STEIEL
ELETTRONICA SRL

SIGNAL SPLITTER

INSTRUCTIONS

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Certified Company, according to UNI EN ISO 9001 standards

WARNINGS

This manual is dedicated to the technical personnel responsible of the installation, management and maintenance of the plants. The manufacturer assumes no responsibility for damages or malfunctions occurring after intervention by non-authorized personnel, or not compliant with the prescribed instructions.

Before performing any maintenance or repair action, ensure that the system is electrically and hydraulically insulated.

Dispose of waste material and consumables accordingly with local regulations.

The manufacturer can modify the instrument or the technical manual without advanced notice.

Warranty

All STEIEL products are warranted for a period of 12 months from the delivery date.

Warranty is not valid if all instructions of installation, maintenance and use, are not strictly followed by the user.

Local regulations and applicable standards have also to be followed.

INTRODUCTION

This simple device allows to split a signal from a sensor only, on two or more channels / uses.
For example:

a) Signal from pulse water meter to be sent to 2, 3 or 4 dosing pumps, EF160 / PSP series
b) Consent from micro-magnetic sensor on CLE12 cell to be sent to two dosing pumps, for example EF162 and EF163

This splitter can be applied to all the devices equipped with 3-wire inputs (negative, signal, positive for power supply), as for example the EF160 / PSP series dosing pumps, the EF260 / EF300 series of control units for swimming pools, etc.
The splitter is powered by the first device and transmits the signal to the second (or more) one by photo-couplers, so as to maintain electrical isolation and do not introduce any noise or malfunction.
Also available is a version with built-in power supply, for compatibility with two-wire input devices.

For proper operation of the splitter, the connection polarity must be respected*. However, the device is equipped with electronic protections to prevent damage to the devices connected to it in case of wrong connections.*

The splitter also allows to invert the input signal, in order to be connected to micro-magnetic sensors, both NPN and PNP type.
During installation or test, an internal LED indicates whether the input transmits the signal correctly: LED ON = contact closed; LED OFF = contact open.
Upon order, the customer should specify the following:

- Number of channels (2 to 4)
- Inversion of the input signal
- Connection cables (e.g. cables for outputs 1 and 2, 1 meter length, with M8 connector)
- Mains voltage for models with built-in power supply (standard version: 230 V~)

Available Models

This manual refers to all possible versions of the splitter, with all the options available on request, such as the cable length or type of pre-wired connectors.
The most used versions are:

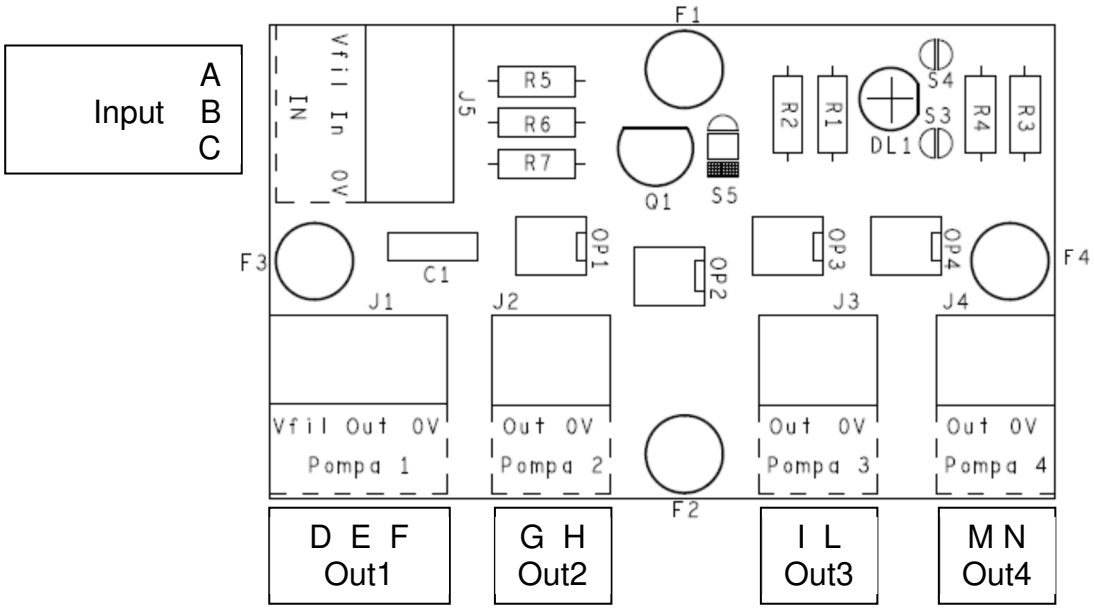
– Splitter for 2 channels, with no signal inversion (part no. 80620001)
– Splitter for 4 channels, with no signal inversion (part no. 80620002)
– Splitter for 4 channels, with signal inversion (part no. 80620003)
– Splitter for 2 channels, with no signal inversion; model with power supply (part no. 80620011)
– Splitter for 4 channels, with no signal inversion; model with power supply (part no. 80620012)
– Splitter for 4 channels, with signal inversion; model with power supply (part no. 80620013)

