

IPM

SEMIKRON Offers Highly Integrated IPMs

The SKiiP IPMs represent the benchmark for regenerative inverter solutions up to 6MW.

SKiiP 3/4	160
SKiiP Accessories	169

For detailed information please refer to data sheets.

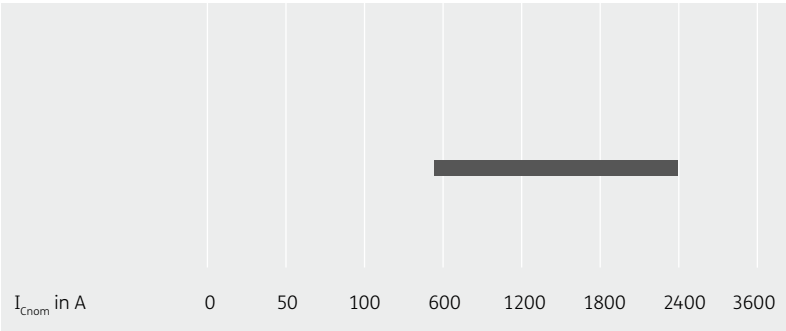
Further information: www.semikron.com/ipm

SKiiP®3

6-pack
half-bridge



1200V up to 1700V

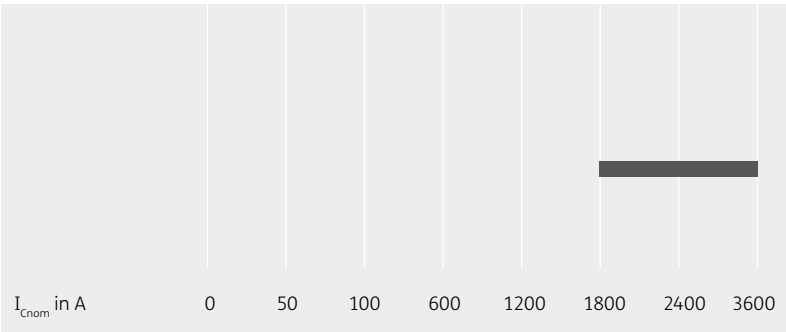


SKiiP®4

half-bridge



1200V up to 1700V



ЭйБиЭн

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IPM / SKiP

Type	IGBT			Diode			Module			
	$I_C @ T_s = 25^{\circ}C$	I_{nom}	$V_{CE(sat)} @ T_j = 25^{\circ}C \text{ typ.}$	$E_{on} + E_{off}$	$I_F @ T_s = 25^{\circ}C$	$V_F @ T_j = 25^{\circ}C \text{ typ.}$	E_{rr}	Options F=F-Option U=U-Option S=SKiFace Adapter		Circuit
A	A	V	mJ	A	V	mJ				
1200V - IGBT 3 (Trench) - SKiiP3										
SKiiP 603 GD123-3DUL V3	627	600	1.7	195	508	1.50	28	-	S33	
SKiiP 603 GD123-3DUW V3	627	600	1.7	195	508	1.50	28	-	S33	
SKiiP 613 GD123-3DUL V3	577	600	1.7	195	466	1.50	28	-	S33	
SKiiP 613 GD123-3DUW V3	577	600	1.7	195	466	1.50	28	-	S33	
SKiiP 1213 GB123-2DL V3	1145	1200	1.7	390	925	1.50	56	F	S23	
SKiiP 1213 GB123-2DW V3	1145	1200	1.7	390	925	1.50	56	F	S23	
SKiiP 1813 GB123-3DL V3	1695	1800	1.7	585	1411	1.50	84	F,U	S33	
SKiiP 1813 GB123-3DW V3	1695	1800	1.7	585	1411	1.50	84	F,U	S33	
SKiiP 1813 GB123-3DUL V3	1695	1800	1.7	585	1411	1.50	84	F,U	S33	
SKiiP 2413 GB123-4DUL V3	2280	2400	1.7	780	1807	1.50	112	F,U	S43	
SKiiP 2413 GB123-4DL V3	2280	2400	1.7	780	1807	1.50	112	F,U	S43	
SKiiP 2413 GB123-4DW V3	2280	2400	1.7	780	1807	1.50	112	F,U	S43	
1200V - IGBT 4 (Trench) - SKiiP4										
SKiiP 1814 GB12E4-3DUL	2345	1800	2.01	1260	1776	2.33	150	F,S	S34	
SKiiP 1814 GB12E4-3DUW	2345	1800	2.01	1260	1776	2.33	150	F,S	S34	
SKiiP 1814 GB12E4-3DUSL	2345	1800	2.01	1260	1776	2.33	150	F,S	S34	
SKiiP 2414 GB12E4-4DUL	3109	2400	2.01	1680	2369	2.33	200	F,S	S44	
SKiiP 2414 GB12E4-4DUW	3109	2400	2.01	1680	2369	2.33	200	F,S	S44	
SKiiP 2414 GB12E4-4DUSL	3109	2400	2.01	1680	2369	2.33	200	F,S	S44	
SKiiP 2414 GB12E4-4DUL	3109	2400	2.01	1680	2369	2.33	200	F,S	S44	
SKiiP 2414 GB12E4-4DULR	3109	2400	2.01	1680	2369	2.33	200	F,S	S44	
SKiiP 3614 GB12E4-6DUL	4664	3600	2.01	2520	3558	2.33	300	F,S	S64	
SKiiP 3614 GB12E4-6DUW	4664	3600	2.01	2520	3558	2.33	300	F,S	S64	
SKiiP 3614 GB12E4-6DULR	4664	3600	2.01	2520	3558	2.33	300	F,S	S64	
SKiiP 3614 GB12E4-6DUSL	4664	3600	2.01	2520	3558	2.33	300	F,S	S64	
SKiiP 3614 GB12E4-6DUL	4664	3600	2.01	2520	3558	2.33	300	F,S	S64	
1700V - IGBT 3 (Trench) - SKiiP3										
SKiiP 513 GD172-3DUL V3	540	500	1.9	288	438	2.00	43	-	S33	
SKiiP 513 GD172-3DUW V3	540	500	1.9	288	438	2.00	43	-	S33	
SKiiP 603 GD172-3DUL V3	587	570	1.9	288	476	2.00	43	-	S33	
SKiiP 603 GD172-3DUW V3	570	570	1.9	288	476	2.00	43	-	S33	

