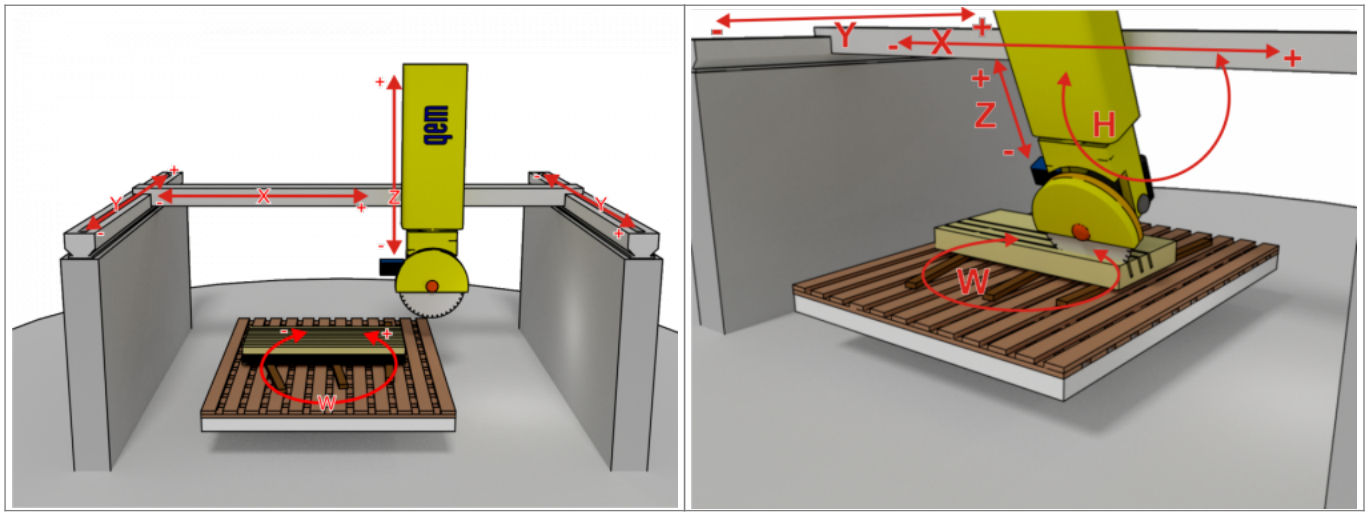
Índice

MCE_P1P44F-010: Connections



1. Informations

1.1 Release

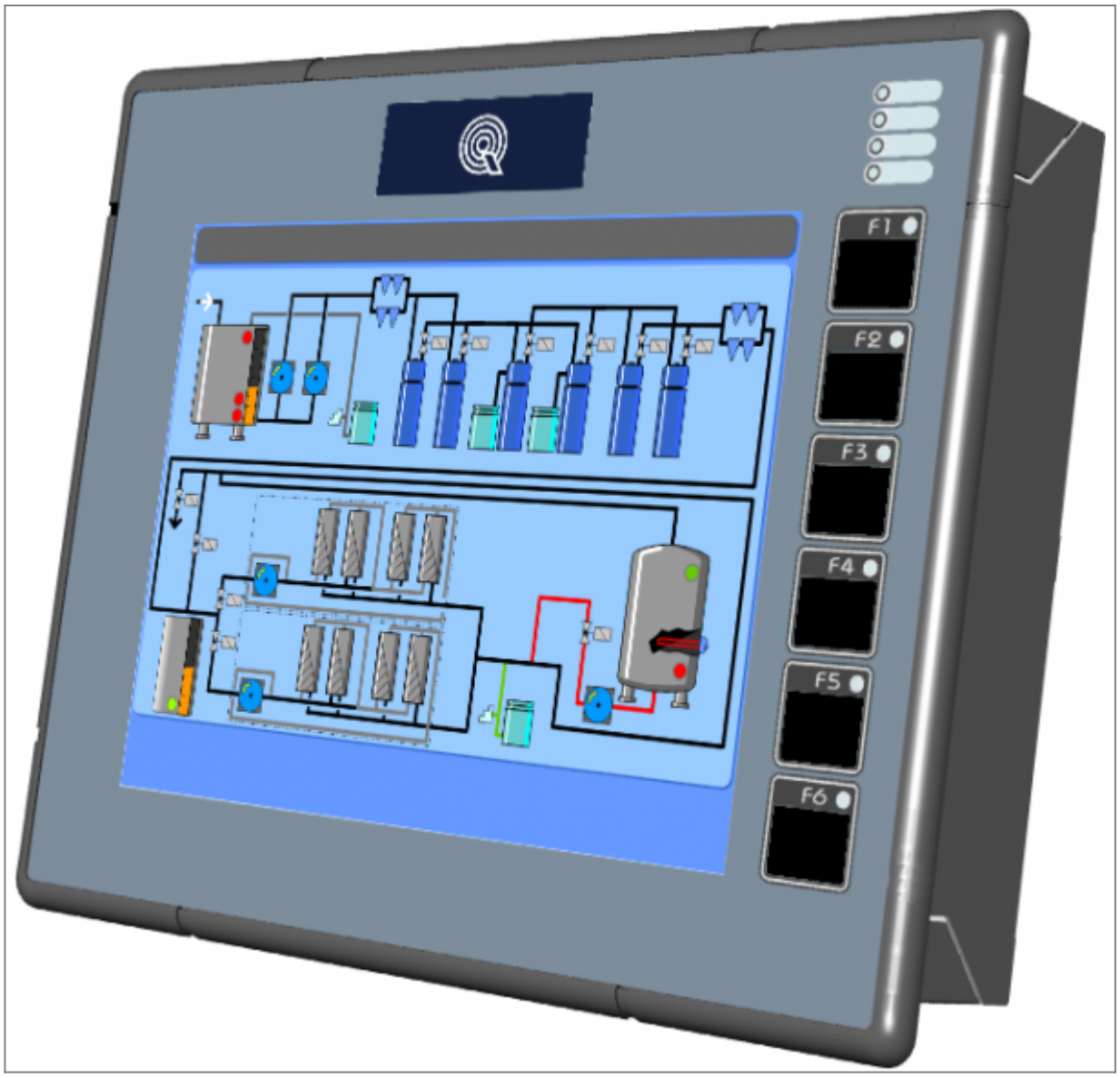
Document:	**mce_p1p44f-010**
Description:	p1p44f-010 Electrical Connections Manual
Editor:	Michele Sandri
Approver	Gabriele Bazzi
Link:	http://www.qem.eu/doku/doku.php/en/strumenti/qmoveplus/j1p44/p1p44f-010/mce_p1p44f-010
Language:	English

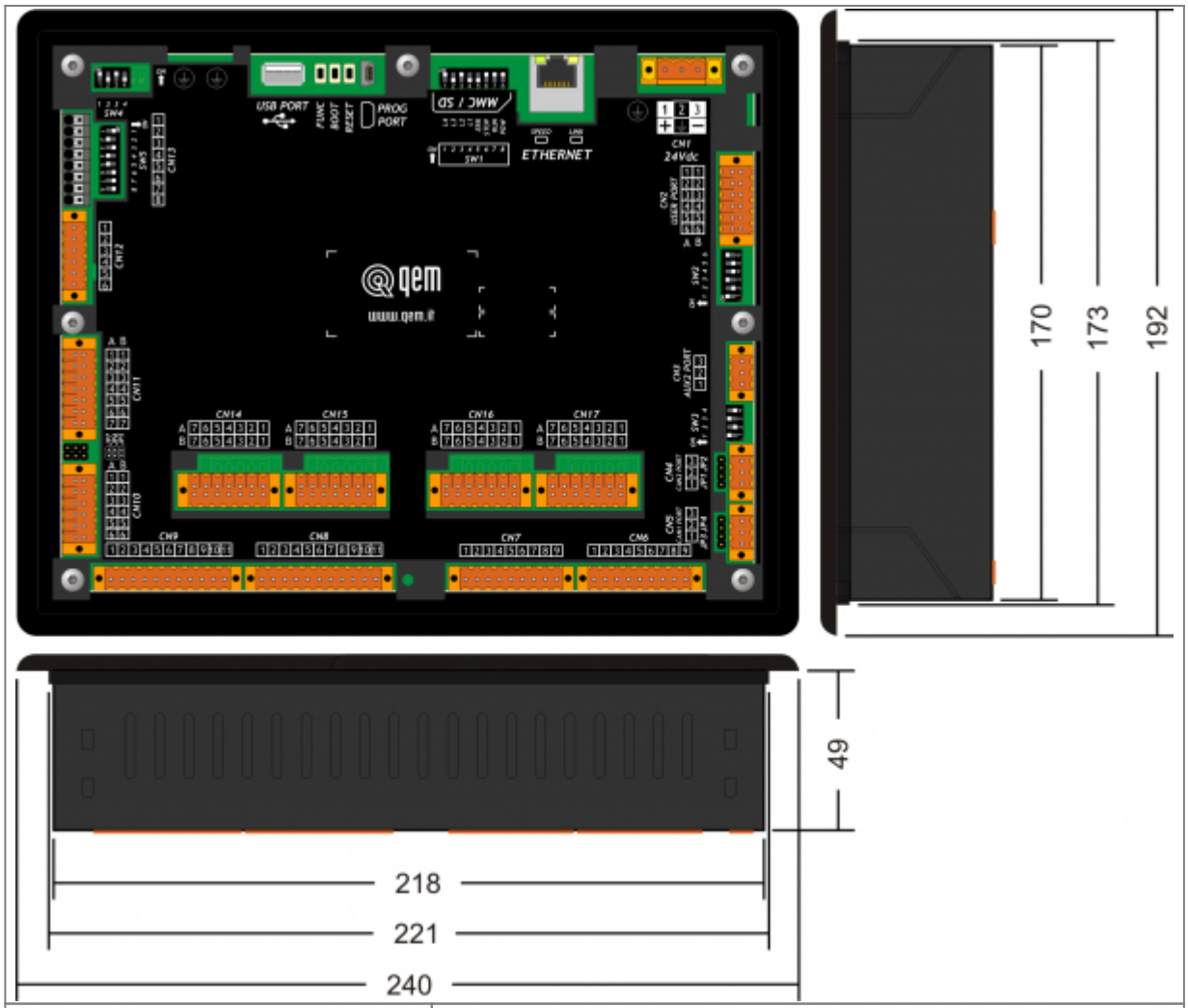
Document release	Description	Note	Date
01	New manual		17/02/2020
02	Add the Alarm 2 output on the second RMC-1S module		09/07/2020
03	Can speed modifity to 500Kb		17/02/2021
04	Add the I70 input and O63 output for hydraulic brakes (wedges)		31/03/2021

1.1.1 Specifications

2. Hardware and connections

2.1 Instrument J1-P44-FB20


F1
F2
F3
F4
F5
F6

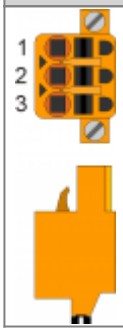


	J1-P44-Fx:Installation and Maintenance Manual

2.1.1 Power supply

2.1.1.1 CN1

The instrument should be powered at 24Vdc, provide an external fuse in series to the positive conductor +24Volt.

	PIN	ID	DESCRIPTION
	1	+24V	Positive Power Supply Input **+24Vdc**
	2	PE	Ground-PE
	3	0V	Common Power Supply **0Vdc**

2.1.2 Connectivity

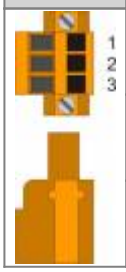
N. 1 PROG PORT → Serial with TTL logical standard for programming

N. 1 ETHERNET PORT

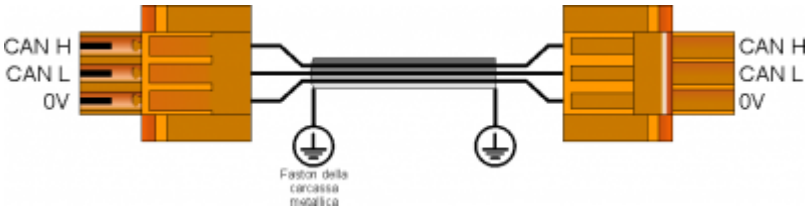
N. 1 USB port to save/load data from external memory

N. 1 CAN port connecting to external I/O modules

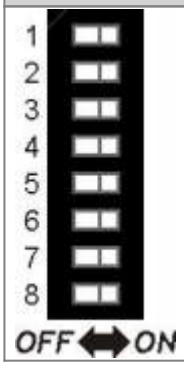
2.1.2.1 CN5

	PIN	ID	DESCRIPTION
	1	0V	Common CAN
	2	CAN_L	Communication low signal
	3	CAN_H	Communication high signal

2.1.2.1.1 J1-P44/RMC-1S/RMC-1S example of connections



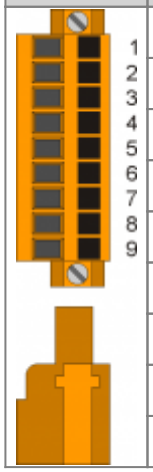
2.1.2.1.2 CAN port settings

SW1	Num. Dip	Set
	1	X
	2	X
	3	X
	4	OFF
	5	ON
	6	X
	7	X
	8	X

2.1.3 Digital inputs

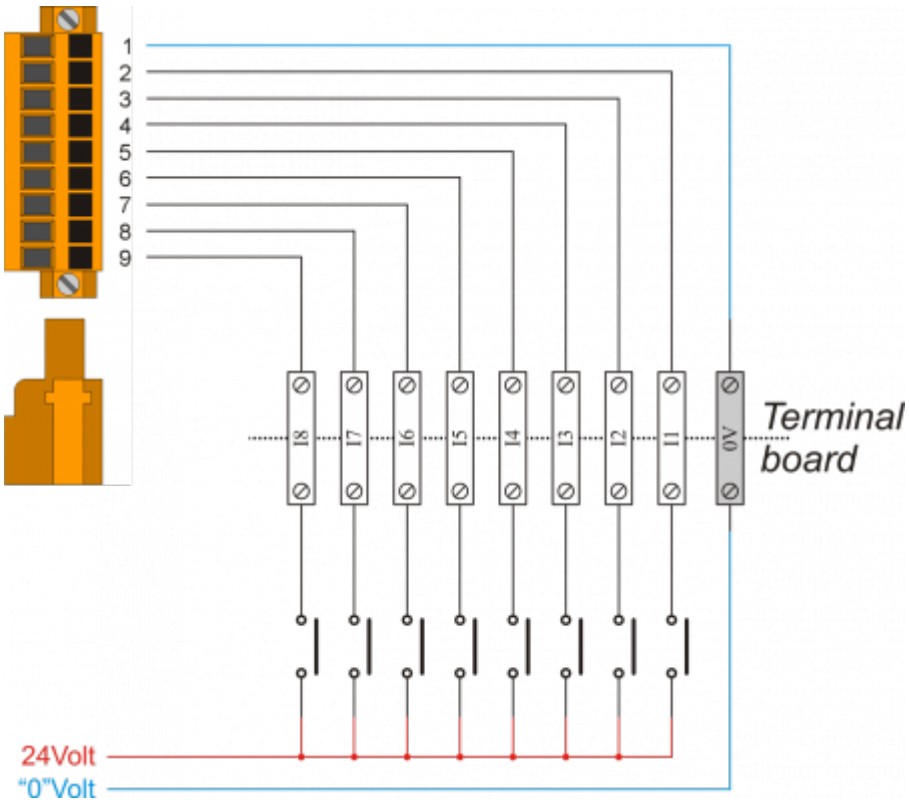
S = State	A = Action	ID
NO = Normally Open	**I** = Impulsive	**ID** = Software
NC = Normally Closed	**C** = Continuous	