TECHNICAL DATA

Power Supply	self-powered by the first device (10…30V-) or built-in power supply @ 230V~ 50/60 Hz / 10…30V- (other voltages upon request)	
Protections	limiting resistors	
Outputs	electronic simulation of contact closing	
Environment	Working temperature Storage temperature RH max	-10 to 50 °C -20 to +60 °C 90% no condensing
Case	self-extinguish plastic material, for wall mounting	
Protection Rate	IP56	
Dimensions	90 x 130 x h 55 mm	
Weight	approx. 200 g (slf-powered version) approx. 300 g (version with power supply)	
Cable Inputs / Outputs	through PG7 cable-glands	

ELECTRICAL CONNECTIONS – SELF-POWERED VERSION

Open the cover to access the electronic board (see drawing below), used for the electrical connections.



Input: depending on sensor type, perform connections as follows:
- Input from voltage-free contact (e.g. pulse water meter): connect the sensor to terminals A and B, no polarity
- Input from micro-magnetic sensor: terminal A = brown wire, B = black wire, C = blue wire

Output 1 :
- In case of EF160 / PSP series pumps, connect terminal D to pin 2, terminal E to pin 3 and terminal F to pin 4
- In case of EF260 / EF300 series controllers, connect terminal D to pin 2, terminal E to pin 3 and terminal F to pin 4 (⏚)

Output 2 :
- In case of EF160 / PSP series pumps, connect terminal G to pin 3 and terminal H to pin 4
- In case of EF260 / EF300 controllers, connect terminal G to pin 3 and terminal H to pin 4 (⏚)

Output 3 :
- In case of EF160 / PSP series pumps, connect terminal I to pin 3 and terminal L to pin 4
- In case of EF260 / EF300 controllers, connect terminal I to pin 3 and terminal L to pin 4 (⏚)

