



## DC/DC CONVERTERS INVERTERS & CHOPPER



Linea Elettromeccanica | Electromechanical Line





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# DC/DC CONVERTER

LINEAR VOLTAGE REGULATOR

12V → 5V 100mA



## TECHNICAL SPECIFICATIONS

Input voltage	12V		
Output voltage	5V		
Maximum current output	100mA		
Short circuit protected output	Yes		
Reverse polarity protected input	Yes		
Dimensions	30mm x 51mm x 31,5mm		
Operating temperature	-20°C ÷ +65°C		
Storage temperature	20°C ÷ +85°C		
Sealing degree	IP66		
Connector	JWPF 3 pins		

<b>Purchase code</b>	<b>Pkg</b>	<b>20</b>	<b>1030773</b>				
<b>Drawing code</b>	<b>Q.ty</b>		34.0188.0000				
Input voltage			12V				
Output voltage			5V				

# DC/DC CONVERTER

VOLTAGE CONVERTER

24V → 12V



## TECHNICAL SPECIFICATIONS

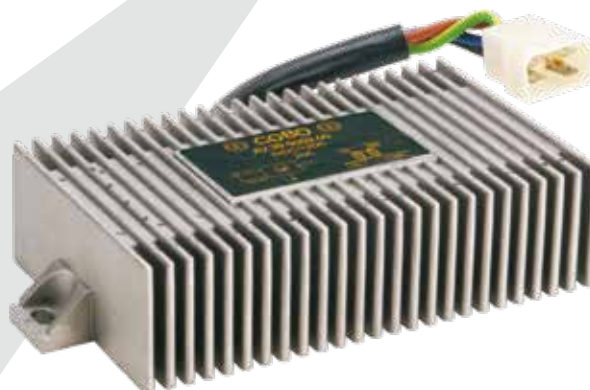
Input voltage	19 - 30V	Sealing degree	IP65
Output voltage	13,2V ± 1,5V	Connector	AMP 3 pins
Nominal current output (1 hr. rating)	3A		
Nominal current	3,5A		
Stand-by current	35mA		
Short circuit protected output	Yes		
Reverse polarity protected input	Yes		
Dimensions	108mm x 35mm x 62mm		
Operating temperature	-30°C ÷ +60°C		
Storage temperature	-40°C ÷ +85°C		

<b>Purchase code</b>	<b>Pkg</b>	<b>1031509</b>					
<b>Drawing code</b>	<b>Q.ty</b>	<b>39.0030.0000</b>					
Input voltage	1	19 - 30V					
Output voltage		13,2V ± 1,5V					

## DC/DC CONVERTER

LINEAR VOLTAGE CONVERTER

24V → 12V



### TECHNICAL SPECIFICATIONS

Input voltage	16 - 32V	Sealing degree	IPX5
Output voltage	13,6 ± 0,5V	Connector	AMP 4 pins
Nominal current	20A		
Stand-by current	100mA closed contact 1mA open contact		
Short circuit protected output	Yes		
Reverse polarity protected input	Yes		
Dimensions	193,8mm x 41,5mm x 97,6mm		
Operating temperature	-30°C ÷ +80°C		
Storage temperature	-40°C ÷ +85°C		

Purchase code	Pkg	1031511					
Drawing code	Q.ty	39.0031.0000					
Input voltage	1						
Output voltage							

# DC/DC CONVERTER

VOLTAGE CONVERTER

24V → 12V



## TECHNICAL SPECIFICATIONS

Input voltage	18 - 32V	Maximum peak power	130W
Output voltage	13,5V	Nominal power rating	100W
Maximum current	10A	Frequency	62kHz
Nominal current output (1 hr. rating)	7,4A	Shock and vibration	SAE J1378
Output voltage regulation	+ / - 0,5V	Dimensions	110mm x 56mm x 105mm
Output ripple voltage	200mVpk-pk	Operating temperature	-30°C + +60°C
Short circuit protected output	Yes	Storage temperature	-40°C + +70°C
Reverse polarity protected input	Yes	Sealing degree	IP64
Overload protection	Yes	Connector	DEUTSCH 3 pins
Thermal protection	Yes		

Purchase code	Pkg	1031521					
Drawing code	Q.ty	39.015.000					
Input voltage		18 - 32V					
Output voltage		13,5V					

# DC/DC CONVERTER

VOLTAGE CONVERTER

48 - 80V → 24V



## TECHNICAL SPECIFICATIONS

Input voltage	48 - 80V	Nominal power rating	200W
Output voltage	24V	Frequency	62kHz
Maximum current	10A	Shock and vibration	SAE J1378
Nominal current output (1 hr. rating)	8,3A	Dimensions	110mm x 56mm x 105mm
Output voltage regulation	+ / - 1V	Operating temperature	-30°C + +55°C
Output ripple voltage	100mVpk-pk	Storage temperature	-40°C + +70°C
Short circuit protected output	Yes	Sealing degree	IP64
Reverse polarity protected input	Yes	Connectors	BPF 2 pins + BPM 2 pins
Overload protection	Yes		
Maximum peak power	250W		