2.1.3.1 CN7

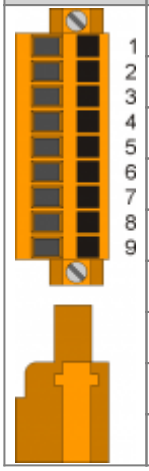


PIN	ID	DESCRIPTION			S	A
1	0V	Common of digital inputs				
2	I1	**Jog**	**X Axis**	Forward	NO	I
3	I2			Backward		
4	I3		**Y Axis**	Forward		
5	I4			Backward		
6	I5		**Z Axis**	Ascent		
7	I6			Descent		
8	I7		**W Axis**	Clockwise rotation		
9	I8			Anti-clockwise rotation		

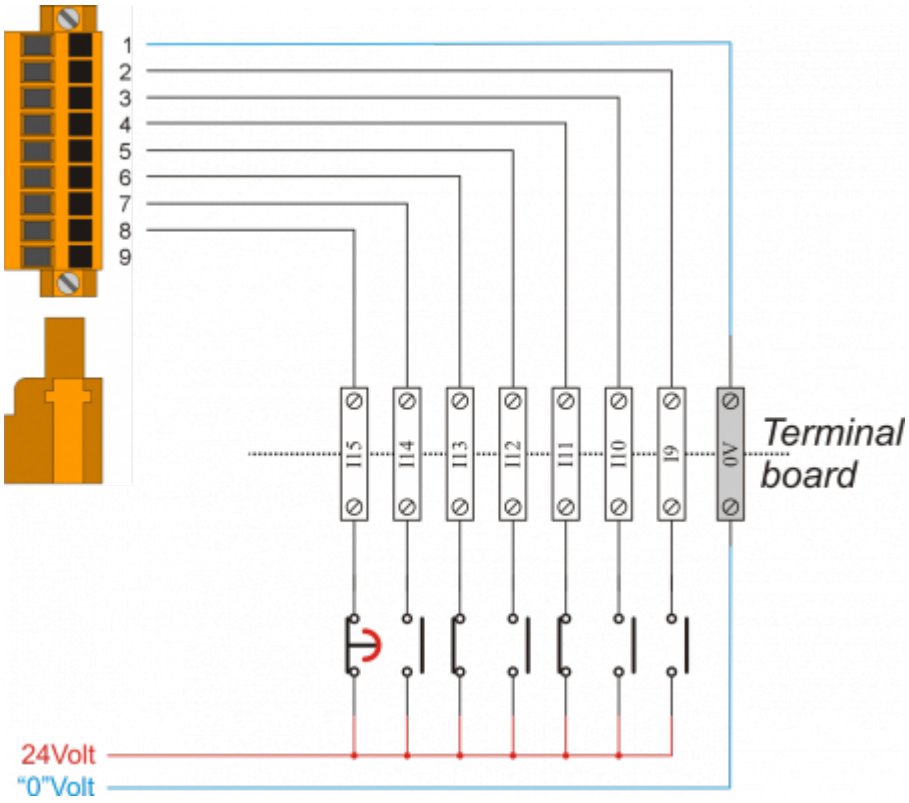
2.1.3.1.1 Connections example



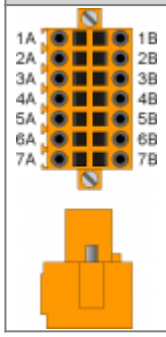
2.1.3.2 CN6

	PIN	ID	DESCRIPTION		S	A
	1	0V	Common of digital inputs			
	2	I9	**Manual / Automatic**	OFF = Manual, ON = Automatic	NO	C
	3	I10	**Start**			I
	4	I11	**Stop**		NC	C
	5	I12	**Start disk rotation**		NO	I
	6	I13	**Stop disk rotation**		NC	C
	7	I14	**Slow/Fast Selector**	OFF = slow, ON = fast	NO	
	8	I15	**Emergency**		NC	
	9	I16	*Available*		-	-

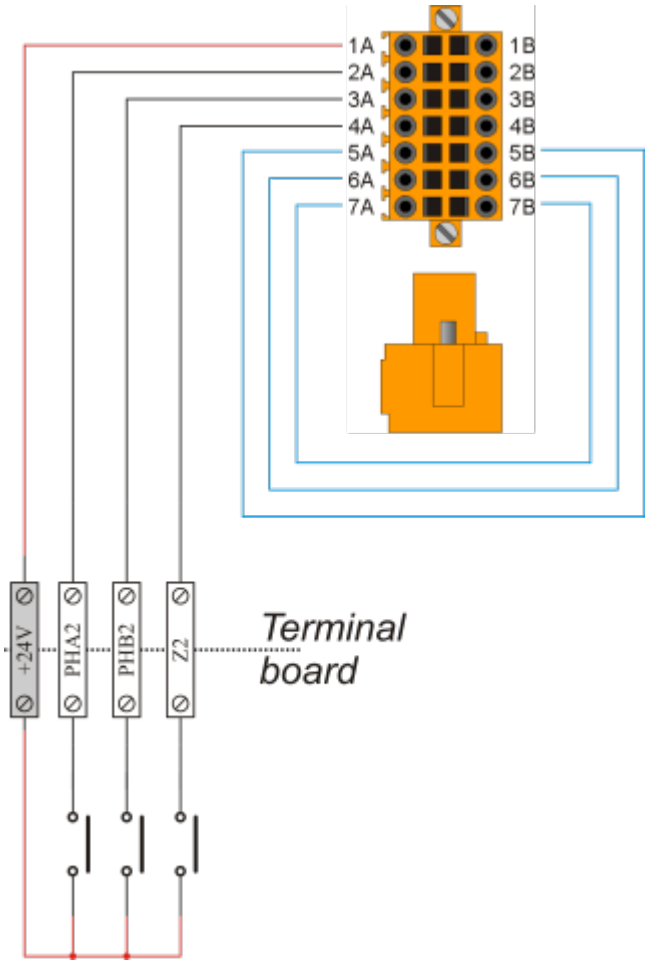
2.1.3.2.1 Connections example



2.1.3.3 CN15

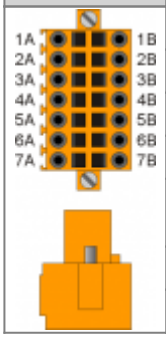
	PIN	ID		DESCRIPTION			S	A
	1A	+24V		Out +24Vdc				
	2A	PHA2		**JOG**	**H Axis**	Forward	NO	I
	3A	PHB2				Backward		
	4A	Z2		**Y-Axis zeroing**				
	5A	0V	n	Common of counter inputs - Internally connected to the 0Volt (PIN 3 - CN1) Connect to PIN 5B				
	6A			Connect to PIN 6B				
	7A			Connect to PIN 7B				

2.1.3.3.1 Connections example

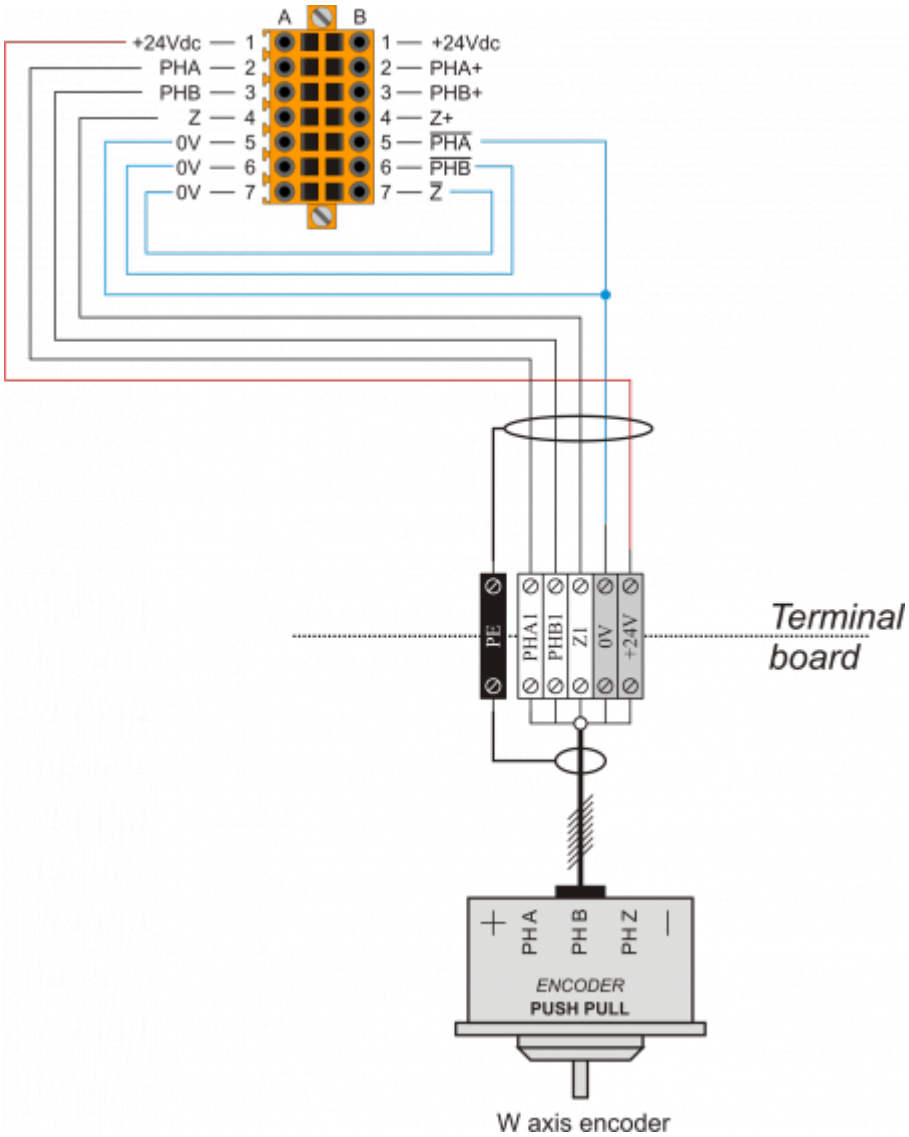


2.1.4 Counter inputs

2.1.4.1 CN14

	PIN	ID		DESCRIPTION	
	1A	+24V		Encoder Power Supply Output	
	2A	PHA1		**A Phase**	**Asse H**
	3A	PHB1		**B Phase**	
	4A	Z1		**Z Phase**	
	5A	0V	n	Common of counter inputs - Internally connected to the 0Volt (PIN 3 - CN1) Connect to PIN 5B	
	6A			Connect to PIN 6B	
	7A			Connect to PIN 7B	

