

# Point Colour Splitter Cables

A range of cables allowing multiple sensors and power sources to be connected simultaneously to the Point Colour range of RTU's without requiring junction boxes.



ACCESSORIES

This info sheet provides useful information about the splitter cables that can be used with the battery powered Point Colour RTU's. For all of these cables the following terminology is used;

Term	Definition
Terminated	A cable that has been terminated with a connector that will be overmoulded to the cable
Unterminated	A cable that has been left with bare ends for connecting to other devices.
External Battery	A terminated cable ready for direct connection to a Metasphere external battery
External Power	An unterminated cable with bare ends for connecting to an external DC power supply.

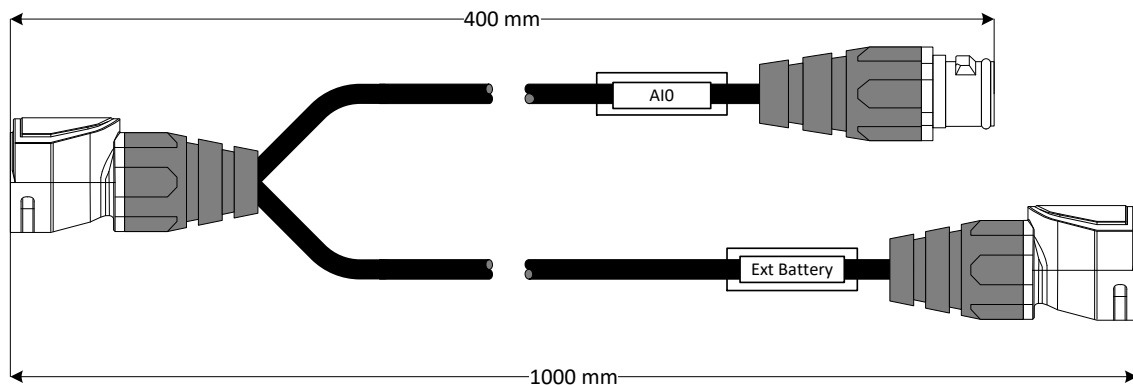
The connection tables will list details according to the cable termination type. For unterminated cables the core colours are shown and for terminated cables the pin numbers are shown.

Some of these cables are provided with bare ends for connection to a sensor as required. Users should ensure these connections are made using the most appropriate method to ensure the IP integrity of the cable has not been compromised. For more information about these options please contact Metasphere (see contact details at the end of this document).

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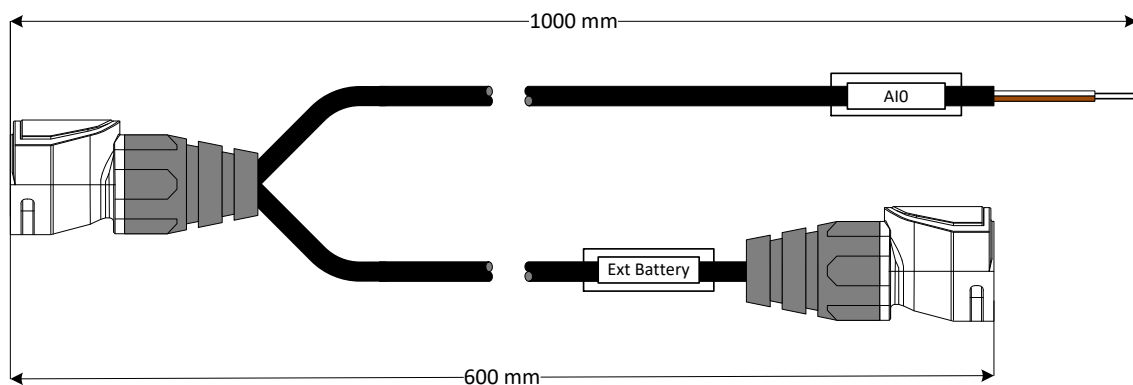
#### AI0 TERMINATED + EXTERNAL BATTERY (PN4-104)



