Industrial Automation Connector Systems



Connecting tomorrow's technology, today.











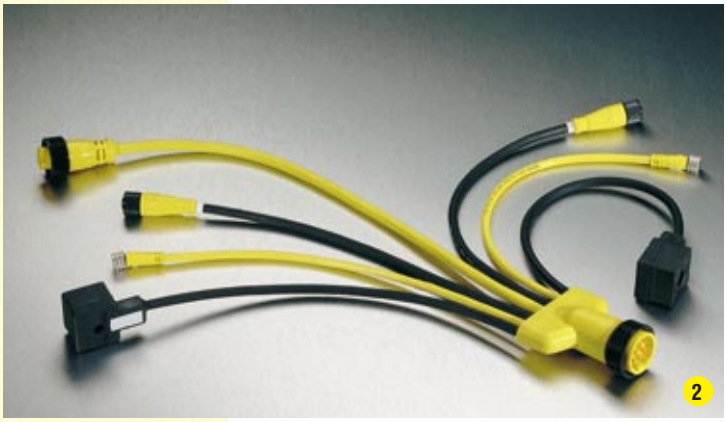
Woodhead Connectivity

SST™ ▪ Brad Harrison® ▪ mPm™

Brad Harrison® and mPm® Connector Systems

Brad Harrison® originally started manufacturing moulded connectors in 1946 for the steel, automotive and mining industries. It was acquired by Woodhead Industries Inc. in 1969 after which the Mini-Change® connector was introduced. It's development was as a direct result of working with the automotive industry to produce a quick disconnect solution to hard wired control devices such as proximity and limit switches, valves and other devices.









Similarly, mPm® a family owned company was founded in 1973, evolved to service the expanding solenoid valve market. They rapidly developed into the market leader for DIN 43650 style connectors, and joined the group in 1998.

The two market leading brands provide a solid foundation of robust and reliable products from a flexible and supportive manufacturer for both end users and OEMs in industrial segments. Our range has been developed to provide the same high quality product and design for other market sectors such as instrumentation, transportation and materials handling to name just a few.

This catalogue has been specifically designed to cover the connector requirements of customers using industrial automation products – solenoid valves, proximity, photoelectric, capacitive, reed, hall effect and limit switches together with our latest offering in Multi-Port Splitter Boxes – but is not the limit of our capability or product range. Shown are some examples of customised solutions designed for specific applications.

1. Mini-Change® receptacles with integral wiring of Nano-Change® Mini-Change® and mPm® connectors for control functions. This provided a through panel connection system, which provides a water proof (IP67) solution for control systems in harsh operating conditions.

2. The Multi-In-Line Splitter is a complete wiring system built into one connector. In this case it has been used to provide a solution for wiring proximity switches and solenoid valves with the choice of either a home run connector or panel mounted receptacle for the control installation.

3. The ultimate wiring systems, this is a model of a complete plug and play solution for wiring a complex mixing machine. This comprises a variety of connector types together with a shielded circuit for drive motors.

4. Finally, a range of PCB and panel mount multi-pole Mini-Change® receptacles for integration into a control system, where environmental protection is required and a robust design.

Selection Guide

In order to choose the correct connectors for your system, it is important to note the various type of connectors available. Below is a short introduction to guide you to the correct part of the catalogue.

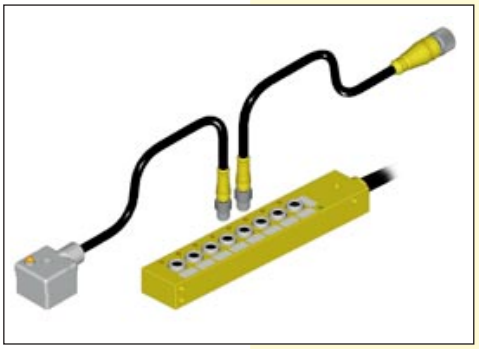
Nano-Change® (M8) Multi-Port Systems

The Nano-Change® 3 and 4 pole connectors are not interchangeable, so care has to be taken in selecting the correct product.

Typically, inductive, reed and Hall effect switches and a limited range of photoelectric sensors use 3 pole connectors. Where as many photoelectric switches use the 4 pole connector, in this case pin 2 is typically used for programming the device or as an alarm output.

Using the In-line Splitter, a 4 pole twin I/O unit can be used to connect two devices per port, so doubling the capacity of the system.

3 Pole – Single I/O units 5
4 Pole – Twin I/O units 6
M16 Home Run Connectors 7
M8 to M8 Sensor/Input Jumpers 8
M12 to M8 Sensor/Input Jumpers 9
Solenoid Valve to M8 Output Jumpers 10
M12 to M8 Adapters and Splitters 13
Solenoid Valve to M8 Adapters 14



Micro-Change® (M12) Multi-Port Systems

The single I/O or 4 wire units, have common power and earth circuits, plus I/O from each port. These are fully compatible with all sensors and solenoids with the additional choice of either PNP or NPN LED indication of power and status.

The twin I/O or 5 wire units allow for two devices (input or output) to be connected per port doubling the capacity of the unit. Using a 4 pole, 4 wire jumper cable with these units completes the connection for switches with programming functions or complementary outputs.

4 Wire – Top-Mount – Single I/O Units 16
5 Wire – Top-Mount – Twin I/O Units 17
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Solenoid Valve to M12 Output Jumpers 23
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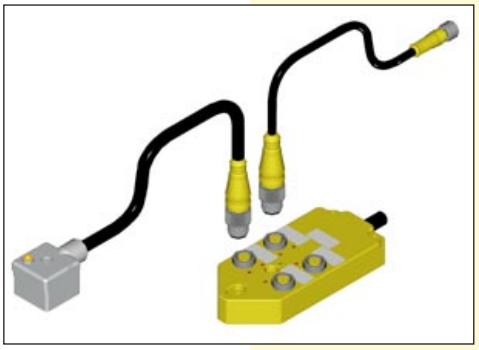
Solenoid Valve to M12 Adapters 27

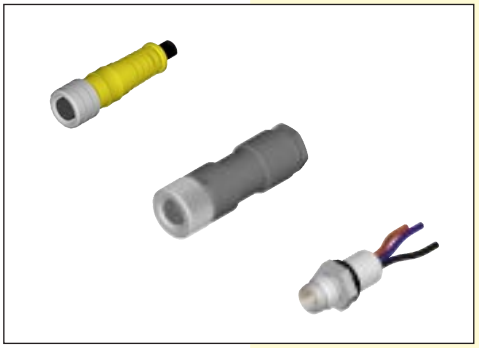


Nano-Change® (M8) 3, 4 and 5 pole connectors

Nano-Change® is available in 3, 4 and 5 pole designs with either a snap fit or M8 threaded coupling nut. Versions with LED indication show power to the device while a separate LED reports the signal status (on or off).

The range is complemented by panel mount receptacles either with PCB or wire tails.

Moulded Snap Connectors 29
Moulded Coupler Connectors 30
Attachable Connectors 31
Female and Male Receptacles 31

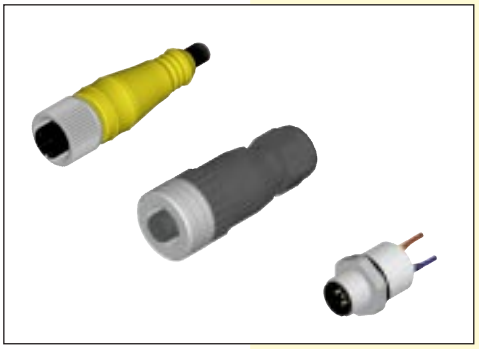


Micro-Change® (M12) 3, 4, 5 and 8 pole connectors

Micro-Change® single key way connectors are available as 3, 4, 5 or 8 pole. The 3, 4 and 5 poles devices are fully interchangeable for maximum flexibility.

Female and male attachable connectors with screw terminals and choice of gland size on the straight versions, plus a range of panel and PCB mount receptacles, complete the range.

Moulded Connectors 33
Attachable Connectors 34
Female and Male Receptacles 35



mPm® DIN 43650 Form A, B and C connectors

The mPm® Din 43650 Form A, B and C connectors provide the option of fully moulded or field attachable versions.

In each case, choice of either connectors with or without indication and suppression circuits are available.

Moulded Connectors 37
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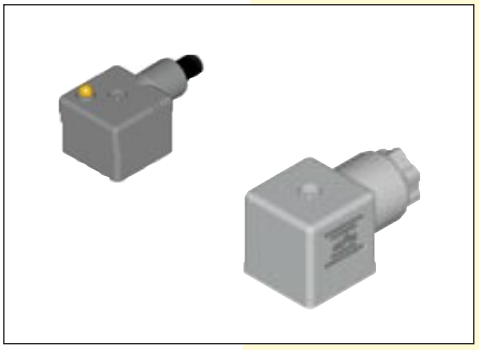


NANO-CHANGE® MULTI-PORT SPLITTER BOX SYSTEMS

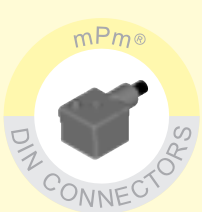






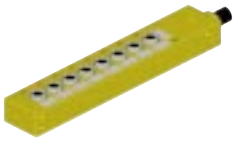




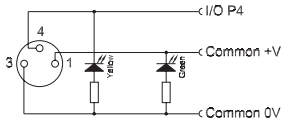


- **Compact design fits into small and previously inaccessible spaces helping to minimise overall machine size**
- **Factory built and tested units, cuts the demand on highly skilled workforce and decreases machine built time, whilst eliminating wiring errors**
- **Simplifies control systems, reducing the size of cable trays, trunking and control cabinets by cutting the number of cables and terminals required**
- **Three case styles each providing choice of three mounting positions with twin I/O units providing connections for 100 devices in just over the space of a CD case**

