |
| FRJJS 7625-2/6x8,5/3,3 | 2,0 | 51 | 3,3 | 4 230 | 2 115 | 200 x 370 x 250 | 26 | No |



| Type | $U_N$ (kV) | $C_N$ (µF) | $f_N$ (kHz) | $Q_N$ (kvar) | $I_N$ (A) | Dimensions W x L x H (mm) | Weight (kg) | Brackets |
|---|---|---|---|---|---|---|---|---|
| FRJJS 7640-0,6/6x106/1 | 0,6 | 636 | 1,0 | 1 440 | 2 400 | 200 x 370 x 400 | 42 | Yes |
| FRJJS 7640-0,8/6x50/2 | 0,8 | 300 | 2,0 | 2 412 | 3 016 | 200 x 370 x 400 | 42 | Yes |
| FRJJS 7640-0,8/6x62,5/1,5 | 0,8 | 375 | 1,5 | 2 262 | 2 827 | 200 x 370 x 400 | 42 | Yes |
| FRJJS 7640-0,8/6x84/1 | 0,8 | 504 | 1,0 | 2 027 | 2 533 | 200 x 370 x 400 | 42 | Yes |
| FRJJS 7640-0,8/6x97,4/1 | 0,8 | 584 | 1,0 | 2 350 | 2 938 | 200 x 370 x 400 | 42 | Yes |
| FRJJS 7640-1,0/6x62,5/1,2 | 1,0 | 375 | 1,2 | 2 826 | 2 826 | 200 x 370 x 400 | 42 | Yes |
| FRJJS 7640-1,4/6x31/1,4 | 1,4 | 186 | 1,4 | 3 208 | 2 291 | 200 x 370 x 400 | 42 | Yes |
| FRJJS 7640-1,5/6x16/3 | 1,5 | 96 | 3,0 | 4 072 | 2 714 | 200 x 370 x 400 | 42 | Yes |
| FRJJS 7640-1,8/6x23,4/2 | 1,8 | 141 | 2,0 | 5 742 | 3 180 | 200 x 370 x 400 | 42 | Yes |

Other voltage, power and frequency on request.