Pin	Signal	AI0	Ext Battery
1	AI0 +ve	1	
3	Gnd		2
5	AI0 -ve	5	
12	Ext V+		1

- Connects an active current loop (4-20mA) sensor and an external battery
- Shorter length for AI0 to allow for external sensor cable
- Suitable for use with Point Orange and Blue
- Cable length: 1m

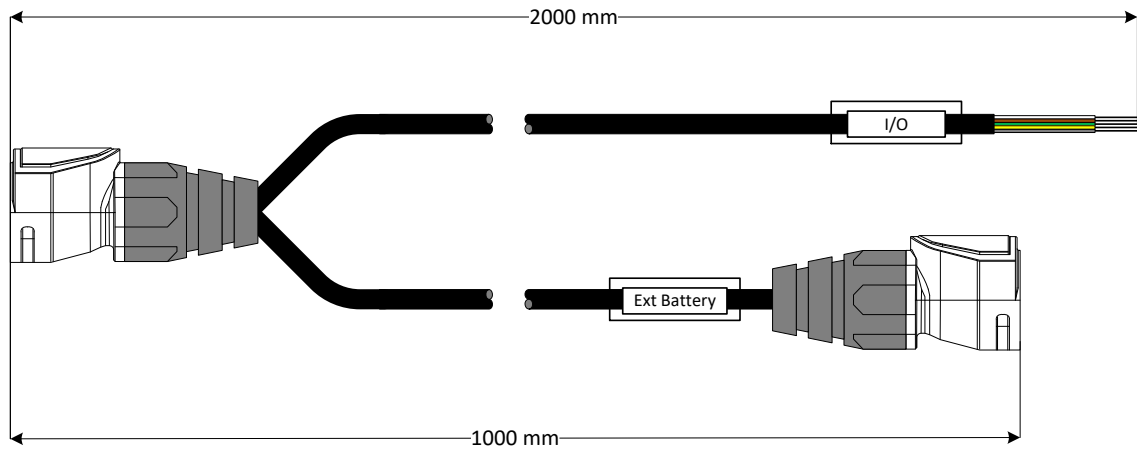
#### AI0 UNTERMINATED + EXTERNAL BATTERY (PN4-131)



Pin	Signal	AI0	Ext Battery
1	AI0 +ve	White	
3	Gnd		2
5	AI0 -ve	Brown	
12	Ext V+		1

- Connects an active current loop (4-20mA) sensor and an external battery
- Unterminated for direct connection to sensor
- Suitable for use with Point Orange and Blue
- Cable length: 1m

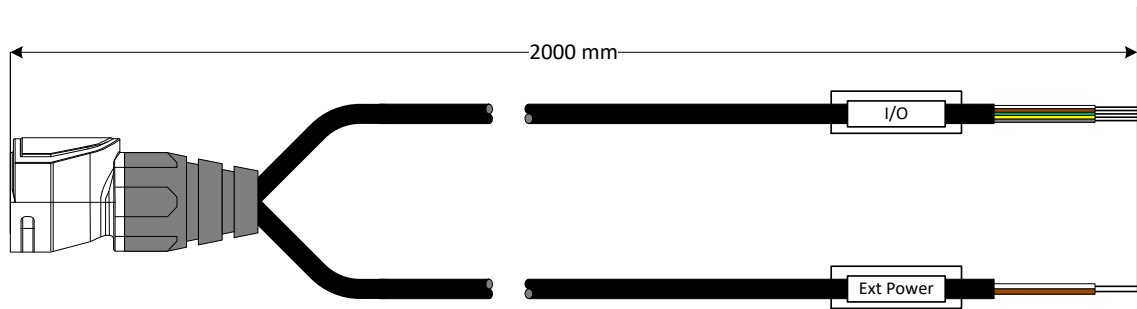
## ALL I/O UNTERMINATED + EXTERNAL BATTERY (PN4-103)



