

Product Change Notification

product group: SEMiX

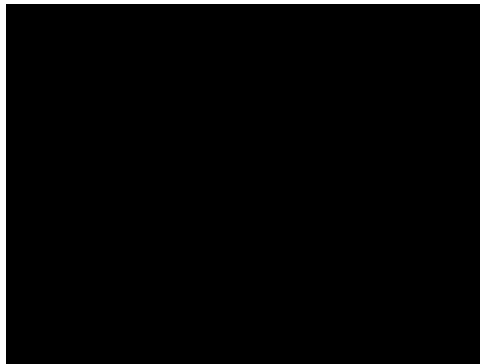
no.: 09-039 Change of SEMiX housing

Rev.: 00

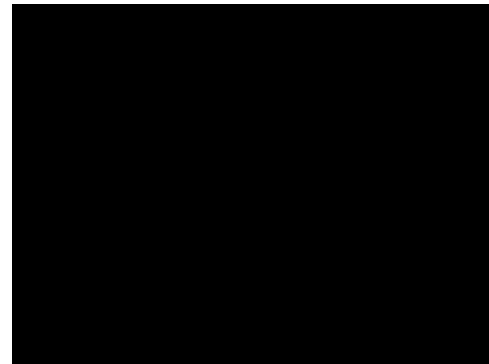
subject of change: change of SEMiX housing, namely form of nuts at the main terminals, housing material, one-piece housing, mounting domes for driver assembly and spring slots

SEMIKRON product type: all SEMiX modules.
which changes are applied on which product type can be seen in the table below

description of change: 1. hexagonal nuts at the main terminals replace square nuts



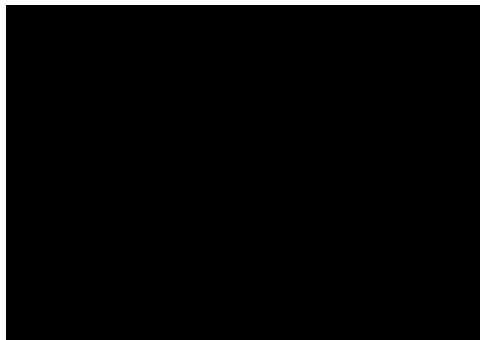
present and new version



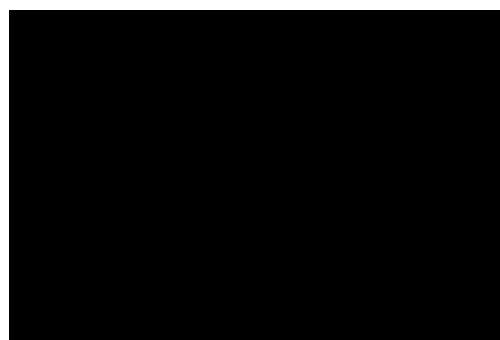
after the change

2. the housing material is changed from Makrolon 9425 (polycarbonate + 20% glass fibre) to Crastin SK645FR (polybutylenterephthalat + 30% glass fibre)

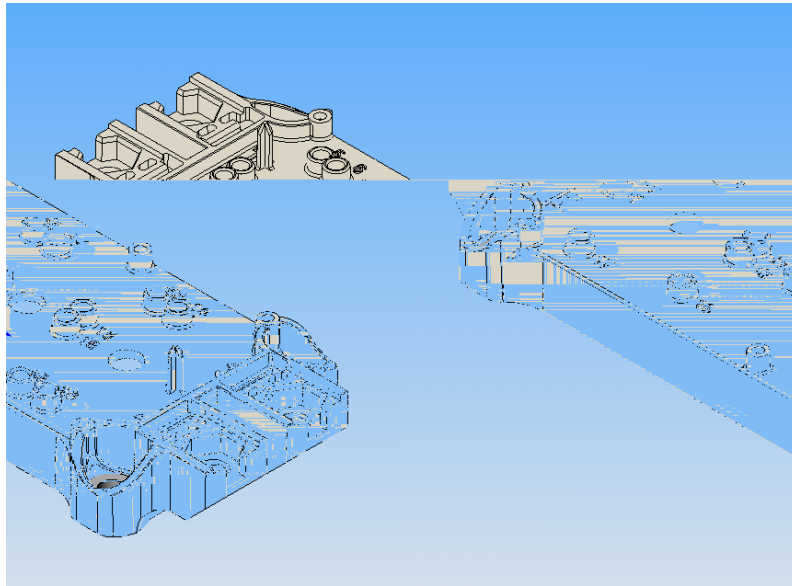
3. a one-piece housing substitutes the two parts case plus cover