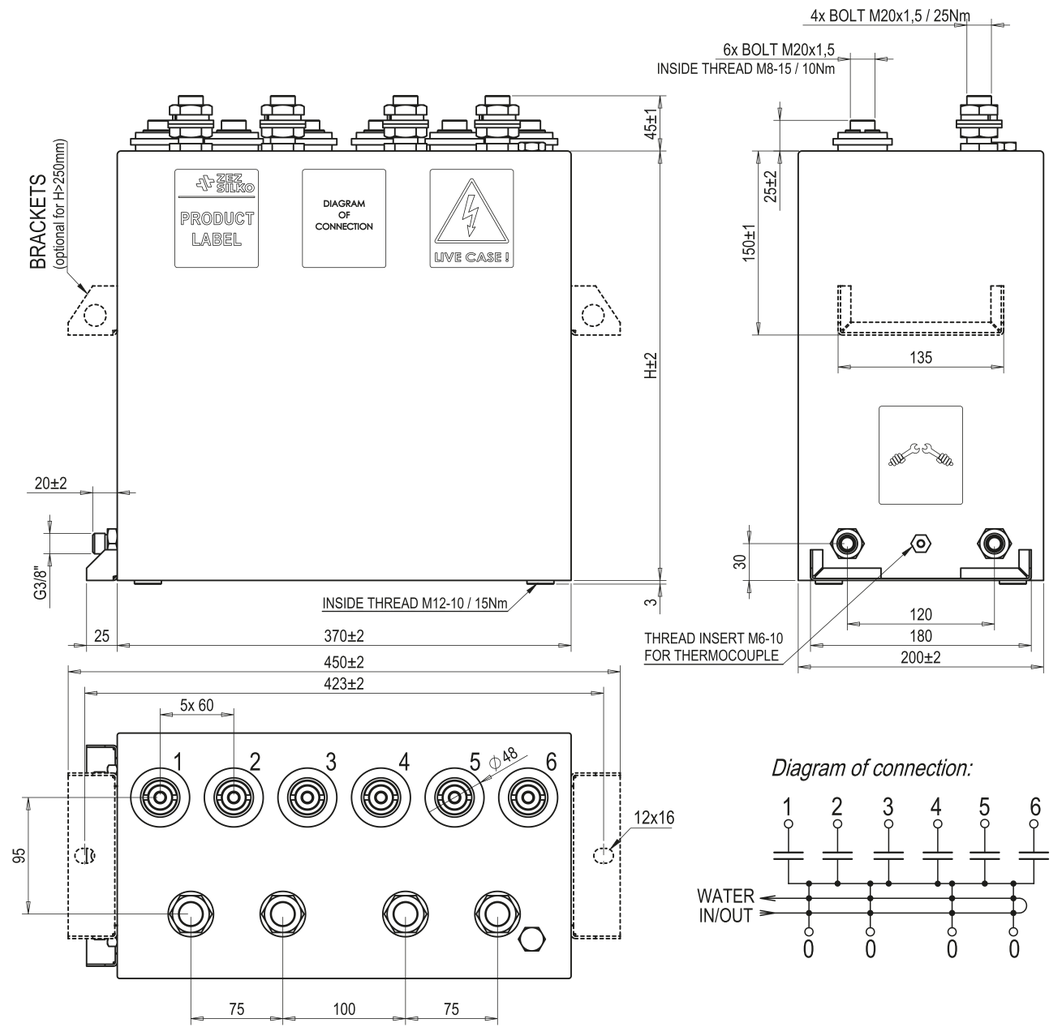



*Diagram of connection:*

# FRHJS 61..-$U_n/C_n/f_n$

## Maximum single parameters of product line

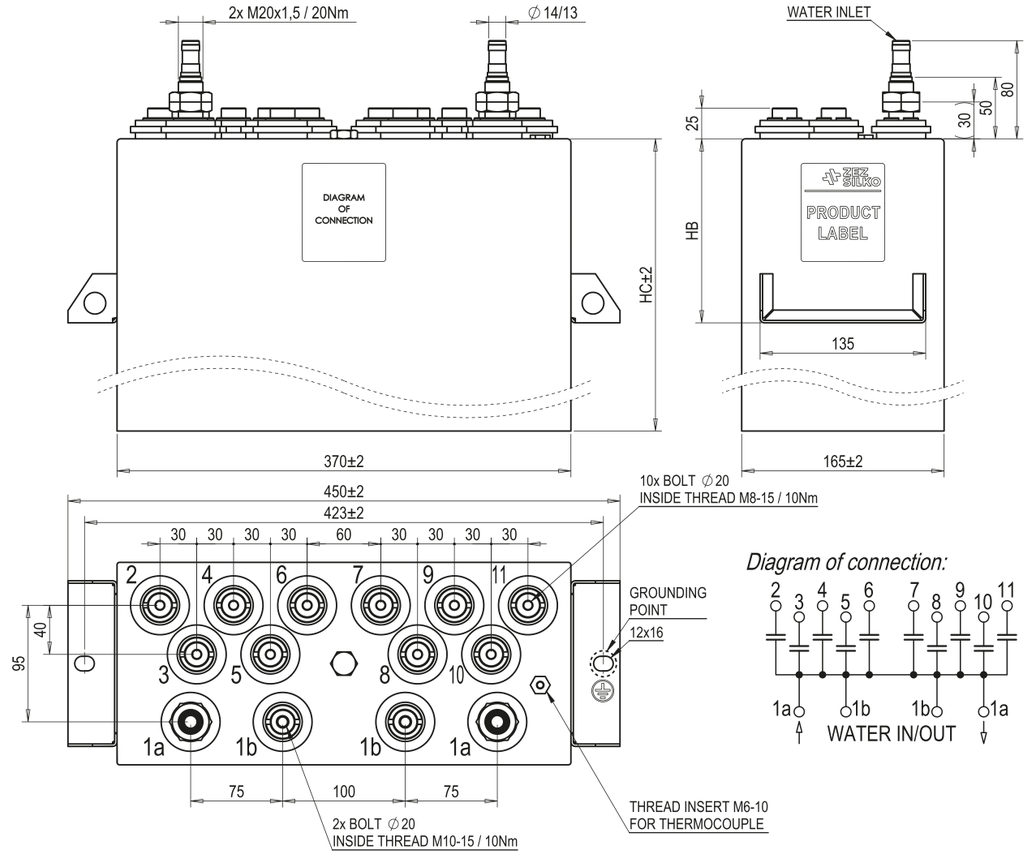
| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 5 000 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 000 V |
| **Max current** | $I_{Nmax}$ | 4 000 A |
| **Max frequency** | $f_{Nmax}$ | 5 000 Hz |
| **Design** | DEAD CASE | |

| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,3 W/kvar |
| **Water-cooling** | WF |
| **Max. outlet water temperature** | 40°C |
| **Water flow rate** | > 10 l/min |
| **Presure drop at 10 l/min** | < 0,4 bar |
| **Water pressure** | 6 bar |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_N$ AC / 10s or 4,0x $U_N$ DC / 10s |
| **Voltage test between terminals and case** | 5 000 V AC / 10s |
| **Case** | brass welded, painted (RAL 7035) |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |



| Type | $U_N$ (kV) | $C_N$ (µF) | $f_N$ (kHz) | $Q_N$ (kvar) | $I_N$ (A) | Dimensions W x L x H (mm) | Weight (kg) |
|---|---|---|---|---|---|---|---|
| FRHJS 6132-0,75/211/3,75 | 0,75 | 211 | 3,75 | 2 800 | 3 730 | 165 x 370 x 325 | 28 |
| FRHJS 6132-0,75/265/2,5 | 0,75 | 265 | 2,5 | 2 350 | 3 133 | 165 x 370 x 325 | 28 |
| FRHJS 6132-0,8/200/2,5 | 0,8 | 200 | 2,5 | 2 010 | 2 513 | 165 x 370 x 325 | 28 |
| FRHJS 6132-1,0/159/3,75 | 1,0 | 159 | 3,75 | 3 750 | 3 750 | 165 x 370 x 325 | 28 |
| FRHJS 6132-1,5/94/3,75 | 1,5 | 94,0 | 3,75 | 5 000 | 3 333 | 165 x 370 x 325 | 28 |
| FRHJS 6140-0,8/320/2,5 | 0,8 | 320 | 2,5 | 3 217 | 4 021 | 165 x 370 x 400 | 36 |
| FRHJS 6145-0,8/497/1,25 | 0,8 | 497 | 1,25 | 2 500 | 3 125 | 165 x 370 x 450 | 40 |
| FRHJS 6145-1,0/398/1,25 | 1,0 | 398 | 1,25 | 3 125 | 3 125 | 165 x 370 x 450 | 40 |

Other voltage, power and frequency on request.