<b>Purchase code</b>	<b>Pkg</b>	<b>1031517</b>					
<b>Drawing code</b>	<b>Q.ty</b>	<b>39.013.000</b>					
Input voltage		48 - 80V					
Output voltage		24V					



# DC/DC CONVERTER

VOLTAGE CONVERTER

48 - 80V → 24V



## TECHNICAL SPECIFICATIONS

Input voltage	48 - 80V	Nominal power rating	200W
Output voltage	24V	Frequency	62kHz
Maximum current	10A	Shock and vibration	SAE J1378
Nominal current output (1 hr. rating)	8,3A	Dimensions	140mm x 61mm x 80mm
Output voltage regulation	+ / - 1V	Operating temperature	-30°C + +55°C
Output ripple voltage	100mVpk-pk	Storage temperature	-40°C + +80°C
Short circuit protected output	Yes	Sealing degree	IP64
Reverse polarity protected input	Yes	Connectors	2 X Faston AMP + BPM 8 pins
Overload protection	Yes		
Maximum peak power	250W		

Purchase code	Pkg	1031518					
Drawing code	Q.ty	39.014.000					
Input voltage		48 - 80V					
Output voltage		24V					

# DC/DC CONVERTER

VOLTAGE CONVERTER

12V → 24V



## TECHNICAL SPECIFICATIONS

Input voltage	9 - 18V	Dimensions	160mm x 181mm x 88,5mm
Output voltage	27,5 - 28,5V	Operating temperature	-30°C + +45°C
Input current @ POUT 700W Vin 13,5V	56V	Sealing degree	IP66
Maximum peak power	750W	Connector	DEUTSCH 4 pins
Nominal power rating	700W		
Frequency	60kHz		
Nominal input voltage	13,5V		
Nominal output voltage (lin bus)	22 - 32V		
Output voltage regulation	+ / - 0,5V		
Output ripple voltage	50mVpk-pk		

<b>Purchase code</b>	<b>Pkg</b>	<b>1</b>	<b>1031505</b>				
<b>Drawing code</b>	<b>Q.ty</b>		<b>39.0028.0000</b>				
Input voltage			9 - 18V				
Output voltage			27,5 - 28,5V				

# DC/DC CONVERTER

VOLTAGE CONVERTER

48V → 12V

24V → 12V



## TECHNICAL SPECIFICATIONS

Maximum current output	14,5A	Frequency	64kHz
Nominal current output	12,5A	Shock and vibration	SAE J1378
Output voltage regulation	+ / - 1V	Dimensions	180mm x 88,5mm x 160mm
Output ripple voltage	100mVpk-pk	Operating temperature	-30°C + +45°C
Short circuit protected output	Yes	Storage temperature	-40°C + +70°C
Reverse polarity protected input	Yes	Sealing degree	IP65
Overload protection	Yes	Electromagnetic compatibility (EMC)	61000-6-3 for emission 61000-6-2 for immunity
Maximum peak power	350W	Connector	DEUTSCH 4 pins
Input/output isolation (1000vrms)	Yes		
Nominal power rating	300W		

Purchase code	Pkg	1031501	1031502	1031503	1031504		
Drawing code	Q.ty	39.0022.0000	39.0023.0000	39.0026.0000	39.0027.0000		
Input voltage	1	48V	48V	24V	24V		
Output voltage		12V	12V	12V	12V		
Load sharing (max 5 units)			X		X		

## THOR 2

### INVERTER



#### TECHNICAL SPECIFICATIONS

Digital input	10	Sealing degree	IP54
Analog input	2	Dimensions	230mm x 200mm x 140mm
Power output	2	Connector	AMPSEAL 23 pins
Led output	-		
Encoder output	1		
Encoder type	Open collector or differential		
Motor thermal input	1		
Switching frequency	8kHz		
Regulation	EN1175-1:1998		
Operating temperature	-40°C ÷ +40°C		

Purchase code	Pkg	1031524	1031525	1031526	1031527		
Drawing code	Q.ty	40.0007.0000	40.0008.0000	40.0009.0000	40.0010.0000		
Battery voltage	1	48V	80V	48V	48V		
Nominal current (1h) [Arms]		180	160	160			
Max current (1h) [Arms]		450 (3 min)	350 (3 min)	350 (3 min)	200 (3 min)		
Encoder open collector		X	X	X	X		