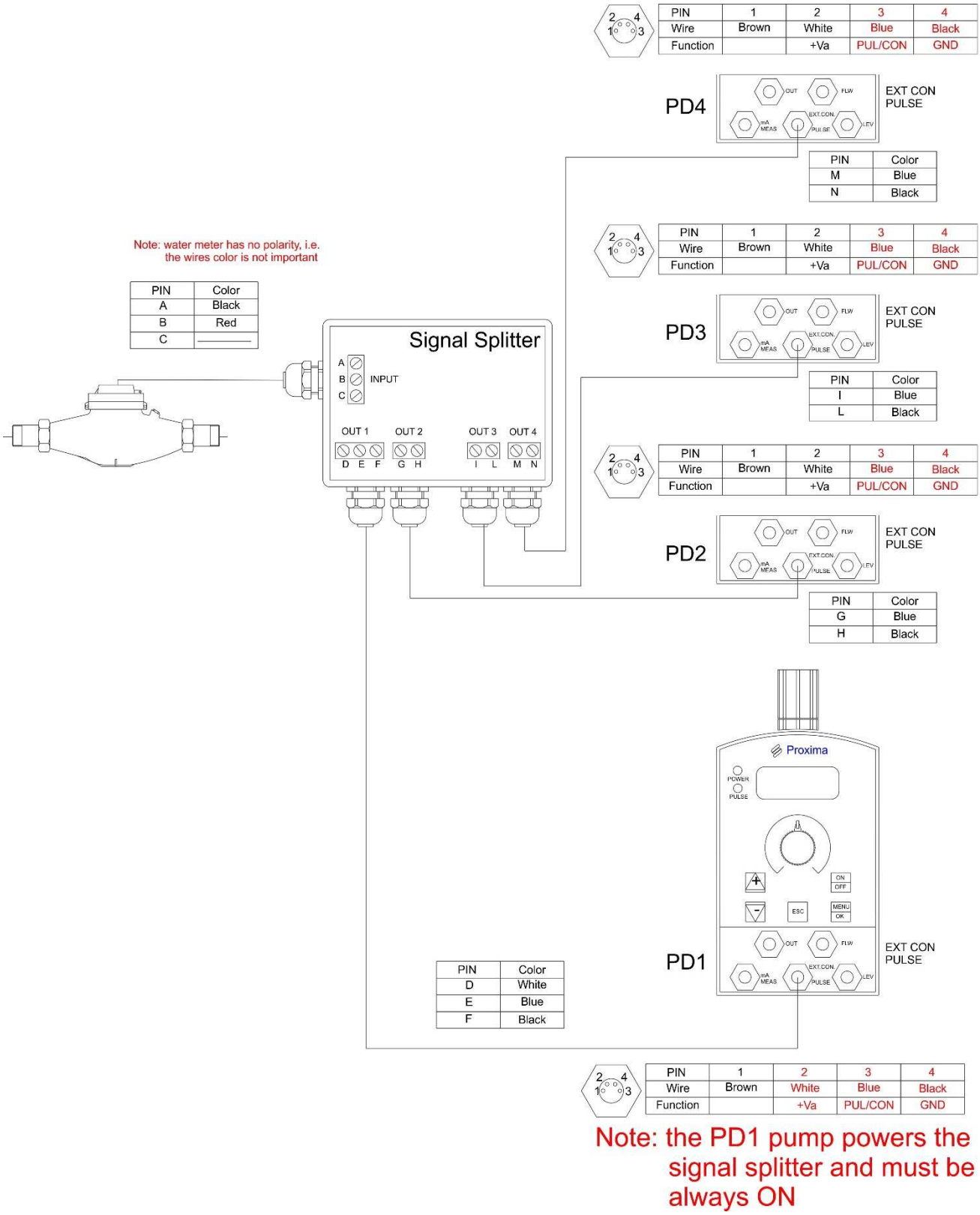
Output 4 :
- In case of EF160 / PSP series pumps, connect terminal M to pin 3 and terminal N to pin 4
- In case of EF260 / EF300 controllers, connect terminal M to pin 3 and terminal N to pin 4 (⏚)

***NOTE**: For wirings on M8 connector, a 4-wire cable is available, with prewired female connector, and the following pin-out:*

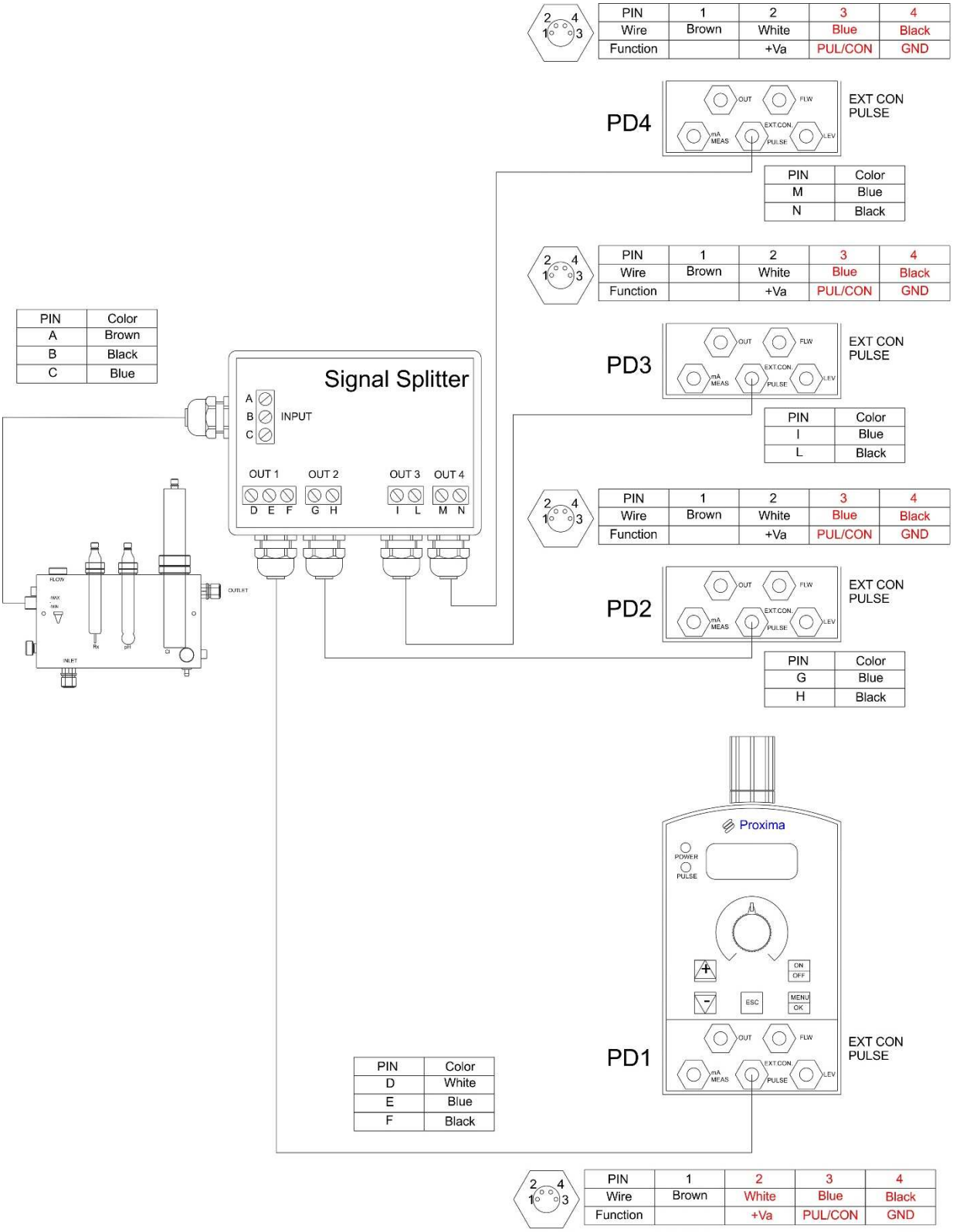
pin1= brown wire ; pin2 = white ; pin3 = blue ; pin4 = black.