# FRJJS 15..-$U_n$/$C_n$/$f_n$


## Maximum single parameters of product line

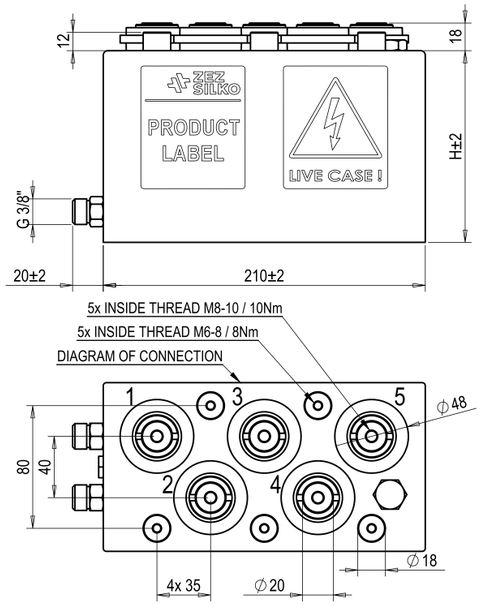
| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 2 500 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 500 V |
| **Max current** | $I_{Nmax}$ | 1 700 A |
| **Max frequency** | $f_{Nmax}$ | 150 000 Hz |
| **Design** | LIVE CASE | |

| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,35 W/kvar |
| **Water-cooling** | WF |
| **Max. outlet water temperature** | 40°C |
| **Water flow rate** | > 4 l/min |
| **Presure drop at 4 l/min** | < 0,1 bar |
| **Water pressure** | 6 bar |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_{MAX}$ AC / 10s or 4,0x $U_{MAX}$ DC / 10s |
| **Operation** | only at cooled busbar <40°C |
| **Case** | copper welded, painted (RAL 7035) |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |



| **Type** | **$U_N$ / $U_{MAX}$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 1501-1,2/2,65/50 | 1,2 / 1,5 | 2,65 | 50 | 1 200 | 1 000 | 110 x 210 x 100 | 5,5 |
| FRJJS 1501-1,3/3/40 | 1,3 / 1,5 | 3,00 | 40 | 1 275 | 980 | 110 x 210 x 100 | 5,5 |
| FRJJS 1501-1,6/2/50 | 1,6 / 2,0 | 2,00 | 50 | 1 608 | 1 005 | 110 x 210 x 100 | 5,5 |
| FRJJS 1501-1,8/0,7/130 | 1,8 / 2,0 | 0,70 | 130 | 1 850 | 1 030 | 110 x 210 x 100 | 5,5 |
| FRJJS 1502-1,0/10/20 | 1,0 / 1,2 | 10,0 | 20 | 1 257 | 1 257 | 110 x 210 x 125 | 7 |
| FRJJS 1502-1,5/3,68/30 | 1,5 / 1,7 | 3,68 | 30 | 1 560 | 1 040 | 110 x 210 x 125 | 7 |
| FRJJS 1502-1,5/4,5/25 | 1,5 / 1,7 | 4,50 | 25 | 1 590 | 1 060 | 110 x 210 x 125 | 7 |
| FRJJS 1503-0,8/20/15 | 0,8 / 1,0 | 20,0 | 15 | 1 206 | 1 508 | 110 x 210 x 162 | 9 |
| FRJJS 1503-0,9/16/15 | 0,9 / 1,1 | 16,0 | 15 | 1 222 | 1 358 | 110 x 210 x 162 | 9 |
| FRJJS 1503-1,5/6/20 | 1,5 / 1,7 | 6,00 | 20 | 1 700 | 1 133 | 110 x 210 x 162 | 9 |
| FRJJS 1504-1,0/22/10 | 1,0 / 1,2 | 22,0 | 10 | 1 382 | 1 382 | 110 x 210 x 185 | 10 |
| FRJJS 1504-1,3/16/10 | 1,3 / 1,5 | 16,0 | 10 | 1 700 | 1 006 | 110 x 210 x 185 | 10 |
| FRJJS 1504-1,5/12/12 | 1,5 / 1,7 | 12,0 | 12 | 2 036 | 1 357 | 110 x 210 x 185 | 10 |

Other voltage, power and frequency on request.



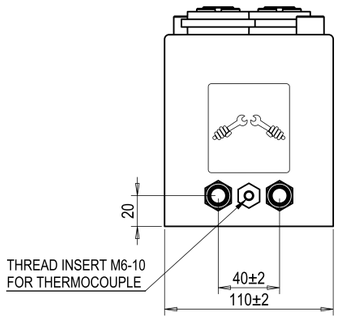
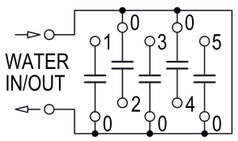




