Introduction

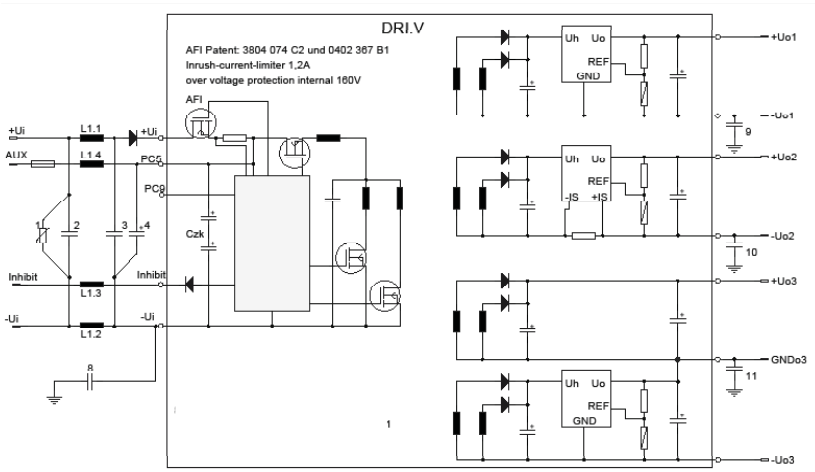
Product line C's DC/DC-modules are galvanic isolating converters in a one-step or two-step build-up switching topology, while the minimisation of the capacitor's chopper-current-limit (topology conditioned) was in focus. As a pre-step the short-circuit proof Buck-concept (higher Uin) or the patented Regenerator-topology (lower Uin) are used for medium sized and higher power to generate a pre-stable intermediate circuit. The following push-pull steps, which transform the energy to the secondary side hard switched or current resonant can be rectified with synchronic switches or diodes for outputs, which can be combined from <3 V up to >110 V.

With this topology voltages can be generated, which magnetic pre-regulated to ±2,5 % (without optical couplers), isolated and stable over the whole load-range. The outputs are crosswise functionally independent. SYKO was the first company, which offered standard input voltage ranges of 1:10 and 1:20 for the global use in mobile applications. Additionally SYKO was able to combine multiple, regulated low voltage- and high voltage-outputs without any problems. The conventional design of coiled inductances allows us very easily to offer modified parameters.

Circuit Diagram

Combination brings functionality!

- ***Patented switching topologies***
- ***Single and multiple outputs***
- ***Wide Input ranges up to >1:12***
- ***Transient adapted and simply radio interference adjustable***
- ***Application diagrams for external circuits available***
- ***High functional reliability***
- ***Suitable system compatibility***



Shown: principle circuit diagram of the series DRI.V

Converter-	PA	Nom. Uin	Quantity	Build-up style		Special features
family	W	V	Outputs			
MRI.U	1,5	12 - 60	1	PCB-Module	open	
MRI.S/B	3	12/24/36	1/2	PCB-Module	potted / open	
MRI.E/Z	3	24 - 110	1/2	PCB-Module	open	
VRI.S	12	12 - 110	1	PCB-Module	potted / open	
VRI.B	10	12 - 110	2	PCB-Module	potted / open	
VRI.D/T	10	12 - 60	3/4	PCB-Module	potted / open	
DRI.B/T	10	24 - 110	2/3	PCB-Module	open	UWR[1)]
DRI.V	6	24 - 110	4	PCB-Module	open	UWR[1)]
SRI.1/2	15	12 - 110	1/2	PCB-Module	open	UWR[1)]
SRI.E	30	12 - 110	1	PCB-Module	open	UWR[1)]
SRI.Z	30	12 - 110	2	PCB-Module	open	UWR[1)]
SRI.D	25	12 - 110	3	PCB-Module	open	UWR[1)]
MCB.V	30	12/24/48	4	PCB-Module	open	4 independent outputs
CNR.U/B	35	24 - 110	1/2	Chassis	incl. Filter	Display supply UWR[1)]
BNR.B	40	12 - 110	2	Chassis	incl. Filter	Display supply UWR[1)]
DNR.B	60	24 - 110	2	Chassis	incl. Filter	Display supply UWR[1)]
BNL.U/B/T	45	12 - 110	1/2/3	Chassis	incl. Filter	UWR[1)]
GER.U	30-50	24 - 110	1	Chassis	incl. Filter	UWR[1)]
DEN.U	45-60	24 - 110	1	Chassis	incl. Filter	UWR[1)]
BNL/M.S	50	12 - 110	1	Chassis	incl. Filter	
LSV.P	50	12/24/42	1	Car-adapter	with housing	DIN ISO 7637 / E1-released
MSV.P	80	12/24/42	1	Car-Adapter	im Gehäuse	DIN ISO 7637
MCA.U	90	12/24	1	On-board adapter	with housing	VG 96916 / VG 95373

* External application circuits are available for all PCB-Modules for EMC and disturbances (please request)

1) UWR: Ultra-Wide-Range 14,4 - 154V is available