Nano-Change® (M8) Multi-Port Splitter Boxes

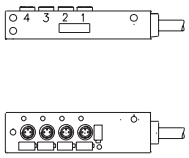
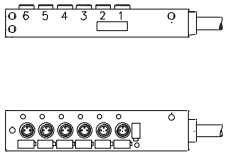
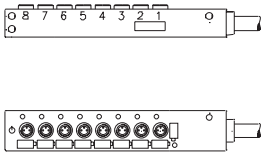
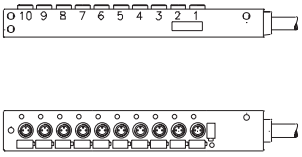


3 pole – Single I/O Multi-Ports

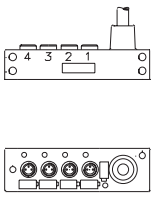
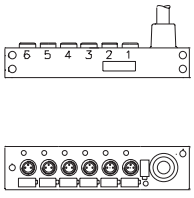
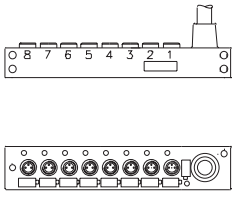
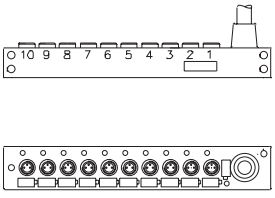


Function	Cable Colour	M16 Connector Pin No	Function	Cable Colour	M16 Connector Pin No	Function	Cable Colour	M16 Connector Pin No
+V	Brown	A&M						
0V	Blue	L&U						
Port 1 P4	White	P	Port 5 P4	Pink	G	Port 9 P4	White/Blue	C
Port 2 P4	Green	J	Port 6 P4	Red	R	Port 10 P4	Brown/Blue	N
Port 3 P4	Yellow	T	Port 7 P4	Black	E			
Port 4 P4	Grey	S	Port 8 P4	Violet	O			

Integral End Cable Entry

Cable	Length (m)	4 Port	6 Port	8 Port	10 Port
					
PUR	5.0	BEY401P-FBP-05	BEY601P-FBP-05	BEY801P-FBP-05	BEYA01P-FBP-05
	10.0	BEY401P-FBP-10	BEY601P-FBP-10	BEY801P-FBP-10	BEYA01P-FBP-10
	20.0	BEY401P-FBP-20	BEY601P-FBP-20	BEY801P-FBP-20	BEYA01P-FBP-20

Integral Top Cable Entry

Cable	Length (m)	4 Port	6 Port	8 Port	10 Port
					
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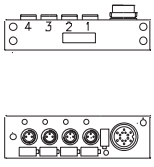
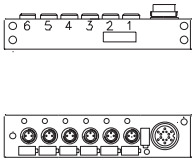
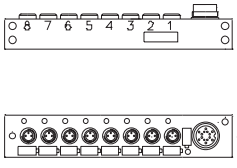
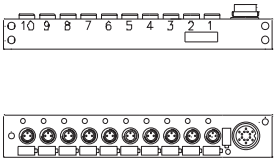
	10.0	BNY401P-FBP-10	BNY601P-FBP-10	BNY801P-FBP-10	BNYA01P-FBP-10
	20.0	BNY401P-FBP-20	BNY601P-FBP-20	BNY801P-FBP-20	BNYA01P-FBP-20

Integral M16 Home Run Connector

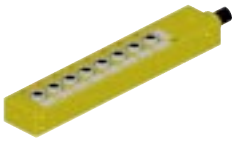


See top of page 7 for connectors

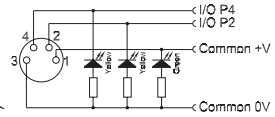
4 Port	6 Port	8 Port	10 Port
			
BNY401P-FBC	BNY601P-FBC	BNY801P-FBC	BNYA01P-FBC

Standard: Power and single status LED per port, identification labels, two sealing caps
Options: NPN format LED indication, choice of cable, see page 40 for more information

Nano-Change® (M8) Multi-Port Splitter Boxes

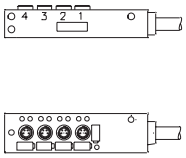
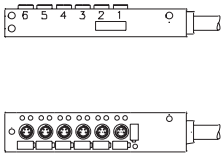
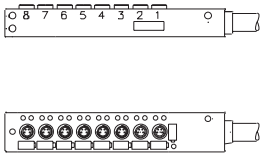
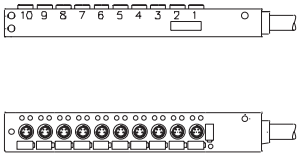


4 pole – Twin I/O Multi-Ports



Function	Cable Colour	M16 Connector Pin No	Function	Cable Colour	M16 Connector Pin No	Function	Cable Colour	M16 Connector Pin No	Function	Cable Colour	M16 Connector Pin No
+V	Brown	A									
0V	Blue	L									
Port 1 P4	White	U	Port 6 P4	Red	N	Port 1 P2	Grey/Pink	P	Port 6 P2	Yellow/Brown	C
Port 2 P4	Green	J	Port 7 P4	Black		Port 2 P2	Red/Blue	S	Port 7 P2	White/Grey	
Port 3 P4	Yellow	M	Port 8 P4	Violet		Port 3 P2	White/Green	T	Port 8 P2	Grey/Brown	
Port 4 P4	Grey	R	Port 9 P4	White/Blue		Port 4 P2	Brown/Green	G	Port 9 P2	White/Pink	
Port 5 P4	Pink	O	Port 10 P4	Brown/Blue		Port 5 P2	White/Yellow	E	Port 10 P2	Pink/Brown	

Integral End Cable Entry

Cable	Length (m)	4 Port	6 Port	8 Port	10 Port
					
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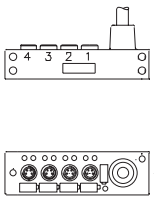
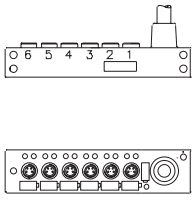
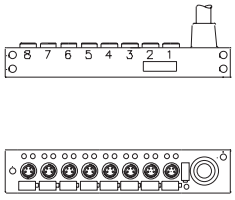
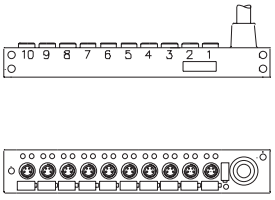
	10.0	BEY403P-FBP-10	BEY603P-FBP-10	BEY803P-FBP-10	BEYA03P-FBP-10
	20.0	BEY403P-FBP-20	BEY603P-FBP-20	BEY803P-FBP-20	BEYA03P-FBP-20

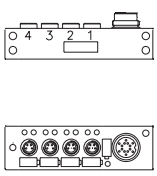
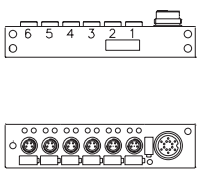
Integral Top Cable Entry

Cable	Length (m)	4 Port	6 Port	8 Port	10 Port
					
PUR	5.0	BNY403P-FBP-05	BNY603P-FBP-05	BNY803P-FBP-05	BNYA03P-FBP-05
	10.0	BNY403P-FBP-10	BNY603P-FBP-10	BNY803P-FBP-10	BNYA03P-FBP-10
	20.0	BNY403P-FBP-20	BNY603P-FBP-20	BNY803P-FBP-20	BNYA03P-FBP-20

Integral M16 Home Run Connector



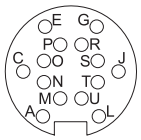
See bottom of page 7 for connectors

4 Port	6 Port
	
BNY403P-FBC	BNY603P-FBC

Standard: Power and two status LEDs per port, identification labels, two sealing caps
Options: NPN format LED indication, choice of cable see page 40 for more information

M16 Home Run Connectors for Nano Change® Multi-Port Splitter Boxes





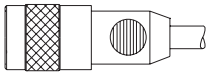
Function	M16 Connector Pin No	Cable Colour	Function	M16 Connector Pin No	Cable Colour	Function	M16 Connector Pin No	Cable Colour
+V	A&M	Brown						
0V	L&U	Blue						
Port 1 P4	P	White	Port 5 P4	G	Pink	Port 9 P4	C	White/Blue
Port 2 P4	J	Green	Port 6 P4	R	Red	Port 10 P4	N	Brown/Blue
Port 3 P4	T	Yellow	Port 7 P4	E	Black			
Port 4 P4	S	Grey	Port 8 P4	O	Violet			

Female Connector

Cable Length (m)

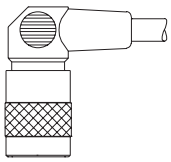
Home Run Connectors for Nano-Change® Single I/O Multi-Ports

Female Straight

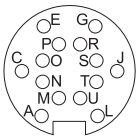


Cable	Length (m)	BNY401P-FBC 3 Pole/4 Port	BNY601P-FBC 3 Pole/6 Port	BNY801P-FBC 3 Pole/8 Port	BNYA01P-FBC 3 Pole/10 Port
PUR	5.0	L04300P78M050	L04200P78M050	L04100P78M050	L04A00P78M050
	10.0	L04300P78M100	L04200P78M100	L04100P78M100	L04A00P78M100
	20.0	L04300P78M200	L04200P78M200	L04100P78M200	L04A00P78M200

Female 90º



Cable	Length (m)				
PUR	5.0	L04301P78M050	L04201P78M050	L04101P78M050	L04A01P78M050
	10.0	L04301P78M100	L04201P78M100	L04101P78M100	L04A01P78M100
	20.0	L04301P78M200	L04201P78M200	L04101P78M200	L04A01P78M200



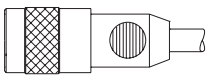
Function	M16 Connector Pin No	Cable Colour	Function	M16 Connector Pin No	Cable Colour	Function	M16 Connector Pin No	Cable Colour	Function	M16 Connector Pin No	Cable Colour
+V	A	Brown									
0V	L	Blue									
Port 1 P4	U	White	Port 4 P4	R	Grey	Port 1 P2	P	Grey/Pink	Port 4 P2	G	Brown/Green
Port 2 P4	J	Green	Port 5 P4	O	Pink	Port 2 P2	S	Red/Blue	Port 5 P2	E	White/Yellow
Port 3 P4	M	Yellow	Port 6 P4	N	Red	Port 3 P2	T	White/Green	Port 6 P2	C	Yellow/Brown