*Diagram of connection:*



# FRJJS 19..-$U_n/C_n/f_n$


## Maximum single parameters of product line

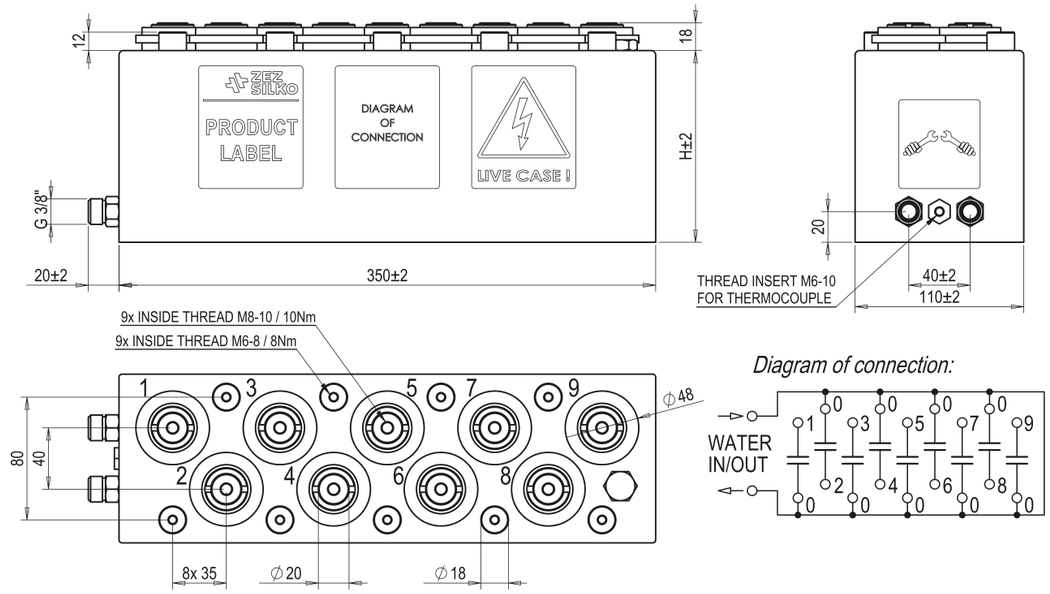
| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 5 000 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 500 V |
| **Max current** | $I_{Nmax}$ | 3 000 A |
| **Max frequency** | $f_{Nmax}$ | 200 000 Hz |
| **Design** | LIVE CASE | |

| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,35 W/kvar |
| **Water-cooling** | WF |
| **Max. outlet water temperature** | 40°C |
| **Water flow rate** | > 8 l/min |
| **Presure drop at 8 l/min** | < 0,2 bar |
| **Water pressure** | 6 bar |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_{MAX}$ AC / 10s or 4,0x $U_{MAX}$ DC / 10s |
| **Operation** | only at cooled busbar <40°C |
| **Case** | copper welded, painted (RAL 7035) |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |

WATER COOLED CAPACITORS

| **Type** | **$U_N$ / $U_{MAX}$** (kV) | **$C_N$** (µF) | **$f_N$** (kHz) | **$Q_N$** (kvar) | **$I_N$** (A) | **Dimensions** W x L x H (mm) | **Weight** (kg) |
|---|---|---|---|---|---|---|---|
| FRJJS 1901-1,5/1,2/200 | 1,5 / 2,0 | 1,20 | 200 | 3 393 | 2 262 | 110 x 350 x 100 | 8 |
| FRJJS 1901-1,5/2/150 | 1,5 / 2,0 | 2,00 | 150 | 4 241 | 2 827 | 110 x 350 x 100 | 8 |
| FRJJS 1901-1,5/3/100 | 1,5 / 2,0 | 3,00 | 100 | 4 241 | 2 827 | 110 x 350 x 100 | 8 |
| FRJJS 1901-2,0/1,2/120 | 2,0 / 2,4 | 1,20 | 120 | 3 600 | 1 508 | 110 x 350 x 100 | 8 |
| FRJJS 1901-2,0/2/70 | 2,0 / 2,4 | 2,00 | 70 | 3 520 | 1 760 | 110 x 350 x 100 | 8 |
| FRJJS 1902-1,0/18/20 | 1,0 / 1,2 | 18,0 | 20 | 2 260 | 2 260 | 110 x 350 x 125 | 10 |
| FRJJS 1902-2,0/4,5/35 | 2,0 / 2,2 | 4,50 | 35 | 3 960 | 1 980 | 110 x 350 x 125 | 10 |
| FRJJS 1903-0,8/24/20 | 0,8 / 1,3 | 24,0 | 20 | 1 930 | 2 412 | 110 x 350 x 162 | 13 |
| FRJJS 1903-2,0/7,5/20 | 2,0 / 2,4 | 7,50 | 20 | 3 770 | 1 885 | 110 x 350 x 162 | 13 |
| FRJJS 1904-1,8/12/15 | 1,8 / 2,2 | 12,0 | 15 | 3 664 | 2 036 | 110 x 350 x 185 | 14 |
| FRJJS 1904-2,0/9,95/20 | 2,0 / 2,4 | 9,95 | 20 | 5 000 | 2 500 | 110 x 350 x 185 | 14 |
| FRJJS 1904-2,0/18/10 | 2,0 / 2,0 | 18,0 | 10 | 4 525 | 2 263 | 110 x 350 x 185 | 14 |

Other voltage, power and frequency on request.



