



Datasheet 202404

Sine wave filter with excellent attenuation for VFD applications

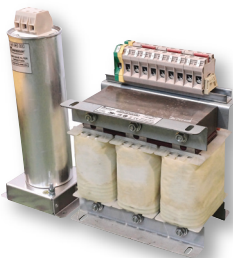
APPROVALS:



Up to 650A



SWF.(002 - 020).M



SWF.(025 - 180).M



SWF.(210 - 380).M



SWF.(440 - 1000).M

CHARACTERISTICS

- Rated current from 2 to 1000A
- Compact design
- Enclosure available upon request

BENEFITS

- Minimal power loss
- Ventilation-free design
- Eliminates high-frequency disturbance

MARKETS

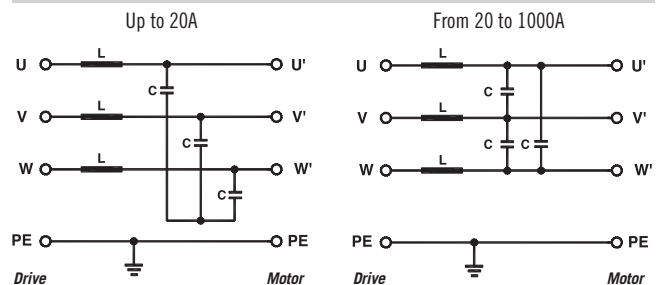
- Applications with motor cables longer than 250m
- Variable frequency drives / servo drives
- Industrial automation
- Water treatment plants
- Agriculture

CODE

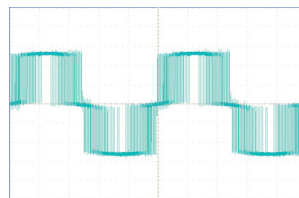
SWF0012.4MXXA2

Model	Current	Voltage	Connection	Protection	Open Frame	Min. PWM Freq.
SWF 0012	4	4 = 400/480 V 7 = 690 V	M = Terminal block B = Bus bar	XX = None T1 = 1 Thermocouple T3 = 3 Thermocouples	A	2 = 2 kHz 4 = 4 kHz

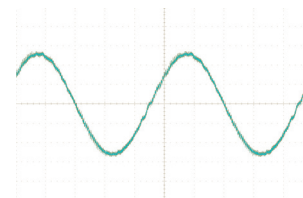
ELECTRICAL DIAGRAM



TYPICAL MEASUREMENT



Motor side pulse without SWF filter



Motor side pulse with SWF filter

TECHNICAL SPECIFICATIONS

Nominal voltage	0 - 480 Vac (690 Vac option)
Frequency	0 - 70 Hz
Rated current	2 to 1000 A
Ambient temperature	40°C
Altitude	Derating $I_T = \sqrt{(85-T)/45}$ 1000 m Derating 0.5% every 100 m
Relative humidity	<95% no condensation
Overload capability	1.5 x Rated current
IP Protection	IP20 up to 180 A IP00 over 260 A
Optional	Current and frequency customizations available on request

ELECTRICAL CHARACTERISTICS

SWF	Rated Current 40°C	Min Switching Frequency (kHz)	Power Loss (W)
SWF0002.4MXXA4	2	4	22
SWF0004.4MXXA4	4	4	36
SWF0006.4MXXA4	6	4	50
SWF0008.4MXXA4	8	4	52
SWF0012.4MXXA4	12	4	70
SWF0016.4MXXA4	16	4	73
SWF0020.4MXXA4	20	4	94
SWF0025.4MXXA4	25	4	145
SWF0032.4MXXA4	32	4	164
SWF0038.4MXXA4	38	4	156
SWF0045.4MXXA4	45	4	167
SWF0060.4MXXA4	60	4	191
SWF0075.4MXXA4	75	4	232
SWF0090.4MXXA4	90	4	265
SWF0110.4MXXA4	110	4	268
SWF0130.4MXXA4	130	4	288
SWF0150.4MXXA4	150	4	354
SWF0180.4MXXA4	180	4	327

