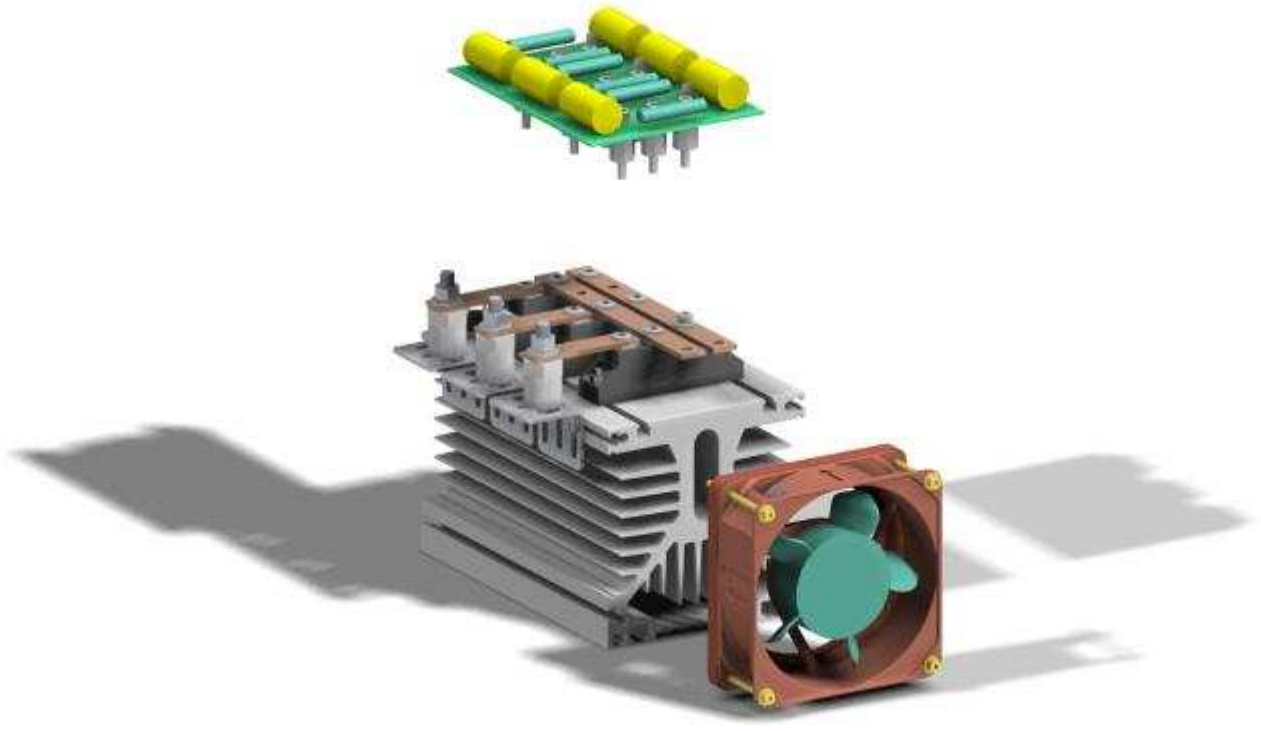
ARCEL
ELECTRONIQUE DE PUISSANCE

DATASHEET FOR POWER ASSEMBLIES

For energy conversion

STANDARD ASSEMBLY EN V1

Module Standard assemblies
Single phase bridges 197A max
Three phase bridges 311A max



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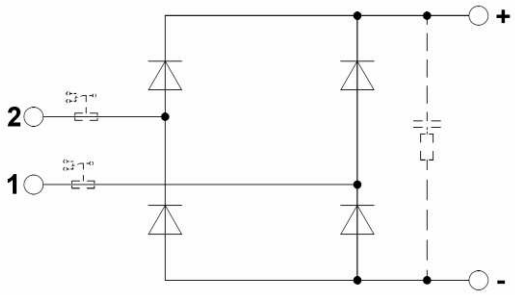
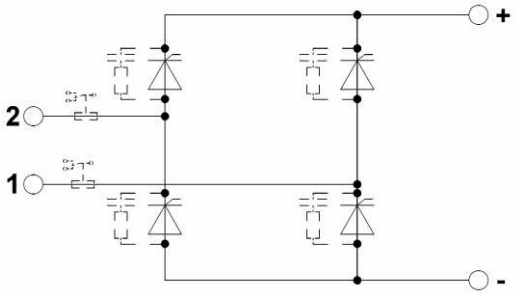
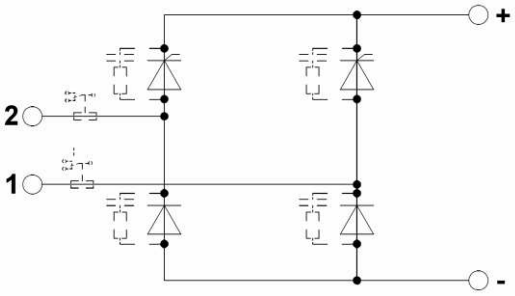
1. DESCRIPTION

This range of standard module assemblies consists of single and three phase bridge rectifiers with diodes, thyristors or mixed..

	Single phase rectifier bridge with diodes (type B2U). The available options are dotted represented.
	Single phase rectifier bridge with thyristors (type B2C). The available options are dotted represented.
	Mixed single phase bridge rectifier (type B2HK). The available options are dotted represented.

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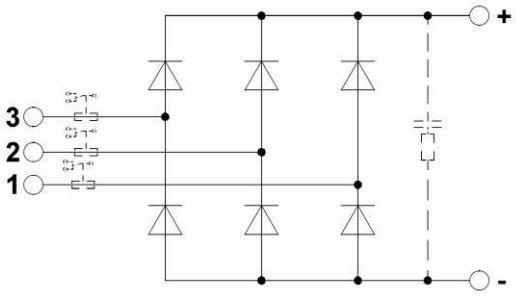
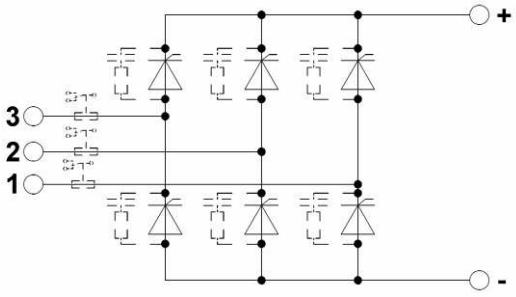
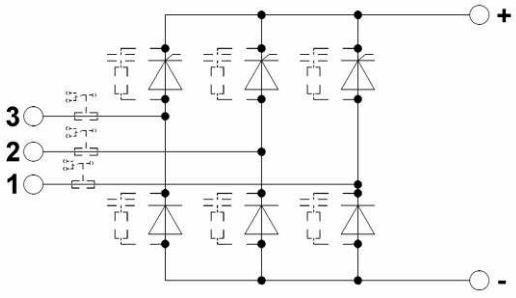
	Three phase bridge rectifier with diodes (type B6U). The available options are dotted represented.
	Three phase bridge rectifier with thyristors (type B6C). The available options are dotted represented.
	Mixed three phase bridge rectifier (type B6HK). The available options are dotted represented.

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2. ELECTRICAL VARIATIONS

2.1. *Single phase bridge rectifier with diodes (B2U)*

Single phase bridge rectifiers with diodes have a rating within a range of current going from 52 to 197 Amperes depending on the type of component, heatsink and cooling mode which are pre-defined by ARCEL.

For forced air cooling, ARCEL standard assemblies include a 230 Vac fan and a thermostat, normally closed and dimensioned according to the stack rating.

Natural convection cooling :

Description	I max 40°C	Input Voltage V AC	Output voltage V DC	Heatsink x L mm	Semi-conductor	Max DC current in A		
						40 °C	50°C	60°C
B2U 52A CN 400V	52	400	540	APV99 x 195	MDD5614	52	48	43
B2U 120A CN 400V	120	400	540	AR125B x 195	MDD9514	120	109	100

Forced air cooling (fan + thermostat) :

Description	I max 40°C	Input Voltage V AC	Output voltage V DC	Heatsink x L mm	Semi-conductor	Max DC current in A		
						40 °C	50°C	60°C
B2U 197A VF 400V	197	400	540	AR125B x 195	MDD9514	197	183	169

For any of the above mentioned assemblies, the following options are possible :

- RC circuit to the output terminals of each component
- Fuses for each phase (please contact ARCEL for dimensional design)

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2.2. Single phase bridge rectifier with thyristors (B2C)

Single phase bridge rectifiers with thyristors have a rating within a range of current going from 37 to 155 Amperes depending on the type of component, heatsink and cooling mode which are pre-defined by ARCEL.

For forced air cooling, ARCEL standard assemblies include a 230 Vac fan and a thermostat, normally closed and dimensioned according to the stack rating.

Natural convection cooling :

						Max DC current in A		
Description	**I max 40°C**	**Input Voltage V AC**	**Output voltage V DC**	**Heatsink x L mm**	**Semi-conductor**	**40 °C**	**50°C**	**60°C**
B2C 37A CN 400V	37	400	540	APV99 x 195	MCC5614	37	32	28
B2C 88A CN 400V	88	400	540	AR125B x 195	MCC9514	88	77	66

Forced air cooling (fan + thermostat) :

						Max DC current in A		
Description	**I max 40°C**	**Input Voltage V AC**	**Output voltage V DC**	**Heatsink x L mm**	**Semi-conductor**	**40 °C**	**50°C**	**60°C**
B2C 155A VF 400V	155	400	540	AR125B x 195	MCC9514	155	141	126

For any of the above mentioned assemblies, the following options are possible :

- RC circuit to the output terminals of each component
- Fuses for each phase (please contact ARCEL for dimensional design)

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2.3. *Mixed single phase bridge rectifier (B2HK)*

Mixed single phase bridge rectifiers have a rating within a range of current going from 37 to 155 Amperes depending on the type of component, heatsink and cooling mode which are pre-defined by ARCEL.

For forced air cooling, ARCEL standard assemblies include a 230 Vac fan and a thermostat, normally closed and dimensioned according to the stack rating.

Natural convection cooling :

						Max DC current in A		
Description	**I max 40°C**	**Input Voltage V AC**	**Output voltage V DC**	**Heatsink x L mm**	**Semi-conductor**	**40 °C**	**50°C**	**60°C**
B2HK 37A CN 400V	37	400	540	APV99 x 195	MCD5614	37	32	28
B2HK 88A CN 400V	88	400	540	AR125B x 195	MCD9514	88	77	66

Forced air cooling (fan + thermostat) :

						Max DC current in A		
Description	**I max 40°C**	**Input Voltage V AC**	**Output voltage V DC**	**Heatsink x L mm**	**Semi-conductor**	**40 °C**	**50°C**	**60°C**
B2HK 155A VF 400V	155	400	540	AR125B x 195	MCD9514	155	141	126

For any of the above mentioned assemblies, the following options are possible :

- RC circuit to the output terminals of each component
- Fuses for each phase (please contact ARCEL for dimensional design)

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2.4. Three phase bridge rectifier with diodes (B6U)

Three phase bridge rectifiers with diodes have a rating within a range of current going from 56 to 311 Amperes depending on the type of component, heatsink and cooling mode which are pre-defined by ARCEL.

For forced air cooling, ARCEL standard assemblies include a 230 Vac fan and a thermostat, normally closed and dimensioned according to the stack rating.

Natural convection cooling :

						Max DC current in A		
Description	**I max 40°C**	**Input Voltage V AC**	**Output voltage V DC**	**Heatsink x L mm**	**Semi-conductor**	**40 °C**	**50°C**	**60°C**
B6U 56A CN 400V	56	400	540	APV99 x 195	MDD5614	56	50	44
B6U 107A CN 400V	107	400	540	AR125B x 195	MDD5614	107	97	90
B6U 133A CN 400V	133	400	540	AR125B x 195	MDD9514	133	122	110
B6U 158A CN 400V	158	400	540	AR125B x 195	MDD17214	158	1145	128

Forced air cooling (ventilateur + thermostat) :

						Max DC current in A		
Description	**I max 40°C**	**Input Voltage V AC**	**Output voltage V DC**	**Heatsink x L mm**	**Semi-conductor**	**40 °C**	**50°C**	**60°C**
B6U 175A VF 400V	175	400	540	AR125B x 195	MDD5614	175	163	151
B6U 233A VF 400V	233	400	540	AR125B x 195	MDD9514	233	217	201
B6U 311A VF 400V	311	400	540	AR125B x 195	MDD17214	311	288	264

For any of the above mentioned assemblies, the following options are possible :

- RC circuit to the output terminals of each component
- Fuses for each phase (please contact ARCEL for dimensional design)

2.5. Three phase bridge rectifier with thyristors (B6C)

Three phase bridge rectifiers with thyristors have a rating within a range of current going from 39 to 239 Amperes depending on the type of component, heatsink and cooling mode which are pre-defined by ARCEL.