2.1.4.1.1 Connection example

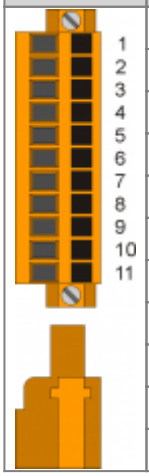


Press here for more examples of connection

2.1.5 Digital outputs

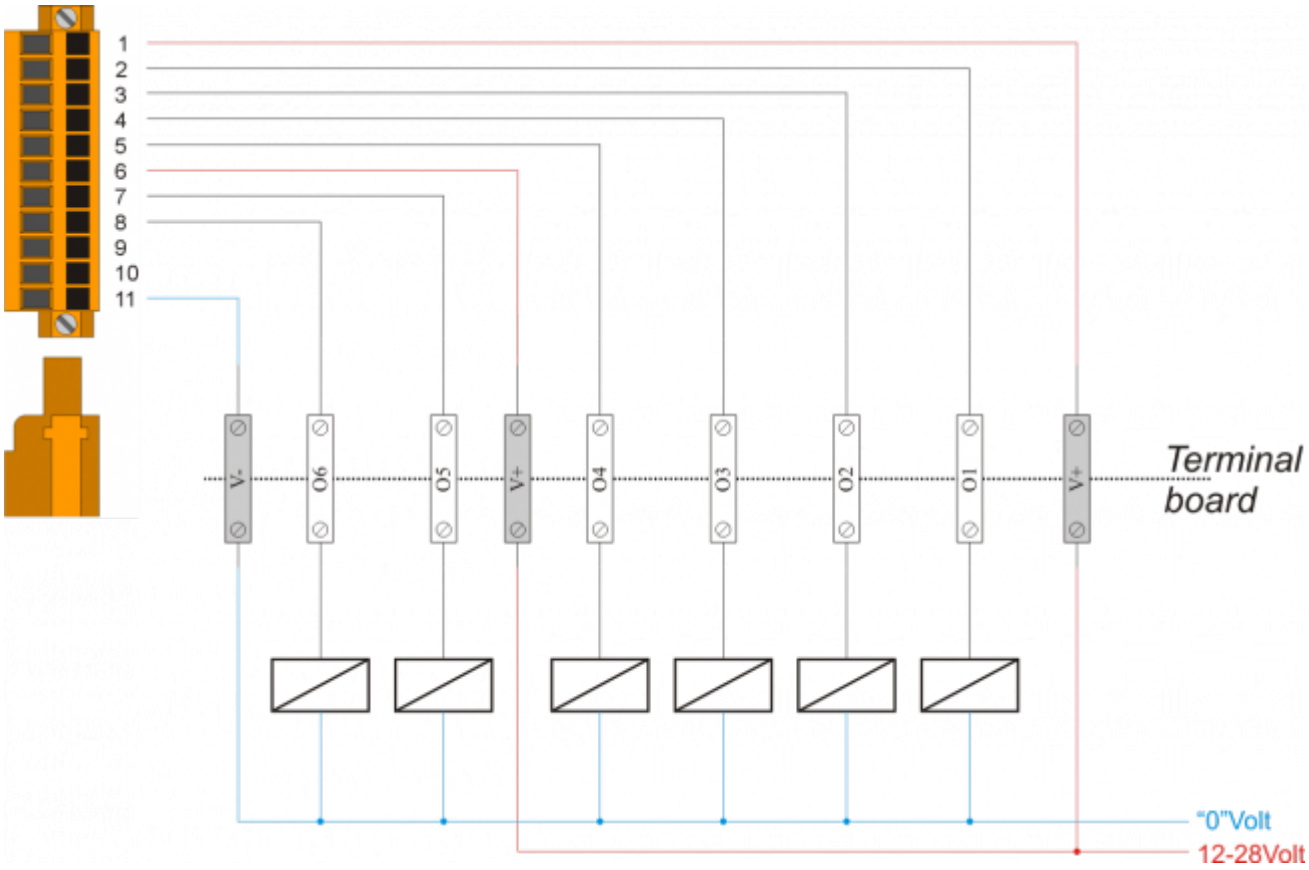
S = State	ID
OFF	**ID** = Software
ON	

2.1.5.1 CN9

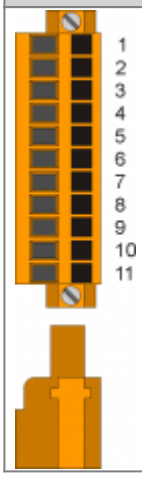


PIN	ID	DESCRIPTION	S
1	V+	Input of Power Supply outputs O1÷O4 (12÷28V dc)	
2	O1	**Automatic Cycle**	OFF
3	O2	**Allarm**	
4	O3	**Stopped Disk**	
5	O4	**Overcurrent Disk**	
6	V+	Input of Power Supply outputs O5÷O8(12÷28V dc)	
7	O5	**Buzzer**	OFF
8	O6	**Raised bridge**	
9	O7	*Available*	-
10	O8	*Available*	-
11	V-	Input of Power Supply outputs (0V dc)	

2.1.5.1.1 Connections example

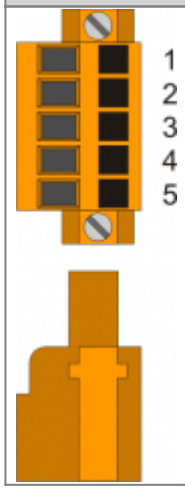


2.1.5.2 CN8

	PIN	ID	DESCRIPTION	S
	1	V+	Input of Power Supply outputs O9÷O12(12÷28V dc)	
	2	O9	*Available*	-
	3	O10	*Available*	-
	4	O11	*Available*	-
	5	O12	*Available*	-
	6	V+	Input of Power Supply outputs O13÷O16(12÷28V dc)	
	7	O13	*Available*	-
	8	O14	*Available*	-
	9	O15	*Available*	-
	10	O16	*Available*	-
	11	V-	Input of Power Supply outputs (0V dc)	

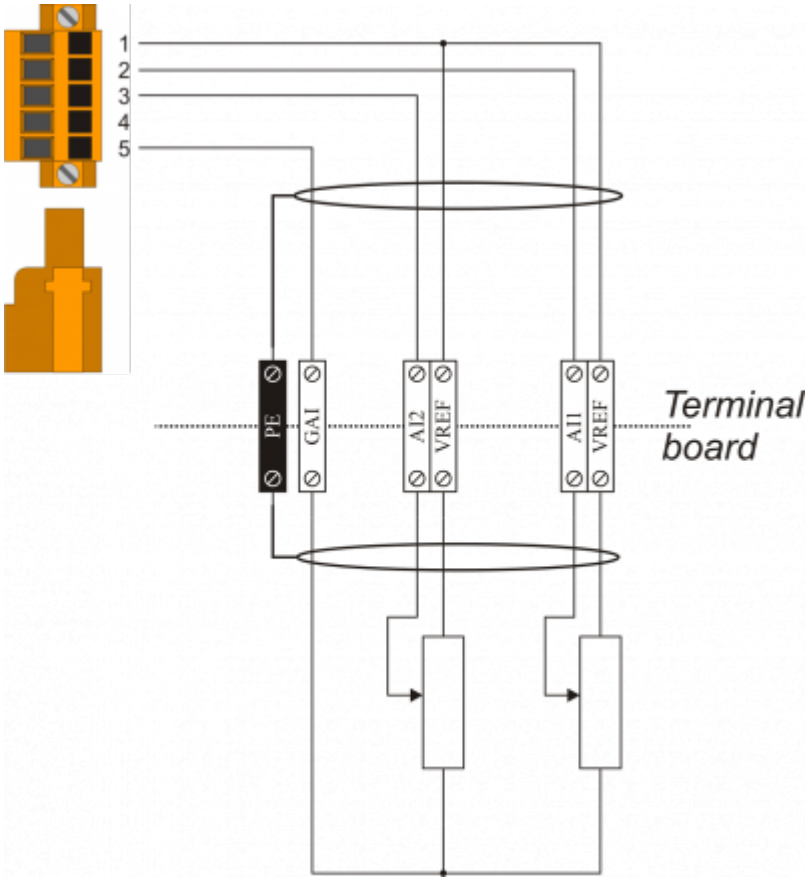
2.1.6 Analog inputs

2.1.6.1 CN13



PIN	ID	DESCRIPTION		
1	VREF	Reference voltage Output to 2,5Volt		
2	AI1	**Speed Potentiometer**	**Asse X**	Avanti
3	AI2			Indietro
4	AI3	*Available*		
5	GAI	Common of analog inputs		

2.1.6.1.1 Connections example

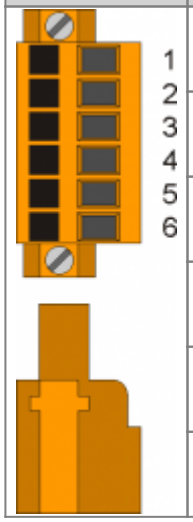


2.1.6.2 Setting of analog inputs

SW4	Num. Dip	Set
	1	OFF
	2	OFF
	3	OFF
	4	OFF
	5	X
	6	X

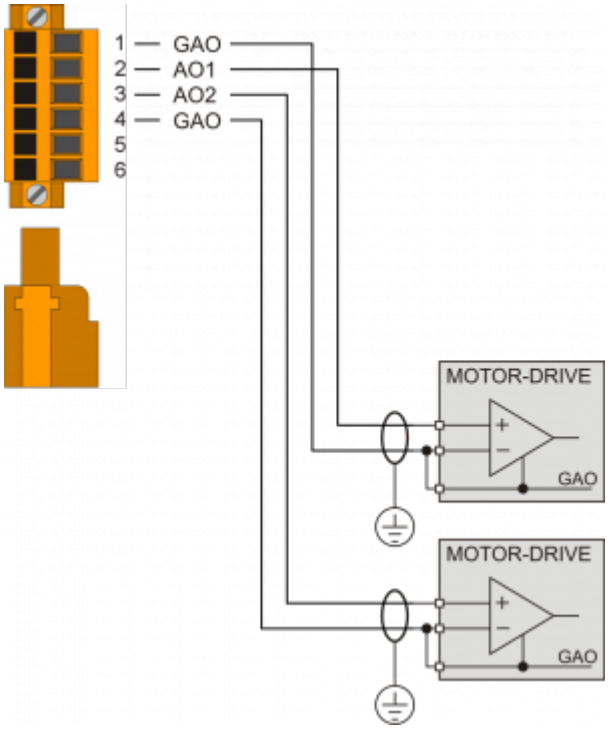
2.1.7 Analog outputs

2.1.7.1 CN12

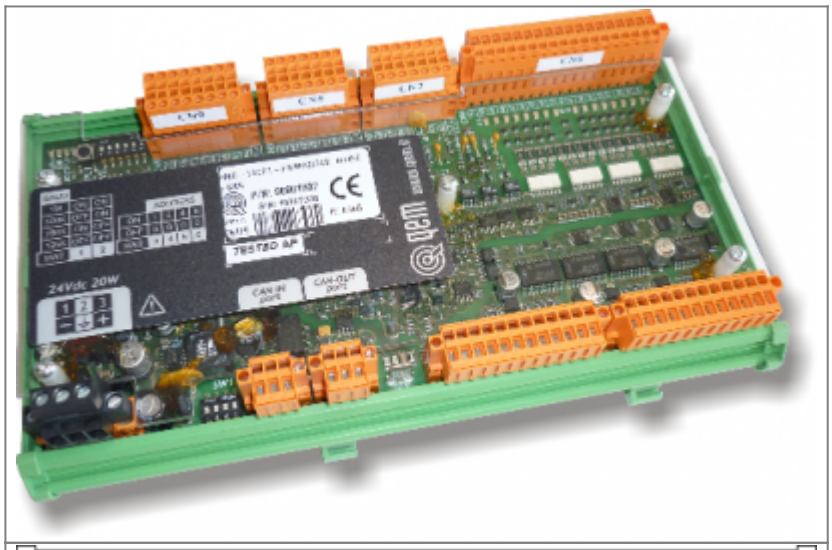


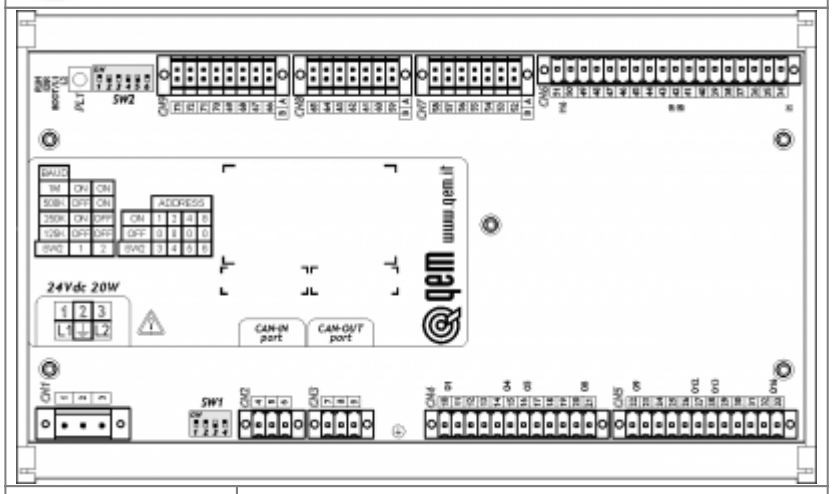
PIN	ID	DESCRIPTION
1	GAO	Common of analog outputs
2	AO1	**H Axis (0-10 Vdc o +/-10V)**
3	AO2	**Cutting Disk (0-10 Vdc)**
4	GAO	Common of analog outputs
5	AO3	*Available*
6	AO4	*Available*

2.1.7.1.1 Connections example



2.2 RMC-1SC01E1/MG2/24Vdc Expansion (1° Module)



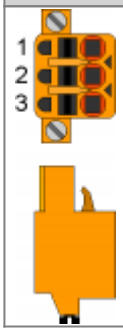


RMC-1SC01:Installation and Maintenance Manual

2.2.1 Power Supply

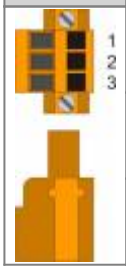
2.2.1.1 CN1

The instrument should be powered at 24Vdc, provide an external fuse in series to the positive conductor +24Volt.

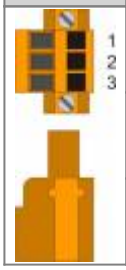
	PIN (NUMBER)	ID	DESCRIPTION
	1 (1)	0V	Common of Power Supply **0V**
	2 (2)	PE	Ground-PE
	3 (3)	+24V	Positive of Power Supply Input **+24V**

2.2.2 Connectivity

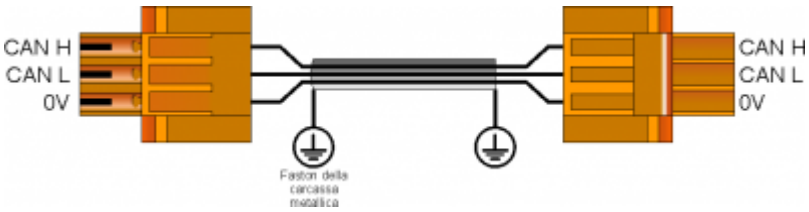
2.2.2.1 CN2

	PIN (NUMBER)	ID	DESCRIPTION
	1 (4)	0V	Common CAN
	2 (5)	CAN_L	Communication CAN low signal
	3 (6)	CAN_H	Communication CAN high signal

2.2.2.2 CN3

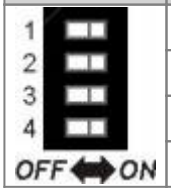
	PIN (NUMBER)	ID	DESCRIPTION
	1 (7)	0V	Common CAN
	2 (8)	CAN_L	Communication CAN low signal
	3 (9)	CAN_H	Communication CAN high signal

2.2.2.2.1 Connections example



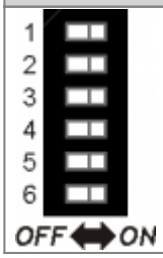
2.2.2.2.2 Terminating Resistance Setting

Setting of terminating resistances for the Canbus line.