Pin	Signal	I/O	Ext Battery
1	I/O	White	
2	I/O	Brown	
3	Gnd	Green	2
4	I/O	Yellow	
5	I/O	Grey	
6	I/O	Pink	
7	I/O	Blue	
11	I/O	Red	
12	Ext V+		1

- Connects sensors and an external battery
- Presents all I/O signals
- Unterminated for direct connection to sensors
- I/O signals are assigned by Poco+
- Suitable for use with Point Green, Orange and Blue
- Cable length: 2m

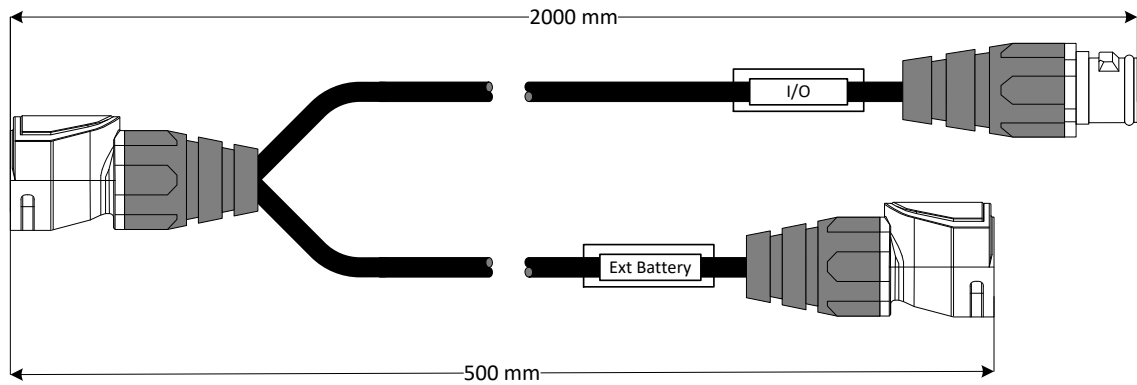
## ALL I/O UNTERMINATED+ EXTERNAL POWER (PN4-121)



Pin	Signal	I/O	Ext Power
1	I/O	White	
2	I/O	Brown	
3	Gnd	Green	White
4	I/O	Yellow	
5	I/O	Grey	
6	I/O	Pink	
7	I/O	Blue	
11	I/O	Red	
12	Ext V+		Brown

- Connects sensors and an external power source
- Presents all I/O signals
- Unterminated for direct connection to sensors
- I/O signals are assigned by Poco+
- Suitable for use with Point Green, Orange and Blue
- Cable length: 2m
- NB: When using an external supply with the Point Blue an appropriately certified external DC source should be used.  
All users must verify the system intrinsic safety before using in a classified environment.

## ALL I/O TERMINATED + EXTERNAL BATTERY (PN4-113)



Pin	Signal	I/O	Ext Battery
1	I/O	1	
2	I/O	2	
3	Gnd	3	2
4	I/O	4	
5	I/O	5	
6	I/O	6	
7	I/O	7	
11	I/O	11	
12	Ext V+		1

- Connects sensors and an external battery
- Presents all I/O signals
- Terminated for connection to Metasphere sensors and serial cables
- I/O signals are assigned by Poco+
- Suitable for use with Point Green, Orange and Blue
- Cable length: 2m