Footnotes: 2) In production new

IPM / SKiP

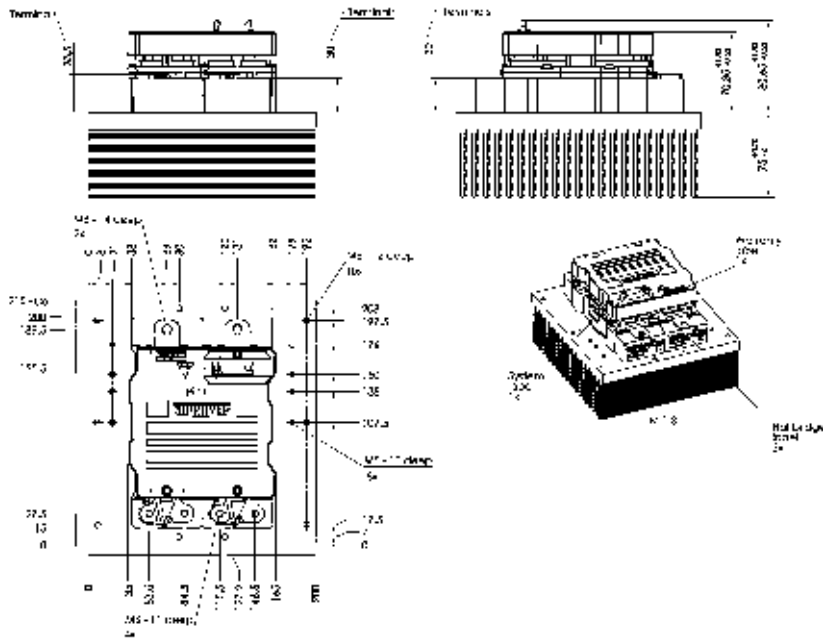
Type	IGBT				Diode		Module			
	I_C @ $T_J = 25^{\circ}C$	I_{room}	$V_{CE(sat)}$ @ $T_J = 25^{\circ}C$ typ.	$E_{on} + E_{off}$	I_F @ $T_J = 25^{\circ}C$	V_F @ $T_J = 25^{\circ}C$ typ.	E_{rr}	Options F=F-Option U=U-Option S=SKiFace Adapter		Circuit
A	A	A	V	mJ	A	V	mJ			
1700V - IGBT 3 (Trench) - SKiiP3										
SKiiP 1013 GB172-2DL V3	1072	1000	1.9	575	879	2.00	86	F	S23	
SKiiP 1013 GB172-2DW V3	1072	1000	1.9	575	879	2.00	86	F	S23	
SKiiP 1203 GB172-2DL V3	1159	1200	1.9	575	961	2.00	86	F	S23	
SKiiP 1203 GB172-2DW V3	1159	1200	1.9	575	961	2.00	86	F	S23	
SKiiP 1513 GB172-3DL V3	1589	1500	1.9	863	1336	2.00	128	F,U	S33	
SKiiP 1513 GB172-3DW V3	1589	1500	1.9	863	1336	2.00	128	F,U	S33	
SKiiP 1513 GB172-3DFL V3	1589	1500	1.9	863	1336	2.00	128	F,U	S33	
SKiiP 1803 GB172-3DL V3	1744	1800	1.9	863	1454	2.00	128	F,U	S33	
SKiiP 1803 GB172-3DW V3	1744	1800	1.9	863	1454	2.00	128	F,U	S33	
SKiiP 2013 GB172-4DL V3	2102	2000	1.9	1150	1758	2.00	171	F,U	S43	
SKiiP 2013 GB172-4DW V3	2102	2000	1.9	1150	1758	2.00	171	F,U	S43	
SKiiP 2013 GB172-4DFL V3	2102	2000	1.9	1150	1758	2.00	171	F,U	S43	
SKiiP 2403 GB172-4DL V3	2282	2400	1.9	1150	1921	2.00	171	F,U	S43	
SKiiP 2403 GB172-4DW V3	2282	2400	1.9	1150	1921	2.00	171	F,U	S43	
1700V - IGBT 4 (Trench) - SKiiP4										
SKiiP 1814 GB17E4-3DUL V2	2547	1800	2.12	2130	1771	2.02	498	F,S	S34	
SKiiP 1814 GB17E4-3DUW V2	2547	1800	2.12	2130	1771	2.02	498	F,S	S34	
SKiiP 2414 GB17E4-4DUL V2	3385	2400	2.12	2840	2362	2.02	664	F,S	S44	
SKiiP 2414 GB17E4-4DUW V2	3385	2400	2.12	2840	2362	2.02	664	F,S	S44	
SKiiP 2414 GB17E4-4DPVL 2)	3385	2400	2.12	2840	2362	2.02	664	F,S	S44	
SKiiP 2414 GB17E4-4DPVW 2)	3385	2400	2.12	2840	2362	2.02	664	F,S	S44	
SKiiP 3614 GB17E4-6DUL V2	5078	3600	2.12	6840	3547	2.02	996	F,S	S64	
SKiiP 3614 GB17E4-6DUW V2	5078	3600	2.12	6840	3547	2.02	996	F,S	S64	
SKiiP 3614 GB17E4-6DULR V2	5078	3600	2.12	6840	3547	2.02	996	F,S	S64	
SKiiP 3614 GB17E4-6DPVLR 2)	5078	3600	2.12	6840	3547	2.02	996	F,S	S64	
SKiiP 3614 GB17E4-6DPVL 2)	5078	3600	2.12	6840	3547	2.02	996	F,S	S64	