SW1	N. Dip	DIP Settings	Function
	1	/	without
	2	/	
	3	OFF	Resistances Not Inserted
	4	OFF	

2.2.2.2.3 DIP-SWITCH SW2

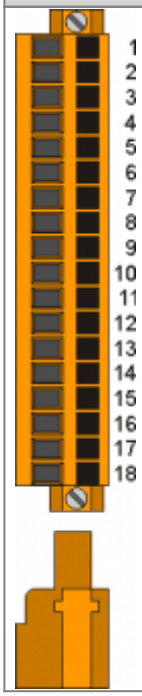
Functions Description

SW2		N. DIP	Function
	*Selecting the Transmission Speed of the Canbus*	1	OFF
		2	ON
		Baud-Rate	500Kb
	Selecting the address of the Canbus slave module	3	ON
		4	OFF
		5	OFF
		6	OFF
		ID	1

2.2.3 Digital inputs

S = State	A = Action	ID
NO = Normally Open	**I** = Impulsive	**ID** = Software
NC = Normally Closed	**C** = Continuous	

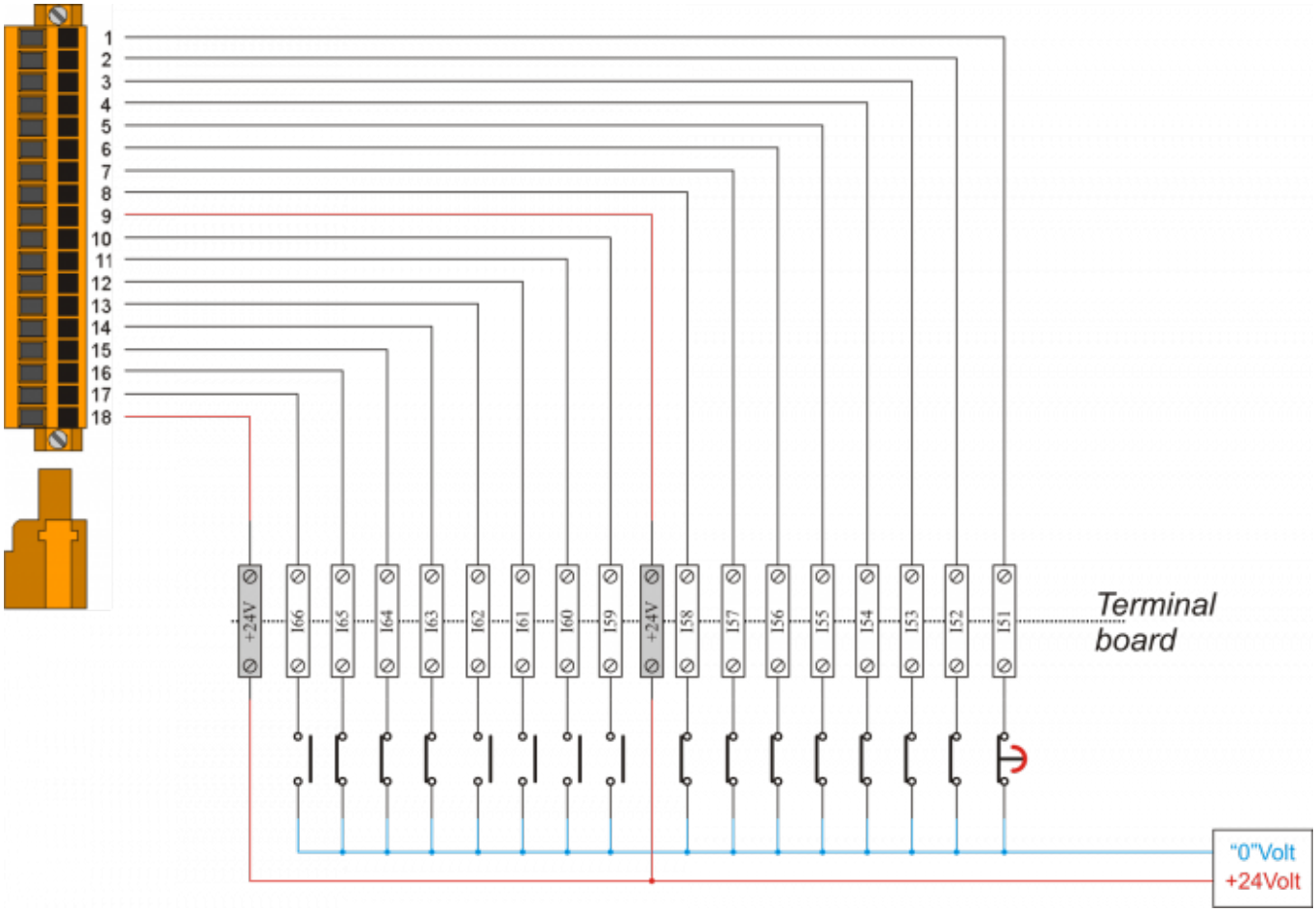
2.2.3.1 CN6



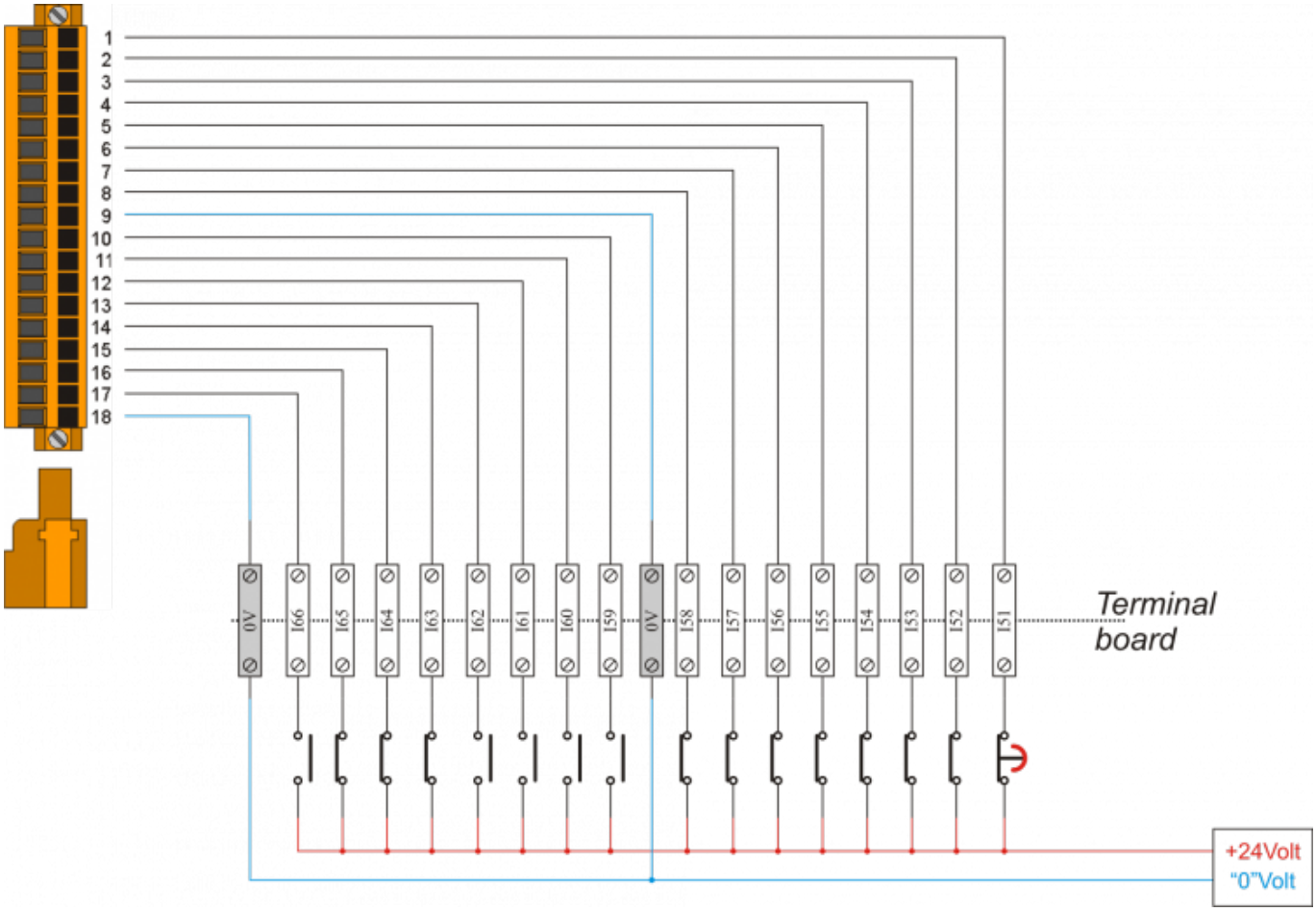
PIN (NUMBER)	ID	DESCRIPTION			S	A
1 (34)	I51	**Emergency**			NC	C
2 (35)	I52	**Limit switch**	**X Axis**	Forward		
3 (36)	I53			Backward		
4 (37)	I54		**Y Axis**	Forward		
5 (38)	I55			Backward		
6 (39)	I56		**Z Axis**	Top		
7 (40)	I57			Bottom		
8 (41)	I58	**Stateflow**				
9 (42)	PL1	Polarizer				
10 (43)	I59	**Zero Cam**	**X Axis**		NO	C
11 (44)	I60		**Y Axis**			
12 (45)	I61		**Z Axis**			
13 (46)	I62		**W Axis**			
14 (47)	I63	**W and H fault inverters** [1)]			NC	
15 (48)	I64	**Disk fault inverter**				
16 (49)	I65	**Thermal series**				
17 (50)	I66	**Moving disk**			NO	
18 (51)	PL2	Polarizer				

[1)] Connect in series

2.2.3.1.1 NPN logic connections example



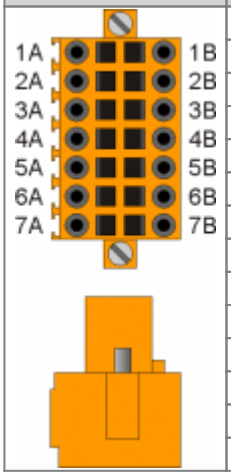
2.2.3.1.2 PNP logic connections example



We suggested to choose the connection with PNP logic

2.2.4 Counter inputs

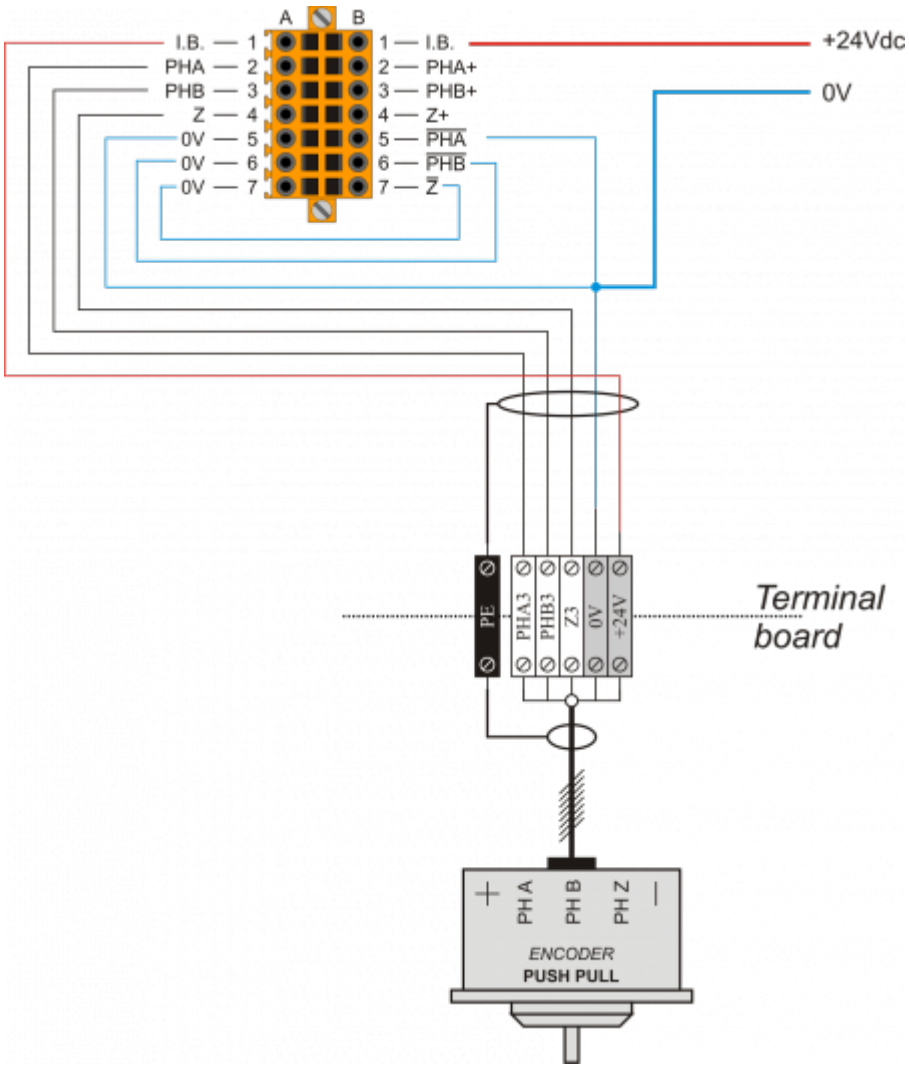
2.2.4.1 CN7



PIN (NUMBER)	ID	Description		
1A (52A)		Internal bridge 1A -1B		
2A (53A)	PHA3	**A Phase**	**X Axis**	PNP Push-Pull 12-24V[1)]
3A (54A)	PHB3	**B Phase**		
4A (55A)	Z3	**Z Pulse**		
5A (56A)	0V	Common encoder input		
6A (57A)	0V			
7A (58A)	0V			
1B (52B)		Internal bridge 1A -1B		
2B (53B)	PHA3+	**A+ Phase**	**X Axis**	Line Driver only 5V
3B (54B)	PHB3+	**B+ Phase**		
4B (55B)	Z3+	**Z+ Pulse**		
5B (56B)	PHA3-	**A- Phase**		
6B (57B)	PHB3-	**B- Phase**		
7B (58B)	Z3-	**Z- Pulse**		

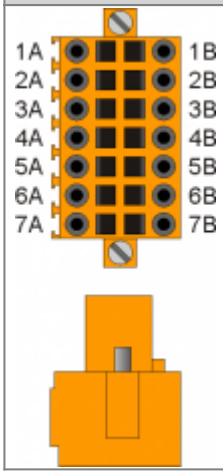
[1)] **Type Count Configuration PNP/Push-Pull**:
Terminal 5B (56B): connect to the 5A terminal (56A)
Terminal 6B (57B): connect to the 6A terminal (57A)
Terminale 7B (58B): connect to the 7A terminal (58A)