CONNECTIONS

LINE		PE		CAPACITORS		CAPACITOR BOX	
Cable (mm ²)	Terminal Torque (Nm)	Cable (mm ²)	Terminal Torque (Nm)	Cable (mm ²)	Terminal Torque (Nm)	Cable (mm ²)	Terminal Torque (Nm)
0.5-4	0.8	0.5-4	0.8	0.5-4	0.8	0.5-4	0.8
0.5-4	0.8	0.5-4	0.8	0.5-4	0.8	0.5-4	0.8
0.5-4	0.8	0.5-4	0.8	0.5-4	0.8	0.5-4	0.8
0.5-4	0.8	0.5-4	0.8	0.5-4	0.8	0.5-4	0.8
0.5-4	0.8	0.5-4	0.8	0.5-4	0.8	0.5-4	0.8
0.5-6	1.8	0.5-6	1.8	0.5-6	1.8	0.5-4	0.8
0.5-6	1.8	0.5-6	1.8	0.5-6	1.8	0.5-4	0.8
0.5-10	1.3	0.5-10	1.3	0.5-10	1.3	4-25	2
0.5-10	1.3	0.5-10	1.3	0.5-10	1.3	4-25	2
1.5-16	3.4	1.5-16	3.4	1.5-16	3.4	4-25	2
1.5-16	3.4	1.5-16	3.4	1.5-16	3.4	4-25	2
1.5-35	6.5	1.5-16	3.4	1.5-35	6.5	4-25	2
1.5-35	6.5	1.5-16	3.4	1.5-35	6.5	4-25	2
16-50	5.6	1.5-35	6.5	16-50	5.6	4-25	2
16-50	5.6	1.5-35	6.5	16-50	5.6	4-25	2
35-95	10	16-50	5.6	35-95	10	4-25	2
35-95	10	16-50	5.6	35-95	10	4-25	2
35-95	10	16-50	5.6	35-95	10	4-25	2

ELECTRICAL CHARACTERISTICS

SWF	Rated Current 40°C	Min Switching Frequency (kHz)	Power Loss (W)
SWF0210.4BXXA4	210	4	375
SWF0260.4BXXA4	260	4	467
SWF0320.4BXXA4	320	4	541
SWF0380.4BXXA4	380	4	569
SWF0440.4BXXA4	440	4	634
SWF0500.4BXXA4	500	4	735
SWF0600.4BXXA4	600	4	824
SWF0700.4BXXA4	700	4	869
SWF0800.4BXXA4	800	4	975
SWF0900.4BXXA4	900	4	1050
SWF1000.4BXXA4	1000	4	1305

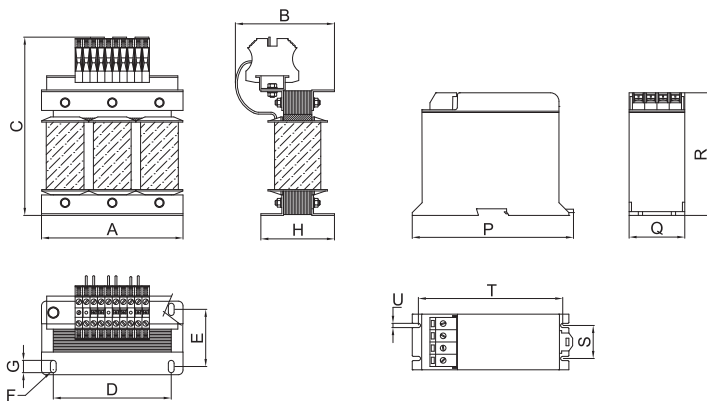
CONNECTIONS

LINE	PE	CAPACITORS	CAPACITOR BOX	
Torque (Nm)	Screw (mm)	Torque (Nm)	Cable (mm ²)	Terminal Torque (Nm)
25	8x25	14	4-25	2
50	8x25	14	4-25	2
50	8x25	14	4-25	2
50	8x25	14	4-25	2
50	8x25	14	35-95	15
50	8x25	14	35-95	15
50	8x25	14	35-95	15
50	10x35	14	35-95	15
50	10x35	14	-	14
50	10x35	14	-	14
50	10x35	14	-	14

