

Data sheet

SM 032 (032-1CD40)

Technical data

Type	Order no.	032-1CD40
General information	Туре	SM 032
Note -	Module ID	050C 25E0
Note -		
Features 4 outputs 16Bit Current 0(4)20mA Current consumption/power loss Current consumption from backplane bus 65 mA Power loss 0.8 W Technical data analog outputs Number of outputs 4 Cable length, shielded 200 m Rated load voltage DC 24 V Reverse polarity protection of rated load voltage yes Current consumption from load voltage L+ (without load) - Voltage output short-circuit protection - - Max. inductive load (current range) - Sasc error limit voltage ranges - Destruction limit against external applied voltage - Current outputs yes Max. inductive load (current range) 350 Ohm Max. inductive load (current range) 350 Ohm Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges 0 0 mA+20 mA +4 mA+20 mA -4		
Current consumption/power loss Current consumption from backplane bus 65 mA Power loss 0.8 W Technical data analog outputs Number of outputs 4 Cable length, shielded 200 m Rated load voltage DC 24 V Reverse polarity protection of rated load voltage yes Current consumption from load voltage L+ (without load) - Voltage output short-circuit protection - Voltage routput load (current range) - Destruction limit daga ranges - Current outputs yes Max. inductive load (current range) - Max. inductive load (current ranges - Voltage current voltput - Voltage current voltage - Voltage current voltput		<u>-</u>
Current consumption from backplane bus 65 mA Power loss 0.8 W Technical data analog outputs Number of outputs 4 Cable length, shielded 200 m Rated load voltage DC 24 V Reverse polarity protection of rated load voltage yes Current consumption from load voltage L+ (without load) - Voltage output short-circuit protection - Voltage output short-circuit protection - Voltage outputs sold (current range) - Max. capacitive load (current range) - Max. inductive load (current range) - Operational limit of voltage ranges - Operational limit of voltage ranges - Destruction limit against external applied voltage - Current outputs yes Max. in load resistance (current range) 350 Ohm Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges +/-0.2% Basic error limit current ranges +/-0.2% Basic error limit current ranges max. 12 V (30 V for 1s) Settling time for chancic load 0.25 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied on 15 me.	Features	
Current consumption from backplane bus 65 mA Power loss 0.8 W Technical data analog outputs Number of outputs 4 Cable length, shielded 200 m Rated load voltage DC 24 V Reverse polarity protection of rated load voltage yes Current consumption from load voltage L+ (without load) - Voltage output short-circuit protection - Voltage output short-circuit protection - Voltage outputs sold (current range) - Max. capacitive load (current range) - Max. inductive load (current range) - Operational limit of voltage ranges - Operational limit of voltage ranges - Destruction limit against external applied voltage - Current outputs yes Max. in load resistance (current range) 350 Ohm Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges +/-0.2% Basic error limit current ranges +/-0.2% Basic error limit current ranges max. 12 V (30 V for 1s) Settling time for chancic load 0.25 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied on 15 me.		
Power loss 0.8 W Technical data analog outputs Number of outputs 4 Cable length, shielded 200 m Rated load voltage DC 24 V Reverse polarity protection of rated load voltage yes Current consumption from load voltage L+ (without load) - Voltage output short-circuit protection - Voltage output short-circuit protection - Voltage output short-drievit protection - Voltage output short-drievit protection - Voltage outputs - Min. load resistance (voltage range) - Max. inductive load (current range) - Operational limit of voltage ranges - Destruction limit against external applied voltage - Current outputs yes Max. in load resistance (current range) 350 Ohm Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges 0 - Operational limit of current ranges +/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for chmic load 0.25 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied		
Number of outputs 4 Cable length, shielded 200 m Rated load voltage DC 24 V Reverse polarity protection of rated load voltage yes Current consumption from load voltage L+ (without load) - Voltage output short-circuit protection - Voltage output short-circuit protection - Voltage outputs SMR. capacitive load (current range) - Max. capacitive load (current range) - Max. inductive load (current range) - Output voltage ranges - Operational limit of voltage ranges - Basic error limit voltage ranges - Destruction limit against external applied voltage - Current outputs yes Max. in load resistance (current range) 350 Ohm Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges 0, Max+20 mA +4 mA+20 mA -4 mA20 mA -4 max20 mA -4 max.	Current consumption from backplane bus	65 mA
Number of outputs 4 Cable length, shielded 200 m Rated load voltage DC 24 V Reverse polarity protection of rated load voltage yes Current consumption from load voltage L+ (without load) - Voltage output short-circuit protection - Voltage outputs - Min. load resistance (voltage range) - Max. capacitive load (current range) - Max. inductive load (current range) - Output voltage ranges - Operational limit of voltage ranges - Destruction limit against external applied voltage - Current outputs yes Max. in load resistance (current range) 350 Ohm Max. in load resistance (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges 0 mA +20 mA +4 mA +20 mA +4 mA +20 mA Operational limit of current ranges +/-0.1% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s)	Power loss	0.8 W
Cable length, shielded 200 m Rated load voltage DC 24 V Reverse polarity protection of rated load voltage yes Current consumption from load voltage L+ (without load) - Voltage output short-circuit protection - Voltage outputs short-circuit protection - Voltage outputs short-circuit protection - Voltage outputs - Min. load resistance (voltage range) - Max. capacitive load (current range) - Max. inductive load (current range) - Output voltage ranges - Operational limit of voltage ranges - Basic error limit voltage ranges - Current outputs yes Max. in load resistance (current range) a550 Ohm Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges 0 mA +20 mA +4 mA +20 mA +4 mA +20 mA +4 mA +20 mA Destruction limit against external applied voltage max. 12 V (30V for 1s) Basic error limit current ranges max. 12 V (30V for 1s) Settling time for ohmic load 0.25 ms Settling time for capacitive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied no	Technical data analog outputs	
Rated load voltage DC 24 V Reverse polarity protection of rated load voltage yes Current consumption from load voltage L+ (without load) - Voltage output short-circuit protection - Voltage outputs short-circuit protection - Voltage outputs short-circuit protection - Voltage outputs S Min. load resistance (voltage range) - Max. capacitive load (current range) - Max. inductive load (current range) - Output voltage ranges - Operational limit of voltage ranges - Destruction limit against external applied voltage - Current outputs yes Max. in load resistance (current range) 350 Ohm Max. in load resistance (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges 0 mA +20 mA + 4 mA +20 mA + 4 mA +20 mA - 4 m Ma +20 mA - 4 y-0.2% Basic error limit current ranges +/-0.2% Basic error limit against external applied voltage max. 12 V (30V for 1s) Settling time for capacitive load - Settling time for capacitive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied	Number of outputs	4
Reverse polarity protection of rated load voltage yes Current consumption from load voltage L+ (without load) - Voltage output short-circuit protection - Voltage outputs - Min. load resistance (voltage range) - Max. capacitive load (current range) - Max. inductive load (current range) - Output voltage ranges - Operational limit of voltage ranges - Basic error limit voltage ranges - Destruction limit against external applied voltage - Current outputs yes Max. in load resistance (current range) 350 Ohm Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges - Operational limit of current ranges +/-0.2% Basic error limit current ranges +/-0.2% Basic error limit current ranges	Cable length, shielded	200 m
Current consumption from load voltage L+ (without load) Voltage output short-circuit protection - Voltage outputs - Min. load resistance (voltage range) - Max. capacitive load (current range) - Max. inductive load (current range) - Output voltage ranges - Operational limit of voltage ranges - Basic error limit voltage ranges - Destruction limit against external applied voltage - Current outputs yes Max. in load resistance (current range) 350 Ohm Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges - Operational limit of current ranges +/-0.2% Basic error limit current ranges +/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load - Settling time for ohmic load - Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied	Rated load voltage	DC 24 V
Voltage output short-circuit protection Voltage outputs	Reverse polarity protection of rated load voltage	yes
Voltage outputs Min. load resistance (voltage range) Max. capacitive load (current range) Max. inductive load (current range) Output voltage ranges Operational limit of voltage ranges Basic error limit voltage ranges - Current outputs Max. in load resistance (current range) - Current outputs Max. in load resistance (current range) Max. in load resistance (current range) Max. inductive load (current range) Typ. open circuit voltage current output 12 V Output current ranges Oma +20 ma +4 ma +20 ma 44 ma +20 ma Operational limit of current ranges #/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for capacitive load - Settling time for capacitive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied	Current consumption from load voltage L+ (without load)	
Min. load resistance (voltage range) Max. capacitive load (current range) Output voltage ranges Operational limit of voltage ranges Basic error limit voltage ranges Current outputs Max. inductive load (current range)	Voltage output short-circuit protection	
Max. inductive load (current range) Output voltage ranges Operational limit of voltage ranges Basic error limit voltage ranges Destruction limit against external applied voltage Current outputs Max. in load resistance (current range) Max. in load resistance (current range) Max. inductive load (current range) Typ. open circuit voltage current output 12 V Output current ranges Ona+20 mA 44 mA+20 mA Coperational limit of current ranges Postruction limit against external applied voltage ### Accordance	Voltage outputs	
Max. inductive load (current range) Output voltage ranges Operational limit of voltage ranges - Basic error limit voltage ranges - Destruction limit against external applied voltage - Current outputs yes Max. in load resistance (current range) Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges 0 mA +20 mA +4 mA +20 mA Coperational limit of current ranges 4/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load 0.25 ms Settling time for capacitive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied	Min. load resistance (voltage range)	
Output voltage ranges	Max. capacitive load (current range)	
Destruction limit of voltage ranges Basic error limit voltage ranges Current outputs Max. in load resistance (current range) Max. inductive load (current range) Typ. open circuit voltage current output Output current ranges Operational limit of current ranges H-/-0.2% Basic error limit current ranges Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load Settling time for inductive load Conversion time 400 µs all channels Substitute value can be applied no	Max. inductive load (current range)	-