old case



old cover

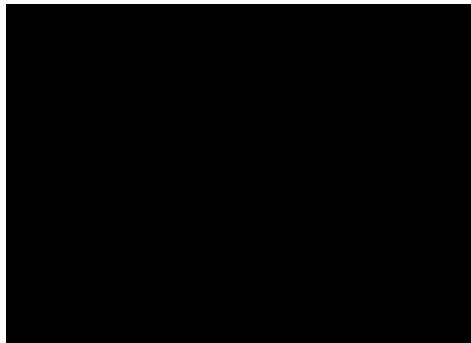


new one-piece housing

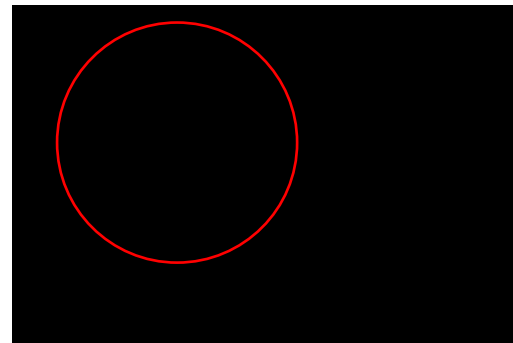
4. optimization of PCB mounting domes

SEMiX33c:

The outer diameter of all mounting domes is extended from 4.5mm to 5.0mm. Additionally 2-3 ribs extend the supporting area for the PCB with a radius of 3mm maximum from hole centre.

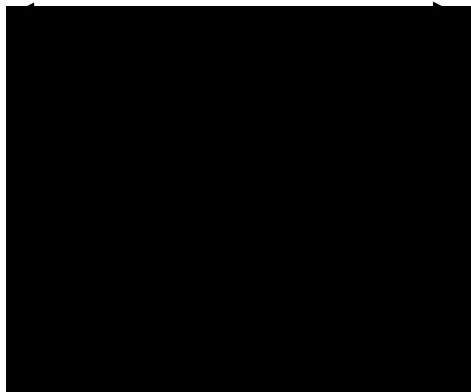


old version



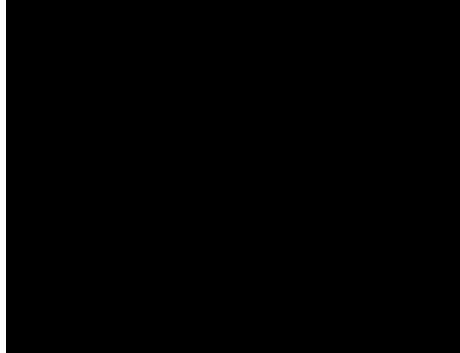
new version

Due to the enhancement of the outer mounting domes the module length raises from 162mm up to 163mm.

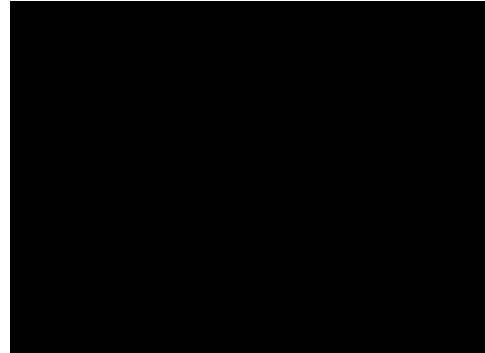


other SEMiX types:

The outer diameter of all mounting domes is extended from 4.5mm to 5.0mm.
Additionally 3-4 ribs extend the supporting area for the PCB with a radius of 6.2mm maximum from hole centre.

