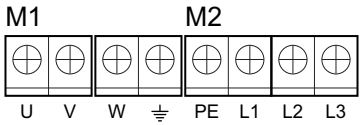
4. Inputs and outputs

4.1 Three-phase power supply and power output for motor(s)

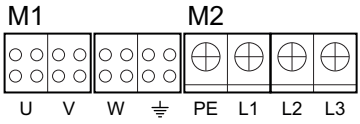
4.1.1 Terminal board M1

Three-phase power supply and output to fan groups with total absorption within the adopted RDM model limits.

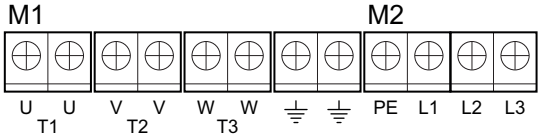
Terminal board RDM308, RDM312, RDM320 single output



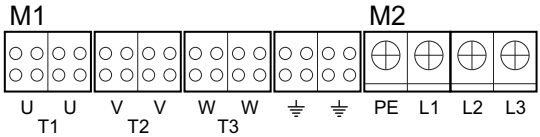
Terminal board RDM308, RDM312, RDM320 output x 4



Terminal board RDM320, RDM328 double output



Terminal board RDM320, RDM328 output x 8



Terminal	Description
U/T1	Phase output 1 **(*)**
V/T2	Phase output 2 **(*)**
W/T3	Phase output 3 **(*)**
⏚	Auxiliary grounding to be used for the load, internally connected to PE.
PE	Protection circuit breaker connection terminal **(**)**.
L1	Phase input 1
L2	Phase input 2
L3	Phase input 3

***Note**(*): double three-phase output on models RDM328.*

***Note** (**): the device can be installed in TT (e.g., domestic users in Italy), IT (to ensure maximum operating continuity) and TN (users with their own transformer cabin) voltage distribution systems. Each of these systems provides different ways to ground the power source and the metal system masses.*

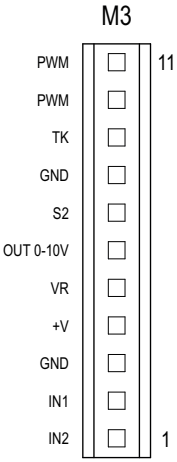
4.1.2 Power supply wiring diagram

See "Power supply wiring and power output for motor(s)" on page 22.

4.2 Analog inputs and outputs

4.2.1 Terminal board M3

***Note**: MEI-4 module is available to expand inputs. Contact SELPRO customer service.*



Terminal		Description	Specifications
1	**IN2**	Analog Input 2.	V dc/mA/kΩ
2	**IN1**	Analog Input 1.	V dc/mA/kΩ
3	**GND**	Grounding.	-
4	**+V**	Non-stabilized power voltage output for transducers.	20 V dc Max 20 mA
5	**VR**	Stabilized voltage output for raziometric sensors and potentiometers. Switching between 5 V and 10 V is automatic according to the set configuration.	5–10 V dc Max 5 mA
6	**OUT**	Powered output used to command the auxiliary power slave unit. ***Note**: the 0-10 V output follows the trend of the input signal in a directly proportional manner. It is not affected by the position of switch 2 of the DIP switch).*	0–10/10–0 Vdc Max 30 mA
7	**START/STOP**	NO/NC contact (can be configured with the DIP switch) for the remote start/stop command. **CAUTION!** The contact does not disconnect the mains power. Do not use it as a power switch or as a safety switch.	-
8	**GND**	Grounding.	-

Terminal		Description	Specifications
9	**TK**	Normally closed (NC) contact to connect to the motor overload protections: ■ closed: no alarm, consent to regulation ■ open: alarm, no consent to regulation ***NOTICE**: the overload protection of one or more motors or an alarm coming from an electrical cabinet can be connected to the TK input but must be normally closed logic.* Can be configured as NO (with the DIP switch) to enable the **Lh** parameter for the night speed limit: ■ open: the controller works according to the set parameters, without limits. ■ closed: the **Lh** limit is activated.	-
10	**PWM**	Optoisolated input, not polarized for control signal 0–10 Vdc in PWM modulation for Slave mode operation.	3–30 Vdc/10 mA
11	**PWM**		

***NOTICE**: the same type of sensors must be connected to inputs **IN1** and **IN2**.*

***Note**: outputs **V+** and **VR** are protected against short-circuit to **IN1**, **IN2** and **GND**.*

4.2.2 Analog inputs IN1 and IN2

Signals can be received from different types of transducers, sensors and controllers. The number of inputs and the prevalent input selection mode are automatically set when one of the configurations is loaded.

***Note**: for special applications, the configuration or inputs **IN1** and **IN2** can be set from menu **4: SETUP** > parameters **C0**, **C1**, and **C2**.*

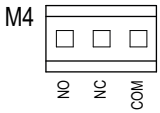
4.2.3 Wiring diagrams

See "Connecting analog inputs in Slave mode" on page 23"Analog input connections in Master mode" on page 25, "OUT analog output connections" on page 27 and "Auxiliary On/Off inputs connection" on page 27.

4.3 Relay output

4.3.1 Terminal board M4

The two-logic relay terminal board can be used to control alarm devices (i.e. sirens).



Terminal		Description
1	**NO**	Normally open output (**NO**+**COM**).
2	**NC**	Normally closed output (**NC**+**COM**).
3	**COM**	Shared.

4.3.2 Configuration for communicating operative statuses and malfunctions

It is possible to manage the operative (for example, if the regulator is in alarm) and fault (for example, insufficient power) states in different ways by setting DIP switch SW1 switches 5 and 6, see "Behavior of relay and LED DL6 to indicate the operative and fault states" on page 14.