Footnotes: 2) In production new

IPM / SKiP

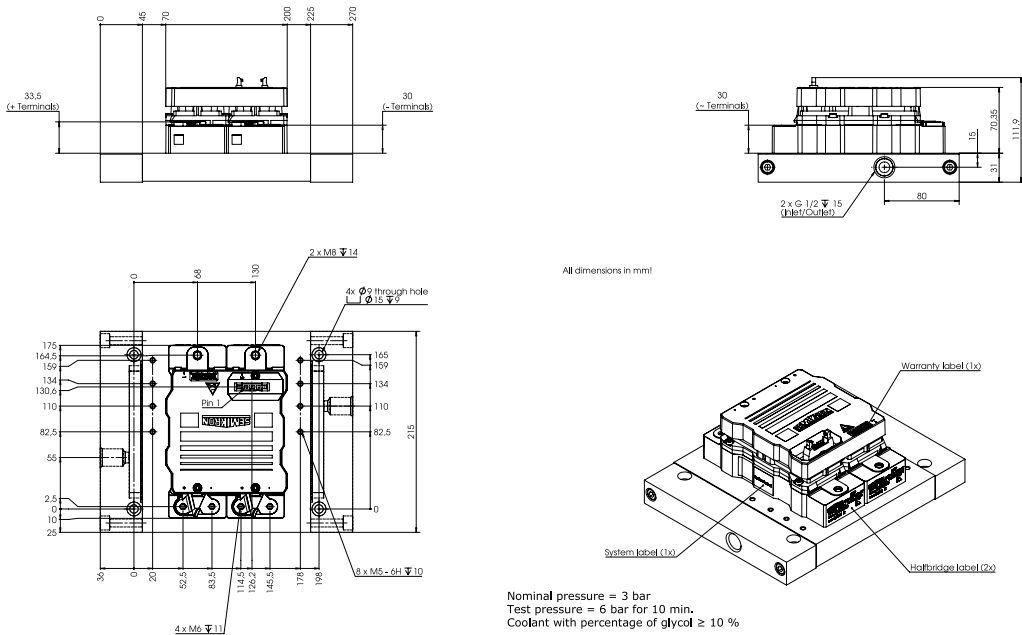
SKiP 3

Case S 23 mounted on P3016 heat sink



Weight without heat sink: 1,7 kg
P3016: 4,4 kg

Case S 23 mounted on liquid cooled heat sink NWK 40



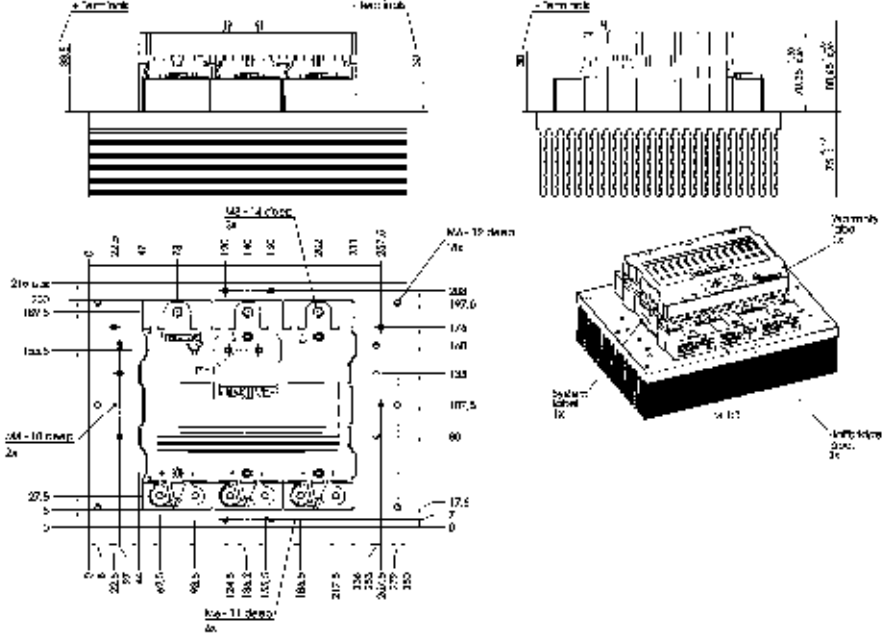
NWK 40: 2,8 kg

Dimensions in mm

IPM / SKiP

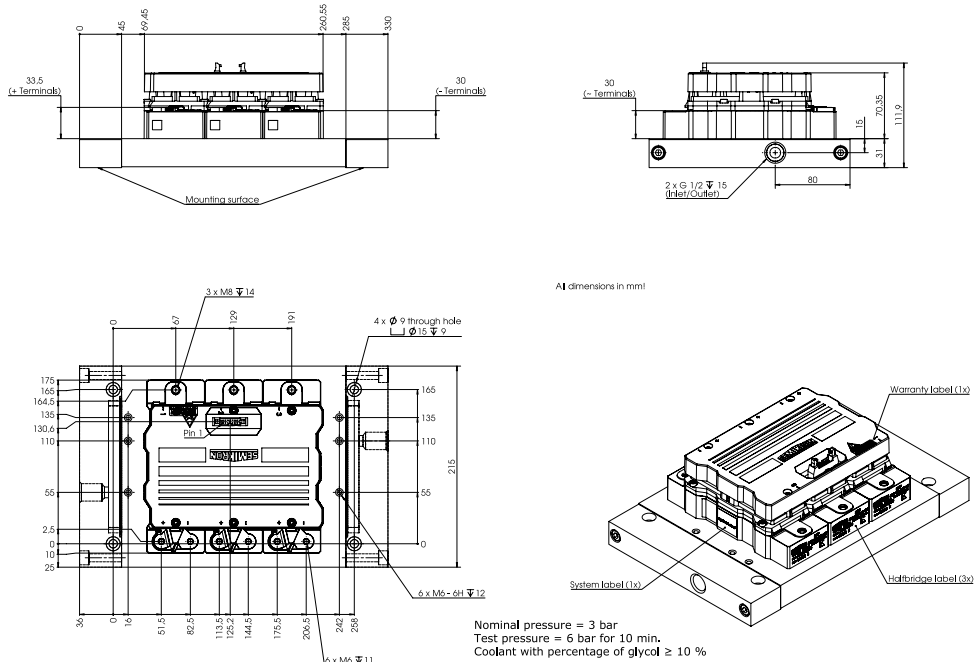
SKiP 3

Case S 33 mounted on P3016 heat sink



Weight without heat sink: 2,4 kg
P3016: 6,2 kg

Case S 33 mounted on liquid cooled heat sink NWK 40



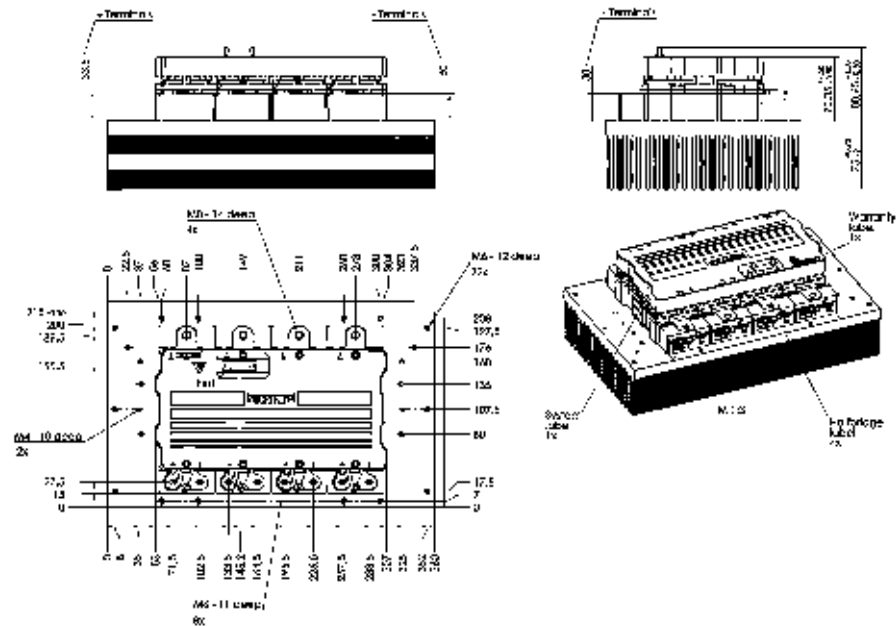
NWK 40: 5,2 kg