Female Connector

Cable Length (m)

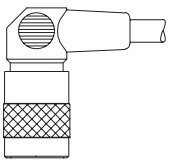
Home Run Connector for Nano-Change® Twin I/O Multi-Ports

Female Straight



Cable	Length (m)	BNY403P-FBC 4 Pole/4 Port	BNY603P-FBC 4 Pole/6 Port
PUR	5.0	L044000P78M050	L04000P78M050
	10.0	L044000P78M100	L04000P78M100
	20.0	L044000P78M200	L04000P78M200

Female 90º



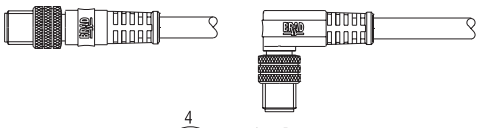
Cable	Length (m)		
PUR	5.0	L04401P78M050	L04001P78M050
	10.0	L04401P78M100	L04001P78M100
	20.0	L04401P78M200	L04001P78M200

Nano-Change® (M8) Jumper Cables



Female Connector

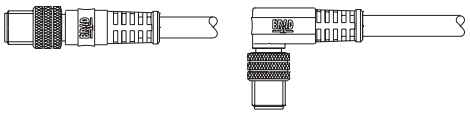
M8 3 Pole – Single I/O Multi-Port





1 Brown
3 Blue
4 Black

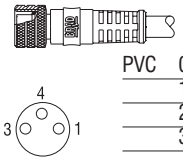
M8 4 Pole – Twin I/O Multi-Port

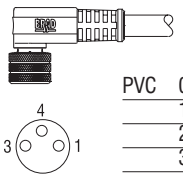


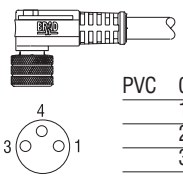


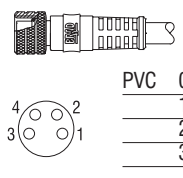
1 Brown 3 Blue
2 White 4 Black

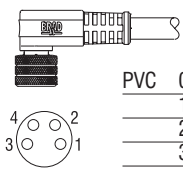
Cable	Length (m)	WIRING CONFIGURATION		WIRING CONFIGURATION	
Nano-Change® (M8) Straight					
PVC	0.6	443030E03M006	443032E03M006	443430E03M006	443432E03M006
	1.0	443030E03M010	443032E03M010	443430E03M010	443432E03M010
	2.0	443030E03M020	443032E03M020	443430E03M020	443432E03M020
	3.0	443030E03M030	443032E03M030	443430E03M030	443432E03M030
PUR	0.6	443030P03M006	443032P03M006	443430P03M006	443432P03M006
	1.0	443030P03M010	443032P03M010	443430P03M010	443432P03M010
	2.0	443030P03M020	443032P03M020	443430P03M020	443432P03M020
	3.0	443030P03M030	443032P03M030	443430P03M030	443432P03M030
Nano-Change® (M8) 90º					
PVC	0.6	443031E03M006	443033E03M006	443431E03M006	443433E03M006
	1.0	443031E03M010	443033E03M010	443431E03M010	443433E03M010
	2.0	443031E03M020	443033E03M020	443431E03M020	443433E03M020
	3.0	443031E03M030	443033E03M030	443431E03M030	443433E03M030
PUR	0.6	443031P03M006	443033P03M006	443431P03M006	443433P03M006
	1.0	443031P03M010	443033P03M010	443431P03M010	443433P03M010
	2.0	443031P03M020	443033P03M020	443431P03M020	443433P03M020
	3.0	443031P03M030	443033P03M030	443431P03M030	443433P03M030
Nano-Change® (M8) 90º PNP LED					
PVC	0.6	4430P7E03M006	4430P9E03M006	4434P7E03M006	4434P9E03M006
	1.0	4430P7E03M010	4430P9E03M010	4434P7E03M010	4434P9E03M010
	2.0	4430P7E03M020	4430P9E03M020	4434P7E03M020	4434P9E03M020
	3.0	4430P7E03M030	4430P9E03M030	4434P7E03M030	4434P9E03M030
PUR	0.6	4430P7P03M006	4430P9P03M006	4434P7P03M006	4434P9P03M006
	1.0	4430P7P03M010	4430P9P03M010	4434P7P03M010	4434P9P03M010
	2.0	4430P7P03M020	4430P9P03M020	4434P7P03M020	4434P9P03M020
	3.0	4430P7P03M030	4430P9P03M030	4434P7P03M030	4434P9P03M030
Nano-Change® (M8) Straight					
PVC	0.6	444330E03M006	444332E03M006	444030E03M006	444032E03M006
	1.0	444330E03M010	444332E03M010	444030E03M010	444032E03M010
	2.0	444330E03M020	444332E03M020	444030E03M020	444032E03M020
	3.0	444330E03M030	444332E03M030	444030E03M030	444032E03M030
PUR	0.6	444330P03M006	444332P03M006	444030P03M006	444032P03M006
	1.0	444330P03M010	444332P03M010	444030P03M010	444032P03M010
	2.0	444330P03M020	444332P03M020	444030P03M020	444032P03M020
	3.0	444330P03M030	444332P03M030	444030P03M030	444032P03M030
Nano-Change® (M8) 90º					
PVC	0.6	444331E03M006	444333E03M006	444031E03M006	444033E03M006
	1.0	444331E03M010	444333E03M010	444031E03M010	444033E03M010
	2.0	444331E03M020	444333E03M020	444031E03M020	444033E03M020
	3.0	444331E03M030	444333E03M030	444031E03M030	444033E03M030
PUR	0.6	444331P03M006	444333P03M006	444031P03M006	444033P03M006
	1.0	444331P03M010	444333P03M010	444031P03M010	444033P03M010
	2.0	444331P03M020	444333P03M020	444031P03M020	444033P03M020
	3.0	444331P03M030	444333P03M030	444031P03M030	444033P03M030











Pin No. Wire
1 Brown
3 Blue
4 Black

1 Brown
3 Blue
4 Black

1 Brown
3 Blue
4 Black

1 Brown
2 White
3 Blue
4 Black

1 Brown
2 White
3 Blue
4 Black

Options: NPN format LED indication, choice of cables, see page 40 for more information

Nano-Change® (M8) Jumper Cables

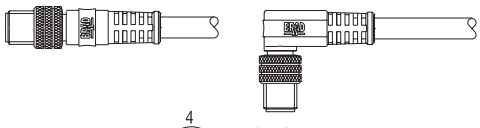


Female Connector

Cable

Length (m)

M8 3 Pole – Single I/O Multi-Port

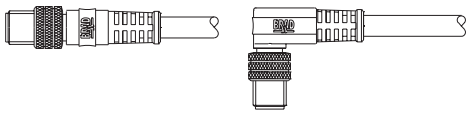




1 Brown
3 Blue
4 Black

WIRING CONFIGURATION

M8 4 Pole – Twin I/O Multi-Port

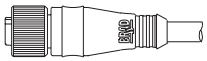


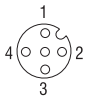


1 Brown 3 Blue
2 White 4 Black

WIRING CONFIGURATION

Micro-Change® (M12) Straight

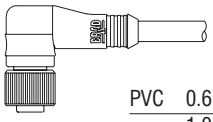


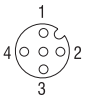


1 Brown
2 White*
3 Blue
4 Black

PVC	0.6	843030E03M006	843032E03M006	844030E03M006	844032E03M006
	1.0	843030E03M010	843032E03M010	844030E03M010	844032E03M010
	2.0	843030E03M020	843032E03M020	844030E03M020	844032E03M020
	3.0	843030E03M030	843032E03M030	844030E03M030	844032E03M030
PUR	0.6	843030P03M006	843032P03M006	844030P03M006	844032P03M006
	1.0	843030P03M010	843032P03M010	844030P03M010	844032P03M010
	2.0	843030P03M020	843032P03M020	844030P03M020	844032P03M020
	3.0	843030P03M030	843032P03M030	844030P03M030	844032P03M030

Micro-Change® (M12) 90º

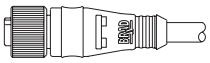


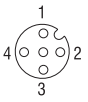


1 Brown
2 White*
3 Blue
4 Black

PVC	0.6	843031E03M006	843033E03M006	844031E03M006	844033E03M006
	1.0	843031E03M010	843033E03M010	844031E03M010	844033E03M010
	2.0	843031E03M020	843033E03M020	844031E03M020	844033E03M020
	3.0	843031E03M030	843033E03M030	844031E03M030	844033E03M030
PUR	0.6	843031P03M006	843033P03M006	844031P03M006	844033P03M006
	1.0	843031P03M010	843033P03M010	844031P03M010	844033P03M010
	2.0	843031P03M020	843033P03M020	844031P03M020	844033P03M020
	3.0	843031P03M030	843033P03M030	844031P03M030	844033P03M030

Micro-Change® (M12) PNP LED

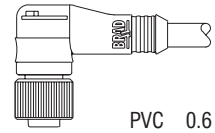


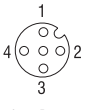


1 Brown
2 White*
3 Blue
4 Black

PVC	0.6	8430P6E03M006	8430P8E03M006	8440P6E03M006	8440P8E03M006
	1.0	8430P6E03M010	8430P8E03M010	8440P6E03M010	8440P8E03M010
	2.0	8430P6E03M020	8430P8E03M020	8440P6E03M020	8440P8E03M020
	3.0	8430P6E03M030	8430P8E03M030	8440P6E03M030	8440P8E03M030
PUR	0.6	8430P6P03M006	8430P8P03M006	8440P6P03M006	8440P8P03M006
	1.0	8430P6P03M010	8430P8P03M010	8440P6P03M010	8440P8P03M010
	2.0	8430P6P03M020	8430P8P03M020	8440P6P03M020	8440P8P03M020
	3.0	8430P6P03M030	8430P8P03M030	8440P6P03M030	8440P8P03M030