# FUBJS 0.. - $U_n/C_n/f_n$ - MIDICOAX


## Maximum single parameters of product line

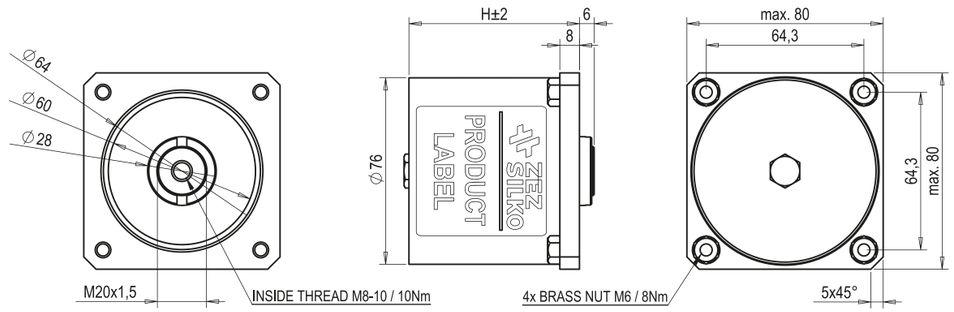
| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 500 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 000 V |
| **Max current** | $I_{Nmax}$ | 260 A |
| **Max frequency** | $f_{Nmax}$ | 200 000 Hz |
| **Design** | LIVE CASE | |

| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,3 W/kvar |
| **Cooling by contact cooling** | < 50°C |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_N$ AC / 10s or 4,0x $U_N$ DC / 10s |
| **Operation** | only at cooled busbar <50°C |
| **Case** | copper |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |

COAX TYPE CAPACITORS

| Type | $U_N$ (kV) | $C_N$ (μF) | $f_N$ (kHz) | $Q_N$ (kvar) | $I_N$ (A) | Case height H (mm) | Weight (kg) |
|---|---|---|---|---|---|---|---|
| FUBJS 02 - 1,0/0,6/50 | 1,0 | 0,60 | 50 | 188 | 188 | 68 | 1,1 |
| FUBJS 02 - 1,0/1,1/30 | 1,0 | 1,10 | 30 | 207 | 207 | 68 | 1,1 |
| FUBJS 02 - 1,2/0,75/30 | 1,2 | 0,75 | 30 | 204 | 170 | 68 | 1,1 |
| FUBJS 02 - 1,4/0,09/250 | 1,4 | 0,09 | 250 | 277 | 197 | 68 | 1,1 |
| FUBJS 02 - 1,4/0,22/103 | 1,4 | 0,22 | 103 | 280 | 200 | 68 | 1,1 |
| FUBJS 02 - 1,6/0,33/50 | 1,6 | 0,33 | 50 | 265 | 166 | 68 | 1,1 |
| FUBJS 02 - 1,8/0,17/70 | 1,8 | 0,17 | 70 | 242 | 135 | 68 | 1,1 |
| FUBJS 02 - 1,8/0,09/200 | 1,8 | 0,09 | 200 | 366 | 204 | 68 | 1,1 |
| FUBJS 02 - 1,8/0,022/200 | 1,8 | 0,022 | 200 | 90 | 50 | 68 | 1,1 |
| FUBJS 02 - 1,8/0,044/200 | 1,8 | 0,044 | 200 | 180 | 100 | 68 | 1,1 |
| FUBJS 02 - 1,8/0,064/200 | 1,8 | 0,064 | 200 | 260 | 145 | 68 | 1,1 |

Other voltage, power and frequency on request.



# FUJJS 0.. - $U_n/C_n/f_n$ - COAX


## Maximum single parameters of product line

| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 1 000 kvar |
| **Max voltage** | $U_{Nmax}$ | 2 000 V |
| **Max current** | $I_{Nmax}$ | 560 A |
| **Max frequency** | $f_{Nmax}$ | 70 000 Hz |
| **Design** | LIVE CASE | |

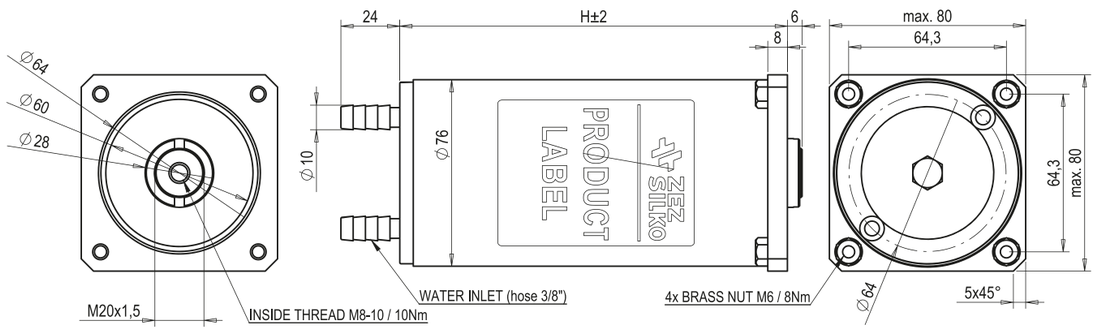
| | |
|---|---|
| **Standards** | IEC 60110-1:1998; EN 60110-1:1998 |
| **Capacitance tolerance** | -5 / +10% |
| **Ambient temperature** | 1°C ... 50°C |
| **Power losses** | < 0,3 W/kvar |
| **Water-cooling and cooled busbars** | WF |
| **Max. outlet water temperature** | 35°C |
| **Water flow rate** | > 5 l/min |
| **Presure drop at 5 l/min** | < 0,05 bar |
| **Water pressure** | 6 bar |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,0x $U_N$ AC / 10s or 4,0x $U_N$ DC / 10s |
| **Operation** | only at cooled busbar <50°C |
| **Case** | copper |
| **Dielectric system** | all-film |
| **Impregnant** | Jarylec (non-toxic, non-PCB) |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |



COAX TYPE CAPACITORS

| Type | $U_N$ (kV) | $C_N$ (µF) | $f_N$ (kHz) | $Q_N$ (kvar) | $I_N$ (A) | Case height H (mm) | Weight (kg) |
|---|---|---|---|---|---|---|---|
| FUJJS 01 - 0,5/10/15 | 0,5 | 10,0 | 15 | 236 | 472 | 158 | 1,9 |
| FUJJS 01 - 0,8/11,5/8 | 0,8 | 11,5 | 8 | 370 | 462 | 158 | 1,9 |
| FUJJS 01 - 0,8/9,0/10 | 0,8 | 9,0 | 10 | 362 | 453 | 158 | 1,9 |
| FUJJS 01 - 1,0/6,7/12 | 1,0 | 6,7 | 12 | 505 | 505 | 158 | 1,9 |
| FUJJS 01 - 1,3/4,5/12 | 1,3 | 4,5 | 12 | 573 | 441 | 158 | 1,9 |
| FUJJS 01 - 1,6/3,5/15,5 | 1,6 | 3,5 | 15,5 | 872 | 545 | 158 | 1,9 |
| FUJJS 01 - 1,8/2,4/16,5 | 1,8 | 2,4 | 16,5 | 810 | 448 | 158 | 1,9 |
| FUJJS 05 - 0,4/6/25 | 0,4 | 6,0 | 25 | 151 | 377 | 113 | 1,6 |
| FUJJS 05 - 0,6/4/25 | 0,6 | 4,0 | 25 | 225 | 375 | 113 | 1,6 |
| FUJJS 05 - 0,6/5,6/20 | 0,6 | 5,6 | 20 | 250 | 420 | 113 | 1,6 |
| FUJJS 05 - 0,8/4,4/20 | 0,8 | 4,4 | 20 | 354 | 442 | 113 | 1,6 |
| FUJJS 05 - 1,4/1,4/30 | 1,4 | 1,4 | 30 | 517 | 370 | 113 | 1,6 |
| FUJJS 06 - 1,325/0,9/40 | 1,325 | 0,9 | 40 | 397 | 300 | 98 | 1,3 |
| FUJJS 06 - 1,7/0,47/50 | 1,7 | 0,47 | 50 | 423 | 251 | 98 | 1,3 |
| FUJJS 06 - 1,7/0,6/40 | 1,7 | 0,6 | 40 | 435 | 256 | 98 | 1,3 |
| FUJJS 06 - 1,7/0,8/35 | 1,7 | 0,8 | 35 | 508 | 299 | 98 | 1,3 |
| FUJJS 06 - 1,8/1,2/20 | 1,8 | 1,2 | 20 | 488 | 271 | 98 | 1,3 |
| FUJJS 06 - 1,8/1,2/25 | 1,8 | 1,2 | 25 | 610 | 340 | 98 | 1,3 |
| FUJJS 07 - 0,6/1,0/70 | 0,6 | 1,0 | 70 | 158 | 264 | 76 | 1,15 |
| FUJJS 07 - 1,7/0,33/70 | 1,7 | 0,33 | 70 | 420 | 247 | 76 | 1,15 |

Other voltage, power and frequency on request.




Coax Type Capacitors



IVD GmbH, Max-Eyth-Strasse 10, 74405 Gaildorf Tel. 07971/9789-0 info@ivdgmbh.de www.ivdgmbh.de

# FZOJP ... - $U_n/C_n/f_n$

## Maximum single parameters of product line

| | | |
|---|---|---|
| **Max output** | $Q_{Nmax}$ | 360 kvar |
| **Max voltage** | $U_{Nmax}$ | 800 V |
| **Max current** | $I_{Nmax}$ | 3x 220 A |
| **Max frequency** | $f_N$ | 50/60 Hz |
| **Design** | DEAD CASE | |

| | |
|---|---|
| **Standards** | EN 60831-1 *) |
| **Capacitance tolerance** | -5 / +10% |
| **Power losses** | < 0,3 W/kvar |
| **Air-cooling (self ventilated)** | AN |
| **Maximum ambient temperature** | 40°C |
| **Temperature category** | -25/A |
| **Min. distance between units** | 20 mm |
| **Over-voltage** | 1,05 x $U_N$; 12 hours/day |
| **Over-current** | 1,15 x $I_N$ |
| **Voltage test between terminals** | 2,15x $U_N$ AC / 2s or 3,0x $U_N$ DC / 10s |
| **Voltage test between terminals and case** | 2x$U_N$ AC + 2kV (min. 3kV) / 10s |
| **Case** | aluminium |
| **Dielectric system** | MKP type, dry type, selfhealing |
| **Instalation** | indoor |
| **Protection degree** | IP 00 |

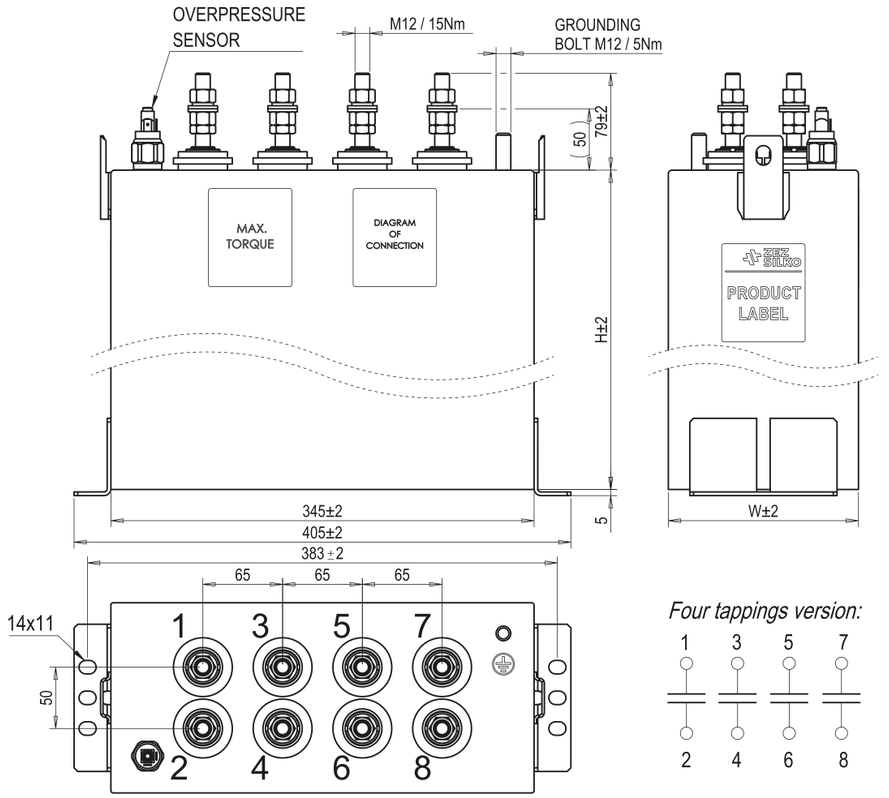
*) Operation only with connected overpressure sensor.
*) Operating with the resistance switching contactors.

| Type | $U_N$ (kV) | $C_N$ (µF) | $f_N$ (kHz) | $Q_N$ (kvar) | $I_N$ (A) | Dimensions W x L x H (mm) | Weight (kg) | Number of tappings |
|---|---|---|---|---|---|---|---|---|
| FZOJP 31361-0,4/3x1382/0,06 | 400 | 3x 1 382 | 60 | 3x 83,3 | 3x 208 | 130 x 345 x 610 | 33 | 3 |
| FZOJP 31362-0,44/3x1292/0,06 | 440 | 3x 1 292 | 60 | 3x 94,3 | 3x 214 | 130 x 345 x 620 | 33 | 3 |
| FZOJP 31374-0,5/3x1235/0,055 | 500 | 3x 1 235 | 55 | 3x 106,7 | 3x 213 | 130 x 345 x 740 | 40 | 3 |
| FZOJP 31562-0,6/2x1326/0,05 | 600 | 2x 1 326,3 | 50 | 2x 150 | 2x 250 | 155 x 345 x 620 | 40 | 2 |
| FZOJP 31562-0,6/3x884/0,05 | 600 | 3x 884 | 50 | 3x 100 | 3x 167 | 155 x 345 x 620 | 40 | 3 |
| FZOJP 31564-0,5/3x1082/0,06 | 500 | 3x 1 082 | 60 | 3x 102 | 3x 204 | 155 x 345 x 640 | 41 | 3 |
| FZOJP 31564-0,6/3x754/0,06 | 600 | 3x 754 | 60 | 3x 102 | 3x 171 | 155 x 345 x 640 | 41 | 3 |
| FZOJP 31567-0,5/3x1118/0,06 | 500 | 3x 1 118 | 60 | 3x 105 | 3x 211 | 155 x 345 x 670 | 43 | 3 |
| FZOJP 31574-0,6/3x904/0,06 | 600 | 3x 904 | 60 | 3x 123 | 3x 204 | 155 x 345 x 740 | 47 | 3 |
| FZOJP 31574-0,65/3x904/0,05 | 650 | 3x 904 | 50 | 3x 120 | 3x 185 | 155 x 345 x 740 | 47 | 3 |
| FZOJP 31554-0,38/4x1378/0,06 | 380 | 4x 1 378 | 60 | 4x 75 | 4x 197 | 155 x 345 x 540 | 35 | 4 |
| FZOJP 31572-0,6/4x737/0,06 | 600 | 4x 737 | 60 | 4x 100 | 4x 167 | 155 x 345 x 720 | 46 | 4 |
| FZOJP 31572-0,72/4x614/0,05 | 720 | 4x 614 | 50 | 4x 100 | 4x 139 | 155 x 345 x 720 | 46 | 4 |

Other voltage, power and frequency on request.