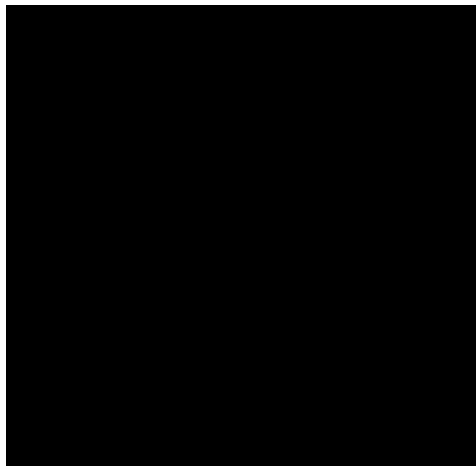


old version

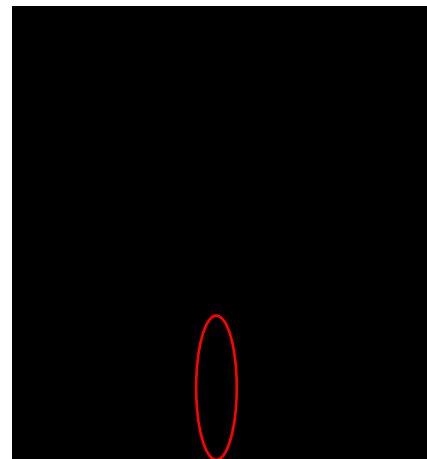


new version

5. deepening of spring slots G21, G22 and G23 from 4mm to 4.5mm.



old version



new version

Which changes are applied on which product type can be seen in the following table:

item numer	type designation	hexagonal nuts	Crastin	one-piece	mounting domes	spring slots
27100001	SEMiX453GD12E4c	X			X	X
27100002	SEMiX303GD12E4c	X			X	X
27100003	SEMiX302GB12E4s	X	X	X	X	
27100004	SEMiX302GAL12E4s	X	X	X	X	
27100005	SEMiX302GAR12E4s	X	X	X	X	
27100006	SEMiX202GB12E4s	X	X	X	X	
27100007	SEMiX453GB12E4s	X	X	X	X	
27100008	SEMiX453GAR12E4s	X	X	X	X	
27100009	SEMiX303GB12E4s	X	X	X	X	
27100010	SEMiX453GAL12E4s	X	X	X	X	
27100011	SEMiX604GB12E4s	X			X	
27100012	SEMiX404GB12E4s	X			X	
27100013	SEMiX71GD12E4s	X			X	
27100014	SEMiX151GD12E4s	X			X	
27100015	SEMiX101GD12E4s	X			X	
27100016	SEMiX151GAL12E4s	X	X		X	
27100017	SEMiX151GAR12E4s	X	X		X	
27100018	SEMiX223GD12E4c	X			X	X
27100020	SEMiX291D16s	X			X	
27110006	SEMiX703GD126HDc	X			X	X
27110016	SEMiX503GD126HDc	X			X	X
27110026	SEMiX353GD126HDc	X			X	X
27110036	SEMiX253GD126HDc	X			X	X
27110506	SEMiX303GD12T4c	X			X	X
27115016	SEMiX453GD12T4c	X			X	X
27116006	SEMiX653GD176HDc	X			X	X
27116016	SEMiX453GD176HDc	X			X	X
27116026	SEMiX353GD176HDc	X			X	X
27116056	SEMiX653GD176v1	X			X	X
27116066	SEMiX353GD176v1	X			X	X
27116076	SEMiX453GD176v1	X			X	X
27120002	SEMiX302GB126HD	X				
27120012	SEMiX252GB126HD	X				
27120041	SEMiX452GAL126HD	X				
27120042	SEMiX452GB126HD	X				
27120043	SEMiX452GAR126HD	X				
27123002	SEMiX352GB128D	X				
27123012	SEMiX302GB128D	X				
27123022	SEMiX202GB128D	X				
27126012	SEMiX302GB176HD	X				
27128002	SEMiX202GB066HD	X				
27128012	SEMiX302GB066HD	X				
27128022	SEMiX402GB066HD	X				
27130001	SEMiX703GAL126HD	X				X
27130002	SEMiX703GB126HD	X				X
27130003	SEMiX703GAR126HD	X				X
27130012	SEMiX503GB126HD	X				X
27130022	SEMiX353GB126HD	X				X
27133001	SEMiX553GAL128D	X				X