Micro-Change® (M12) 90º PNP LED





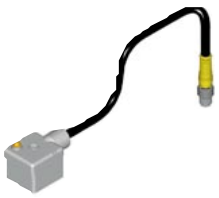
1 Brown
2 White*
3 Blue
4 Black

PVC	0.6	8430P7E03M006	8430P9E03M006	8440P7E03M006	8440P9E03M006
	1.0	8430P7E03M010	8430P9E03M010	8440P7E03M010	8440P9E03M010
	2.0	8430P7E03M020	8430P9E03M020	8440P7E03M020	8440P9E03M020
	3.0	8430P7E03M030	8430P9E03M030	8440P7E03M030	8440P9E03M030
PUR	0.6	8430P7P03M006	8430P9P03M006	8440P7P03M006	8440P9P03M006
	1.0	8430P7P03M010	8430P9P03M010	8440P7P03M010	8440P9P03M010
	2.0	8430P7P03M020	8430P9P03M020	8440P7P03M020	8440P9P03M020
	3.0	8430P7P03M030	8430P9P03M030	8440P7P03M030	8440P9P03M030

* White not used on single I/O connectors

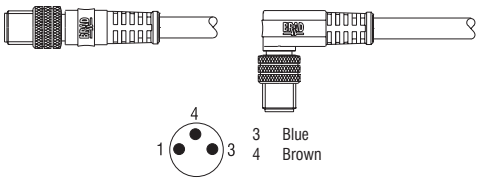
Options: NPN format LED indication, choice of cables, see page 40 for more information

Nano-Change® (M8) Jumper Cables

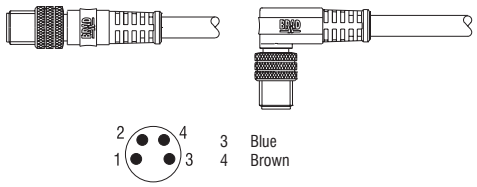


Female Connector

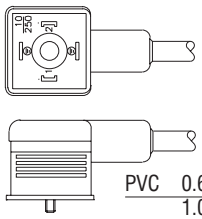
M8 3 Pole – Single I/O Multi-Port



M8 4 Pole – Twin I/O Multi-Port



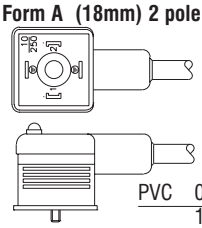
Form A (18mm) 2 pole + earth



1 Brown
2 Blue
3 Yellow/Green*

Cable	Length (m)				
PVC	0.6	E43000E12M006	E43002E12M006	E44000E12M006	E44002E12M006
	1.0	E43000E12M010	E43002E12M010	E44000E12M010	E44002E12M010
	2.0	E43000E12M020	E43002E12M020	E44000E12M020	E44002E12M020
	3.0	E43000E12M030	E43002E12M030	E44000E12M030	E44002E12M030
PUR	0.6	E43000P12M006	E43002P12M006	E44000P12M006	E44002P12M006
	1.0	E43000P12M010	E43002P12M010	E44000P12M010	E44002P12M010
	2.0	E43000P12M020	E43002P12M020	E44000P12M020	E44002P12M020
	3.0	E43000P12M030	E43002P12M030	E44000P12M030	E44002P12M030

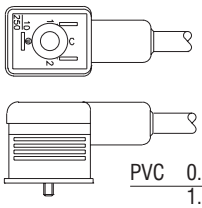
Form A (18mm) 2 pole + earth – 24 V LED & VDR



1 Brown
2 Blue
3 Yellow/Green*

Cable	Length (m)				
PVC	0.6	E430B0E12M006	E430B2E12M006	E440B0E12M006	E440B2E12M006
	1.0	E430B0E12M010	E430B2E12M010	E440B0E12M010	E440B2E12M010
	2.0	E430B0E12M020	E430B2E12M020	E440B0E12M020	E440B2E12M020
	3.0	E430B0E12M030	E430B2E12M030	E440B0E12M030	E440B2E12M030
PUR	0.6	E430B0P12M006	E430B2P12M006	E440B0P12M006	E440B2P12M006
	1.0	E430B0P12M010	E430B2P12M010	E440B0P12M010	E440B2P12M010
	2.0	E430B0P12M020	E430B2P12M020	E440B0P12M020	E440B2P12M020
	3.0	E430B0P12M030	E430B2P12M030	E440B0P12M030	E440B2P12M030

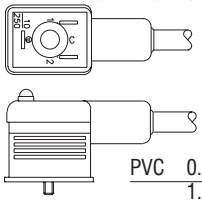
Form B Ind (11mm) 2 pole + 12 o'clock earth



1 Brown
2 Blue
3 Yellow/Green*

Cable	Length (m)				
PVC	0.6	F43001E12M006	F43003E12M006	F44001E12M006	F44003E12M006
	1.0	F43001E12M010	F43003E12M010	F44001E12M010	F44003E12M010
	2.0	F43001E12M020	F43003E12M020	F44001E12M020	F44003E12M020
	3.0	F43001E12M030	F43003E12M030	F44001E12M030	F44003E12M030
PUR	0.6	F43001P12M006	F43003P12M006	F44001P12M006	F44003P12M006
	1.0	F43001P12M010	F43003P12M010	F44001P12M010	F44003P12M010
	2.0	F43001P12M020	F43003P12M020	F44001P12M020	F44003P12M020
	3.0	F43001P12M030	F43003P12M030	F44001P12M030	F44003P12M030

Form B Ind (11mm) 2 pole + 12 o'clock earth – 24 V LED & VDR



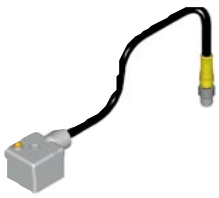
1 Brown
2 Blue
3 Yellow/Green*

* Yellow/Green not connected

Cable	Length (m)				
PVC	0.6	F430B1E12M006	F430B3E12M006	F440B1E12M006	F440B3E12M006
	1.0	F430B1E12M010	F430B3E12M010	F440B1E12M010	F440B3E12M010
	2.0	F430B1E12M020	F430B3E12M020	F440B1E12M020	F440B3E12M020
	3.0	F430B1E12M030	F430B3E12M030	F440B1E12M030	F440B3E12M030
PUR	0.6	F430B1P12M006	F430B3P12M006	F440B1P12M006	F440B3P12M006
	1.0	F430B1P12M010	F430B3P12M010	F440B1P12M010	F440B3P12M010
	2.0	F430B1P12M020	F430B3P12M020	F440B1P12M020	F440B3P12M020
	3.0	F430B1P12M030	F430B3P12M030	F440B1P12M030	F440B3P12M030

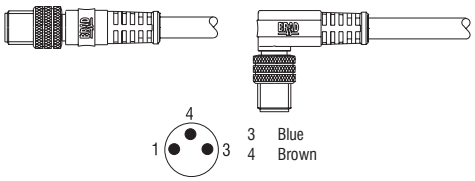
Options: Alternative types of suppression, choice of cables, see page 40 for more information

Nano-Change® (M8) Jumper Cables

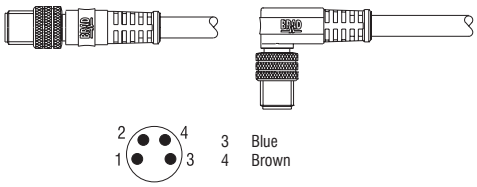


Female Connector

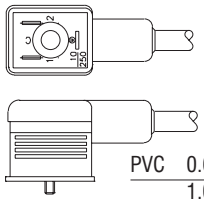
M8 3 Pole – Single I/O Multi-Port



M8 4 Pole – Twin I/O Multi-Port



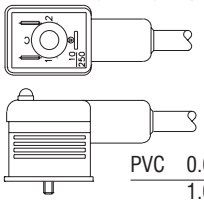
Form B Ind (11mm) 2 pole + 6 o'clock earth



1 Brown
2 Blue
3 Yellow/Green*

Cable	Length (m)				
PVC	0.6	F43000E12M006	F43002E12M006	F44000E12M006	F44002E12M006
	1.0	F43000E12M010	F43002E12M010	F44000E12M010	F44002E12M010
	2.0	F43000E12M020	F43002E12M020	F44000E12M020	F44002E12M020
	3.0	F43000E12M030	F43002E12M030	F44000E12M030	F44002E12M030
PUR	0.6	F43000P12M006	F43002P12M006	F44000P12M006	F44002P12M006
	1.0	F43000P12M010	F43002P12M010	F44000P12M010	F44002P12M010
	2.0	F43000P12M020	F43002P12M020	F44000P12M020	F44002P12M020
	3.0	F43000P12M030	F43002P12M030	F44000P12M030	F44002P12M030

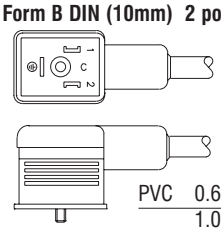
Form B Ind (11mm) 2 pole + 6 o'clock earth – 24 V LED & VDR



1 Brown
2 Blue
3 Yellow/Green*

Cable	Length (m)				
PVC	0.6	F430B0E12M006	F430B2E12M006	F440B0E12M006	F440B2E12M006
	1.0	F430B0E12M010	F430B2E12M010	F440B0E12M010	F440B2E12M010
	2.0	F430B0E12M020	F430B2E12M020	F440B0E12M020	F440B2E12M020
	3.0	F430B0E12M030	F430B2E12M030	F440B0E12M030	F440B2E12M030
PUR	0.6	F430B0P12M006	F430B2P12M006	F440B0P12M006	F440B2P12M006
	1.0	F430B0P12M010	F430B2P12M010	F440B0P12M010	F440B2P12M010
	2.0	F430B0P12M020	F430B2P12M020	F440B0P12M020	F440B2P12M020
	3.0	F430B0P12M030	F430B2P12M030	F440B0P12M030	F440B2P12M030