2.2.4.1.1 Connections example



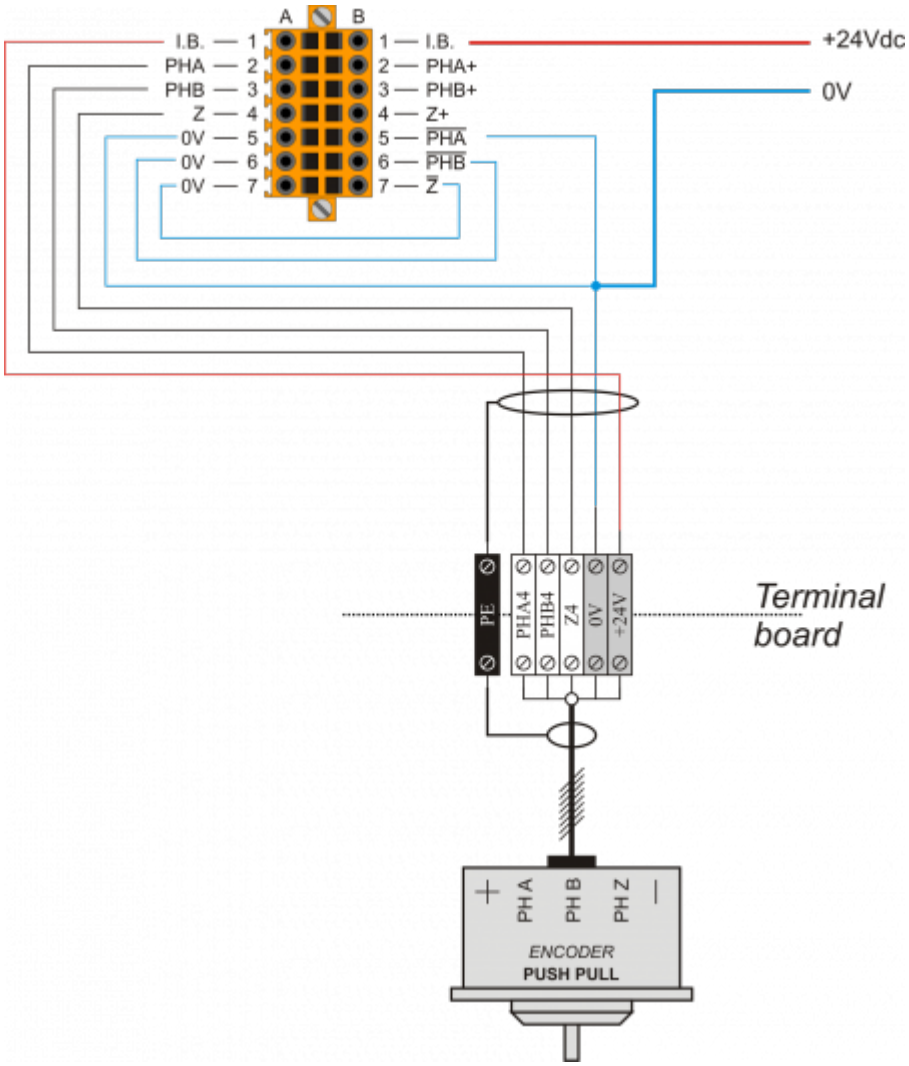
Press here for more examples of connection

2.2.4.2 CN8

	PIN (NUMBER)	ID	Description		
	1A (59A)		Internal bridge 1A -1B		
	2A (60A)	PHA4	**A Phase**	**Y Axis**	PNP Push-Pull 12-24V[1)]
	3A (61A)	PHB4	**B Phase**		
	4A (62A)	Z4	**Z Pulse**		
	5A (63A)	0V	Common encoder input		
	6A (64A)	0V			
	7A (65A)	0V			
	1B (59B)		Internal bridge 1A -1B		
	2B (60B)	PHA4+	**A+ Phase**	**Y Axis**	Line Driver only 5V
	3B (61B)	PHB4+	**B+ Phase**		
	4B (62B)	Z4+	**Z+ Pulse**		
	5B (63B)	PHA4-	**A- Phase**		
	6B (64B)	PHB4-	**B- Phase**		
	7B (65B)	Z4-	**Z- Pulse**		

[1)] **Type Count Configuration PNP/Push-Pull**:
Terminal 5B (63B): connect to the 5A terminal 5A (63A)
Terminal 6B (64B): connect to the 6A terminal (64A)
Terminal 7B (65B): connect to the 7A terminal (65A)

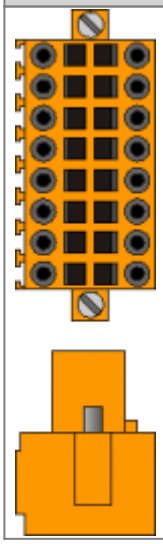
2.2.4.2.1 Connections example



Press here for more examples of connection

2.2.5 Analog outputs / Analog inputs

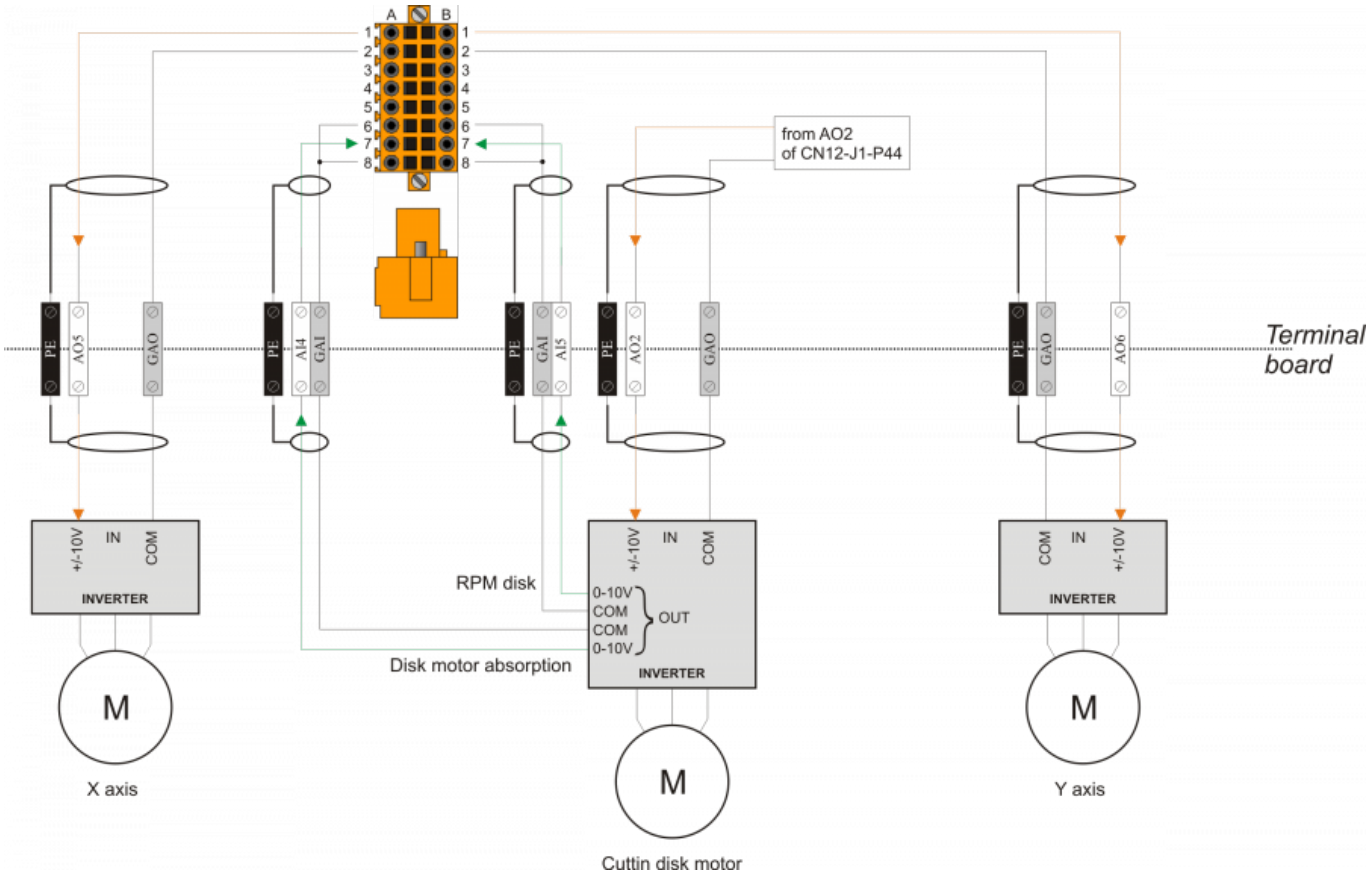
2.2.5.1 CN9



PIN (NUMBER)	ID	Description
1A (66A)	AO5	**X Axis (0-10 Vdc or +/-10V)**
2A (67A)	GAO	Common analog outputs
3A (68A)	n.c.	
4A (69A)	Vref	
5A (70A)	Sel.1 Curr. [1)]	
6A (71A)	Sel.1 Volt [2)]	
7A (72A)	AI4	**Disk motor absorption (0-10Vdc)**
8A (73A)	GAI	Common analog inputs
1B (66B)	AO6	**Y Axis (0-10 Vdc or +/-10V)**
2B (67B)	GAO	Common analog outputs
3B (68B)	n.c.	
4B (69B)	Vref	
5B (70B)	Sel.2 Curr. [3)]	
6B (71B)	Sel.2 Volt [4)]	
7B (72B)	AI5	**RPM disk (0-10Vdc)**
8B (73B)	GAI	Common analog inputs

[1), 3)] 0-20 mA. selection. Connect to GAI
[2), 4)] 0-10 Volt selection. Connect to GAI

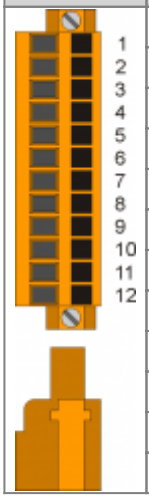
2.2.5.1.1 Connection example



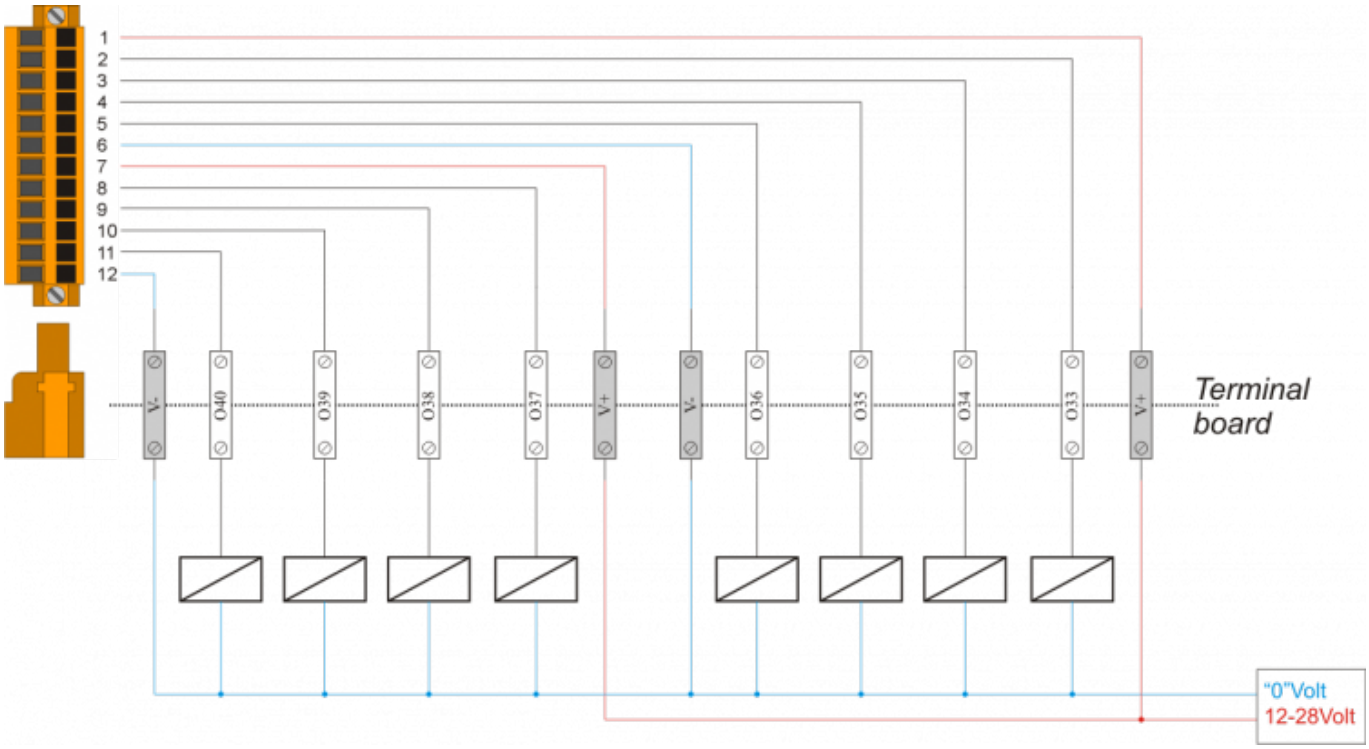
2.2.6 Digital outputs

S = State	ID
OFF	**ID** = Software
ON	

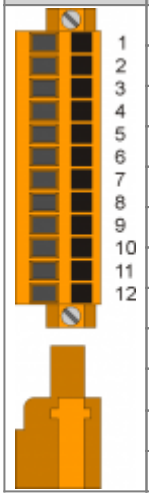
2.2.6.1 CN4

	PIN (NUMBER)	ID	DESCRIPTION		S
	1 (10)	V+	Input of Power Supply outputs O33÷O36 (12÷28V dc)		
	2 (11)	O33	**Water**		OFF
	3 (12)	O34	**Laser**		
	4 (13)	O35	**X Axis**	Forward	
	5 (14)	O36		Backward	
	6 (15)	V-	Input of Power Supply outputs (0V dc)		
	7 (16)	V+	Input of Power Supply outputs O37÷O40 (12÷28V dc)		
	8 (17)	O37	**Y Axis**	Forward	OFF
	9 (18)	O38		Backward	
	10 (19)	O39	**Z Axis**	Ascent	
	11 (20)	O40		Descent	
	12 (21)	V-	Input of Power Supply outputs (0V dc)		