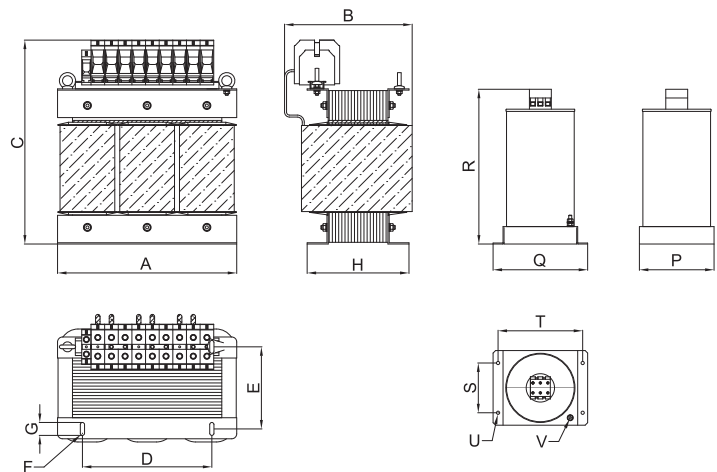
MECHANICAL DIMENSIONS mm

SWF	A	B	C	D	E	F	G	H	P	Q	R	S	T	U	V	Weight Kg.	Cus.
SWF0002.4MXXA4	150	98	185	125	56	6	13	73	170	59	130	35	153	4.5	-	3.5	1
SWF0004.4MXXA4	150	98	185	125	56	6	13	73	170	59	130	35	153	4.5	-	3.5	1
SWF0006.4MXXA4	150	113	185	125	71	6	13	88	170	59	130	35	153	4.5	-	6	1
SWF0008.4MXXA4	180	125	210	150	72	8	20	100	170	59	130	35	153	4.5	-	6	1
SWF0012.4MXXA4	180	125	210	150	72	8	20	100	170	59	130	35	153	4.5	-	8	1
SWF0016.4MXXA4	180	135	214	150	82	8	20	110	170	59	130	35	153	4.5	-	11	1
SWF0020.4MXXA4	180	160	214	150	107	8	20	135	170	59	130	35	153	4.5	-	14	1
SWF0025.4MXXA4	240	159	268	200	97	8	20	129	110	150	232	80	130	6.5	M6x25	18	2
SWF0032.4MXXA4	240	179	268	200	117	8	20	149	110	150	232	80	130	6.5	M6x25	24	2
SWF0038.4MXXA4	240	179	281	200	117	8	20	149	110	150	270	80	130	6.5	M6x25	25	2
SWF0045.4MXXA4	300	173	331	260	103	8	26	143	110	150	270	80	130	6.5	M6x25	19	2
SWF0060.4MXXA4	300	173	331	260	103	8	26	143	110	150	270	80	130	6.5	M6x25	20	2
SWF0075.4MXXA4	360	185	381	260	115	8	26	155	110	150	270	80	130	6.5	M6x25	34	2
SWF0090.4MXXA4	360	195	414	260	115	8	26	155	110	150	270	80	130	6.5	M6x25	37	2
SWF0110.4MXXA4	360	225	414	260	145	8	26	185	110	150	345	80	130	6.5	M6x25	47	2
SWF0130.4MXXA4	360	230	434	260	145	8	26	185	110	150	345	80	130	6.5	M6x25	51	2
SWF0150.4MXXA4	360	250	434	260	165	8	26	205	110	150	345	80	130	6.5	M6x25	82	2
SWF0180.4MXXA4	360	250	434	260	165	8	26	205	150	190	311	100	170	6.5	M6x25	83	2