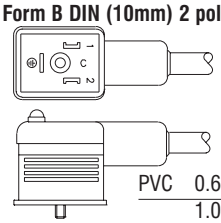
Form B DIN (10mm) 2 pole + 12 o'clock earth



1 Brown
2 Blue
3 Yellow/Green*

Cable	Length (m)				
PVC	0.6	D43001E12M006	D43003E12M006	D44001E12M006	D44003E12M006
	1.0	D43001E12M010	D43003E12M010	D44001E12M010	D44003E12M010
	2.0	D43001E12M020	D43003E12M020	D44001E12M020	D44003E12M020
	3.0	D43001E12M030	D43003E12M030	D44001E12M030	D44003E12M030
PUR	0.6	D43001P12M006	D43003P12M006	D44001P12M006	D44003P12M006
	1.0	D43001P12M010	D43003P12M010	D44001P12M010	D44003P12M010
	2.0	D43001P12M020	D43003P12M020	D44001P12M020	D44003P12M020
	3.0	D43001P12M030	D43003P12M030	D44001P12M030	D44003P12M030

Form B DIN (10mm) 2 pole + 12 o'clock earth – 24 V LED & VDR



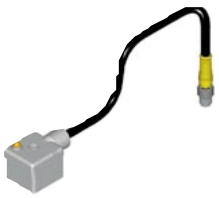
1 Brown
2 Blue
3 Yellow/Green*

* Yellow/Green not connected

Cable	Length (m)				
PVC	0.6	D430B1E12M006	D430B3E12M006	D440B1E12M006	D440B3E12M006
	1.0	D430B1E12M010	D430B3E12M010	D440B1E12M010	D440B3E12M010
	2.0	D430B1E12M020	D430B3E12M020	D440B1E12M020	D440B3E12M020
	3.0	D430B1E12M030	D430B3E12M030	D440B1E12M030	D440B3E12M030
PUR	0.6	D430B1P12M006	D430B3P12M006	D440B1P12M006	D440B3P12M006
	1.0	D430B1P12M010	D430B3P12M010	D440B1P12M010	D440B3P12M010
	2.0	D430B1P12M020	D430B3P12M020	D440B1P12M020	D440B3P12M020
	3.0	D430B1P12M030	D430B3P12M030	D440B1P12M030	D440B3P12M030

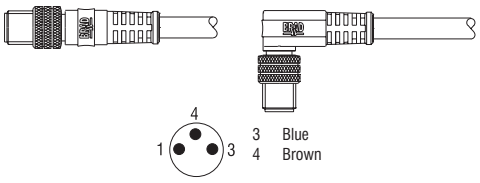
Options: Alternative types of suppression, choice of cables, see page 40 for more information

Nano-Change® (M8) Jumper Cables

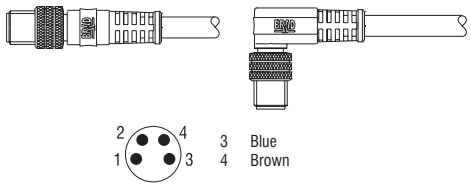


Female Connector

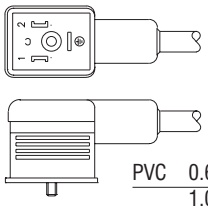
M8 3 Pole – Single I/O Multi-Port



M8 4 Pole – Twin I/O Multi-Port



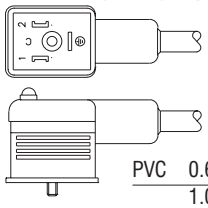
Form B DIN (10mm) 2 pole + 6 o'clock earth



1 Brown
2 Blue
3 Yellow/Green*

Cable	Length (m)	M8 3 Pole – Single I/O Multi-Port		M8 4 Pole – Twin I/O Multi-Port	
PVC	0.6	D43000E12M006	D43002E12M006	D44000E12M006	D44002E12M006
	1.0	D43000E12M010	D43002E12M010	D44000E12M010	D44002E12M010
	2.0	D43000E12M020	D43002E12M020	D44000E12M020	D44002E12M020
	3.0	D43000E12M030	D43002E12M030	D44000E12M030	D44002E12M030
PUR	0.6	D43000P12M006	D43002P12M006	D44000P12M006	D44002P12M006
	1.0	D43000P12M010	D43002P12M010	D44000P12M010	D44002P12M010
	2.0	D43000P12M020	D43002P12M020	D44000P12M020	D44002P12M020
	3.0	D43000P12M030	D43002P12M030	D44000P12M030	D44002P12M030

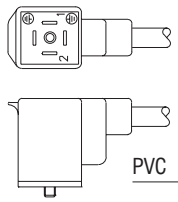
Form B DIN (10mm) 2 pole + 6 o'clock earth – 24 V LED & VDR



1 Brown
2 Blue
3 Yellow/Green*

Cable	Length (m)	M8 3 Pole – Single I/O Multi-Port		M8 4 Pole – Twin I/O Multi-Port	
PVC	0.6	D430B0E12M006	D430B2E12M006	D440B0E12M006	D440B2E12M006
	1.0	D430B0E12M010	D430B2E12M010	D440B0E12M010	D440B2E12M010
	2.0	D430B0E12M020	D430B2E12M020	D440B0E12M020	D440B2E12M020
	3.0	D430B0E12M030	D430B2E12M030	D440B0E12M030	D440B2E12M030
PUR	0.6	D430B0P12M006	D430B2P12M006	D440B0P12M006	D440B2P12M006
	1.0	D430B0P12M010	D430B2P12M010	D440B0P12M010	D440B2P12M010
	2.0	D430B0P12M020	D430B2P12M020	D440B0P12M020	D440B2P12M020
	3.0	D430B0P12M030	D430B2P12M030	D440B0P12M030	D440B2P12M030

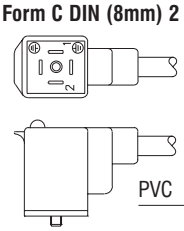
Form C DIN (8mm) 2 pole + earth



1 Brown
2 Blue
3 Yellow/Green*

Cable	Length (m)	M8 3 Pole – Single I/O Multi-Port		M8 4 Pole – Twin I/O Multi-Port	
PVC	0.6	H43000E12M006	H43002E12M006	H44000E12M006	H44002E12M006
	1.0	H43000E12M010	H43002E12M010	H44000E12M010	H44002E12M010
	2.0	H43000E12M020	H43002E12M020	H44000E12M020	H44002E12M020
	3.0	H43000E12M030	H43002E12M030	H44000E12M030	H44002E12M030
PUR	0.6	H43000P12M006	H43002P12M006	H44000P12M006	H44002P12M006
	1.0	H43000P12M010	H43002P12M010	H44000P12M010	H44002P12M010
	2.0	H43000P12M020	H43002P12M020	H44000P12M020	H44002P12M020
	3.0	H43000P12M030	H43002P12M030	H44000P12M030	H44002P12M030

Form C DIN (8mm) 2 pole + earth – 24 V LED & VDR



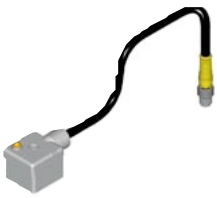
1 Brown
2 Blue
3 Yellow/Green*

* Yellow/Green not connected

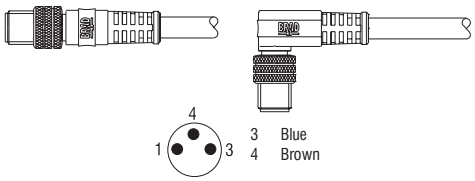
Cable	Length (m)	M8 3 Pole – Single I/O Multi-Port		M8 4 Pole – Twin I/O Multi-Port	
PVC	0.6	H430B0E12M006	H430B2E12M006	H440B0E12M006	H440B2E12M006
	1.0	H430B0E12M010	H430B2E12M010	H440B0E12M010	H440B2E12M010
	2.0	H430B0E12M020	H430B2E12M020	H440B0E12M020	H440B2E12M020
	3.0	H430B0E12M030	H430B2E12M030	H440B0E12M030	H440B2E12M030
PUR	0.6	H430B0P12M006	H430B2P12M006	H440B0P12M006	H440B2P12M006
	1.0	H430B0P12M010	H430B2P12M010	H440B0P12M010	H440B2P12M010
	2.0	H430B0P12M020	H430B2P12M020	H440B0P12M020	H440B2P12M020
	3.0	H430B0P12M030	H430B2P12M030	H440B0P12M030	H440B2P12M030

Options: Alternative types of suppression, choice of cables, see page 40 for more information

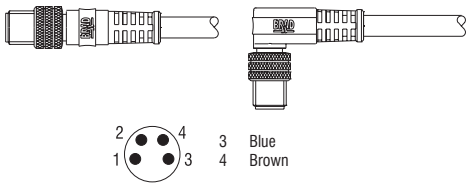
Nano-Change® (M8) Jumper Cables



M8 3 Pole – Single I/O Multi-Port

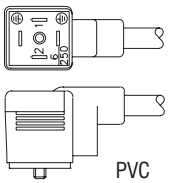


M8 4 Pole – Twin I/O Multi-Port



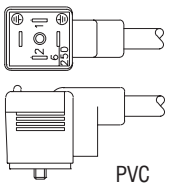
Female Connector

Cable	Length (m)	M8 3 Pole – Single I/O Multi-Port		M8 4 Pole – Twin I/O Multi-Port	
Form C Ind (9.4mm) 2 pole + earth					
PVC	0.6	G43000E12M006	G43002E12M006	G44000E12M006	G44002E12M006
	1.0	G43000E12M010	G43002E12M010	G44000E12M010	G44002E12M010
	2.0	G43000E12M020	G43002E12M020	G44000E12M020	G44002E12M020
	3.0	G43000E12M030	G43002E12M030	G44000E12M030	G44002E12M030
PUR	0.6	G43000P12M006	G43002P12M006	G44000P12M006	G44002P12M006
	1.0	G43000P12M010	G43002P12M010	G44000P12M010	G44002P12M010
	2.0	G43000P12M020	G43002P12M020	G44000P12M020	G44002P12M020
	3.0	G43000P12M030	G43002P12M030	G44000P12M030	G44002P12M030