Dimensions in mm

IPM / SKiP

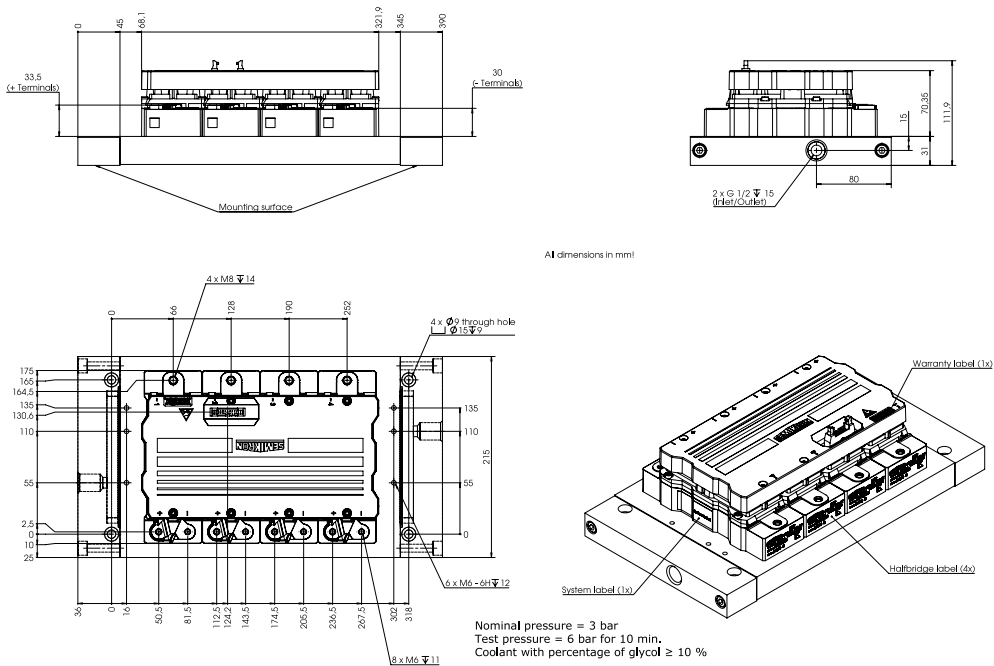
SKiP 3

Case S 43 mounted on P3016 heat sink



Weight without heat sink: 3,1 kg
P3016: 8,0 kg

Case S 43 mounted on liquid cooled heat sink NWK 40



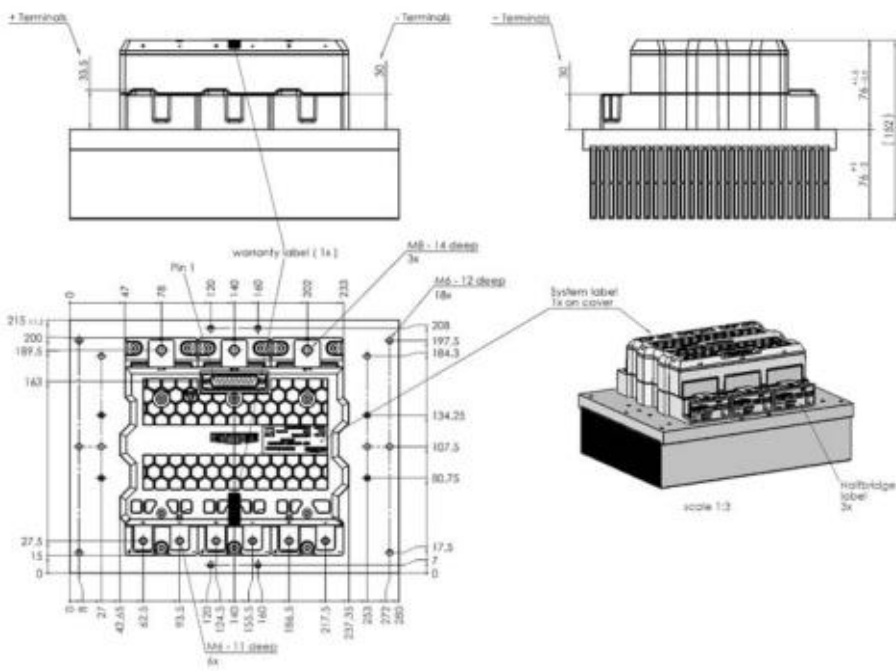
NWK 40: 6,2 kg

Dimensions in mm

IPM / SKiP

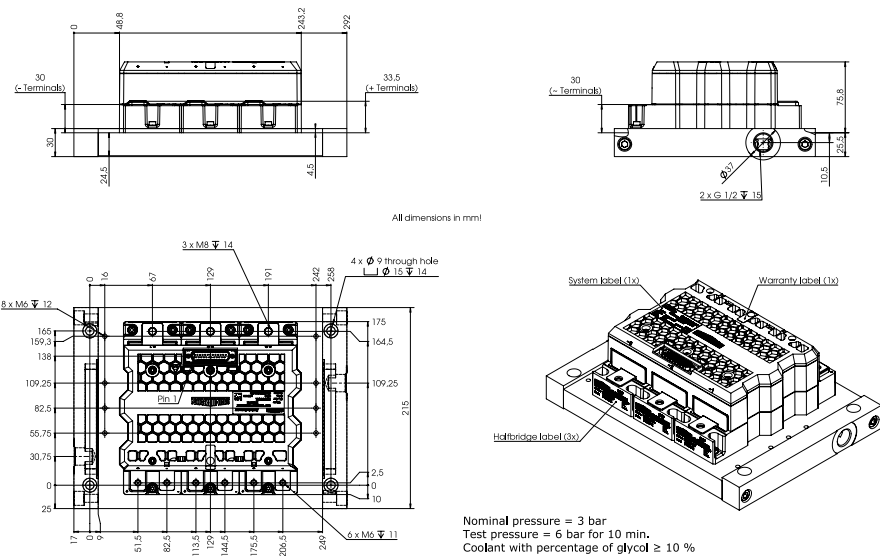
SKiP 4

Case S 34 mounted on P4016 heat sink



Weight without heat sink: 2,48 kg
P4016: 5,9 kg

Case S 34 mounted on liquid cooled heat sink NHC



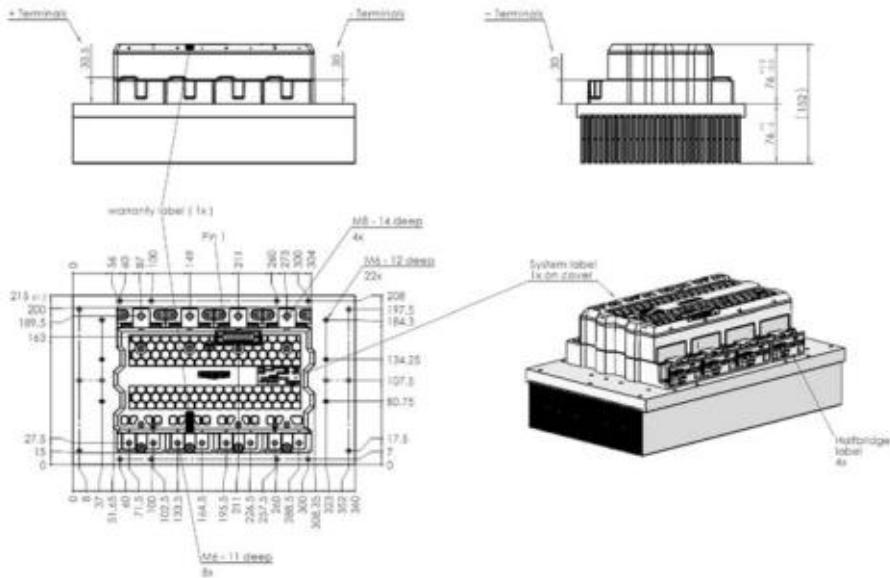
NHC: 3,49 kg

Dimensions in mm

IPM / SKiP