CASE 1



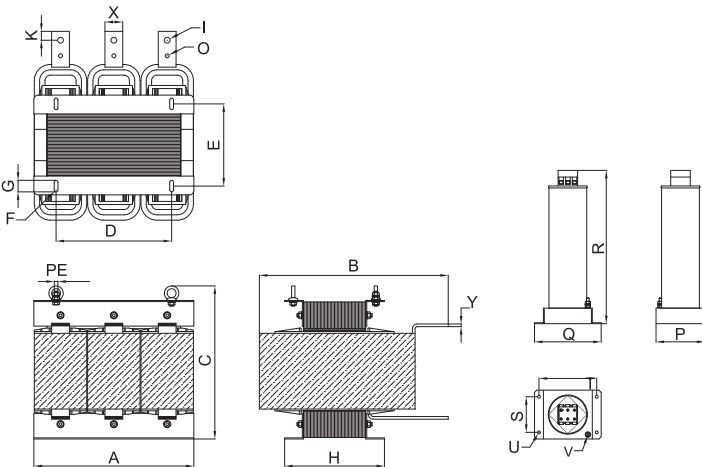
CASE 2



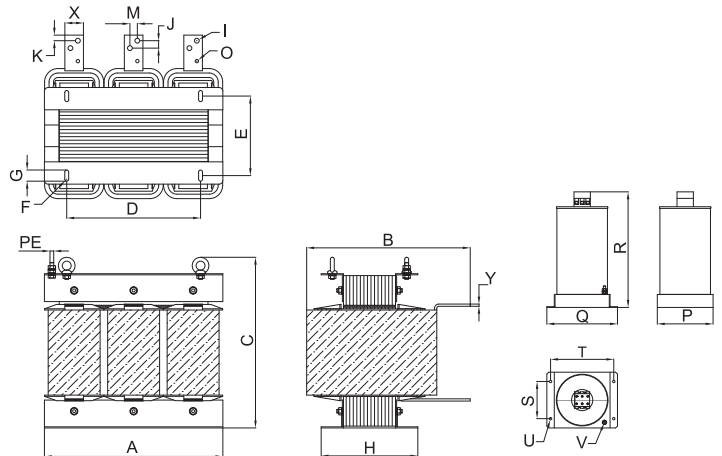
MECHANICAL DIMENSIONS mm

SWF	A	B	C	D	E	F	G	H	I	M	O	J	K	X	Y	P	Q	R	S	T	U	V	W	X1	Y1	Weight Kg.	Cus.
SWF0210.4BXXA4	360	343	345	260	185	8	26	225	11	-	9	-	20	40	6	150	190	326	100	170	6.5	M6x25	-	-	-	93	3
SWF0260.4BXXA4	480	395	459	360	184	10	30	230	13	-	11	-	20	40	6	150	190	326	100	170	6.5	M6x25	-	-	-	128	3
SWF0320.4BXXA4	480	398	459	360	214	10	30	260	13	20	11	20	15	50	6	150	190	311	100	170	6.5	M6x25	-	-	-	167	4
SWF0380.4BXXA4	480	395	459	360	214	10	30	260	13	20	11	20	15	50	6	150	190	326	100	170	6.5	M6x25	-	-	-	170	4
SWF0440.4BXXA4	480	450	459	360	234	10	30	280	13	14	11	20	15	40	10	432	210	400	195	160	5	M5x20	-	-	-	202	5
SWF0500.4BXXA4	600	398	559	380	210	14	30	254	13	20	11	20	15	50	10	432	210	400	195	160	5	M5x20	-	-	-	247	5
SWF0600.4BXXA4	600	434	559	380	240	14	30	284	13	20	11	20	15	60	10	432	210	400	195	160	5	M5x20	-	-	-	298	5
SWF0700.4BXXA4	600	434	559	380	240	14	30	284	13	20	11	20	20	60	10	432	210	400	195	160	5	M5x20	-	-	-	305	5
SWF0800.4BXXA4	600	464	559	380	240	14	30	284	13	40	11	40	20	80	10	450	338	422	150	410	9	M8x20	29	20	6	301	6
SWF0900.4BXXA4	600	481	559	380	260	14	30	304	13	40	11	40	20	80	10	450	338	422	150	410	9	M8x20	29	20	6	332	6
SWF1000.4BXXA4	600	531	559	380	300	14	30	344	13	40	11	40	20	100	10	450	338	422	150	410	9	M8x20	29	20	6	400	6