1 Brown
2 Blue
3 Yellow/Green*

Cable	Length (m)	M8 3 Pole – Single I/O Multi-Port		M8 4 Pole – Twin I/O Multi-Port	
Form C Ind (9.4mm) 2 pole + earth – 24 V LED & VDR					
PVC	0.6	G430B0E12M006	G430B2E12M006	G440B0E12M006	G440B2E12M006
	1.0	G430B0E12M010	G430B2E12M010	G440B0E12M010	G440B2E12M010
	2.0	G430B0E12M020	G430B2E12M020	G440B0E12M020	G440B2E12M020
	3.0	G430B0E12M030	G430B2E12M030	G440B0E12M030	G440B2E12M030
PUR	0.6	G430B0P12M006	G430B2P12M006	G440B0P12M006	G440B2P12M006
	1.0	G430B0P12M010	G430B2P12M010	G440B0P12M010	G440B2P12M010
	2.0	G430B0P12M020	G430B2P12M020	G440B0P12M020	G440B2P12M020
	3.0	G430B0P12M030	G430B2P12M030	G440B0P12M030	G440B2P12M030



1 Brown
2 Blue
3 Yellow/Green*

* Yellow/Green not connected

Nano-Change (M8) Adapters and In-Line Splitters

M8 3 Pole – Single I/O Multi-Port



1 Brown 4 Black
3 Blue

M8 4 Pole – Twin I/O Multi-Port



1 Brown 3 Blue
2 White 4 Black



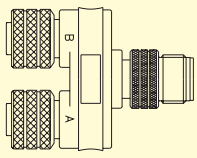
1 Brown 3 Blue
2 Black B 4 Black A

Female Connector

In-line splitter M8 to M8



1 Brown 4 Black
3 Blue



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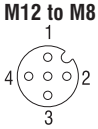
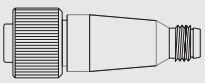
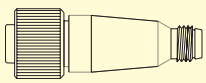
Adapter M12 to M8



1 Brown 3 Blue
2 White 4 Black



853030



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Options: Alternative types of suppression, choice of cables, see page 40 for more information

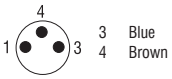
Nano-Change® (M8) Adapters



M8 3 Pole – Single I/O Multi-Port

M8 4 Pole – Twin I/O Multi-Port

Female Connector





Circuit

	WIRING CONFIGURATION		WIRING CONFIGURATION	
Form A (18mm) 2 pole + earth				
None	E53000	E53002	E54000	E54002
24 V LED & VDR	E530B0	E530B2	E540B0	E540B2
Form B (11mm) 2 pole + 12 o'clock earth				
None	F53001	F53003	F54001	F54003
24 V LED & VDR	F530B1	F530B3	F540B1	F540B3
Form B (11mm) 2 pole + 6 o'clock earth				
None	F53000	F53002	F54000	F54002
24 V LED & VDR	F530B0	F530B2	F540B0	F540B2
Form B (10mm) 2 pole + 12 o'clock earth				
None	D53001	D53003	D54001	D54003
24 V LED & VDR	D530B1	D530B3	D540B1	D540B3
Form B (10mm) 2 pole + 6 o'clock earth				
None	D53000	D53002	D54000	D54002
24 V LED & VDR	D530B0	D530B2	D540B0	D540B2
Form C (8mm) 2 pole + earth				
None	H53000		H54000	
24 V LED & VDR	H530B0		H540B0	
Form C (9.4mm) 2 pole + earth				
None	G53000		G54000	
24 V LED & VDR	G530B0		G540B0	

Options: Alternative types of suppression, choice of cables, see page 40 for more information

Micro-Change® Multi-Port Splitter Box Systems



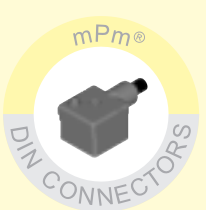
- **Frees up skilled workforce for more demanding tasks, whilst reducing the risk of wiring errors and increasing factory throughput**
- **Quick disconnect solution enables installation or maintenance by semiskilled operators, especially when unscheduled down time occurs through device or cable failure.**
- **Twin I/O versions increases the density of control devices per unit with LED indication of power and signals for fast fault finding**
- **Unique choice of either top or side mounted I/O connections for compact or low profile installations, all provided in a robust design sealed waterproof up to IP68**







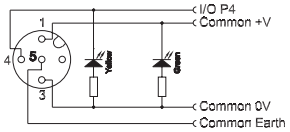




Micro-Change® (M12) Multi-Port Splitter Boxes

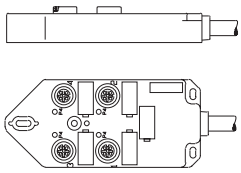
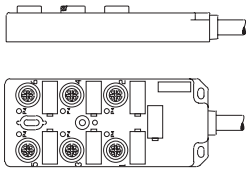
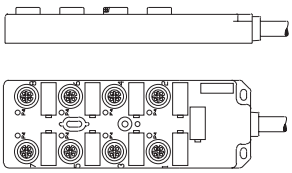


5 pole 4 Wire – Single I/O Top-Mount Multi-Ports



Function	Cable Colour	M23 Connector Pin No	Mini-Change Pin No	Function	Cable Colour	M23 Connector Pin No	Mini-Change Pin No
+V	Brown	11	10	Earth	Green/Yellow	12	9
0V	Blue	9 & 10	11				
Port 1 P4	White	1	1	Port 5 P4	Pink	5	5
Port 2 P4	Green	2	2	Port 6 P4	Red	6	6
Port 3 P4	Yellow	3	3	Port 7 P4	Black	7	7
Port 4 P4	Grey	4	4	Port 8 P4	Violet	8	8

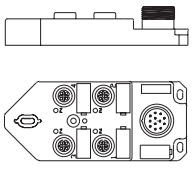
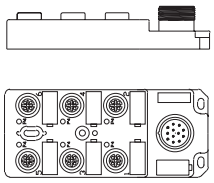
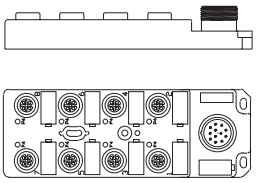
Integral Cable Entry

Cable	Length (m)	4 Port	6 Port	8 Port
				
PVC	5.0	BTY400P-FBE-05	BTY600P-FBE-05	BTY800P-FBE-05
	10.0	BTY400P-FBE-10	BTY600P-FBE-10	BTY800P-FBE-10
	20.0	BTY400P-FBE-20	BTY600P-FBE-20	BTY800P-FBE-20
PUR	5.0	BTY400P-FBP-05	BTY600P-FBP-05	BTY800P-FBP-05
	10.0	BTY400P-FBP-10	BTY600P-FBP-10	BTY800P-FBP-10
	20.0	BTY400P-FBP-20	BTY600P-FBP-20	BTY800P-FBP-20

Integral M23 12 Pole Home Run Connector



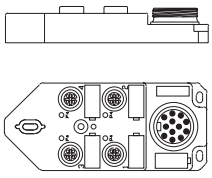
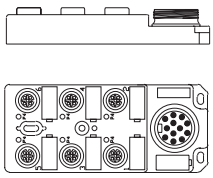
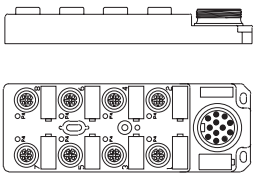
See top of page 19 for connectors

4 Port	6 Port	8 Port
		
BTY401P-FBC	BTY601P-FBC	BTY801P-FBC

Integral Mini-Change® 12 Pole Home Run Connector



See top of page 20 for connectors

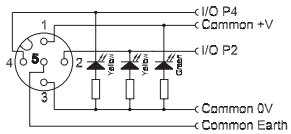
4 Port	6 Port	8 Port
		
BTY401P-FBB	BTY601P-FBB	BTY801P-FBB

Standard: Power and single status LED per port, identification labels, two sealing caps
Options: NPN format LED indication, choice of cable see page 40 for more information

Micro-Change® (M12) Multi-Port Splitter Boxes

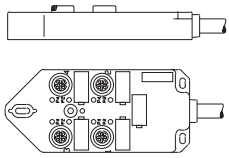
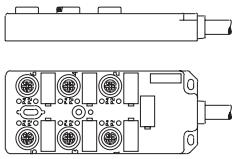
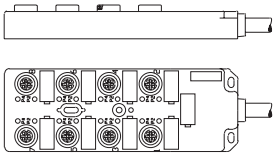


5 pole 5 Wire – Twin I/O Top-Mount Multi-Ports



Function	Cable Colour	M23 Connector Pin No	Mini-Change Pin No	Attachable	Function	Cable Colour	M23 Connector Pin No	Mini-Change Pin No	Attachable
+V	Brown	19	7	17	Earth	Green/Yellow	12	12	19
0V	Blue	6	5	18					
Port 1 P4	White	15	15	1	Port 1 P2	Grey/Pink	7	19	9
Port 2 P4	Green	5	6	2	Port 2 P2	Red/Blue	4	4	10
Port 3 P4	Yellow	16	16	3	Port 3 P2	White/Green	8	8	11
Port 4 P4	Grey	3	3	4	Port 4 P2	Brown/Green	14	14	12
Port 5 P4	Pink	17	17	5	Port 5 P2	White/Yellow	9	9	13
Port 6 P4	Red	2	2	6	Port 6 P2	Yellow/Brown	13	13	14
Port 7 P4	Black	11	11	7	Port 7 P2	White/Grey	10	10	15
Port 8 P4	Violet	1	1	8	Port 8 P2	Grey/Brown	18	18	16

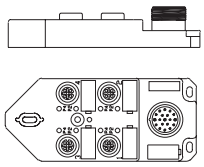
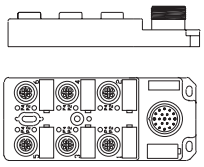
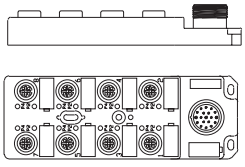
Integral Cable Entry