For forced air cooling, ARCEL standard assemblies include a 230 Vac fan and a thermostat, normally closed and dimensioned according to the stack rating.

Natural convection cooling :

						Max DC current in A		
Description	**I max 40°C**	**Input Voltage V AC**	**Output voltage V DC**	**Heatsink x L mm**	**Semi-conductor**	**40 °C**	**50°C**	**60°C**
B6C 39A CN 400V	39	400	540	APV99 x 195	MCC5614	39	34	30
B6C 79A CN 400V	79	400	540	AR125B x 195	MCC5614	79	72	63
B6C 98A CN 400V	98	400	540	AR125B x 195	MCC9514	98	87	76
B6C 111A CN 400V	111	400	540	AR125B x 195	MCC16214	111	98	84

Forced air cooling (fan + thermostat) :

						Max DC current in A		
Description	**I max 40°C**	**Input Voltage V AC**	**Output voltage V DC**	**Heatsink x L mm**	**Semi-conductor**	**40 °C**	**50°C**	**60°C**
B6C 137A VF 400V	137	400	540	AR125B x 195	MCC5614	137	125	113
B6C 183A VF 400V	183	400	540	AR125B x 195	MCC9514	183	166	149
B6C 239A VF 400V	239	400	540	AR125B x 195	MCC16214	239	216	192

For any of the above mentioned assemblies, the following options are possible :

- RC circuit to the output terminals of each component
- Fuses for each phase (please contact ARCEL for dimensional design)

2.6. Mixed three phase bridge rectifier (B6HK)

Mixed three phase bridge rectifiers have a rating within a range of current going from 39 to 239 Amperes depending on the type of component, heatsink and cooling mode which are pre-defined by ARCEL.

For forced air cooling, ARCEL standard assemblies include a 230 Vac fan and a thermostat, normally closed and dimensioned according to the stack rating.

Natural convection cooling :

						Max DC current in A		
Description	**I max 40°C**	**Input Voltage V AC**	**Output voltage V DC**	**Heatsink x L mm**	**Semi-conductor**	**40 °C**	**50°C**	**60°C**
B6HK 39A CN 400V	39	400	540	APV99 x 195	MCD5614	39	34	30
B6HK 79A CN 400V	79	400	540	AR125B x 195	MCD5614	79	72	63
B6HK 98A CN 400V	98	400	540	AR125B x 195	MCD9514	98	87	76
B6HK 111A CN 400V	111	400	540	AR125B x 195	MCD16214	111	98	84

Forced air cooling (fan + thermostat) :

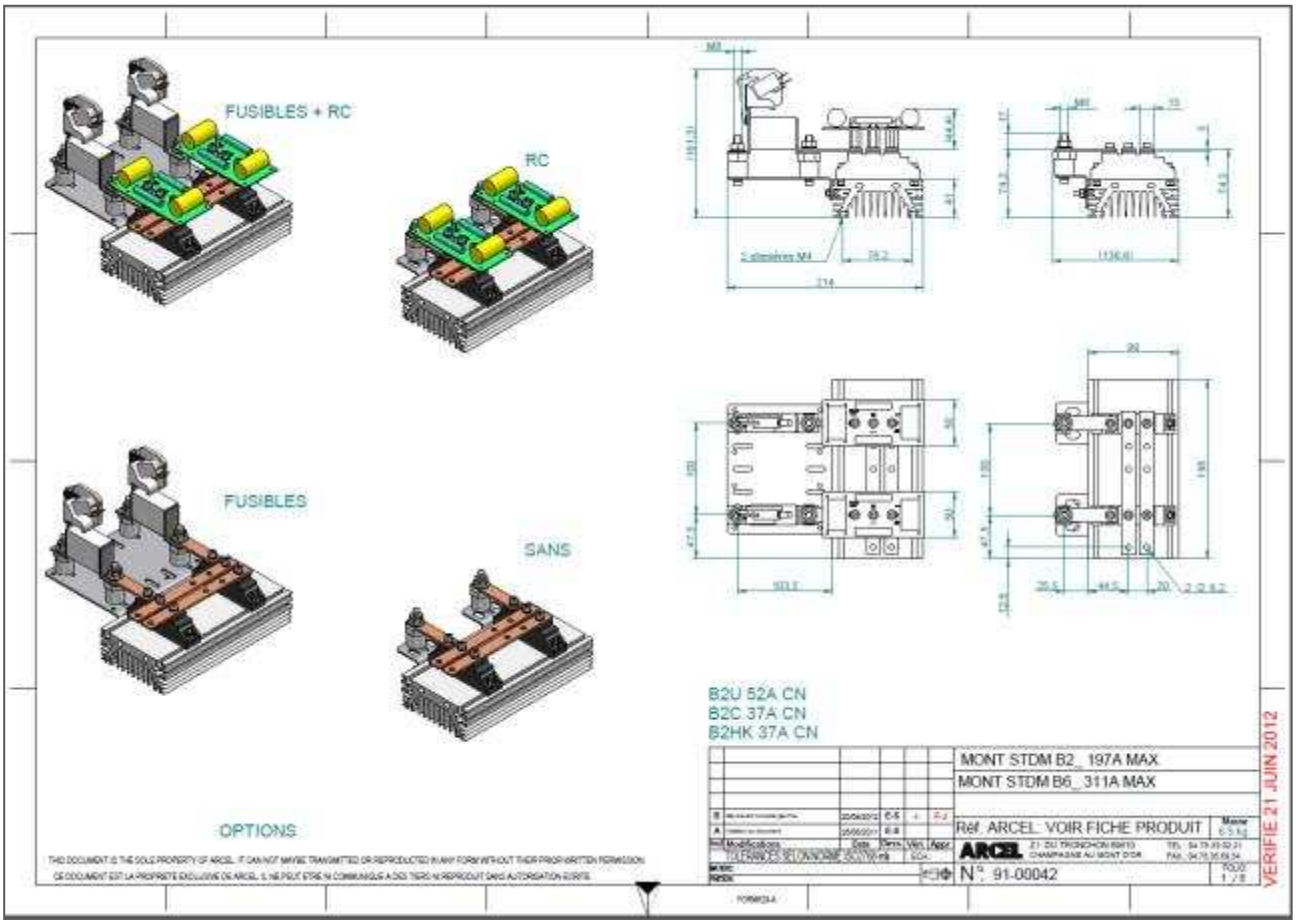
						Max DC current in A		
Description	**I max 40°C**	**Input Voltage V AC**	**Output voltage V DC**	**Heatsink x L mm**	**Semi-conductor**	**40 °C**	**50°C**	**60°C**
B6HK 137A VF 400V	137	400	540	AR125B x 195	MCD5614	137	125	113
B6HK 183A VF 400V	183	400	540	AR125B x 195	MCD9514	183	166	149
B6HK 239A VF 400V	239	400	540	AR125B x 195	MCD16214	239	216	192

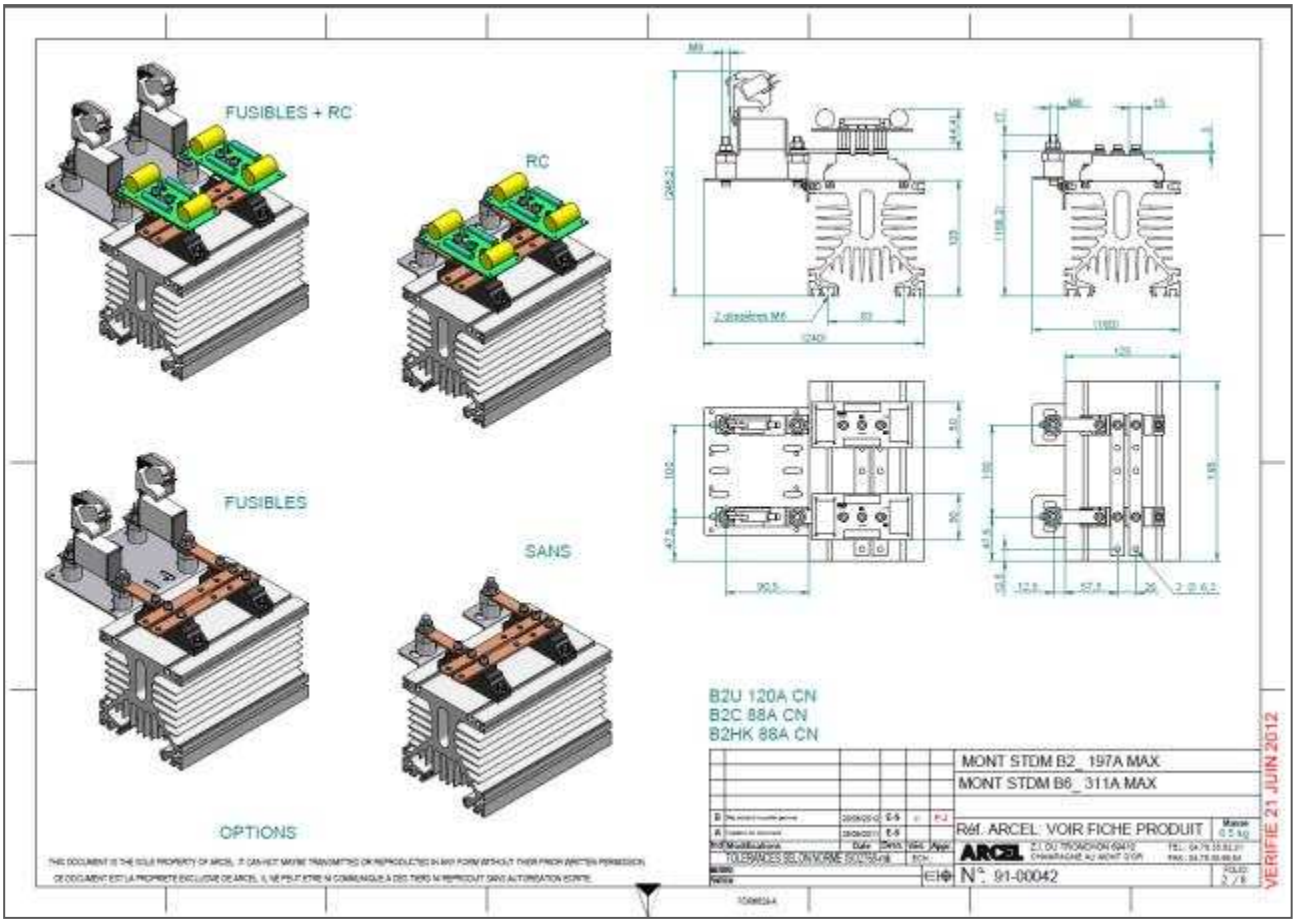
For any of the above mentioned assemblies, the following options are possible :

- RC circuit to the output terminals of each component
- Fuses for each phase (please contact ARCEL for dimensional design)

3. MECHANICAL SPECIFICATIONS

3.1. Overall dimensions





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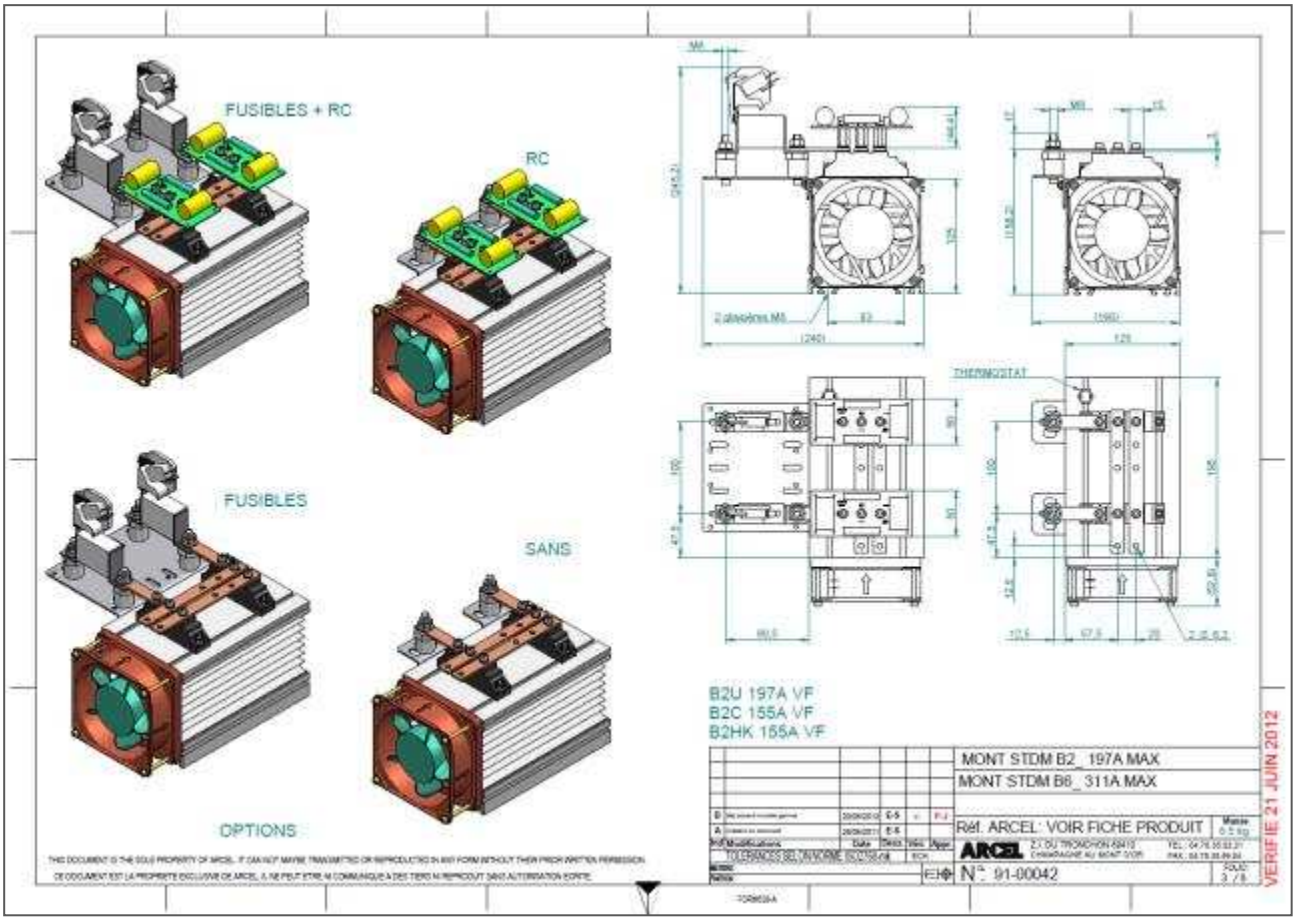

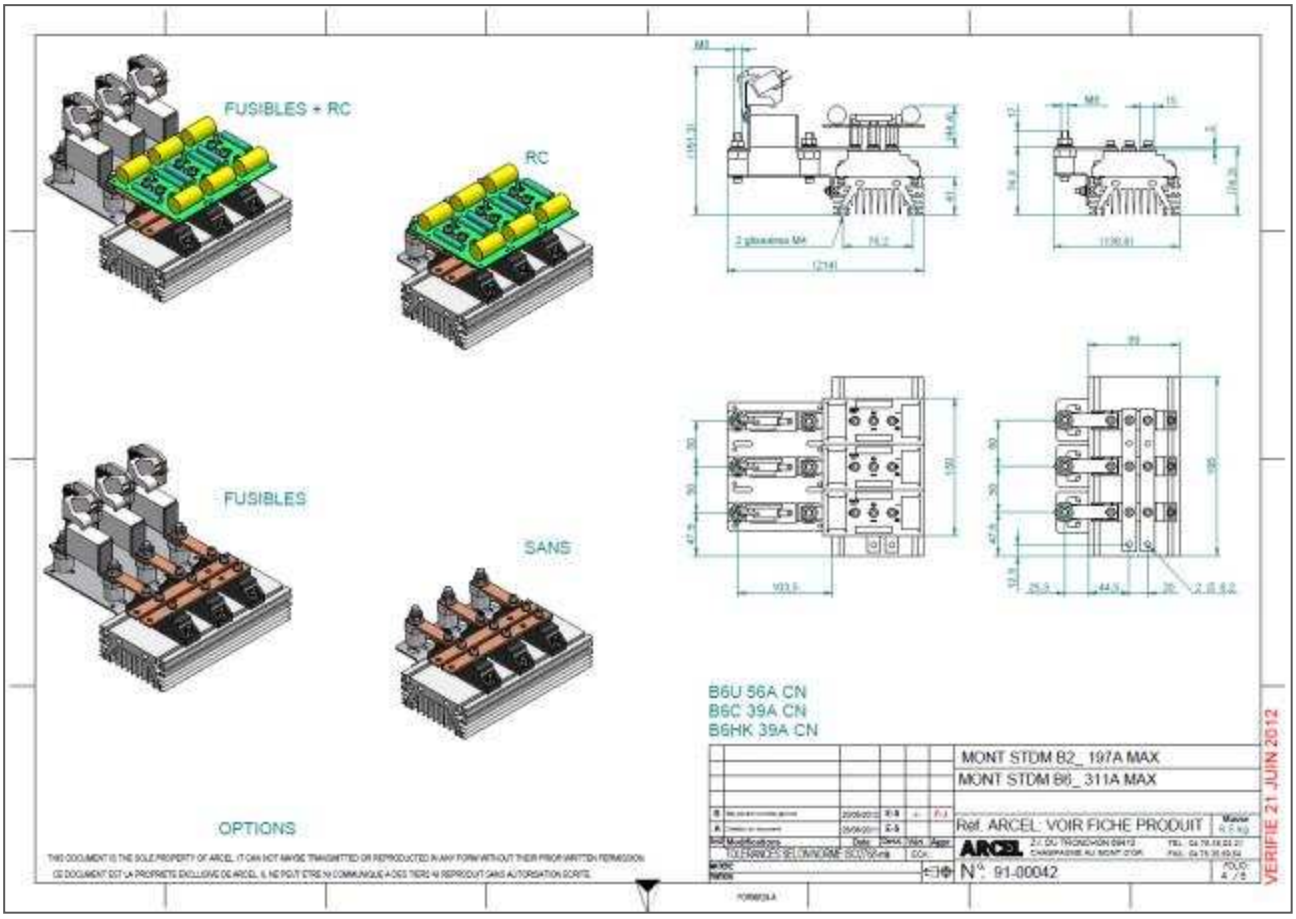

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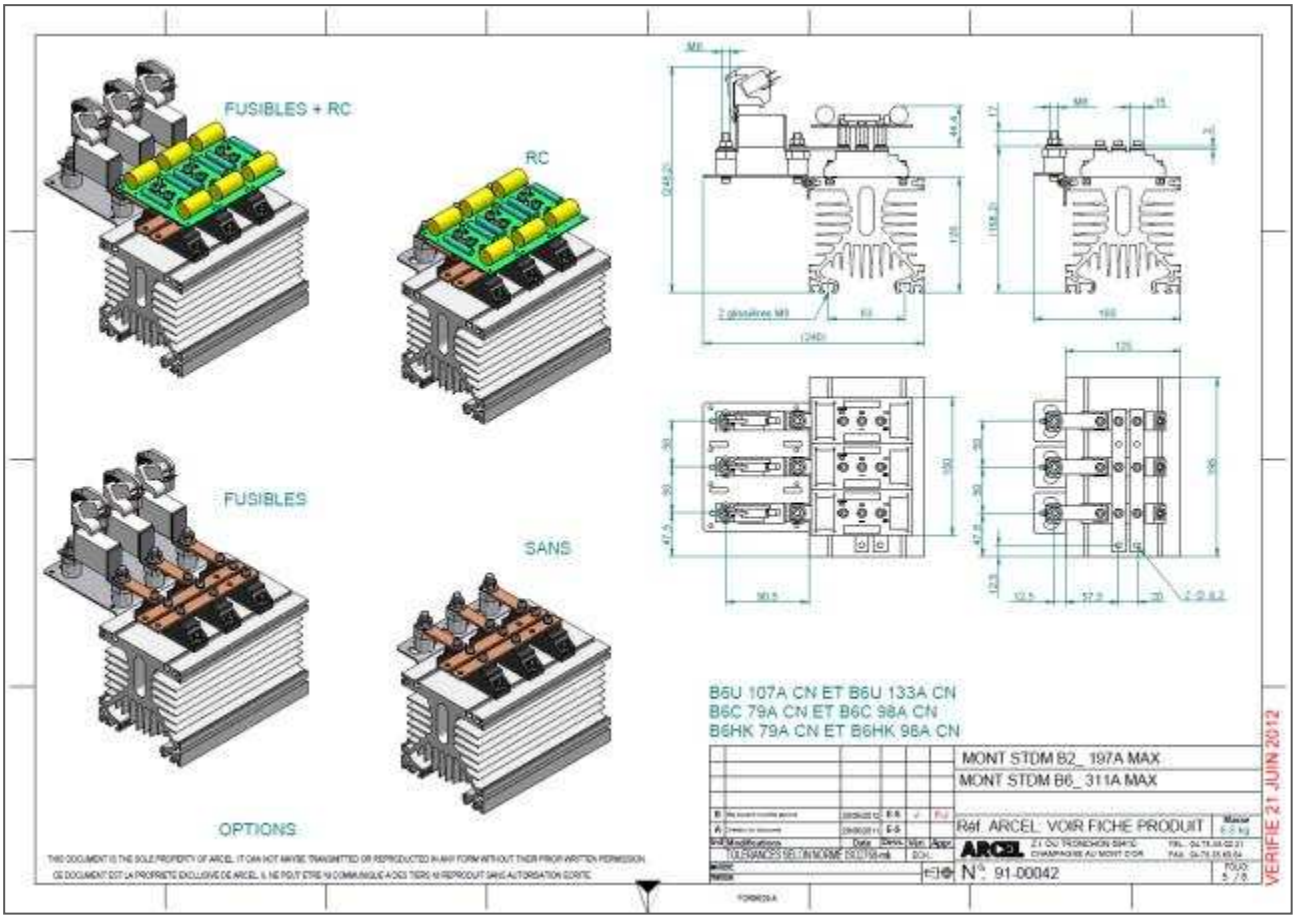

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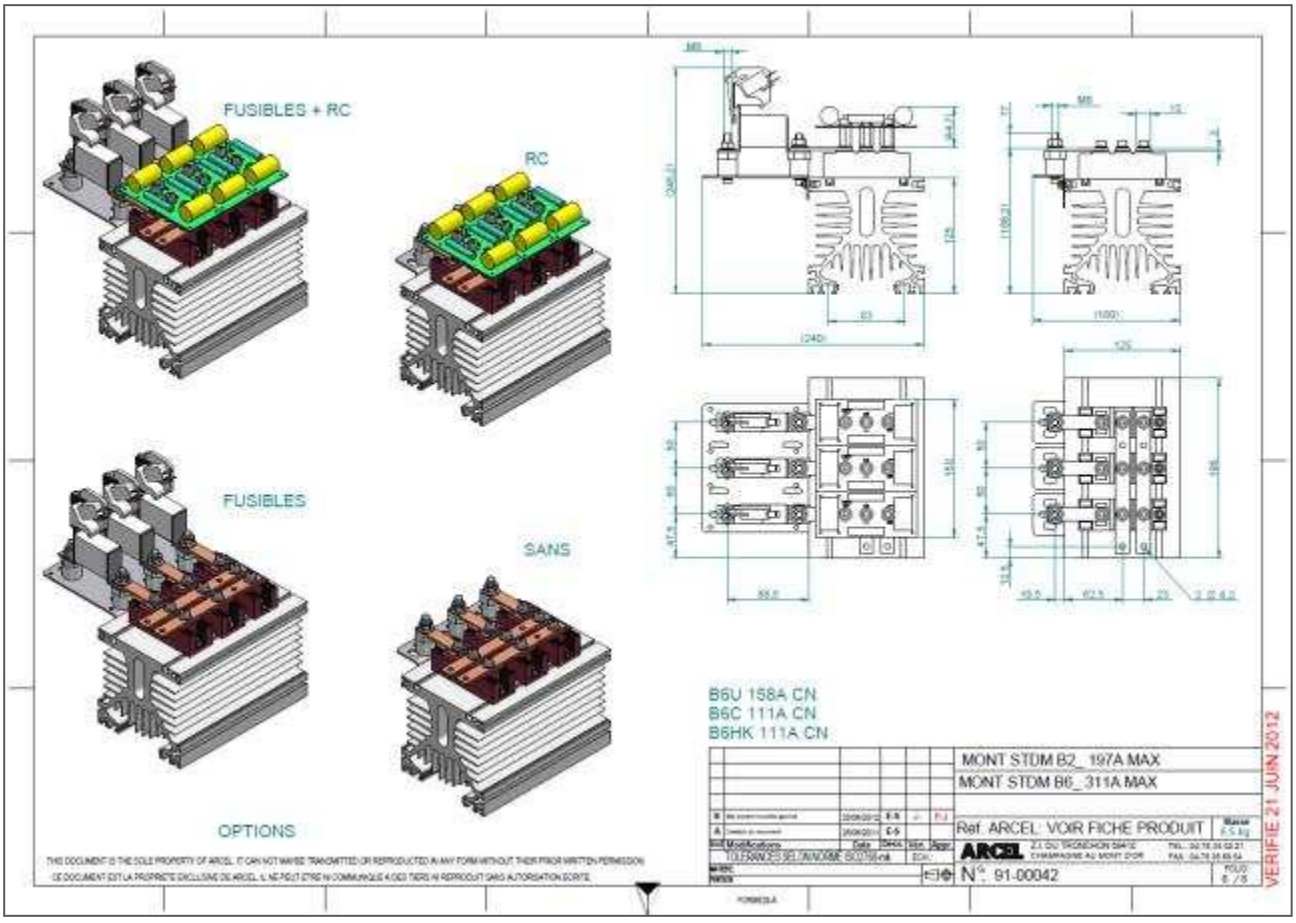

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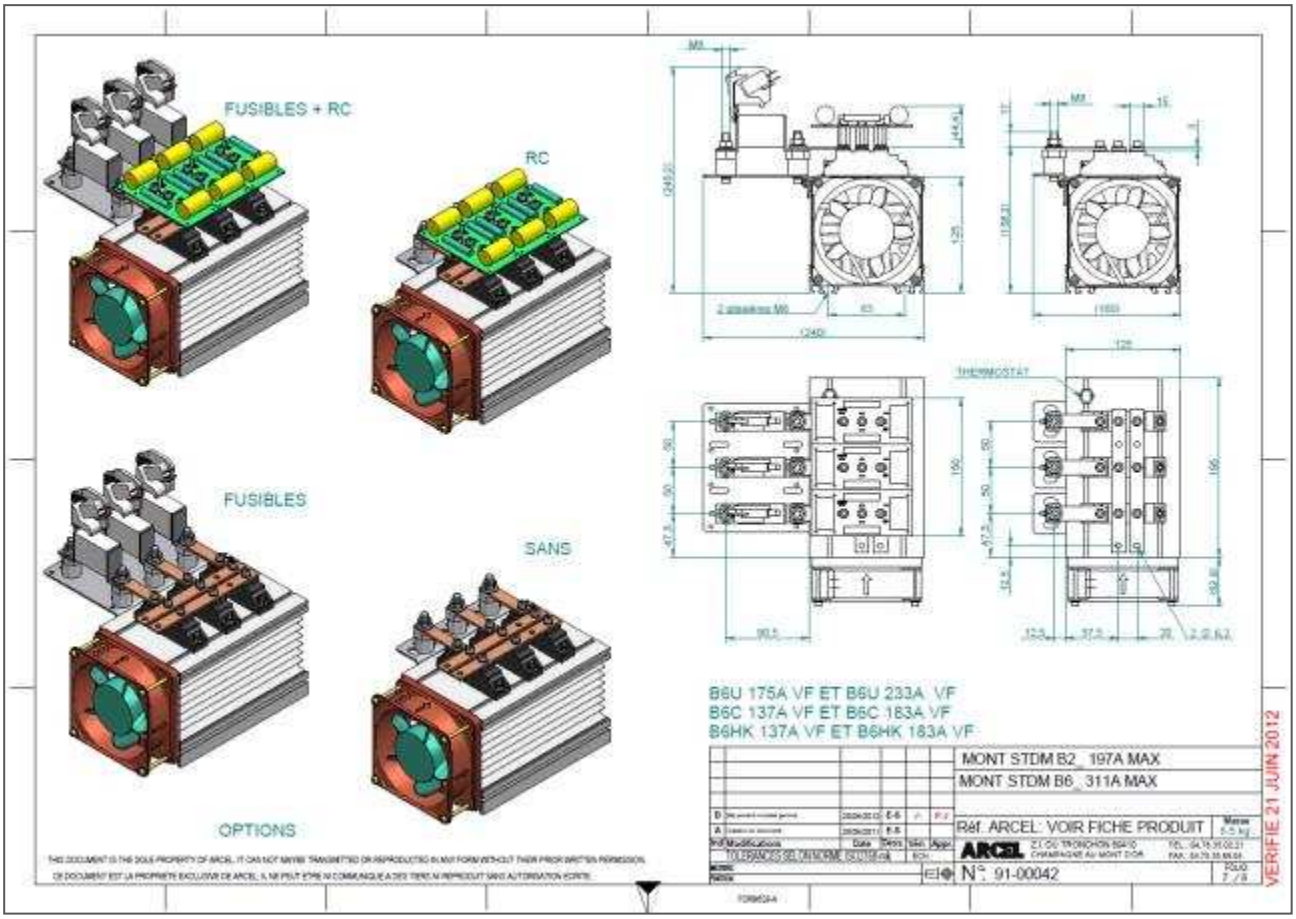

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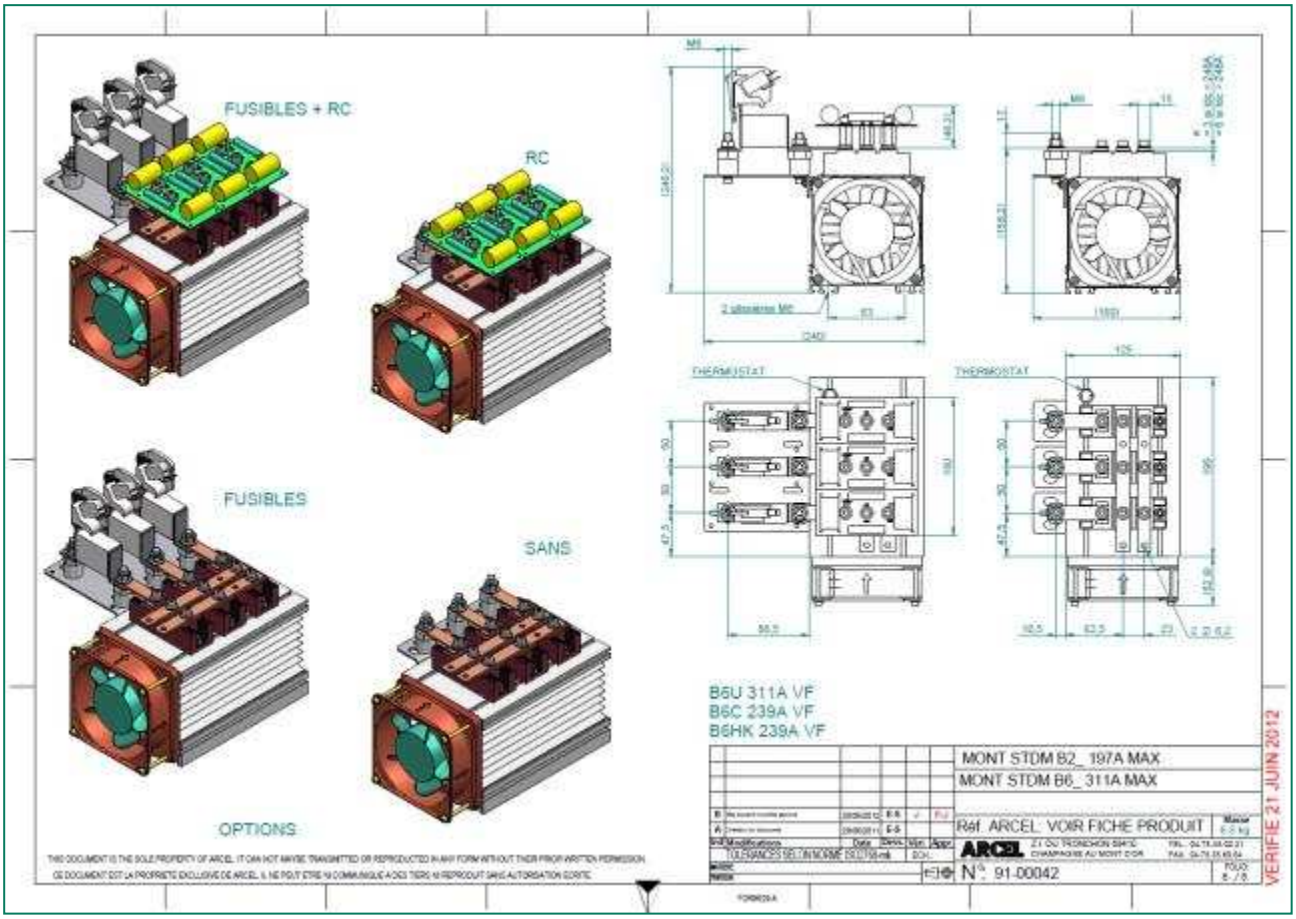

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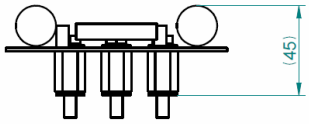
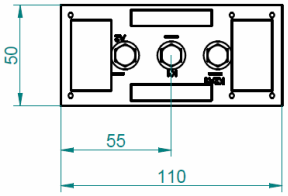
3.2. Overall dimensions of options

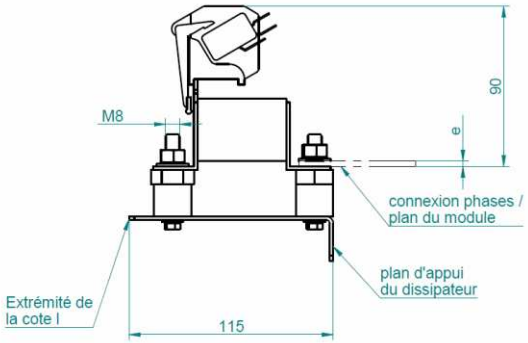
3.2.1. RC option

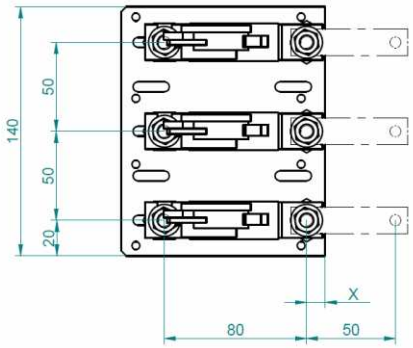




- The RC option is mounted directly above the semiconductors, or on the direct output for diode assemblies.
- Bridge rectifiers are delivered with mounted options.

3.2.2. Fuse option





- If you chose this option, the fuses are mounted instead of the 3 mounting brackets provided on the assembly with no option.
- For the dimensional design of the fuses, please contact ARCEL.
- Bridge rectifiers are delivered with mounted

4. ARCEL Part numbers

Description	No option	With fuse option	With fuse and RC option	With RC option
B2C 155A VF 400V	027328			
		027329		
			027330	
				027331
B2C 37A CN 400V	027320			
		027321		
			027322	
				027323
B2C 88A CN 400V	027324			
		027325		
			027326	
				027327
B2HK 155A VF 400V	027340			
		027341		
			027342	
				027343
B2HK 37A CN 400V	027332			
		027333		
			027334	
				027335
B2HK 88A CN 400V	027336			
		027337		
			027338	
				027339

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Description	No option	With fuse option	With fuse and RC option	With RC option
B2U 120A CN 400V	027348			
		027349		
			027350	
				027351
B2U 197A VF 400V	027352			
		027353		
			027354	
				027355
B2U 52A CN 400V	027344			
		027345		
			027346	
				027347
B6C 111A CN 400V	027368			
		027369		
			027370	
				027371
B6C 137A VF 400V	027372			
		027373		
			027374	
				027375
B6C 183A VF 400V	027376			
		027377		
			027378	
				027379
B6C 239A VF 400V	027380			
		027381		
			027382	
				027383

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Description	No option	With fuse option	With fuse and RC option	With RC option
B6C 39A CN 400V	027356			
		027357		
			027358	
				027359
B6C 79A CN 400V	027360			
		027361		
			027362	
				027363
B6C 98A CN 400V	027364			
		027365		
			027366	
				027367
B6HK 111A CN 400V	027396			
		027397		
			027398	
				027399
B6HK 137A VF 400V	027400			
		027401		
			027402	
				027403
B6HK 183A VF 400V	027404			
		027405		
				027406
			027407	
B6HK 239A VF 400V	027408			
		027409		
			027410	
				027411

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Description	No option	With fuse option	With fuse and RC option	With RC option
B6HK 39A CN 400V	027384			
		027385		
			027386	
				027387
B6HK 79A CN 400V	027388			
		027389		
			027390	
				027391
B6HK 98A CN 400V	027392			
			027393	
				027394
		027395		
B6U 107A CN 400V	027416			
		027417		
			027418	
				027419
B6U 133A CN 400V	027420			
		027421		
			027422	
				027423
B6U 158A CN 400V	027424			
		027425		
			027426	
				027427
B6U 175A VF 400V	027428			
		027429		
			027430	
				027431

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Description	No option	With fuse option	With fuse and RC option	With RC option
B6U 233A VF 400V	027432			
		027433		
			027434	
				027435
B6U 311A VF 400V	027436			
		027437		
			027438	
				027439
B6U 56A CN 400V	027412			
		027413		
			027414	
				027415

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