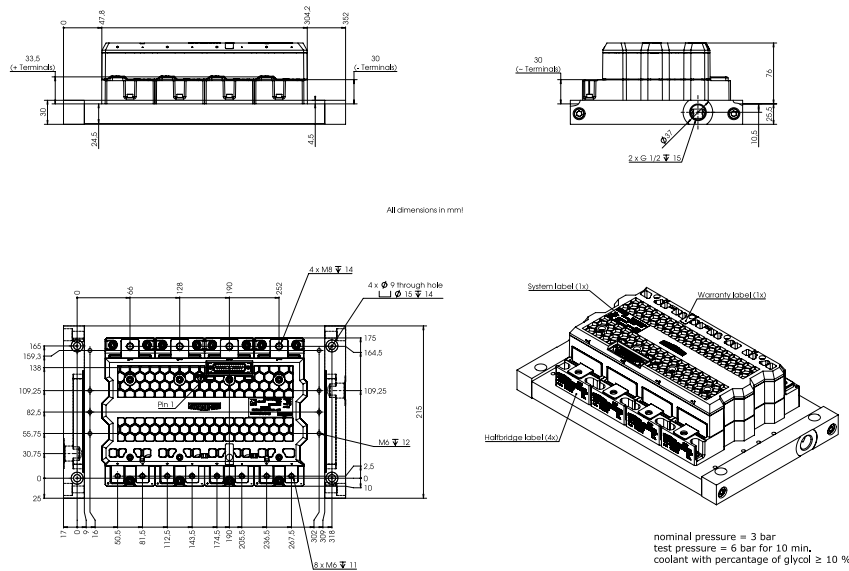
SKiP 4

Case S 44 mounted on P4016 heat sink



Weight without heat sink: 3,22 kg
P4016: 7,55 kg

Case S 44 mounted on liquid cooled heat sink NHC



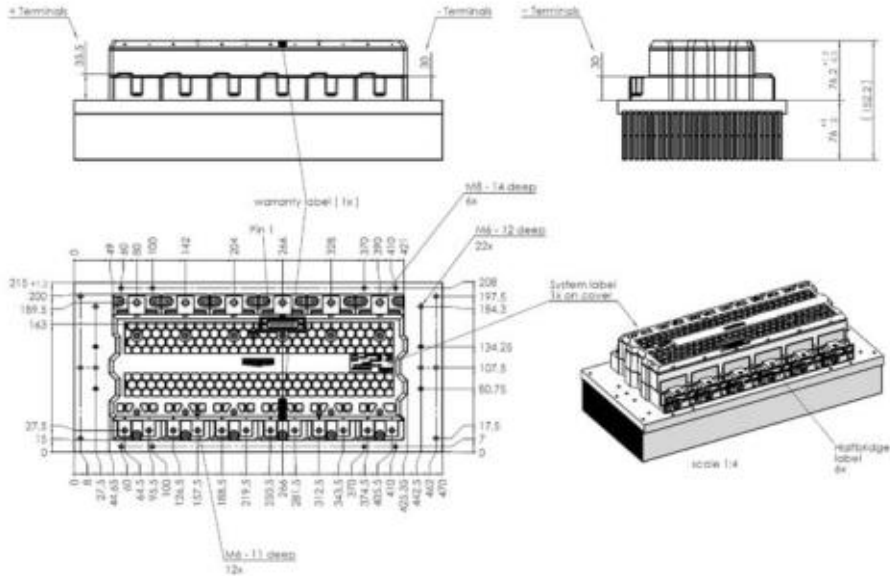
NHC: 4,25 kg

Dimensions in mm

IPM / SKiP

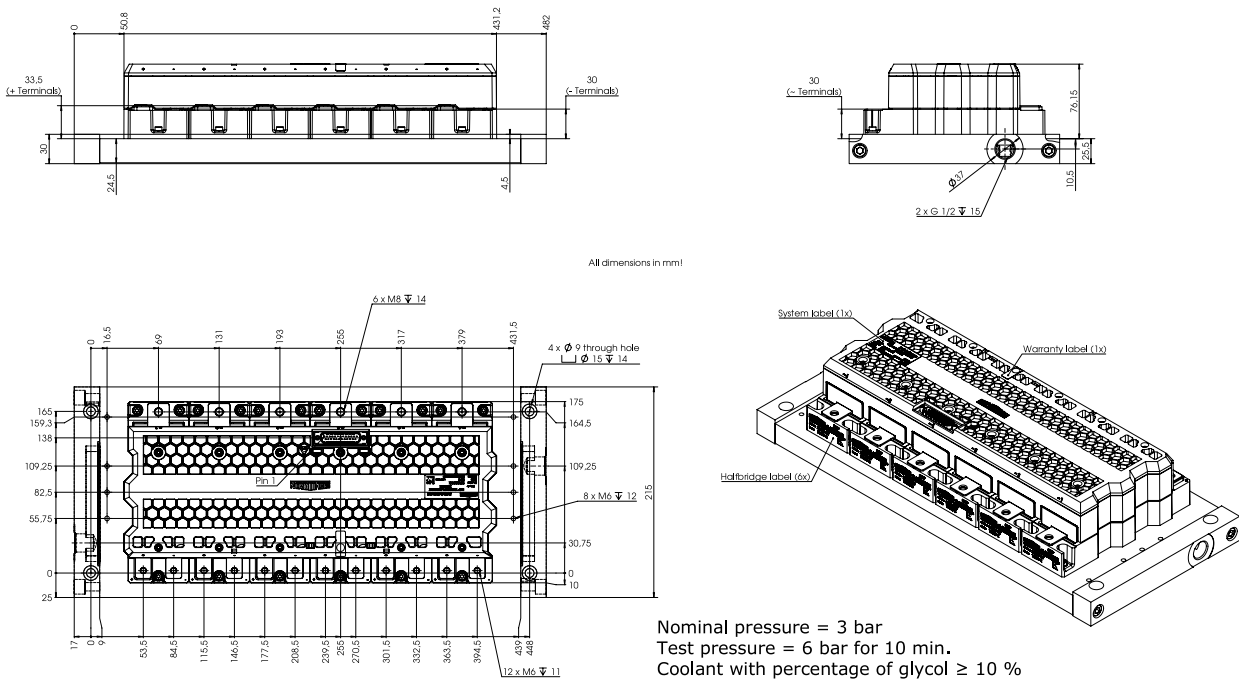
SKiP 4

Case S 64 mounted on P4016 heat sink



Weight without heat sink: 4,84 kg
P4016: 9,9 kg

Case S 64 mounted on liquid cooled heat sink NHC



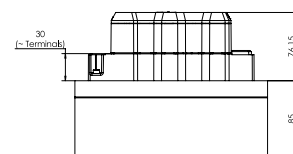
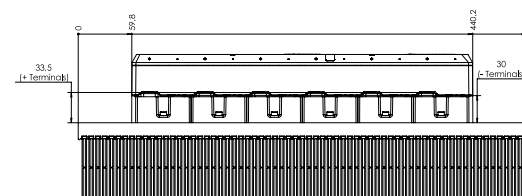
NHC: 5,77 kg

Dimensions in mm