Cable	Length (m)	4 Port	6 Port	8 Port
				
PVC	5.0	BTY405P-FBE-05	BTY605P-FBE-05	BTY805P-FBE-05
	10.0	BTY405P-FBE-10	BTY605P-FBE-10	BTY805P-FBE-10
	20.0	BTY405P-FBE-20	BTY605P-FBE-20	BTY805P-FBE-20
PUR	5.0	BTY405P-FBP-05	BTY605P-FBP-05	BTY805P-FBP-05
	10.0	BTY405P-FBP-10	BTY605P-FBP-10	BTY805P-FBP-10
	20.0	BTY405P-FBP-20	BTY605P-FBP-20	BTY805P-FBP-20

Integral M23 19 Pole Home Run Connector



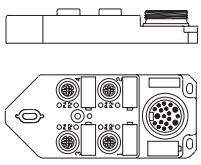
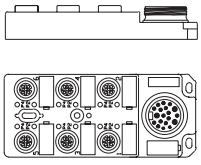
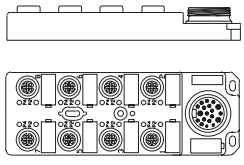
See bottom of page 19 for connectors

4 Port	6 Port	8 Port
		
BTY403P-FBC	BTY603P-FBC	BTY803P-FBC

Integral Mini-Change® 19 Pole Home Run Connector

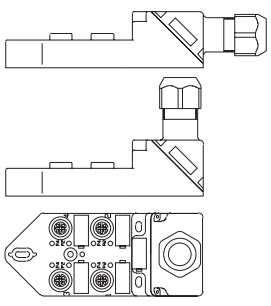
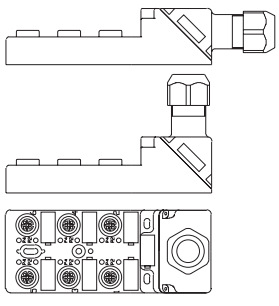
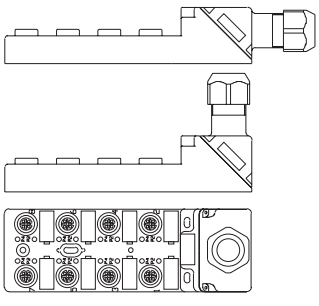


See bottom of page 20 for connectors

4 Port	6 Port	8 Port
		
BTY403P-FBB	BTY603P-FBB	BTY803P-FBB

Field Attachables

Includes removeable cable terminals for ease of assembly

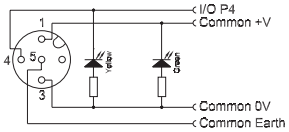
4 Port	6 Port	8 Port
		
BTY403P-FBA	BTY603P-FBA	BTY803P-FBA

Standard: Power and two status LEDs per port, identification labels, two sealing caps
Options: NPN format LED indication, choice of cable see page 40 for more information

Micro-Change® (M12) Multi-Port Splitter Boxes

5 pole 3 Wire – Single I/O Side-Mount Multi-Ports

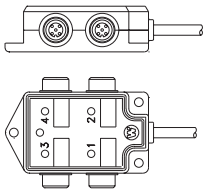
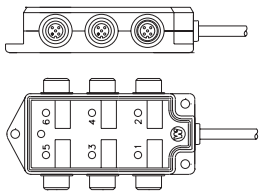
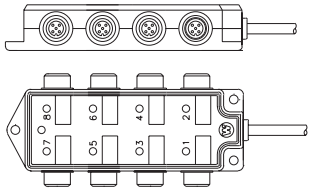




Function	Cable Colour	Mini-Change Pin No	Function Pin No	Cable Colour	Mini-Change Pin No
+V	Brown	10	Earth*	Green/Yellow	9
0V	Blue	11			
Port 1 P4	White	1	Port 5 P4	Pink	5
Port 2 P4	Green	2	Port 6 P4	Red	6
Port 3 P4	Yellow	3	Port 7 P4	Black	7
Port 4 P4	Grey	4	Port 8 P4	Violet	8

Standard: Power and single status LED per port, identification labels, two sealing caps
Options: NPN format LED indication, choice of cable see page 40 for more information

Integral Cable Entry

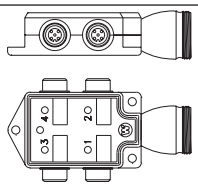
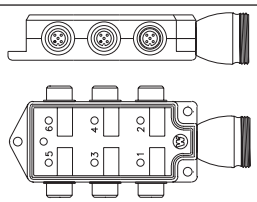
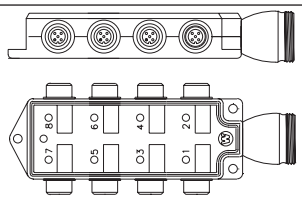
Cable	Length (m)	4 Port	6 Port	8 Port
				
PVC	5.0	BSY404P-FBE-05	BSY604P-FBE-05	BSY804P-FBE-05
	10.0	BSY404P-FBE-10	BSY604P-FBE-10	BSY804P-FBE-10
	20.0	BSY404P-FBE-20	BSY604P-FBE-20	BSY804P-FBE-20
PUR	5.0	BSY404P-FBP-05	BSY604P-FBP-05	BSY804P-FBP-05
	10.0	BSY404P-FBP-10	BSY604P-FBP-10	BSY804P-FBP-10
	20.0	BSY404P-FBP-20	BSY604P-FBP-20	BSY804P-FBP-20

* Earth (pin 5) not connected on this model

Integral Mini-Change® 12 Pole Home Run Connector



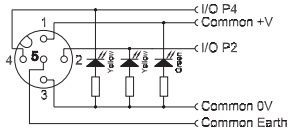
See top of page 20 for connectors

4 Port	6 Port	8 Port
		
BSY401P-FBB	BSY601P-FBB	BSY801P-FBB

* Earth (pin 5) connected on this model

5 pole 5 Wire – Twin I/O Side-Mount Multi-Ports

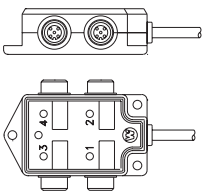
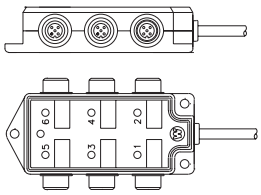
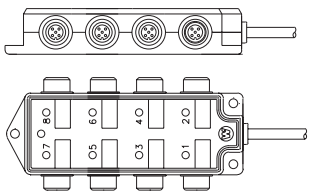




Function	Cable Colour	Mini-Change Pin No	Function	Cable Colour	Mini-Change Pin No
+V	Brown	7	Earth	Green/Yellow	12
0V	Blue	5			
Port 1 P4	White	15	Port 1 P2	Grey/Pink	19
Port 2 P4	Green	6	Port 2 P2	Red/Blue	4
Port 3 P4	Yellow	16	Port 3 P2	White/Green	8
Port 4 P4	Grey	3	Port 4 P2	Brown/Green	14
Port 5 P4	Pink	17	Port 5 P2	White/Yellow	9
Port 6 P4	Red	2	Port 6 P2	Yellow/Brown	13
Port 7 P4	Black	11	Port 7 P2	White/Grey	10
Port 8 P4	Violet	1	Port 8 P2	Grey/Brown	18

Standard: Power and two status LED per port, identification labels, two sealing caps
Options: NPN format LED indication, choice of cable see page 40 for more information

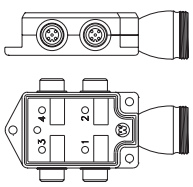
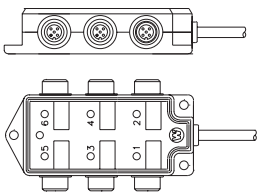
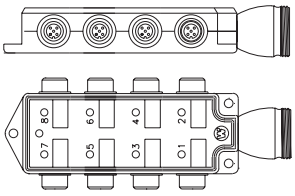
Integral Cable Entry

Cable	Length (m)	4 Port	6 Port	8 Port
				
PVC	5.0	BSY403P-FBE-05	BSY603P-FBE-05	BSY803P-FBE-05
	10.0	BSY403P-FBE-10	BSY603P-FBE-10	BSY803P-FBE-10
	20.0	BSY403P-FBE-20	BSY603P-FBE-20	BSY803P-FBE-20
PUR	5.0	BSY403P-FBP-05	BSY603P-FBP-05	BSY803P-FBP-05
	10.0	BSY403P-FBP-10	BSY603P-FBP-10	BSY803P-FBP-10
	20.0	BSY403P-FBP-20	BSY603P-FBP-20	BSY803P-FBP-20

Integral Mini-Change® 18 Pole Home Run Connector

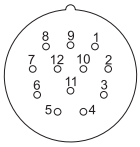


See top of page 20 for connectors

4 Port	6 Port	8 Port
		
BSY403P-FBB	BSY603P-FBB	BSY803P-FBB

Home Run Connectors for Micro-Change® Multi-Port Splitter Boxes



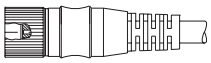


Function	M23 Connector Pin No	Cable Colour	Function	M23 Connector Pin No	Cable Colour
+V	11	Brown	Earth	12	Green/Yellow
0V	9 & 10	Blue			
Port 1 P4	1	White	Port 5 P4	5	Pink
Port 2 P4	2	Green	Port 6 P4	6	Red
Port 3 P4	3	Yellow	Port 7 P4	7	Black
Port 4 P4	4	Grey	Port 8 P4	8	Violet

Female Connector

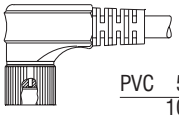
M23 12 Pole Moulded Connector

M23 Straight

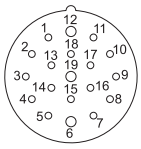


Cable	Length (m)	BTY401P-FBC 5 Pole/4 Wire - 4 Port	BTY601P-FBC 5 Pole/4 Wire - 6 Port	BNY801P-FBC 5 Pole/4 Wire - 8 Port
PVC	5.0	K02300E80M050	K02200E80M050	K02100E80M050
	10.0	K02300E80M100	K02200E80M100	K02100E80M100
	20.0	K02300E80M200	K02200E80M200	K02100E80M200
PUR	5.0	K02300P80M050	K02200P80M050	K02100P80M050
	10.0	K02300P80M100	K02200P80M100	K02100P80M100
	20.0	K02300P80M200	K02200P80M200	K02100P80M200