# Traction Controller

## TC - S

INVERTER



### TECHNICAL SPECIFICATIONS

Digital input	7	Sealing degree	IP65
Analog input	3	Dimensions	160mm x 200mm x 75mm
Power output (contactor)	3	Connector	AMPSEAL 35 pins
Digital outputs	1		
Encoder type	Sin/cos or incremental		
Motor thermal input	1		
Switching frequency	8kHz		
Motor frequency (max)	16KHz		
Regulation	EN12895 - EN1175		
Operating temperature	-30°C ÷ +40°C		

Purchase code	Pkg	1093253	1093256				
Drawing code	Q.ty	40.0036.0000	40.0039.0000				
Battery voltage	1	24 ÷ 48V	60 ÷ 96V				
Nominal current		130A	75A				
Peak current (2 min)		250A	140A				

# Traction Controller

## TC - M

### INVERTER



#### TECHNICAL SPECIFICATIONS

Digital input	7	Sealing degree	IP65
Analog input	3	Dimensions	200mm x 200mm x 75mm
Power output (contactor)	3	Connector	AMPSEAL 35 pins
Digital outputs	1		
Encoder type	Sin/cos or incremental		
Motor thermal input	1		
Switching frequency	8kHz		
Motor frequency (max)	16KHz		
Regulation	EN12895 - EN1175		
Operating temperature	-30°C ÷ +40°C		

Purchase code	Pkg	1093254	1093257				
Drawing code	Q.ty	40.0037.0000	40.0040.0000				
Battery voltage	1	24 ÷ 48V	60 ÷ 96V				
Nominal current		230A	140A				
Peak current (2 min)		450A	270A				

# Traction Controller

## TC - M+

INVERTER



### TECHNICAL SPECIFICATIONS

Digital input	7	Sealing degree	IP65
Analog input	3	Dimensions	250mm x 200mm x 75mm
Power output (contactor)	3	Connector	AMPSEAL 35 pins
Digital outputs	1		
Encoder type	Sin/cos or incremental		
Motor thermal input	1		
Switching frequency	8kHz		
Motor frequency (max)	16KHz		
Regulation	EN12895 - EN1175		
Operating temperature	-30°C ÷ +40°C		

Purchase code	Pkg	1093255	1093258				
Drawing code	Q.ty	40.0038.0000	40.0041.0000				
Battery voltage	1	24 ÷ 48V	60 ÷ 96V				
Nominal current		330A	230A				
Peak current (2 min)		600A	450A				

# Traction Controller

## TC - L

### INVERTER



#### TECHNICAL SPECIFICATIONS

Digital input	7	Sealing degree	IP65
Analog input	3	Dimensions	320mm x 200mm x 75mm
Power output (contactor)	3	Connector	AMPSEAL 35 pins
Digital outputs	1		
Encoder type	Sin/cos or incremental		
Motor thermal input	1		
Switching frequency	8kHz		
Motor frequency (max)	16KHz		
Regulation	EN12895 - EN1175		
Operating temperature	-30°C ÷ +40°C		

Purchase code	Pkg	1093259					
Drawing code	Q.ty	40.0042.0000					
Battery voltage		60 ÷ 96V					
Nominal current		300A					
Peak current (2 min)		600A					



# Traction Module

## TM 1+ / TM 3

### CHOPPER



#### TECHNICAL SPECIFICATIONS

Power supply	24V		
Regulation	EN1175-1:1998		
Operating temperature	-40°C + +40°C		
Sealing degree	IP64		
Dimensions	170mm x 201mm x 68mm		
Connector	AMPSEAL 26 pins		

Purchase code Drawing code	Pkg Q.ty	1	TM1+ 1091431 40.0032.0000	TM3 1091432 40.0033.0000		
Power output			5	1		
Battery voltage			14,5 - 32V	14,5 - 32V		
Pump nominal current (1h) [Arms]			90	125		
Traction nominal current (1h) [Arms]			70	-		
Pump max current (2 min) [Arms]			200	275		
Traction max current (2 min) [Arms]			150	-		

# Traction Module TM 2

CHOPPER



## TECHNICAL SPECIFICATIONS

Power supply	24V		
Regulation	EN1175-1:1999		
Operating temperature	-40°C ÷ +40°C		
Sealing degree	IP65		
Dimensions	177mm x 220mm x 68mm		
Connector	AMPSEAL 26 pins		

<b>Purchase code</b>	<b>Pkg</b>	<b>1091433</b>					
<b>Drawing code</b>	<b>Q.ty</b>	<b>40.0034.0000</b>					
	<b>1</b>						
Power output	5						
Battery voltage	14,5 - 32V						
Pump nominal current (1h) [Arms]	125						
Traction nominal current (1h) [Arms]	70						
Pump max current (2 min) [Arms]	275						
Traction max current (2 min) [Arms]	180						

## Note / Notes



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