

# DC-DC converters

## High performance switching regulators for industrial



### Up to 3 A and up to 61 V input voltage range step down ideal for fail safe systems

ST's L7985, L7986, L7987 and ST1S14, are perfect solutions for industrial applications and fail safe systems.

These devices are able to provide up to 3 A of continuous output current and with a wide input voltage range from 4.5 V up to 61 V, accordingly to the part number chosen.

High flexibility is given by several adjustable parameters, like output voltage, switching frequency, current limit and soft start to name a few.

#### KEY FEATURES

- High switching frequency up to 1.5 MHz
- Wide input voltage range up to 61 V
- Full set of embedded protection functions
- Extended operation junction temperature

#### KEY BENEFITS

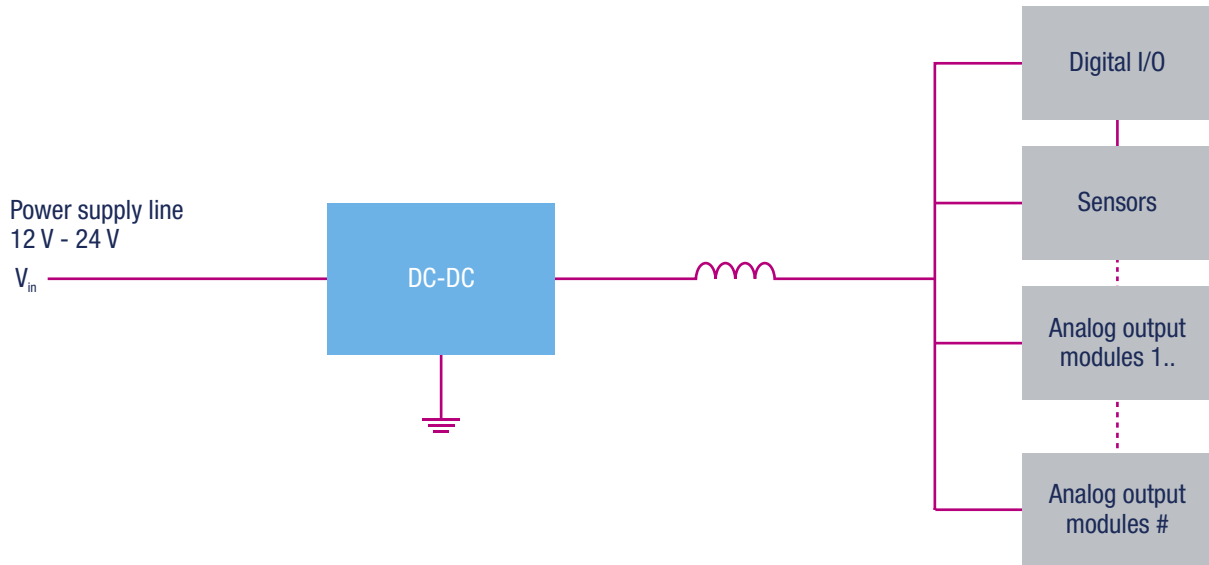
- High safety margin
- High robustness and reliability
- High design flexibility
- Low BOM cost

#### KEY APPLICATIONS

- Industrial application
- Fail safe systems
- Factory automation
- Building automation
- PLCs
- 24 V bus applications



## BLOCK DIAGRAM



## DEVICE SUMMARY

Part Number	L7985, L7985A	L7986, L7986A	L7986TA	ST1S14	L7987	L7987L
Package	DFN3x3 10L/ HSOP 8	DFN3x3 10L/ HSOP 8	HSOP 8	HSOP 8	HTSSOP 16	HTSSOP 16
Input voltage range (V)	4.5 to 38	4.5 to 38	4.5 to 38	5.5 to 48	4.5 to 61	4.5 to 61
Output current (A)	2	3	3	3	Up to 3	Up to 2
Output voltage range (V)	0.6 to $V_{in}$	0.6 to $V_{in}$	0.6 to $V_{in}$	0.8 to 97% $V_{in}$	0.8 to 97% $V_{in}$	0.8 to 97% $V_{in}$
Switching frequency (kHz)	250 to 1000	250 to 1000	250 to 1000	850	250 to 1500	250 to 1500
External synchronization frequency (kHz)	Up to 1000	Up to 1000	Up to 1000	N.A	Up to 1500	Up to 1500
Additional features	Enable pin, Soft start	Enable pin, Soft start	Enable pin, Soft start	Enable/Inhibit pin, PGood, Soft start	Adjustable current limit, Adjustable soft start, Enable pin, PGood	Adjustable current limit, Adjustable soft start, Enable pin, PGood
Operating junction temperature (Tj °C)	-40, 150	-40, 150	-40, 150	-40, 150	-40, 150	-40, 150
Parameters tested and guaranteed over the temperature Tj (°C)	25	25	-40, 125	25	25	25