item numer	type designation	hexagonal nuts	Crastin	one-piece	mounting domes	spring slots
27133002	SEMiX553GB128D	X				X
27133012	SEMiX403GB128D	X				X
27133026	SEMiX553GD128Dc	X			X	X
27133036	SEMiX403GD128Dc	X			X	X
27136001	SEMiX653GAL176HD	X				X
27136002	SEMiX653GB176HD	X				X
27136012	SEMiX453GB176HD	X				X
27138011	SEMiX603GAL066HD	X				X
27138012	SEMiX603GB066HD	X				X
27138013	SEMiX603GAR066HD	X				X
27140001	SEMiX904GAL126HD	X				
27140002	SEMiX904GB126HD	X				
27140003	SEMiX904GAR126HD	X				
27140012	SEMiX604GB126HD	X				
27146002	SEMiX854GB176HD	X				
27146012	SEMiX604GB176HD	X				
27150002	SEMiX302GB126HDs	X	X	X	X	
27150012	SEMiX252GB126HDs	X	X	X	X	
27150041	SEMiX452GAL126HDs	X	X	X	X	
27150042	SEMiX452GB126HDs	X	X	X	X	
27150043	SEMiX452GAR126HDs	X	X	X	X	
27150052	SEMiX302GB126v1	X	X	X	X	
27150062	SEMiX252GB126v1	X	X	X	X	
27150511	SEMiX202GB12T4s	X	X	X	X	
27150521	SEMiX302GB12T4s	X	X	X	X	
27150522	SEMiX302GAL12T4s	X	X	X	X	
27150523	SEMiX302GAR12T4s	X	X	X	X	
27153001	SEMiX352GAL128Ds	X	X	X	X	
27153002	SEMiX352GB128Ds	X	X	X	X	
27153003	SEMiX352GAR128Ds	X	X	X	X	
27153012	SEMiX302GB128Ds	X	X	X	X	
27153022	SEMiX202GB128Ds	X	X	X	X	
27156002	SEMiX452GB176HDs	X	X	X	X	
27156012	SEMiX302GB176HDs	X	X	X	X	
27156022	SEMiX252GB176HDs	X	X	X	X	
27158002	SEMiX202GB066HDs	X	X	X	X	
27158012	SEMiX302GB066HDs	X	X	X	X	
27158021	SEMiX402GAL066HDs	X	X	X	X	
27158022	SEMiX402GB066HDs	X	X	X	X	
27158023	SEMiX402GAR066HDs	X	X	X	X	
27159631	SEMiX302GB125Ds	X	X	X	X	
27160001	SEMiX703GAL126HDs	X	X	X	X	
27160002	SEMiX703GB126HDs	X	X	X	X	
27160003	SEMiX703GAR126HDs	X	X	X	X	
27160012	SEMiX503GB126HDs	X	X	X	X	
27160022	SEMiX353GB126HDs	X	X	X	X	
27160052	SEMiX503GB126v1	X	X	X	X	
27160062	SEMiX353GB126v1	X	X	X	X	
27160071	SEMiX703GB126v1	X	X	X	X	
27160501	SEMiX303GB12T4s	X	X	X	X	
27160511	SEMiX453GB12T4s	X	X	X	X	