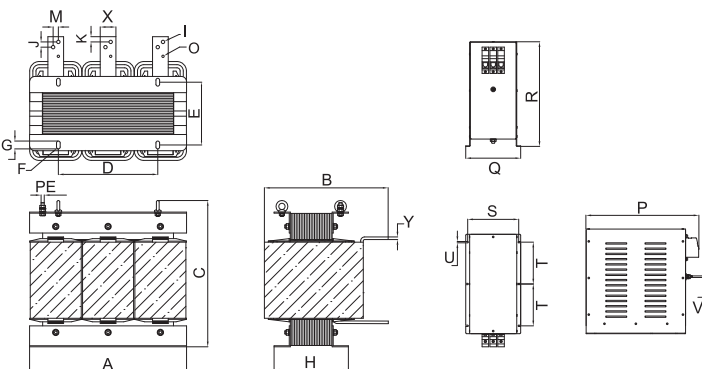
CASE 3



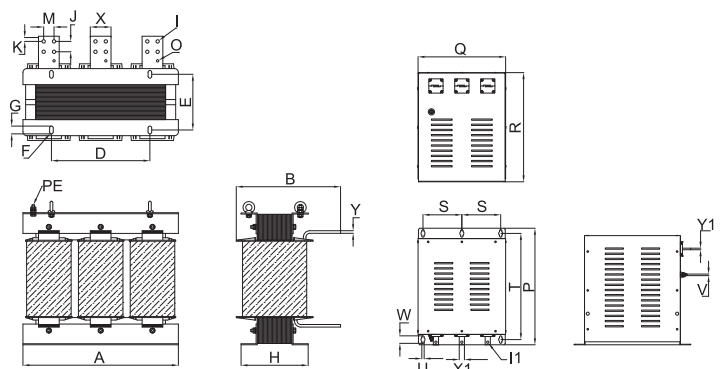
CASE 4



CASE 5



CASE 6



ELECTRICAL CHARACTERISTICS

SWF	Rated Current 40°C	Min Switching Frequency (kHz)	Power Loss (W)
SWF0002.4MXXA2	2	2	20
SWF0004.4MXXA2	4	2	135
SWF0006.4MXXA2	6	2	138
SWF0008.4MXXA2	8	2	163
SWF0012.4MXXA2	12	2	167
SWF0016.4MXXA2	16	2	210
SWF0020.4MXXA2	20	2	229
SWF0025.4MXXA2	25	2	278
SWF0032.4MXXA2	32	2	329
SWF0038.4MXXA2	38	2	313
SWF0045.4MXXA2	45	2	350
SWF0060.4MXXA2	60	2	374
SWF0075.4MXXA2	75	2	556
SWF0090.4MXXA2	90	2	630
SWF0110.4MXXA2	110	2	821
SWF0130.4MXXA2	130	2	834
SWF0150.4MXXA2	150	2	970
SWF0180.4MXXA2	180	2	1033

CONNECTIONS

LINE		PE		CAPACITORS		CAPACITOR BOX	
Cable (mm ²)	Terminal Torque (Nm)	Cable (mm ²)	Terminal Torque (Nm)	Cable (mm ²)	Terminal Torque (Nm)	Cable (mm ²)	Terminal Torque (Nm)
0.5-4	0.8	0.5-4	0.8	0.5-4	0.8	0.5-4	0.8
0.5-4	0.8	0.5-4	0.8	0.5-4	0.8	0.5-4	0.8
0.5-4	0.8	0.5-4	0.8	0.5-4	0.8	0.5-4	0.8
0.5-4	0.8	0.5-4	0.8	0.5-4	0.8	0.5-4	0.8
0.5-4	0.8	0.5-4	0.8	0.5-4	0.8	0.5-4	0.8
0.5-6	1.8	0.5-6	1.8	0.5-6	1.8	0.5-4	0.8
0.5-6	1.8	0.5-6	1.8	0.5-6	1.8	0.5-4	0.8
0.5-10	1.3	0.5-10	1.3	0.5-10	1.3	4-25	2
0.5-10	1.3	0.5-10	1.3	0.5-10	1.3	4-25	2
1.5-16	3.4	1.5-16	3.4	1.5-16	3.4	4-25	2
1.5-16	3.4	1.5-16	3.4	1.5-16	3.4	4-25	2
1.5-35	6.5	1.5-16	3.4	1.5-35	6.5	4-25	2
1.5-35	6.5	1.5-16	3.4	1.5-35	6.5	4-25	2
16-50	5.6	1.5-35	6.5	16-50	5.6	4-25	2
16-50	5.6	1.5-35	6.5	16-50	5.6	4-25	2
35-95	10	16-50	5.6	35-95	10	4-25	2
35-95	10	16-50	5.6	35-95	10	4-25	2
35-95	10	16-50	5.6	35-95	10	4-25	2

ELECTRICAL CHARACTERISTICS

SWF	Rated Current 40°C	Min Switching Frequency (kHz)	Power Loss (W)
SWF0210.4BXXA2	210	2	1104
SWF0260.4BXXA2	260	2	467
SWF0320.4BXXA2	320	2	541
SWF0380.4BXXA2	380	2	569
SWF0440.4BXXA2	440	2	634
SWF0500.4BXXA2	500	2	735
SWF0600.4BXXA2	600	2	824
SWF0700.4BXXA2	700	2	1353
SWF0800.4BXXA2	800	2	1497
SWF0900.4BXXA2	900	2	1413
SWF1000.4BXXA2	1000	2	1388

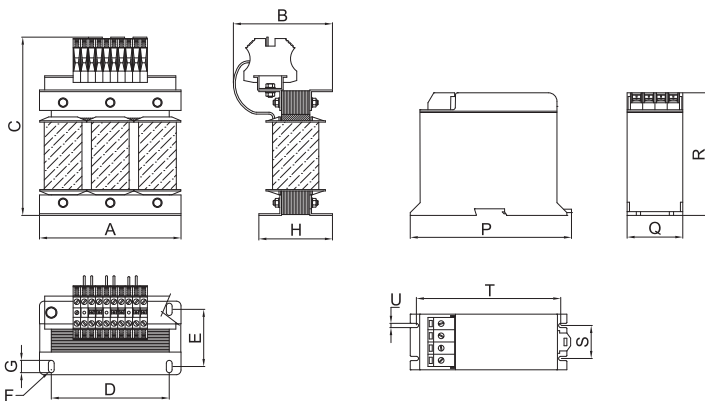
CONNECTIONS

LINE	PE	CAPACITORS	CAPACITOR BOX	
Torque (Nm)	Screw (mm)	Torque (Nm)	Cable (mm ²)	Terminal Torque (Nm)
25	8x25	14	4-25	2
50	8x25	14	4-25	2
50	8x25	14	4-25	2
50	8x25	14	4-25	2
50	8x25	14	35-95	15
50	8x25	14	35-95	15
50	8x25	14	35-95	15
50	10x35	14	35-95	15
50	10x35	14	-	14
50	10x35	14	-	14
50	10x35	14	-	14