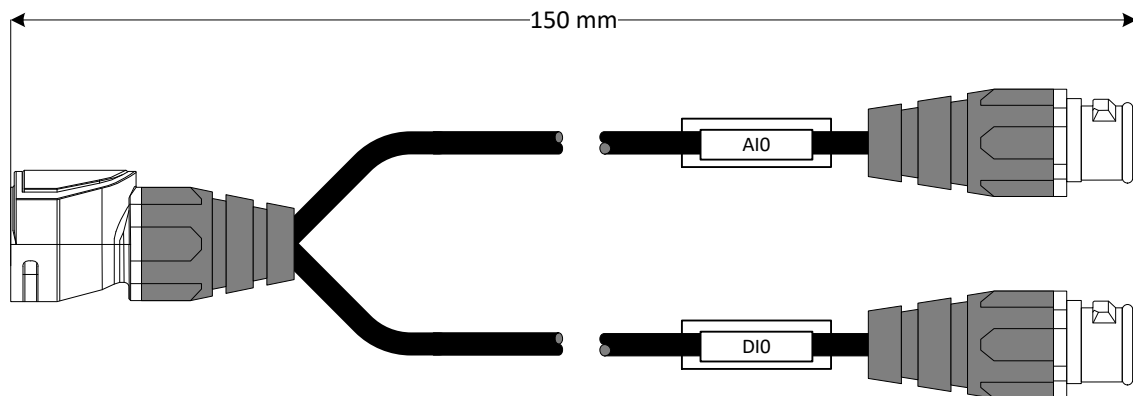
## ALL I/O TERMINATED + EXTERNAL POWER (PN4-136)



Pin	Signal	I/O	Ext Power
1	I/O	1	
2	I/O	2	
3	Gnd	3	White
4	I/O	4	
5	I/O	5	
6	I/O	6	
7	I/O	7	
11	I/O	11	
12	Ext V+		Brown

- Connects sensors and an external power source
- Presents all I/O signals
- Terminated for connection to Metasphere sensors and serial cables
- I/O signals are assigned by Poco+
- Suitable for use with Point Green, Orange and Blue
- Cable length: 2m
- NB: When using an external supply with the Point Blue an appropriately certified external DC source should be used.  
All users must verify the system intrinsic safety before using in a classified environment.

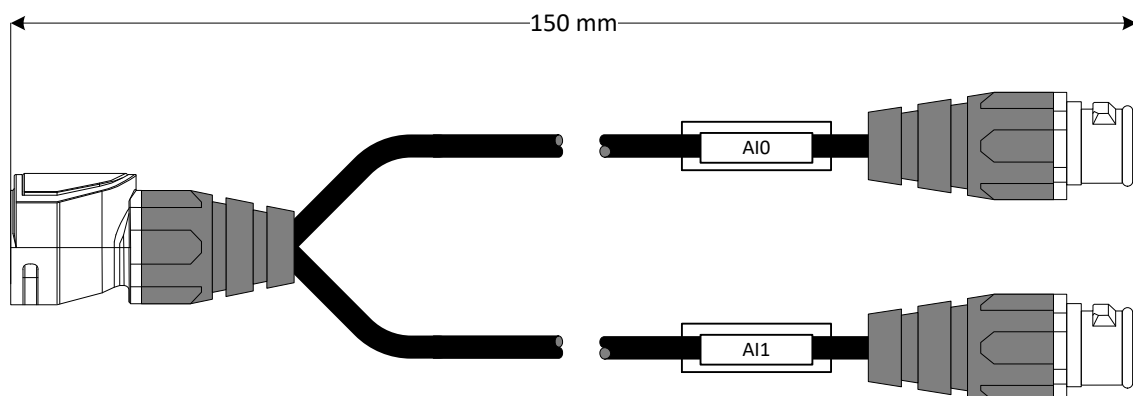
#### ACTIVE LOOP AI0 + DI0 (PN4-122)



Pin	Signal	AI0	DI0
1	AI0 +ve	1	
3	Gnd		3
5	AI0 -ve	5	
11	DI0		11

- Provides terminated cables for connecting an active loop and DI sensors
- Terminated for connection to Metasphere sensors
- Suitable for use with Point Orange and Blue
- Cable length: 15 cm

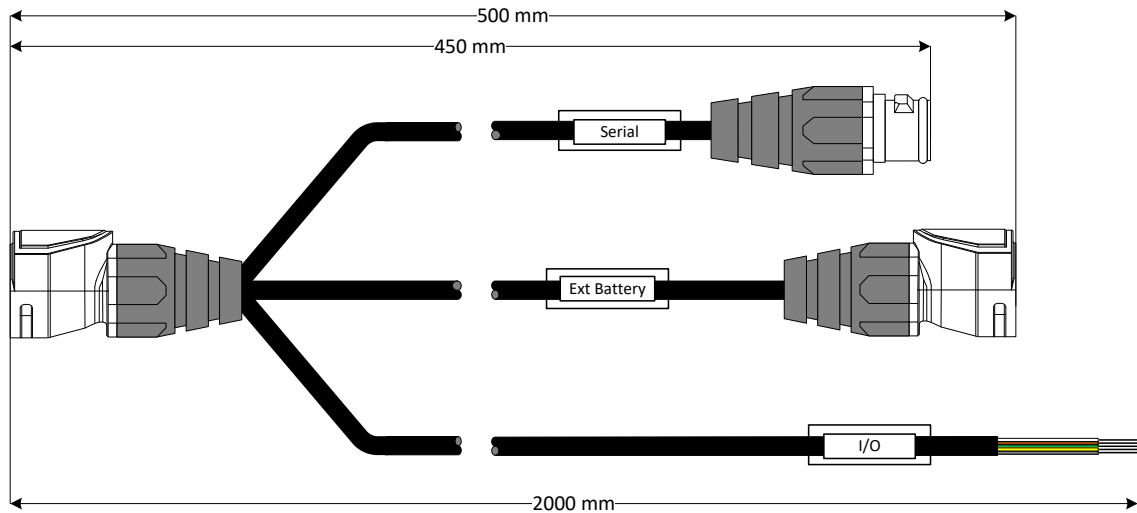
#### ACTIVE LOOP AI0 + AI1 (PN4-132)



Pin	Signal	AI0	DI0
1	AI0 +ve	1	
2	AI1 +ve		2
4	AI1 -ve		4
5	AI0 -ve	5	

- Provides terminated cables for connecting two active loop sensors
- Terminated for connection to Metasphere sensors
- Suitable for use with Point Orange and Blue
- Cable length: 15 cm

## SERIAL + I/O UNTERMINATED + EXTERNAL BATTERY (PN4-I20)



Pin	Signal	Serial	Ext Battery	I/O
1	I/O	1		
2	I/O			White
3	Gnd	3	1	Brown
4	I/O	4		
5	I/O	5		
6	I/O	6		Green
7	I/O			Yellow
11	I/O			Grey
12	Ext V+		2	

- Connects sensors and an external power source
- Provides extra connector for use with Metasphere serial cables
- Presents all I/O signals
- Unterminated for direct connection to sensors
- I/O signals are assigned by Poco+
- Suitable for use with Point Green, Orange and Blue
- Cable length: 2m



## COMMON SPECIFICATIONS

CABLE DESIGN	
Construction	Point Colour 12-pin IP68 Deutsch connector 2m length (including stripped and tinned ends)
Conductor	0.25mm per core Bare copper class5 IEC60228
Core	Colour Identification according to DIN 47100 Material: PVC TI2
Overall screen	Tinned Copper Braid
Outer sheath	Polyurethane + Chemical, termite and rodent protection Black RAL9011 (UV resistant)
IP Rating	IP68. Note, users must ensure unterminated ends are properly connected to retain this IP rating
ELECTRICAL	
Nominal voltage	300V
Test voltage	1500V
Temperature	-40°C + 90°C
Electrical propeties	80.5 $\Omega$ /km 120nF/km (core/core) 160nF/km(core/screen) 0.7mH/km
APPROVALS	
Flame retardant	IEC 60332-1
Fire retardant	IEC 60332-3
Halogen Free	IEC 60754-1



Metasphere provides robust asset monitoring of time critical remote operations for operators to gain competitive advantage and meet regulatory compliance.