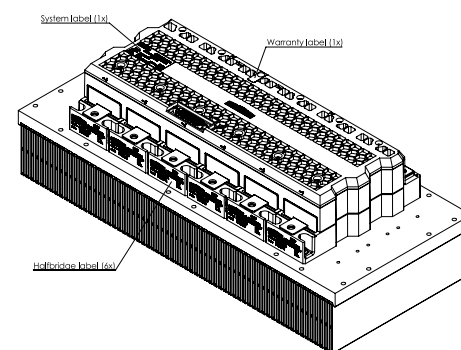
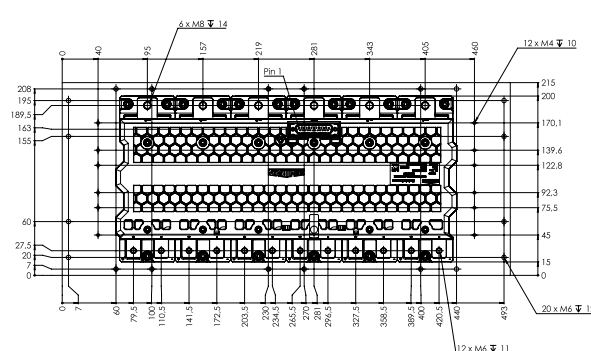
IPM / SKiïP

SKiip 4

Case S 64 mounted on P4016 heat sink with 90° rotated fins



All dimensions in mm



Weight without heat sink:	4,84 kg
P4016:	9,9 kg

Dimensions in mm

IPM / SKiIP Accessories

Type

F-Option SKiiP3

SKiiP3 F-Option	Fiber optic control board for SKiiP3
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F-Option SKiiP4

SKiiP4 F-Option	Fiber optic control board for SKiiP4
SKiiP4 F-Option with D-Sub connector	Fiber optic control board for SKiiP4

SKiiP3 Parallel Board