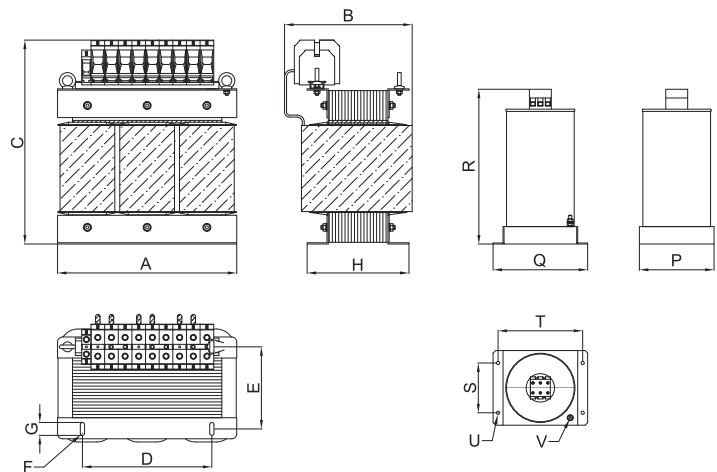
MECHANICAL DIMENSIONS mm

SWF	A	B	C	D	E	F	G	H	P	Q	R	S	T	U	V	Weight Kg.	Case
SWF0002.4MXXA2	150	88	185	125	56	6	13	73	170	59	130	35	153	4.5	-	5	1
SWF0004.4MXXA2	150	103	185	125	71	6	13	88	170	59	130	35	153	4.5	-	7	1
SWF0006.4MXXA2	180	115	200	150	72	8	20	100	170	59	130	35	153	4.5	-	10	1
SWF0008.4MXXA2	180	125	200	150	82	8	20	110	170	59	130	35	153	4.5	-	11	1
SWF0012.4MXXA2	180	135	200	150	92	8	20	120	170	59	130	35	153	4.5	-	14	1
SWF0016.4MXXA2	180	150	214	150	107	8	20	135	170	59	130	35	153	4.5	-	16	1
SWF0020.4MXXA2	240	144	264	200	97	8	20	130	170	59	130	35	153	4.5	-	17	1
SWF0025.4MXXA2	240	164	268	200	117	8	20	150	110	150	232	80	130	6.5	M6x25	24	2
SWF0032.4MXXA2	240	164	268	200	117	8	20	150	110	150	232	80	130	6.5	M6x25	25	2
SWF0038.4MXXA2	300	158	331	260	103	8	26	142	110	150	270	80	130	6.5	M6x25	29	2
SWF0045.4MXXA2	300	158	331	260	103	8	26	142	110	150	270	80	130	6.5	M6x25	30	2
SWF0060.4MXXA2	300	188	331	260	133	8	26	172	110	150	270	80	130	6.5	M6x25	46	2
SWF0075.4MXXA2	300	198	331	260	143	8	26	182	110	150	270	80	130	6.5	M6x25	47	2
SWF0090.4MXXA2	360	250	389	260	115	8	26	154	110	150	270	80	130	6.5	M6x25	53	2
SWF0110.4MXXA2	360	225	389	260	165	8	26	204	110	150	345	80	130	6.5	M6x25	82	2
SWF0130.4MXXA2	360	230	434	260	185	8	26	224	110	150	345	80	130	6.5	M6x25	98	2
SWF0150.4MXXA2	360	395	340	260	185	8	26	224	110	150	345	80	130	6.5	M6x25	97	2
SWF0180.4MXXA2	480	460	450	360	154	10	30	200	150	190	311	100	170	6.5	M6x25	103	2