item numer	type designation	hexagonal nuts	Crastin	one-piece	mounting domes	spring slots
27160512	SEMiX453GAL12T4s	X	X	X	X	
27160513	SEMiX453GAR12T4s	X	X	X	X	
27163001	SEMiX553GAL128Ds	X	X	X	X	
27163002	SEMiX553GB128Ds	X	X	X	X	
27163003	SEMiX553GAR128Ds	X	X	X	X	
27163022	SEMiX403GB128Ds	X	X	X	X	
27166001	SEMiX604GB176HDs	X			X	
27166002	SEMiX653GB176HDs	X	X	X	X	
27166003	SEMiX653GAR176HDs	X	X	X	X	
27166004	SEMiX653GAL176HDs	X	X	X	X	
27166012	SEMiX453GB176HDs	X	X	X	X	
27166022	SEMiX353GB176HDs	X	X	X	X	
27168011	SEMiX603GAL066HDs	X	X	X	X	
27168012	SEMiX603GB066HDs	X	X	X	X	
27168013	SEMiX603GAR066HDs	X	X	X	X	
27170002	SEMiX904GB126HDs	X			X	
27170012	SEMiX604GB126HDs	X			X	
27170501	SEMiX404GB12T4s	X			X	
27170511	SEMiX604GB12T4s	X			X	
27173002	SEMiX754GB128Ds	X			X	
27176002	SEMiX854GB176HDs	X			X	
27180006	SEMiX101GD126HDs	X			X	
27180016	SEMiX151GD126HDs	X			X	
27180026	SEMiX251GD126HDs	X			X	
27180506	SEMiX71GD12T4s	X			X	
27180516	SEMiX101GD12T4s	X			X	
27180526	SEMiX151GD12T4s	X			X	
27183006	SEMiX101GD128Ds	X			X	
27183016	SEMiX151GD128Ds	X			X	
27183026	SEMiX201GD128Ds	X			X	
27183036	SEMiX501D17Fs	X			X	
27188006	SEMiX101GD066HDs	X			X	
27188016	SEMiX151GD066HDs	X			X	
27188026	SEMiX201GD066HDs	X			X	
27189626	SEMiX241MD008s	X			X	
27190501	SEMiX151GB12T4s	X	X		X	
27190502	SEMiX151GAL12T4s	X	X		X	
27190503	SEMiX151GAR12T4s	X	X		X	
27191001	SEMiX151GB12E4s	X	X		X	
27213002	SEMiX191KD16s	X	X		X	
27213502	SEMiX171KH16s	X	X		X	
27213802	SEMiX141KT16s	x	x		x	
27223002	SEMiX302KD16s	X			X	
27223502	SEMiX302KH16s	X			X	
27223802	SEMiX302KT16s	X			X	
27281016	SEMiX251D12Fs	X			X	
27283006	SEMiX341D16s	X			X	
27283506	SEMiX241DH16s	X			X	

reason for change: The hexagonal nuts lead to an improvement of mechanical robustness at the main terminals and allow for a higher mounting torque in combination with a housing made of Crastin before cracks appear. The one-piece housing is introduced to stabilize the mounting points for the heat sink and to avoid hot stamping of two parts as an error source. The screwing conditions for the PCB are enhanced because of the stabilized mounting domes. The spring slots were deepened to avoid a spring lift-off from the DBC, which could have happened before due to a disadvantageous combination of separately acceptable tolerances.

identification of change: see above

time schedule for change:	engineering samples	serial production
1s	week 35/09	week 42/09
1rectifier	week 35/09	week 42/09
13	week 36/09	week 43/09
13rectifier	week 36/09	week 43/09
2s	week 34/09	week 41/09
2	week 37/09	week 44/09
2rectifier	week 34/09	week 41/09
3s	week 33/09	week 40/09
3	week 37/09	week 44/09
33c	week 33/09	week 40/09
4s	week 36/09	week 43/09
4	week 37/09	week 44/09

supporting documentation: n.a.

date: 2009-06-22 **author:** Martin May

- **Please respond to this PCN by returning the attached customer approval form to your local sales partner.**
- **According to the IEC Standard JESD46 no response to this PCN within 30 days after receipt constitutes acceptance of the change.**

Customer Approval Form for PCN No: 09-039

Please check the appropriate box below:

- We agree with this proposed change and its schedule.
- We have objections:

Sender:

company

name:

address:

signature:

date:

SEMIKRON
customer
no.:

Please return to your local sales contact:

name:

phone:

address:

fax:

e-mail: