

Models

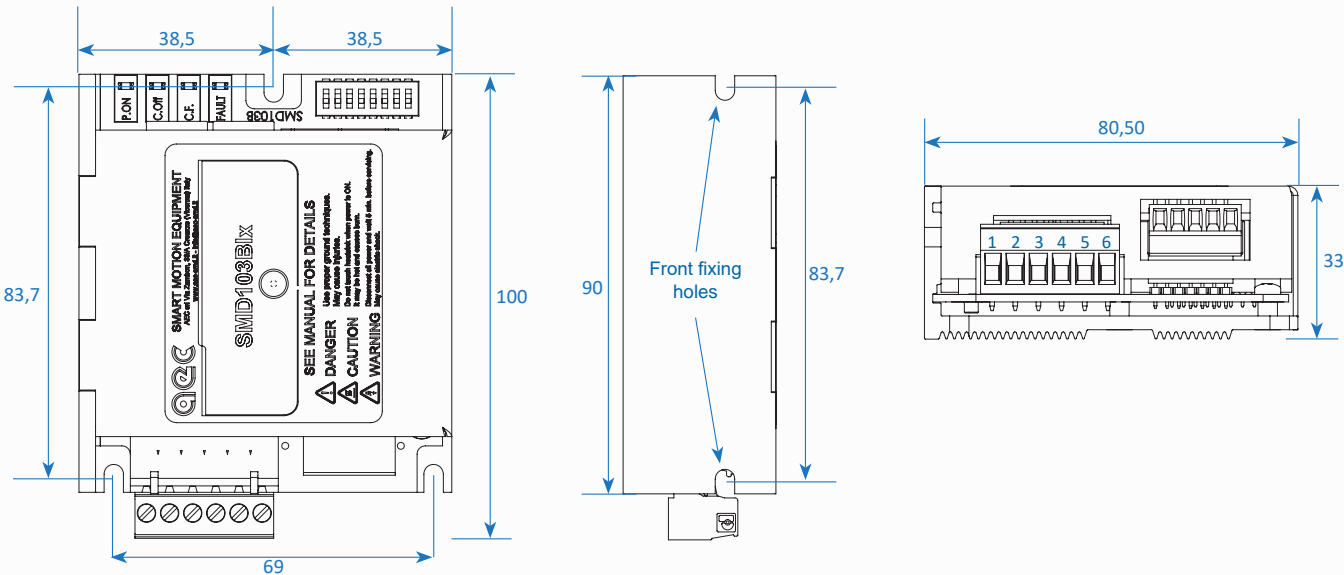
Model	Control(*)	Fieldbus	Maximum current (A)	Voltage Range (Vdc)
SMD103BIM	D / SA / M	Modbus RTU	4	24 .. 48Vdc
SMD103BIC	D / SA / M	CANopen	4	24 .. 48Vdc

Notes:
* D = Direct; SA = Stand-Alone; M = Mixed



Electrical characteristics		U.M.	SMD103B1x
Output current	Maximum current	A	4
Power supply	Voltage Range	Vdc	+24 .. 48
Current Control	Type		Bipolar chopper
	Frequency	KHz	20KHz
Digital Inputs	Number		5
	Type		PNP TTL consistent up to + 30 Vdc
	"High" / "Low" threshold	Vdc	> + 2,2 / < + 0,8
Analog input	Number		1
	Resolution	bit	10
	Range	Vdc	0 .. +10
Protections			Temperature, Short-circuit

Mechanical dimensions



Dimension are expressed in mm.

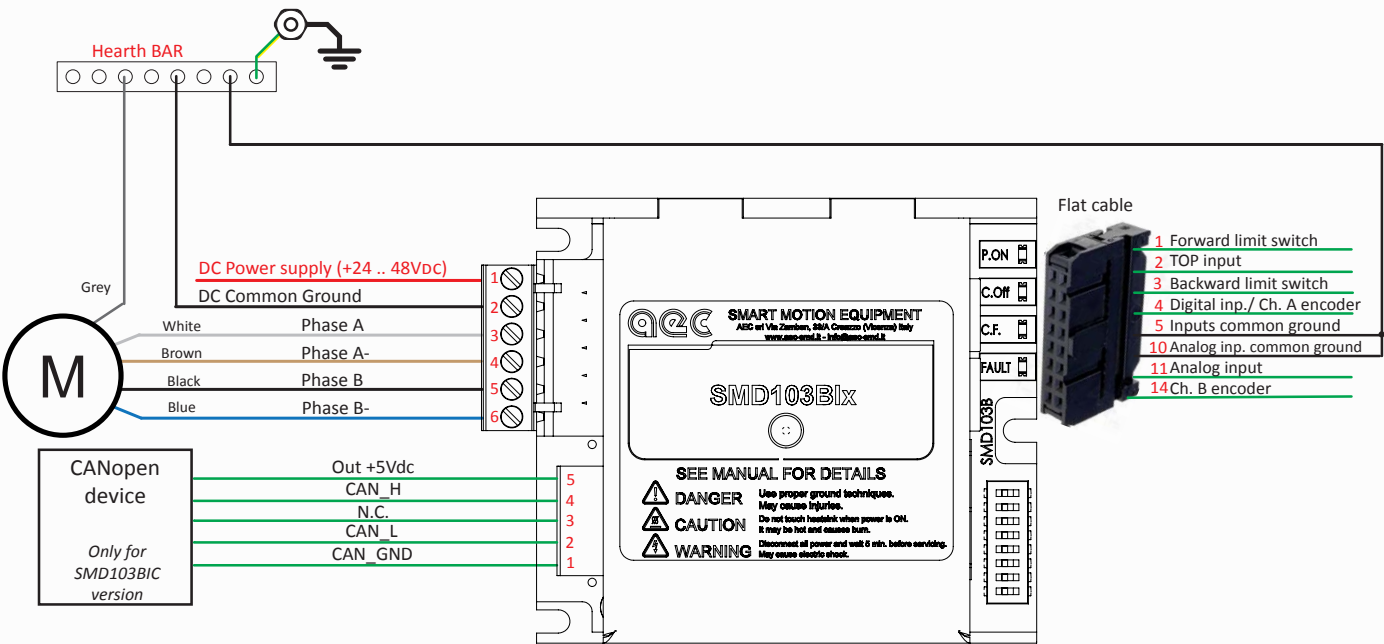
Status Led indicators:

LED	Color	On	Off
P.ON	Green	Power supply on	Power supply off
C.OFF	Green	Disabled drive (Enable input is missing)	Current is enabled
C.F.	Green	Current supplied at set value	Reduced current
FAULT	Red	Drive in alarm	No alarms

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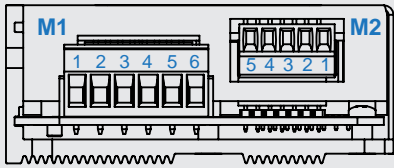
SMD103Bix Stepping Motor Drive

Typical wiring diagram

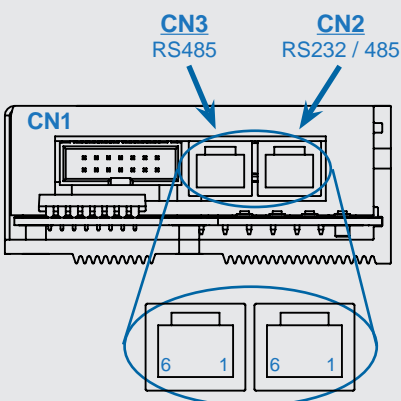
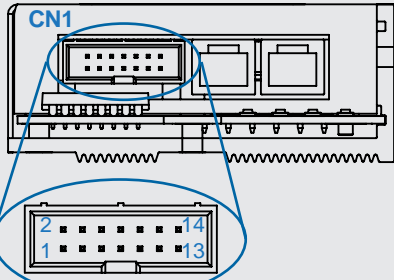


M1		
Pin	Signal name	Description
1	Power supply	DC power supply input
2	Common Ground	DC supply common ground reference
3	Fase A	Phase A output
4	Fase A-	Phase A- output
5	Fase B	Phase B output
6	Fase B-	Phase B- output

M2		
(Only for CANopen version)		
Pin	Signal name	Description
1	CAN_GND	Communication signals common ground
2	CAN_L	CAN L Line
3	N.C.	Not connected
4	CAN_H	CAN H Line
5	Out +5V	Output +5VDC @100mA



CN1		
Pin	Signal name	Description
1	FLS	Forward limit switch
2	TOP	TOP input
3	BLS	Backward limit switch
4	Digital input / Encoder ch. A	Digital input / Encoder channel A
5	Common ground	Inputs common ground
6	Reserved	Reserved
7	Reserved	Reserved
8	Reserved	Reserved
9	Reserved	Reserved
10	Analog common ground	Analog input common ground
11	Analogue input	Analog input
12	Reserved	Reserved
13	Reserved	Reserved
14	Encoder ch. B	Encoder channel B



CN2		
Pin	Signal name	Description
1	D+	RS485 Positive line
2	TxD	Trasmit data output to PC RS-232
3	RxD	Receive data input from PC RS-232
4	D-	RS485 Negative line
5	GND	Signals ground
6	/BOOT	Firmware update mode

CN3		
Pin	Signal name	Description
1	D+	RS485 Positive line
2	N.C.	Not connected
3	N.C.	Not connected
4	D-	RS485 Negative line
5	GND	Signals ground
6	N.C.	Not connected

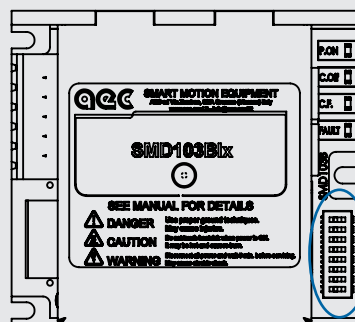
Dip-switch SW A settings

Current

DIP-SWITCH				Ampere
1	2	3		
ON	ON	ON		1,3
ON	ON	OFF		1,7
ON	OFF	ON		2
ON	OFF	OFF		2,4
OFF	ON	ON		2,8
OFF	ON	OFF		3,2
OFF	OFF	ON		3,6
OFF	OFF	OFF		4

Automatic current reduction

DIP-SWITCH		Function
4		
ON		Automatic current reduction DISABLED
OFF		Automatic current reduction ENABLED



SW A

Microsteps

DIP-SWITCH				Ampere
5	6	7		
OFF	OFF	OFF		Not managed / Stand-By
OFF	OFF	ON		Full step
OFF	ON	OFF		Equalized 1/2 step
OFF	ON	ON		Not equalized 1/2 step
ON	OFF	OFF		1/4 step
ON	OFF	ON		1/8 step
ON	ON	OFF		1/16 step
ON	ON	ON		Not managed / Stand-By

Inputs

DIP-SWITCH		Function
8		
OFF		This dip-switch must remain OFF to set the NPN inputs. PNP inputs are not managed.

Dip-switch SW B settings

Drive address

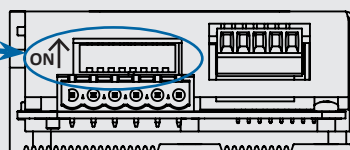
DIP-SWITCH					Address
1	2	3	4	5	
OFF	OFF	OFF	OFF	OFF	0
ON	OFF	OFF	OFF	OFF	1
OFF	ON	OFF	OFF	OFF	2
ON	ON	OFF	OFF	OFF	3
OFF	OFF	ON	OFF	OFF	4
ON	OFF	ON	OFF	OFF	5
OFF	ON	ON	OFF	OFF	6
ON	ON	ON	OFF	OFF	7
OFF	OFF	OFF	ON	OFF	8
ON	OFF	OFF	ON	OFF	9
OFF	ON	OFF	ON	OFF	10
ON	ON	OFF	ON	OFF	11
OFF	OFF	ON	ON	OFF	12
ON	OFF	ON	ON	OFF	13
OFF	ON	ON	ON	OFF	14
ON	ON	ON	ON	OFF	15

DIP-SWITCH					Address
1	2	3	4	5	
OFF	OFF	OFF	OFF	ON	16
ON	OFF	OFF	OFF	ON	17
OFF	ON	OFF	OFF	ON	18
ON	ON	OFF	OFF	ON	19
OFF	OFF	ON	OFF	ON	20
ON	OFF	ON	OFF	ON	21
OFF	ON	ON	OFF	ON	22
ON	ON	ON	OFF	ON	23
OFF	OFF	OFF	ON	ON	24
ON	OFF	OFF	ON	ON	25
OFF	ON	OFF	ON	ON	26
ON	ON	OFF	ON	ON	27
OFF	OFF	ON	ON	ON	28
ON	OFF	ON	ON	ON	29
OFF	ON	ON	ON	ON	30
ON	ON	ON	ON	ON	31



N.B.: for the communication with Modbus RTU protocol, it is necessary to add 1 at the address set through the dip-switch..

SW B



Autorun

DIP-SWITCH		Function
6		
ON		Program autorun at power-up
OFF		Program waiting for RUN command

Protocollo

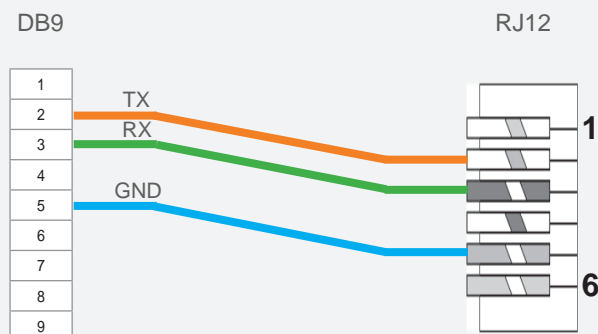
DIP-SWITCH		Function
8		
ON		MODBUS RTU
OFF		PROT-IND



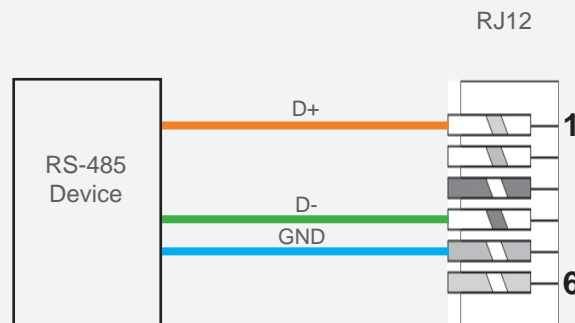
N.B.: the **PROT-IND** must be used for the communication with the software WinIC

Communication cables

RS-232



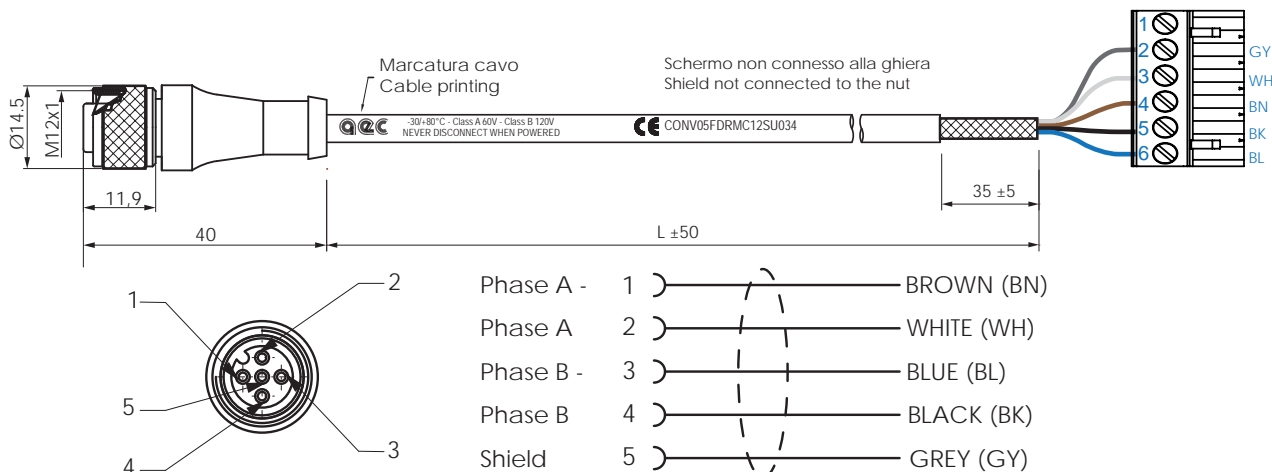
RS-485



M12 MOTOR CONNECTION CABLE: CONV05FDRM12Cxxx

Shielded dynamic laying cables with M12 female connector, for stepper motors series M57SHxx and M60SHxx.

Model	Nr. of conductors	Cross section	Characteristics	Sheath material	Insulation material	External diameter	Length
	N	mm ²				mm	mm
CONV05FDRM12C12SU034	5	0,34	UL20549 CSA LL107556	PUR opaque	PP 9Y	5,8	12000
CONV05FDRM12C04SU034	5	0,34	UL20549 CSA LL107556	PUR opaque	PP 9Y	5,8	4000



M12 PUSH-PULL ENCODER CONNECTION CABLE: CONV05MDRM12Cxxx

Shielded dynamic laying cables for AEC integrated Push Pull encoders.

Specifications	UM	
Temperature range (flexible installation)	°C	-30 .. +80
Temperature range (fixed installation)	°C	-30 .. +80
Stranding	nr x mm	cl 6
Minimum bending radius	mm	10 x Ø
Nominal voltage	V	300
Sheath material notes		Halogen free

Model	Nr. of conductors	Cross section	Characteristics	Sheath material	Insulation material	External diameter	Length
	N	mm ²				mm	mm
CONV05MDRM12C12SU025	5	0,25	UL20549 CSA LL107556	PUR opaque	PP 9Y	5,5	12000
CONV05MDRM12C04SU025	5	0,25	UL20549 CSA LL107556	PUR opaque	PP 9Y	5,5	4000