***Warning!** If, by mistake, the brown (pin2) and black (pin4) wires are short-circuited, the unit turns off and could be damaged!*

Wiring diagram for self-powered splitter, input from pulse water meter and command for PSP161 pumps

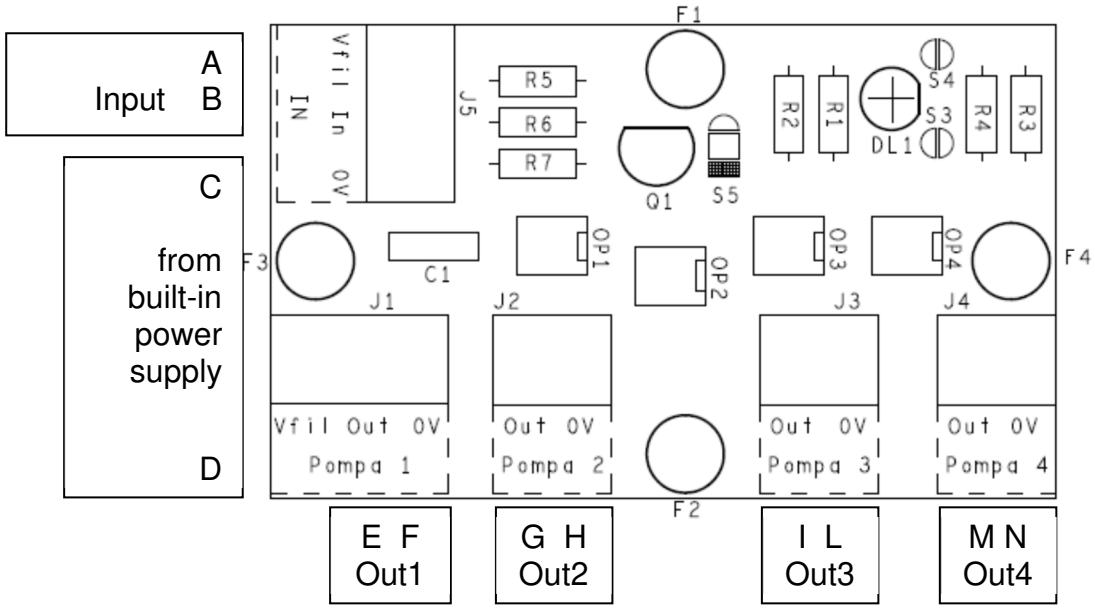


Wiring diagram for self-powered splitter, input from flow sensor and command for PSP pump series



ELECTRICAL CONNECTIONS – VERSION WITH BUILT-IN POWER SUPPLY

Open the cover to access the electronic board (see drawing below), used for the electrical connections.