2.2.6.1.1 Connection example

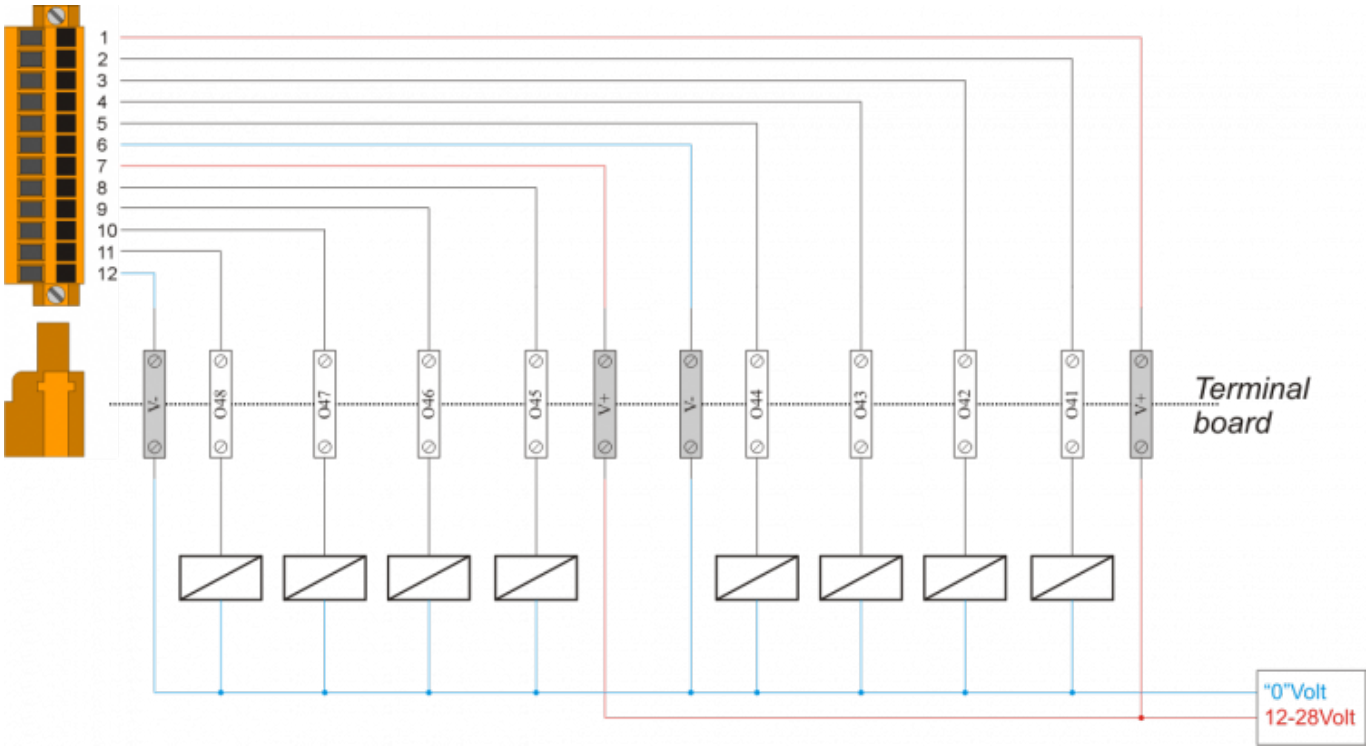


2.2.6.2 CN5

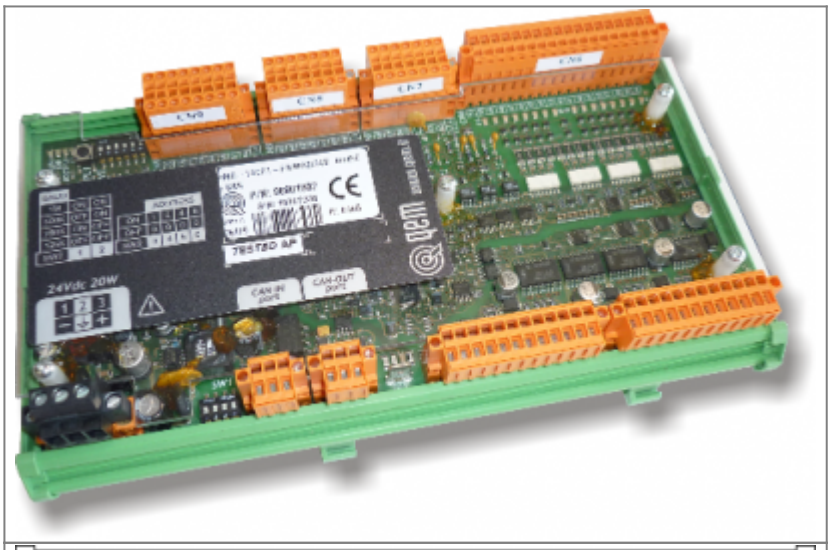
CN5	PIN (NUMBER)	ID	DESCRIPTION		S
	1 (22)	V+	Input of Power Supply outputs O41÷O44 (12÷28V dc)		
	2 (23)	O41	**W Axis**	Clockwise	OFF
	3 (24)	O42		Counter clokwise	
	4 (25)	O43	**Brake**	**X Axis**	[1]
	5 (26)	O44		**Y Axis**	
	6 (27)	V-	Input of Power Supply outputs (0V dc)		
	7 (28)	V+	Input of Power Supply outputs O45÷O48 (12÷28V dc)		
	8 (29)	O45	**Brake**	**Z Axis**	[2]
	9 (30)	O46		**W Axis**	
	10 (31)	O47	**End program**		OFF[3]
	11 (32)	O48	**Machine OK**		ON
	12 (33)	V-	Input of Power Supply outputs (0V dc)		

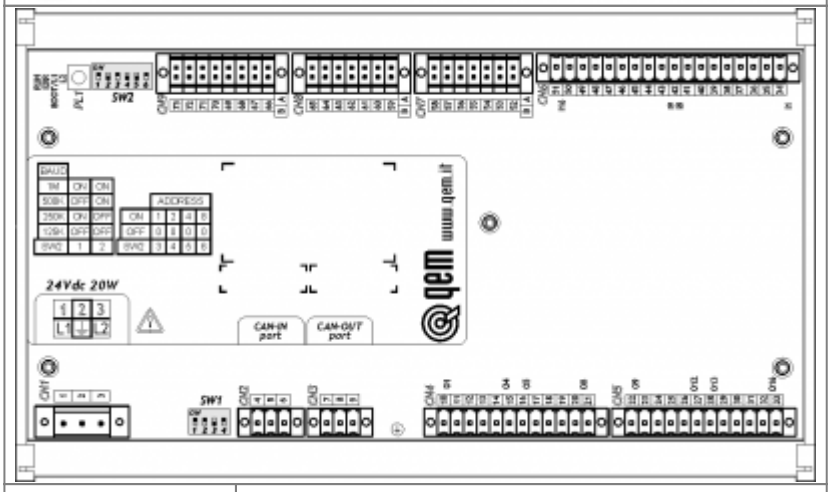
[1], [2] OFF/ON according to setup parameters
[3] Activate for 5 seconds at the end of the automatic cycle

2.2.6.2.1 Connection example



2.3 RMC-1SC01E1/MG2/24Vdc Expansion (2° module)



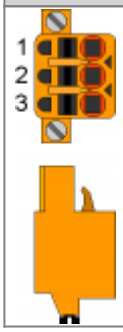


RMC-1SC01:Installation and Maintenance Manual

2.3.1 Power Supply

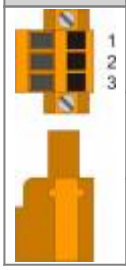
2.3.1.1 CN1

The instrument should be powered at 24Vdc, provide an external fuse in series to the positive conductor +24Volt.

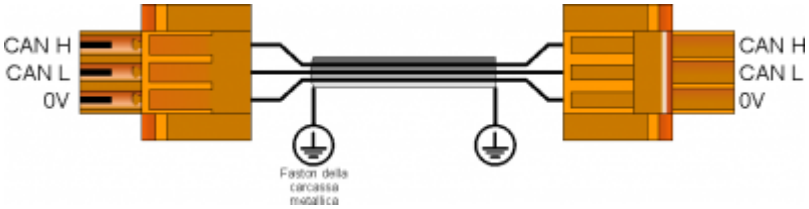
	PIN (NUMBER)	ID	DESCRIPTION
	1 (1)	0V	Common of Power Supply **0V**
	2 (2)	PE	Ground-PE
	3 (3)	+24V	Positive of Power Supply Input **+24V**

2.3.2 Connectivity

2.3.2.1 CN2

	PIN (NUMBER)	ID	DESCRIPTION
	1 (4)	0V	Common CAN
	2 (5)	CAN_L	Communication CAN low signal
	3 (6)	CAN_H	Communication CAN high signal

2.3.2.1.1 Connection example



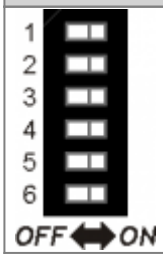
2.3.2.1.2 Terminating Resistance Setting

Setting of terminating resistances for the Canbus line.

SW1	N. Dip	DIP Settings	Function
	1	/	without
	2	/	
	3	ON	Resistances Inserted
	4	ON	

2.3.2.1.3 DIP-SWITCH SW2

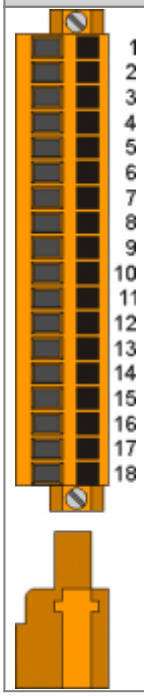
Descrizione funzionalità

SW2		N. DIP	Function
	*Selecting the Transmission Speed of the Canbus*	1	OFF
		2	ON
		Baud-Rate	1Mb
	Selecting the address of the Canbus slave module	3	OFF
		4	ON
		5	OFF
		6	OFF
		ID	2

2.3.3 Digital inputs

S = State	A = Action	ID
NO = Normally Open	**I** = Impulsive	**ID** = Software
NC = Normally Closed	**C** = Continuous	