CASE 1



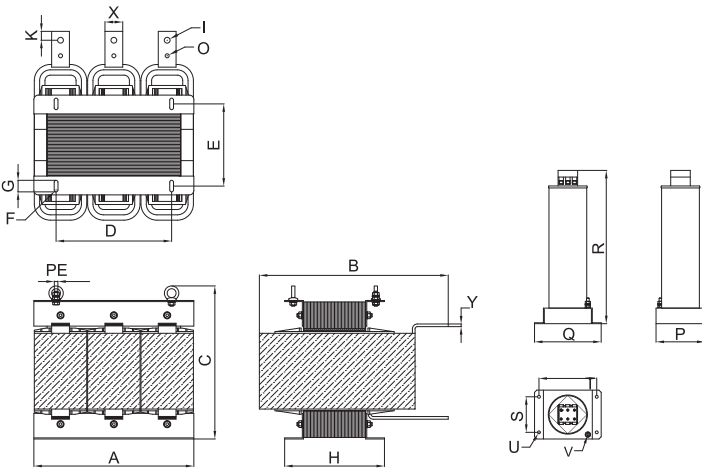
CASE 2



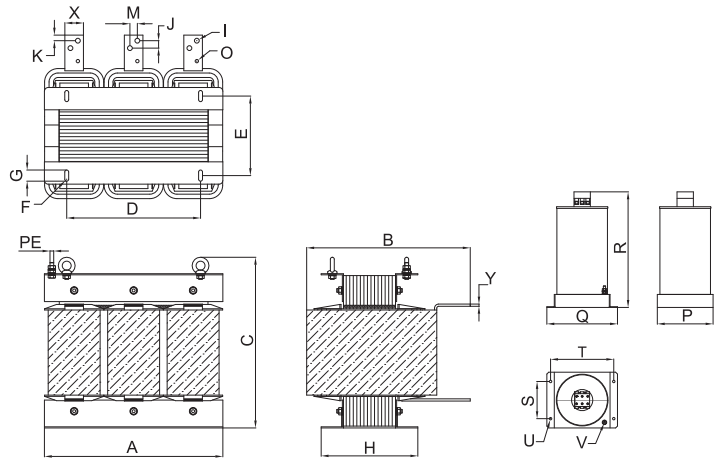
MECHANICAL DIMENSIONS mm

SWF	A	B	C	D	E	F	G	H	I	M	O	J	K	X	Y	P	Q	R	S	T	U	V	W	X1	Y1	Weight Kg.	Case
SWF0210.4BXXA2	480	351	450	360	184	10	30	230	11	-	9	-	15	30	6	150	190	326	100	170	6.5	M6x25	-	-	-	136	3
SWF0260.4BXXA2	480	440	450	360	214	10	30	260	13	-	11	-	15	40	6	150	190	326	100	170	6.5	M6x25	-	-	-	178	3
SWF0320.4BXXA2	600	459	559	380	210	14	30	254	13	20	11	20	15	50	10	150	190	311	100	170	6.5	M6x25	-	-	-	256	4
SWF0380.4BXXA2	600	493	559	380	210	14	30	254	13	20	11	20	15	50	10	150	190	326	100	170	6.5	M6x25	-	-	-	271	4
SWF0440.4BXXA2	600	493	559	380	210	14	30	254	13	20	11	20	15	50	10	432	210	400	195	160	5	M5x20	-	-	-	273	5
SWF0500.4BXXA2	600	502	559	380	240	14	30	284	13	20	11	20	15	50	10	432	210	400	195	160	5	M5x20	-	-	-	325	5
SWF0600.4BXXA2	600	491	559	380	240	14	30	284	13	20	11	20	20	60	10	432	210	400	195	160	5	M5x20	-	-	-	335	5
SWF0700.4BXXA2	600	513	559	380	300	14	30	344	13	20	11	20	20	60	10	432	210	400	195	160	5	M5x20	-	-	-	422	5
SWF0800.4BXXA2	600	556	559	380	330	14	30	374	13	40	11	40	20	80	10	450	338	422	150	410	9	M8x20	29	20	6	464	6
SWF0900.4BXXA2	600	554	559	380	330	14	30	374	13	40	11	40	20	80	10	450	338	422	150	410	9	M8x20	29	20	6	535	6
SWF1000.4BXXA2	600	549	559	380	330	14	30	374	13	40	11	40	20	100	10	450	338	422	150	410	9	M8x20	29	20	6	576	6

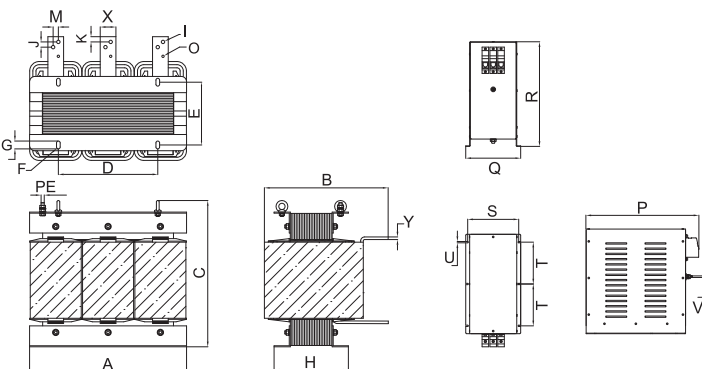
CASE 3



CASE 4



CASE 5



CASE 6