Basic error limit voltage ranges Destruction limit against external applied voltage Current outputs Max. in load resistance (current range) Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges 0 mA +20 mA +4 mA +20 mA 0 perational limit of current ranges +/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load 0.25 ms Settling time for capacitive load 5 ettling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 μs all channels Substitute value can be applied	Output voltage ranges	-
Destruction limit against external applied voltage Current outputs Max. in load resistance (current range) Max. inductive load (current range) Typ. open circuit voltage current output Output current ranges OmA+20 mA +4 mA+20 mA Operational limit of current ranges +/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load O.25 ms Settling time for inductive load Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied	Operational limit of voltage ranges	-
Current outputs Max. in load resistance (current range) 350 Ohm Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges 0 mA +20 mA +4 mA +20 mA +4 mA +20 mA Operational limit of current ranges +/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load 0.25 ms Settling time for capacitive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied	Basic error limit voltage ranges	-
Max. in load resistance (current range) 350 Ohm Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges 0 mA +20 mA +4 mA +20 mA +4 mA +20 mA +/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load 0.25 ms Settling time for capacitive load - Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 μs all channels Substitute value can be applied no	Destruction limit against external applied voltage	-
Max. inductive load (current range) 10 mH Typ. open circuit voltage current output 12 V Output current ranges 0 mA +20 mA +4 mA +20 mA Perational limit of current ranges +/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load 0.25 ms Settling time for capacitive load - Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 μs all channels Substitute value can be applied no	Current outputs	yes
Typ. open circuit voltage current output 12 V Output current ranges 0 mA +20 mA +4 mA +20 mA Operational limit of current ranges +/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load 0.25 ms Settling time for capacitive load - Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied	Max. in load resistance (current range)	350 Ohm
Output current ranges O mA +20 mA +4 mA +20 mA Operational limit of current ranges +/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load 0.25 ms Settling time for capacitive load - Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied	Max. inductive load (current range)	10 mH
+4 mA +20 mA Operational limit of current ranges +/-0.2% Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load 0.25 ms Settling time for capacitive load - Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 μs all channels Substitute value can be applied no	Typ. open circuit voltage current output	12 V
Basic error limit current ranges +/-0.1% Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load 0.25 ms Settling time for capacitive load - Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied no	Output current ranges	
Destruction limit against external applied voltage max. 12V (30V for 1s) Settling time for ohmic load 0.25 ms Settling time for capacitive load - Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied no	Operational limit of current ranges	+/-0.2%
Settling time for ohmic load 0.25 ms Settling time for capacitive load - Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied no	Basic error limit current ranges	+/-0.1%
Settling time for capacitive load - Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied no	Destruction limit against external applied voltage	max. 12V (30V for 1s)
Settling time for inductive load 1.5 ms Resolution in bit 16 Conversion time 400 µs all channels Substitute value can be applied no	Settling time for ohmic load	0.25 ms
Resolution in bit Conversion time 400 µs all channels Substitute value can be applied no	Settling time for capacitive load	-
Conversion time 400 µs all channels Substitute value can be applied no	Settling time for inductive load	1.5 ms
Substitute value can be applied no	Resolution in bit	16
	Conversion time	400 μs all channels
Output data size 8 Byte	Substitute value can be applied	no
	Output data size	8 Byte



Status information, alarms, diagnostics

otatao imormation, alarmo, alagnootioo	
Status display	yes
Interrupts	no
Process alarm	no
Diagnostic interrupt	no
Diagnostic functions	yes
Diagnostics information read-out	possible
Supply voltage display	green LED
Group error display	red LED
Channel error display	red LED per channel
Isolation	
Between channels	-
Between channels of groups to	-
Between channels and backplane bus	yes
Between channels and power supply	yes
Max. potential difference between circuits	-
Max. potential difference between inputs (Ucm)	-
Max. potential difference between Mana and Mintern (Uiso)	DC 75 V/ AC 50 V
Max. potential difference between inputs and Mana (Ucm)	-
Max. potential difference between inputs and Mintern (Uiso)	-
Max. potential difference between Mintern and outputs	-
Insulation tested with	DC 500 V
Datasizes	
Input bytes	0
Output bytes	8
Parameter bytes	10
Diagnostic bytes	20
Housing	
Material	PPE / PPE GF10
Mounting	Profile rail 35 mm
Mechanical data	
Dimensions (WxHxD)	12.9 mm x 109 mm x 76.5 mm
Weight	60 g
Environmental conditions	
Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C
Certifications	
UL certification	in preparation
KC certification	yes