Input:
- Input from voltage-free contact (e.g. pulse water meter): connect the sensor to terminals A and B, no polarity

Built-in power supply (prewired at the factory):
- Terminal C : GND (-) ; terminal D : 10…30V (+)

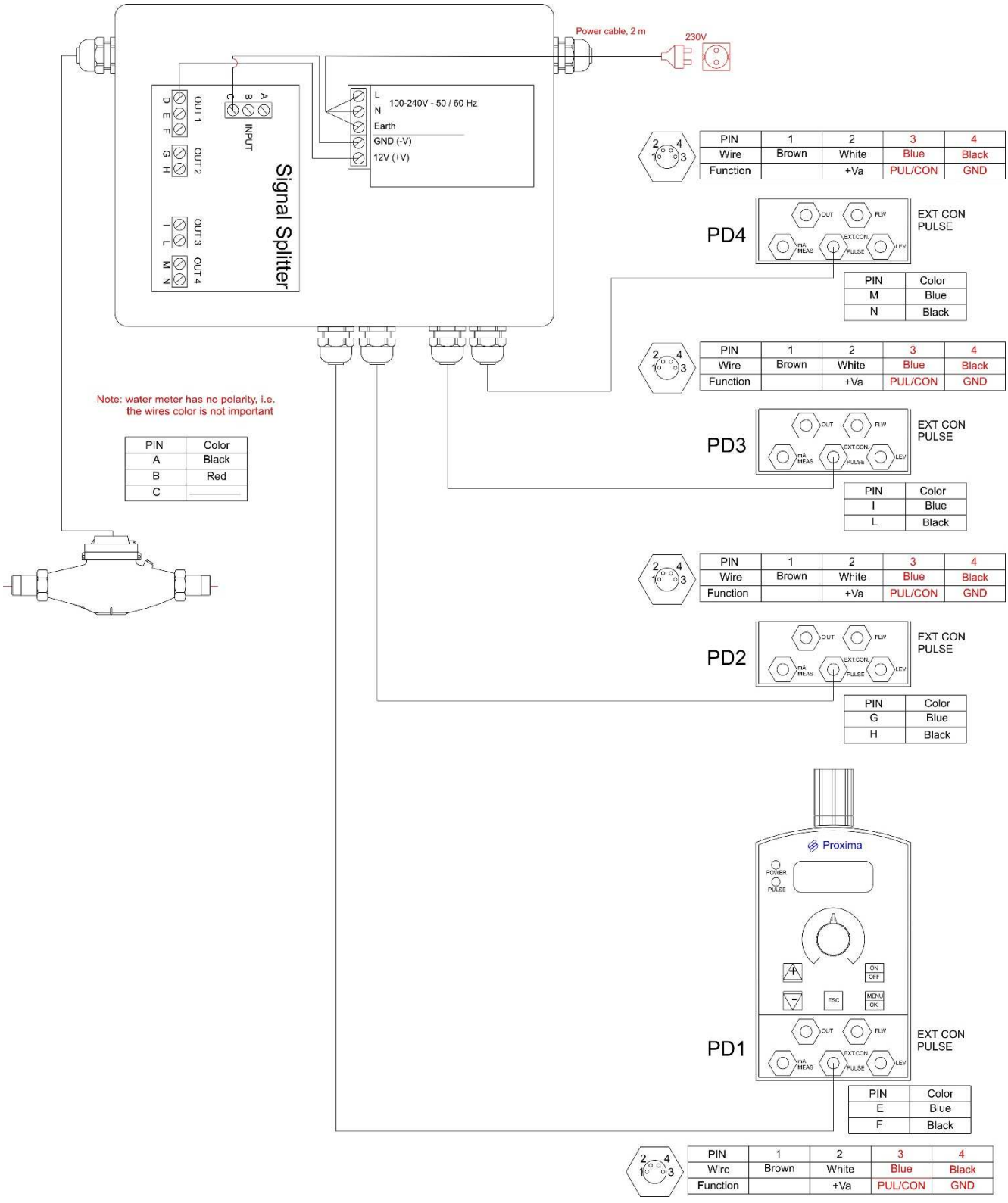
Output 1 :
- Connect terminal E to the positive and terminal F to the negative

Output 2 :
- Connect terminal G to the positive and terminal H to the negative

Output 3 :
- Connect terminal I to the positive and terminal L to the negative

Output 4 :
- Connect terminal M to the positive and terminal N to the negative

Wiring diagram for splitter with built-in power supply, input from pulse water meter and command for PSP161 pumps



Wiring diagram for splitter with built-in power supply, input from flow sensor and command for PSP pump series