SKiiP3 Parallel Board 4-fold	Board for paralleling of 4 SKiiP3, F-Option usage possible
SKiiP3 Parallel Board 3-fold	Board for paralleling of 3 SKiiP3, F-Option usage possible
SKiiP3 Parallel Board 2-fold	Board for paralleling of 2 SKiiP3, F-Option usage possible

SKiiP4 Parallel Board

SKiiP4 Parallel Board 4-fold without F-Option	Board for paralleling of 4 SKiiP4, F-Option usage not possible
SKiiP4 Parallel Board 4-fold F-Option	Board for paralleling of 4 SKiiP4, F-Option usage possible
SKiiP4 Parallel Board 3-fold without F-Option	Board for paralleling of 3 SKiiP4, F-Option usage not possible
SKiiP4 Parallel Board 3-fold F-Option	Board for paralleling of 3 SKiiP4, F-Option usage possible
SKiiP4 Parallel Board 2-fold without F-Option	Board for paralleling of 2 SKiiP4, F-Option usage not possible
SKiiP4 Parallel Board 2-fold F-Option	Board for paralleling of 2 SKiiP4, F-Option usage possible

SKiFace Adapter Board

SKiiP4 SKiFace Adapter UZK	Adapter board to connect SKiiP4 to SKiiP3 controller with DC-Link voltage measurement function
SKiiP4 SKiFace Adapter Temp	Adapter board to connect SKiiP4 to SKiiP3 controller with temperatur measurement function