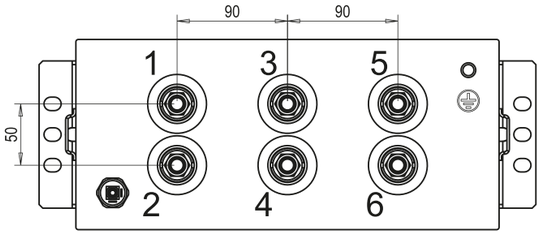


AIR COOLED, LOW FREQUENCY CAPACITORS

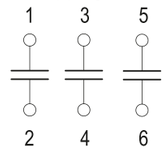


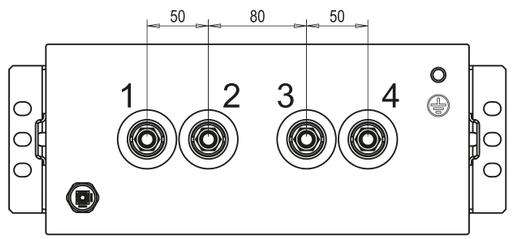

*Four tappings version:*



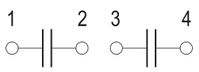




*Three tappings version:*

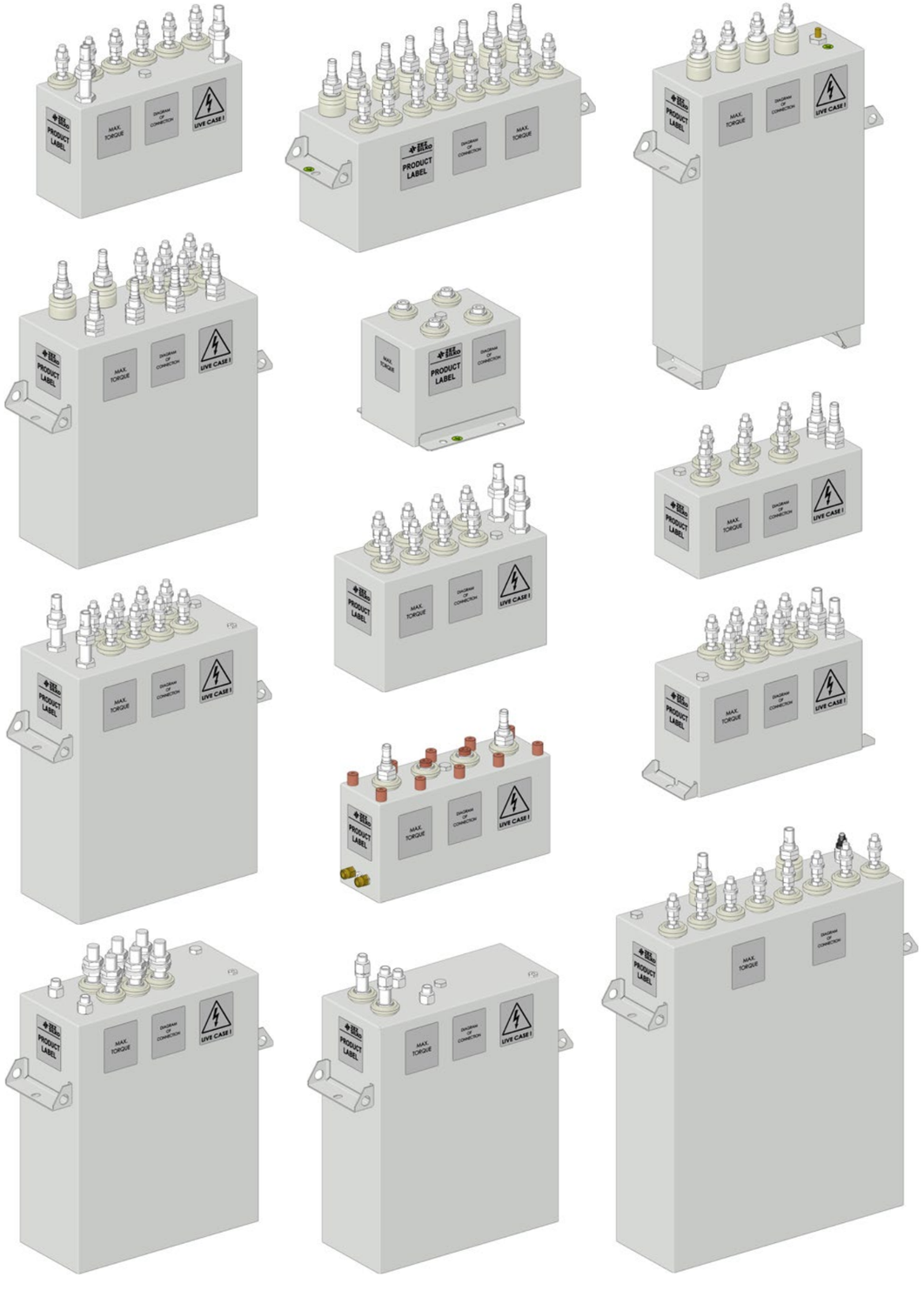



*Two tappings version:*




Air Cooled, Low Frequency Capacitors






## Order information

| | |
|---|---|
| **Standards:** | IEC 60110-1:1998; EN60110-1:1998 |
| **Rated voltage:** | $U_N$. . . . . .V |
| **Rated frequency:** | $f_N$ . . . . . .Hz |
| **Rated capacitance:** | $C_N$. . . . . .µF or **Rated power:** $Q_N$. . . . . .kvar |
| **Case design:** | Live or Dead case |
| **Tappings:** | Number of tappings, capacitance for tappings<br>(different capacitance for each individual tapping is possible) |
| **Cooling:** | WF - water cooling<br>AF – forced air cooling<br>AN – natural air cooling |
| **Customer design:** | In case of request of different dimensions or differrent number of tappings, you may provide us a drawing or sketch with requested modification of case, brackets, tappings, etc. |

## Formula for calculation

$$Q_N = U_N^2 \times C_N \times 2\pi \times f_N \times 10^{-9} \left[\text{kvar}\right]$$

$$I_N = U_N \times C_N \times 2\pi \times f_N \times 10^{-6} \left[A\right]$$

$$I_N = \frac{Q_N}{U_N} \times 10^3 \left[A\right]$$

## Used units

$U_N \left[V\right]$

$C_N \left[\mu F\right]$

$f_N \left[Hz\right]$

$Q_N \left[\text{kvar}\right]$