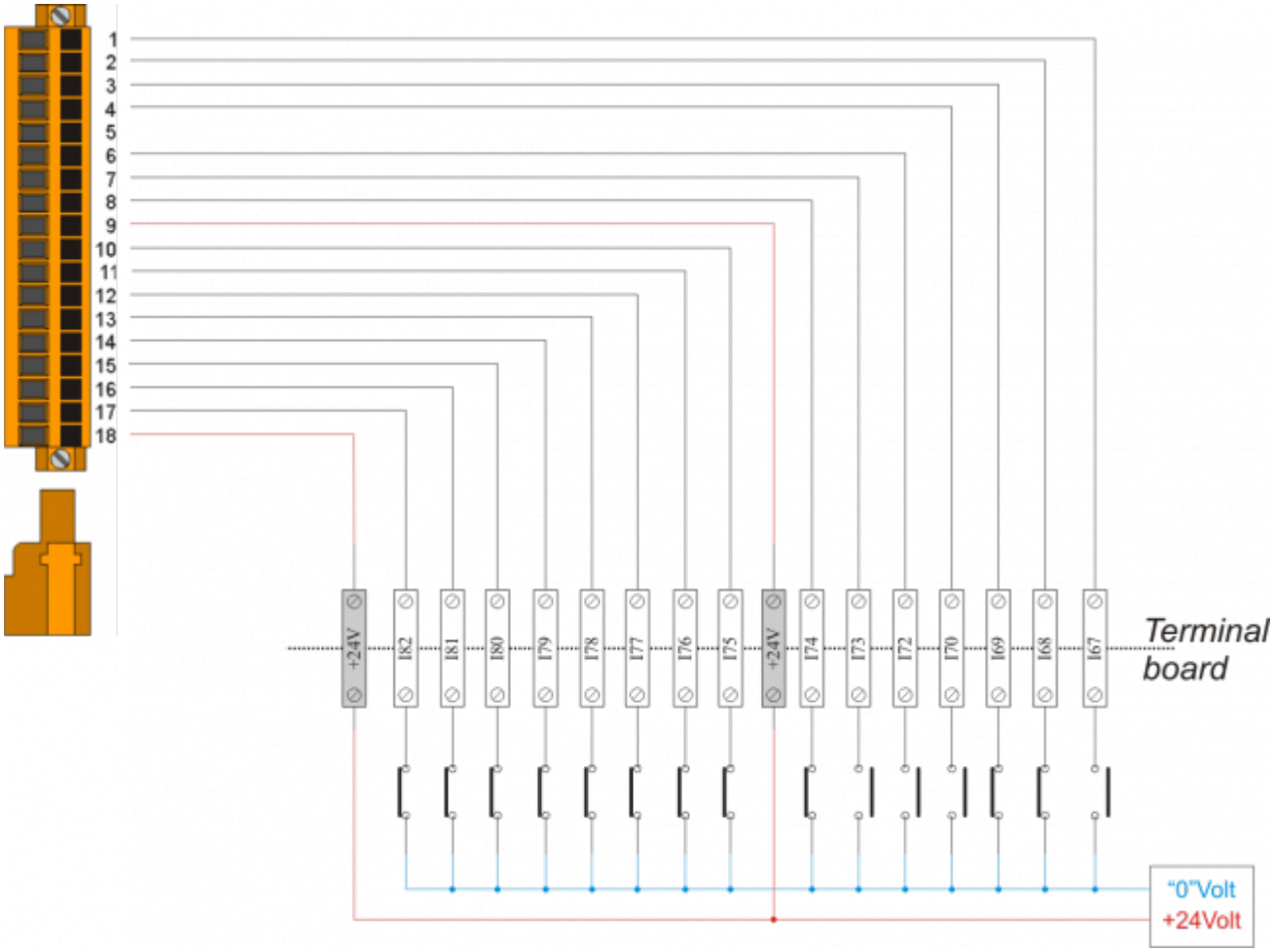
2.3.3.1 CN6



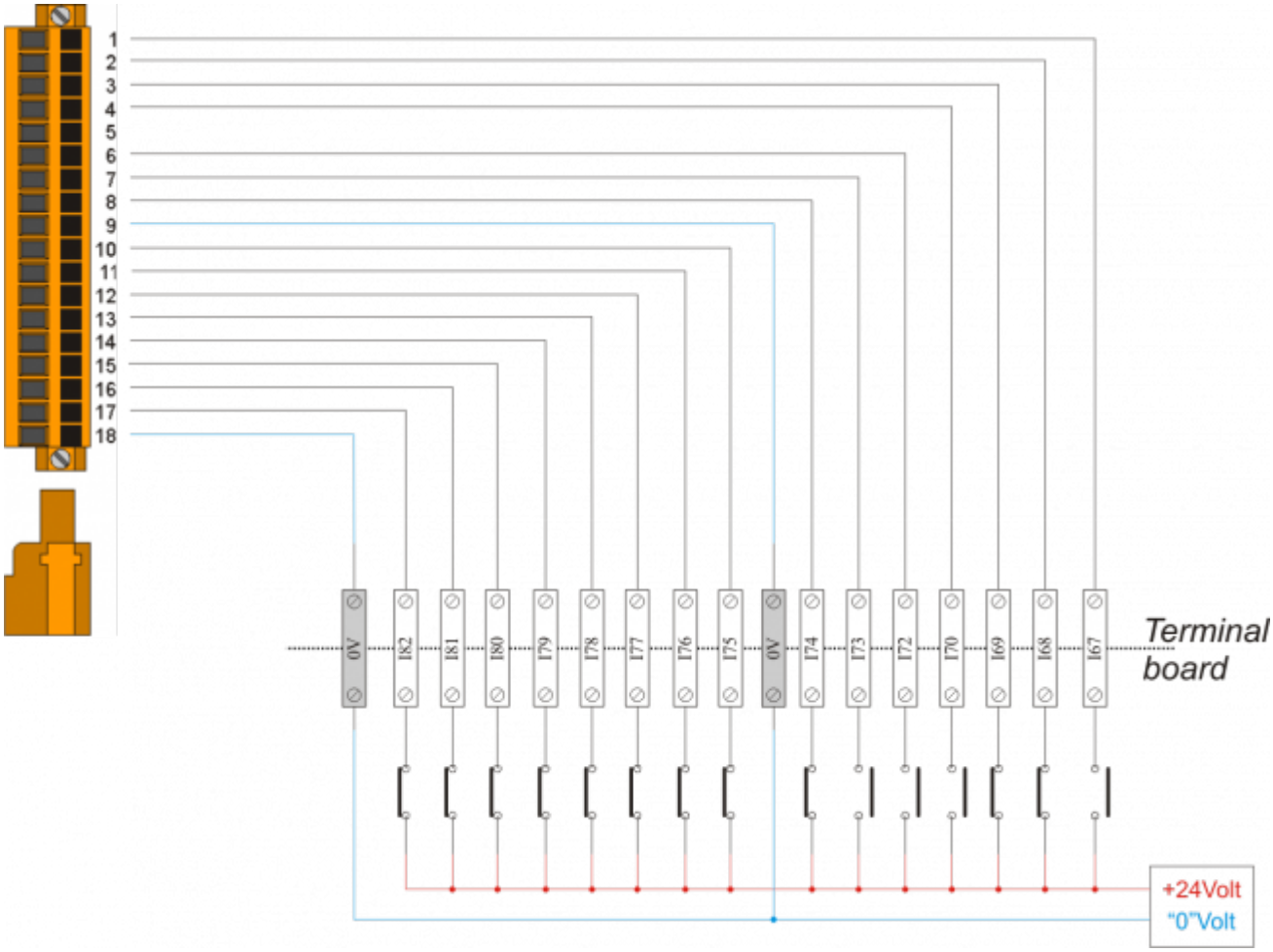
PIN (NUMBER)	ID	DESCRIPTION			S	A
1 (34)	I67	**Zero Cam**	**H Axis**		NO	C
2 (35)	I68	**Limit switch**	**H Axis**	Forward	NC	C
3 (36)	I69			Backward [1]		
4 (37)	I70	*Available*			-	-
5 (38)	I71	*Available*			-	-
6 (39)	I72	**45° dowel pins**	Dowel pins multiple W position 45° inserted		NO	C
7 (40)	I73	**Generic dowel pins**	Generic W position dowel pins inserted			
8 (41)	I74	**Active auxiliaries**			NC	
9 (42)	PL1	Polarizer				
10 (43)	I75	**Active barriers**			NC	C
11 (44)	I76	**Disk absorption alarm**				
12 (45)	I77	**Air pressure switch**				
13 (46)	I78	**Oil pressure switch**				
14 (47)	I79	**Bridge lifting**				
15 (48)	I80	**Fault**	**X Axis**			
16 (49)	I81		**Y Axis**			
17 (50)	I82		**Z Axis**			
18 (51)	PL2	Polarizer				

[1] If the H-Axis **is NOT present** (*PH-02* = 0) keep the input active

2.3.3.1.1 NPN logic connections example



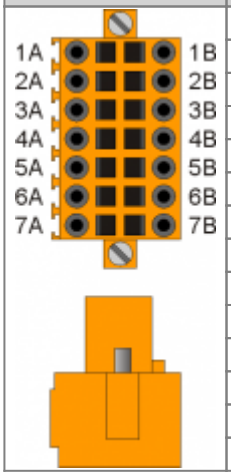
2.3.3.1.2 PNP logic connections example



We suggested to choose the connection with PNP logic

2.3.4 Counter inputs

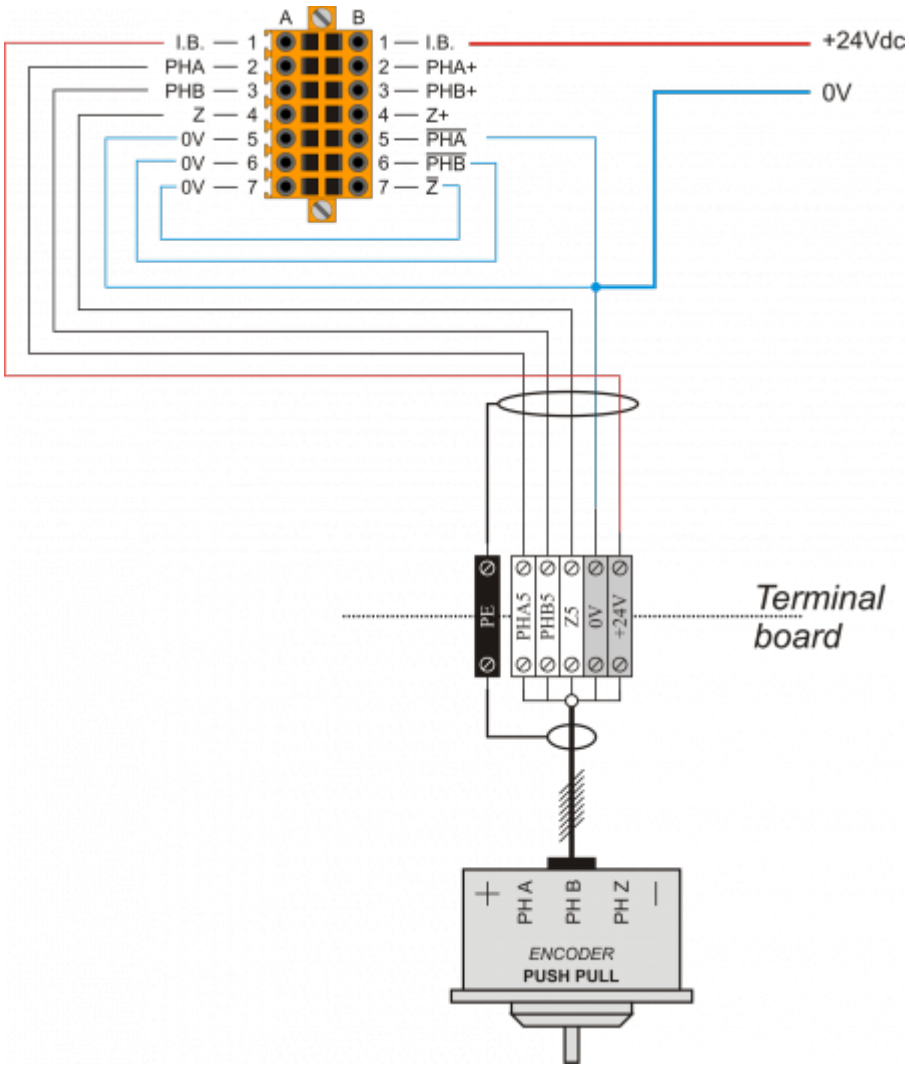
2.3.4.1 CN7



PIN (NUMBER)	ID	Description		
1A (52A)		Internal bridge 1A -1B		
2A (53A)	PHA5	**A Phase**	**Z Axis**	PNP Push-Pull 12-24V[1)]
3A (54A)	PHB5	**B Phase**		
4A (55A)	Z5	**Z Pulse**		
5A (56A)	0V	Common encoder input		
6A (57A)	0V			
7A (58A)	0V			
1B (52B)		Internal bridge 1A -1B		
2B (53B)	PHA5+	**A+ Phase**	**Z Axis**	Line Driver only 5V
3B (54B)	PHB5+	**B+ Phase**		
4B (55B)	Z5+	**Z+ Pulse**		
5B (56B)	PHA5-	**A- Phase**		
6B (57B)	PHB5-	**B- Phase**		
7B (58B)	Z5-	**Z- Pulse**		

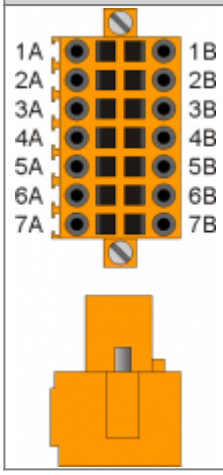
[1)] **Type Count Configuration PNP/Push-Pull**:
Terminal 5B (56B): connect to the 5A terminal (56A)
Terminal 6B (57B): connect to the 6A terminal (57A)
Terminal 7B (58B): connect to the 7A terminal (58A)

2.3.4.1.1 Push Pull encoder connection example



Press here for more examples of connection

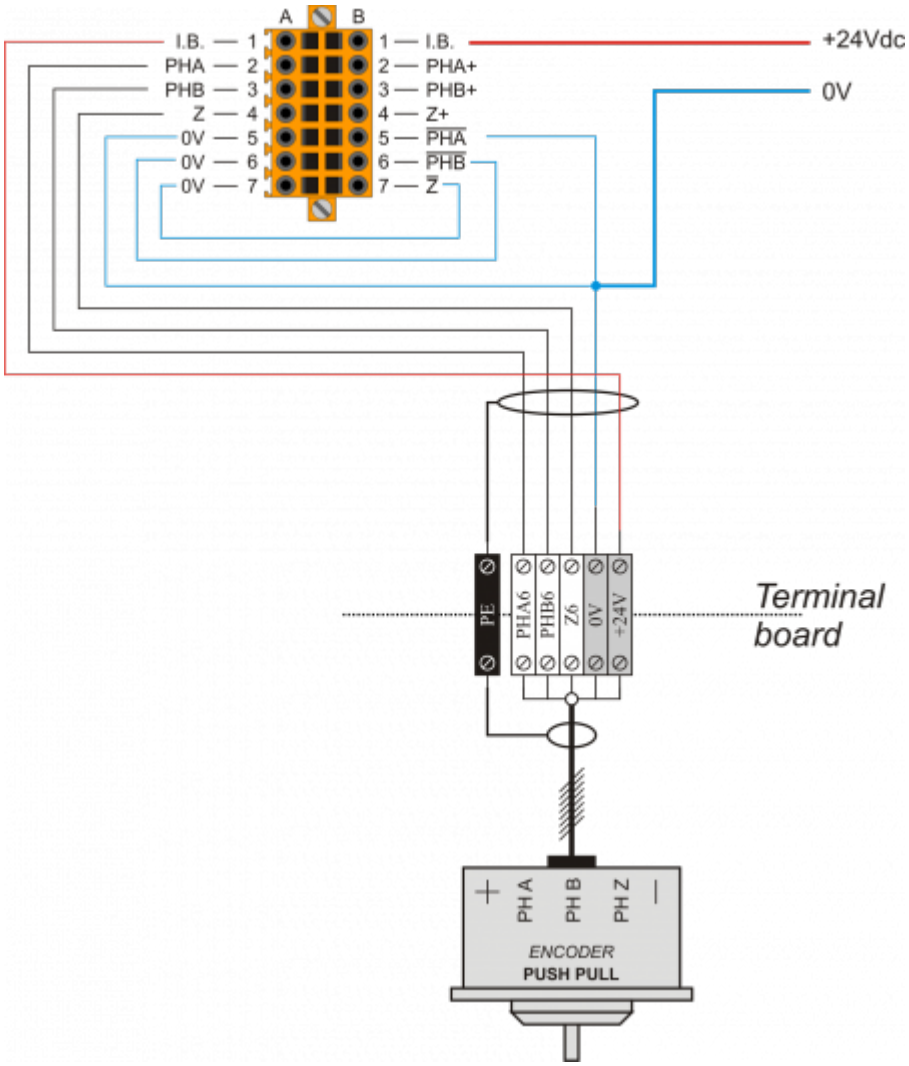
2.3.4.2 CN8



PIN (NUMBER)	ID	Description		
1A (59A)		Internal bridge 1A -1B		
2A (60A)	PHA6	**A Phase**	**W Axis**	PNP Push-Pull 12-24V[1)]
3A (61A)	PHB6	**B Phase**		
4A (62A)	Z6	**Z Pulse**		
5A (63A)	0V	Common encoder input		
6A (64A)	0V			
7A (65A)	0V			
1B (59B)		Internal bridge 1A -1B		
2B (60B)	PHA6+	**A+ Phase**	**W Axis**	Line Driver only 5V
3B (61B)	PHB6+	**B+ Phase**		
4B (62B)	Z6+	**Z+ Pulse**		
5B (63B)	PHA6-	**A- Phase**		
6B (64B)	PHB6-	**B- Phase**		
7B (65B)	Z6-	**Z- Pulse**		

[1)] **Type Count Configuration PNP/Push-Pull**:
Terminal 5B (63B): connect to the 5A terminal (63A)
Terminal 6B (64B): connect to the 6A terminal (64A)
Terminal 7B (65B): connect to the 7A terminal (65A)

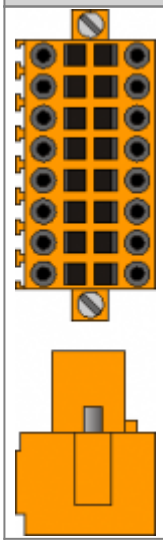
2.3.4.2.1 Push Pull encoder connection example



Press here for more examples of connection

2.3.5 Analog outputs / Analog inputs

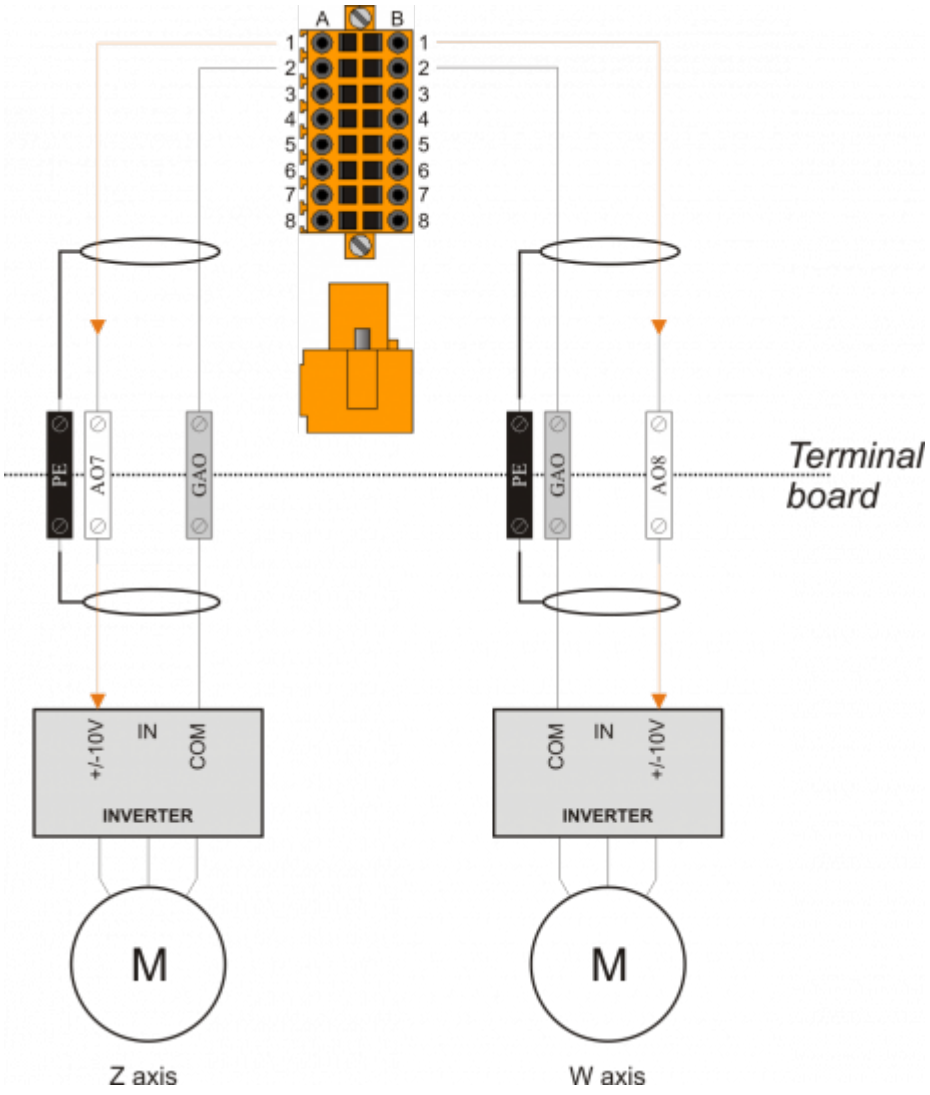
2.3.5.1 CN9



PIN (NUMBER)	ID	Description
1A (66A)	AO7	**Z Axis (0-10 Vdc o +/-10V)**
2A (67A)	GAO	Common analog outputs
3A (68A)	n.c.	
4A (69A)	Vref	
5A (70A)	Sel.1 Curr. [1]	
6A (71A)	Sel.1 Volt [2]	
7A (72A)	AI6	*Available*
8A (73A)	GAI	Common analog inputs
1B (66B)	AO8	**W Axis (0-10 Vdc o +/-10V)**
2B (67B)	GAO	Common analog outputs
3B (68B)	n.c.	
4B (69B)	Vref	
5B (70B)	Sel.2 Curr. [3]	
6B (71B)	Sel.2 Volt [4]	
7B (72B)	AI7	*Disponibile*
8B (73B)	GAI	Common analog inputs

[1], [3] 0-20 mA. selection. Connect to GAI
[2], [4] 0-10 Volt selection. Connect to GAI

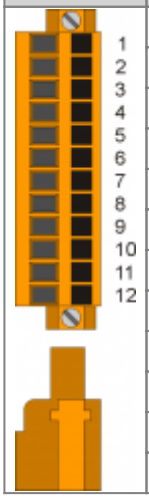
2.3.5.1.1 Connection example



2.3.6 Digital outputs

S = State	ID
OFF	**ID** = Software
ON	

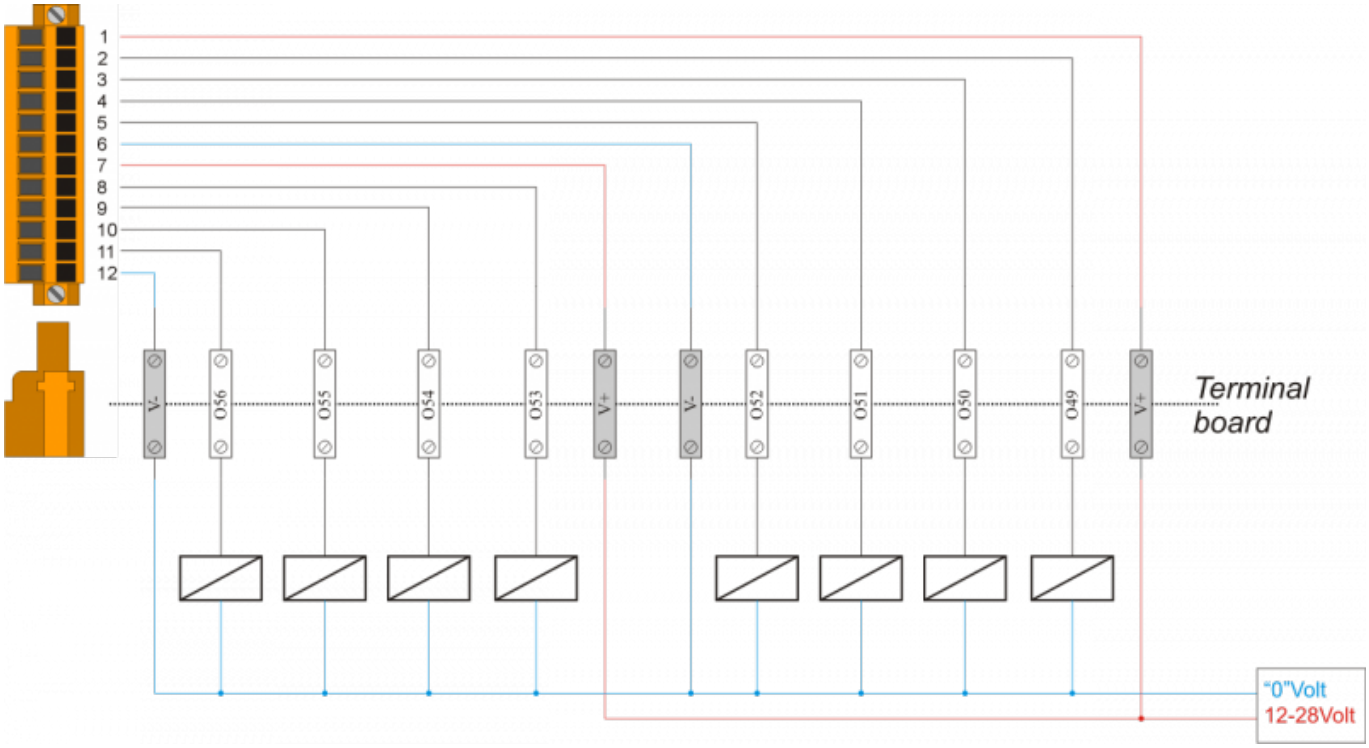
2.3.6.1 CN4



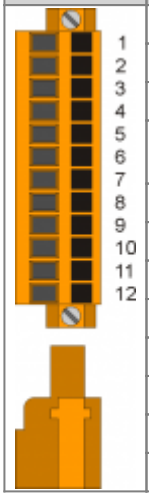
PIN (NUMBER)	ID	DESCRIPTION		S
1 (10)	V+	Input of Power Supply outputs O49÷O52 (12÷28V dc)		
2 (11)	O49	**H Axis**	Forward	OFF
3 (12)	O50		Backward	
4 (13)	O51		Brake	[1]
5 (14)	O52	**Slowdown**	**Y Axis**	OFF
6 (15)	V-	Input of Power Supply outputs (0V dc)		
7 (16)	V+	Input of Power Supply outputs O53÷O56 (12÷28V dc)		
8 (17)	O53	**Slowdown**	**W Axis**	OFF
9 (18)	O54	**Last cut**		
10 (19)	O55	**45° dowel pins**	Dowel pins 45° or multiple inserted	
11 (20)	O56	**Generic dowel pins**	Dowel pins generic position inserted	
12 (21)	V-	Input of Power Supply outputs (0V dc)		

[1] Active according to setup parameters

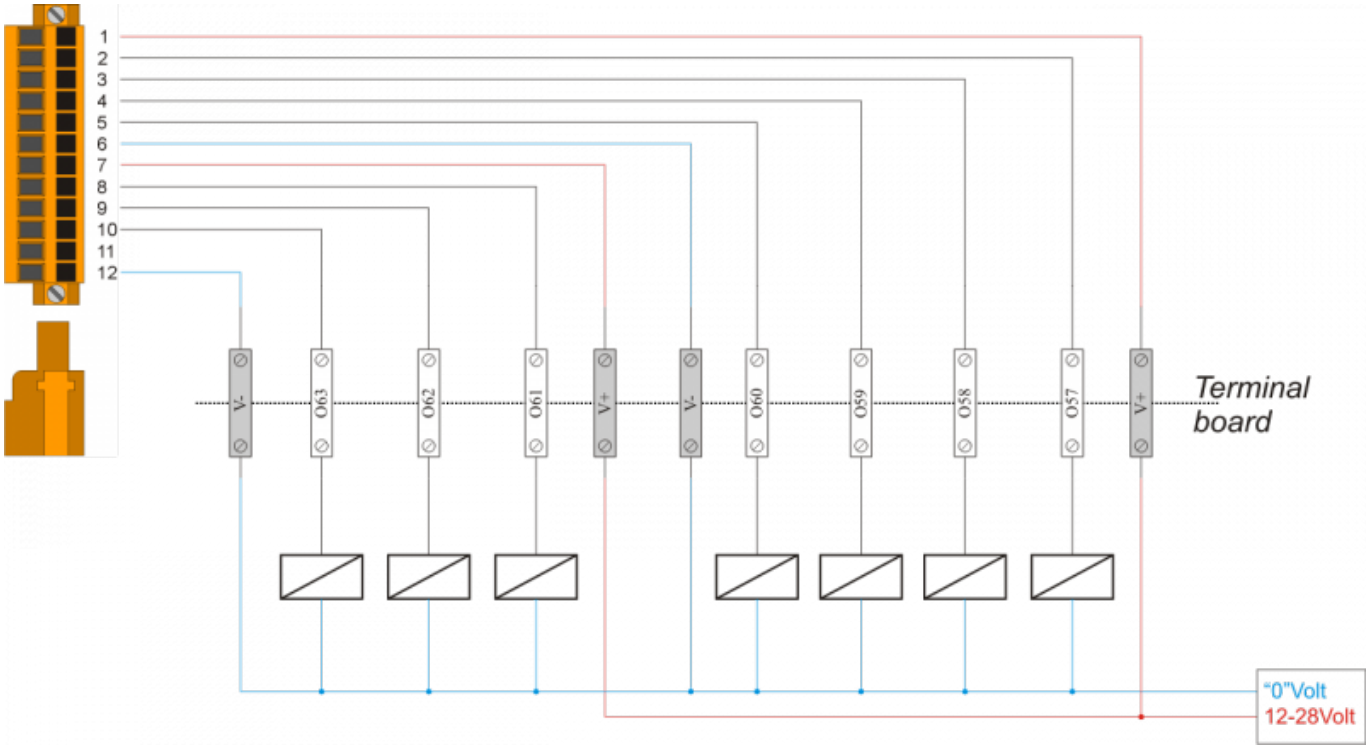
2.3.6.1.1 Connection example



2.3.6.2 CN5

CN5	PIN (NUMBER)	ID	DESCRIPTION		S
	1 (22)	V+	Input of Power Supply outputs O41÷O44 (12÷28V dc)		
	2 (23)	O57	**Piece blocker**	Lock the pieces during cutting	OFF
	3 (24)	O58	**Lubrication**		
	4 (25)	O59	**Disk inverter startup**	In setup, choose if to use as a disk startup or motion consent	
	5 (26)	O60	**Reset inverter**	Active for 2 seconds at alarm reset	
	6 (27)	V-	Input of Power Supply outputs (0V dc)		
	7 (28)	V+	Input of Power Supply outputs O45÷O48 (12÷28V dc)		
	8 (29)	O61	**Slowdown**	**H Axis**	OFF
	9 (30)	O62	**Alarm 2**	Activates with the O2 **Alarm** output	
	10 (31)	O63	*Available*		-
	11 (32)	O64	*Available*		-
	12 (33)	V-	Input of Power Supply outputs (0V dc)		

2.3.6.2.1 Connection example



3. Assistance

For supplying you fast service, at the lowest cost, we need your support.

	
Follow all instructions provided in the MIMAT manual	If the problem remains, fill out the “Request Form for assistance” on the page Contacts at www.qem.it site. Our technicians will get elements essential for the understanding of your problem.

Repair

To provide you with an efficient service, please read and adhere to the instructions given here

Shipping

It is recommended to pack the instrument with materials that are able to cushion any falls.

		
Use the original package: it must protect the instrument during transport.	Attach: 1. A description of the anomaly; 2. A part of the electric scheme where the equipment is inserted 3. The planning of the equipment (set up, quotas of job, parameters...). 4. Request a quote for repair; if not required, the cost will be calculated in the final balance.	A full description of the problem, will help identify and resolve your problems fast. A careful packaging will avoid further inconveniences.