M23 90º



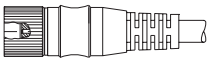
Cable	Length (m)	BTY401P-FBC 5 Pole/4 Wire - 4 Port	BTY601P-FBC 5 Pole/4 Wire - 6 Port	BNY801P-FBC 5 Pole/4 Wire - 8 Port
PVC	5.0	K02301E80M050	K02201E80M050	K02101E80M050
	10.0	K02301E80M100	K02201E80M100	K02101E80M100
	20.0	K02301E80M200	K02201E80M200	K02101E80M200
PUR	5.0	K02301P80M050	K02201P80M050	K02101P80M050
	10.0	K02301P80M100	K02201P80M100	K02101P80M100
	20.0	K02301P80M200	K02201P80M200	K02101P80M200



Function	M23 Connector Pin No	Cable Colour	Function	M23 Connector Pin No	Cable Colour
+V	19	Brown	Earth	12	Green/Yellow
0V	6	Blue			
Port 1 P4	15	White	Port 1 P2	7	Grey/Pink
Port 2 P4	5	Green	Port 2 P2	4	Red/Blue
Port 3 P4	16	Yellow	Port 3 P2	8	White/Green
Port 4 P4	3	Grey	Port 4 P2	14	Brown/Green
Port 5 P4	17	Pink	Port 5 P2	9	White/Yellow
Port 6 P4	2	Red	Port 6 P2	13	Yellow/Brown
Port 7 P4	11	Black	Port 7 P2	10	White/Grey
Port 8 P4	1	Violet	Port 8 P2	18	Grey/Brown

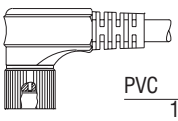
M23 19 Pole Moulded Connector

M23 Straight



Cable	Length (m)	BTY403P-FBC 5 Pole/5 Wire - 4 Port	BTY603P-FBC 5 Pole/5 Wire - 6 Port	BNY803P-FBC 5 Pole/5 Wire - 8 Port
PVC	5.0	K03300E80M050	K03200E80M050	K03000E80M050
	10.0	K03300E80M100	K03200E80M100	K03000E80M100
	20.0	K03300E80M200	K03200E80M200	K03000E80M200
PUR	5.0	K03300P80M050	K03200P80M050	K03000P80M050
	10.0	K03300P80M100	K03200P80M100	K03000P80M100
	20.0	K03300P80M200	K03200P80M200	K03000P80M200

M23 90º



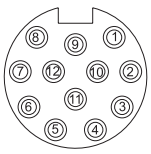
Cable	Length (m)	BTY403P-FBC 5 Pole/5 Wire - 4 Port	BTY603P-FBC 5 Pole/5 Wire - 6 Port	BNY803P-FBC 5 Pole/5 Wire - 8 Port
PVC	5.0	K03301E80M050	K03201E80M050	K03001E80M050
	10.0	K03301E80M100	K03201E80M100	K03001E80M100
	20.0	K03301E80M200	K03201E80M200	K03001E80M200
PUR	5.0	K03301P80M050	K03201P80M050	K03001P80M050
	10.0	K03301P80M100	K03201P80M100	K03001P80M100
	20.0	K03301P80M200	K03201P80M200	K03001P80M200

Options: Choice of cable see page 40 for more information

Home Run Connectors for Micro-Change® Multi-Port Splitter Boxes



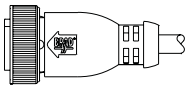
Female Connector



Function	Mini-Change Pin No	Cable Colour	Function	Mini-Change Pin No	Cable Colour
+V	10	Brown	Earth	9	Green/Yellow
0V	11	Blue			
Port 1 P4	1	White	Port 5 P4	5	Pink
Port 2 P4	2	Green	Port 6 P4	6	Red
Port 3 P4	3	Yellow	Port 7 P4	7	Black
Port 4 P4	4	Grey	Port 8 P4	8	Violet

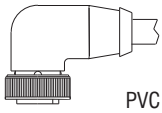
Mini-Change® 12 pole Moulded Connector

Mini-Change® Straight

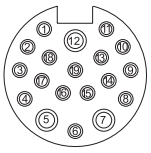


Cable	Length (m)	BTY401P-FBB BSY401P-FBB 5 Pole/4 Wire - 4 Port	BTY601P-FBB BSY601P-FBB 5 Pole/4 Wire - 6 Port	BTY801P-FBB BSY801P-FBB 5 Pole/4 Wire - 8 Port
PVC	5.0	302300E80M050	302200E80M050	302100E80M050
	10.0	302300E80M100	302200E80M100	302100E80M100
	20.0	302300E80M200	302200E80M200	302100E80M200
PUR	5.0	302300P80M050	302200P80M050	302100P80M050
	10.0	302300P80M100	302200P80M100	302100P80M100
	20.0	302300P80M200	302200P80M200	302100P80M200

Mini-Change® 90°



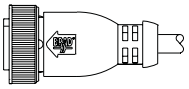
Cable	Length (m)			
PVC	5.0	302301E80M050	302201E80M050	302101E80M050
	10.0	302301E80M100	302201E80M100	302101E80M100
	20.0	302301E80M200	302201E80M200	302101E80M200
PUR	5.0	302301P80M050	302201P80M050	302101P80M050
	10.0	302301P80M100	302201P80M100	302101P80M100
	20.0	302301P80M200	302201P80M200	302101P80M200



Function	Mini-Change Pin No	Cable Colour	Function	Mini-Change Pin No	Cable Colour
+V	7	Brown	Earth	12	Green/Yellow
0V	5	Blue			
Port 1 P4	15	White	Port 1 P2	19	Grey/Pink
Port 2 P4	6	Green	Port 2 P2	4	Red/Blue
Port 3 P4	16	Yellow	Port 3 P2	8	White/Green
Port 4 P4	3	Grey	Port 4 P2	14	Brown/Green
Port 5 P4	17	Pink	Port 5 P2	9	White/Yellow
Port 6 P4	2	Red	Port 6 P2	13	Yellow/Brown
Port 7 P4	11	Black	Port 7 P2	10	White/Grey
Port 8 P4	1	Violet	Port 8 P2	18	Grey/Brown

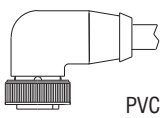
Mini-Change® 19 pole Moulded Connector

Mini-Change® Straight



Cable	Length (m)	BTY403P-FBB 5 Pole/5 Wire - 4 Port	BTY603P-FBB 5 Pole/5 Wire - 6 Port	BTY803P-FBB 5 Pole/5 Wire - 8 Port
PVC	5.0	303300E80M050	303200E80M050	303000E80M050
	10.0	303300E80M100	303200E80M100	303000E80M100
	20.0	303300E80M200	303200E80M200	303000E80M200
PUR	5.0	303300P80M050	303200P80M050	303000P80M050
	10.0	303300P80M100	303200P80M100	303000P80M100
	20.0	303300P80M200	303200P80M200	303000P80M200

Mini-Change® 90°



Cable	Length (m)			
PVC	5.0	303301E80M050	303201E80M050	303001E80M050
	10.0	303301E80M100	303201E80M100	303001E80M100
	20.0	303301E80M200	303201E80M200	303001E80M200
PUR	5.0	303301P80M050	303201P80M050	303001P80M050
	10.0	303301P80M100	303201P80M100	303001P80M100
	20.0	303301P80M200	303201P80M200	303001P80M200

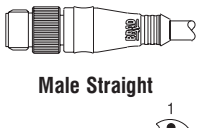
Options: Choice of cable and coupling materials see page 40 for more information

Micro-Change® (M12) Jumper Cables



Female Connector

M12 Single I/O Multi-Port

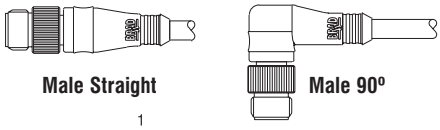




1 Brown
3 Blue
4 Black

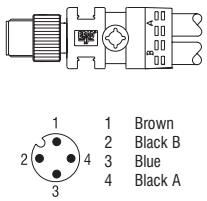
WIRING CONFIGURATION

M12 Twin I/O Multi-Port





1 Brown 3 Blue
2 White 4 Black



1 Brown
2 Black B
3 Blue
4 Black A

WIRING CONFIGURATION

Cable	Length (m)	M12 Single I/O Multi-Port		M12 Twin I/O Multi-Port		
Nano-Change® (M8) Straight						
PVC	0.6	483030E03M006	483032E03M006			484A30E03M006
	1.0	483030E03M010	483032E03M010			484A30E03M010
	2.0	483030E03M020	483032E03M020			484A30E03M020
	3.0	483030E03M030	483032E03M030			484A30E03M030
PUR	0.6	483030P03M006	483032P03M006			484A30P03M006
	1.0	483030P03M010	483032P03M010			484A30P03M010
	2.0	483030P03M020	483032P03M020			484A30P03M020
	3.0	483030P03M030	483032P03M030			484A30P03M030
Nano-Change® (M8) 90º						
PVC	0.6	483031E03M006	483033E03M006			484A31E03M006
	1.0	483031E03M010	483033E03M010			484A31E03M010
	2.0	483031E03M020	483033E03M020	**Also compatible with Twin I/O Multi-Ports**		484A31E03M020
	3.0	483031E03M030	483033E03M030			484A31E03M030
PUR	0.6	483031P03M006	483033P03M006			484A31P03M006
	1.0	483031P03M010	483033P03M010			484A31P03M010
	2.0	483031P03M020	483033P03M020			484A31P03M020
	3.0	483031P03M030	483033P03M030			484A31P03M030
Nano-Change® (M8) 90º PNP LED						
PVC	0.6	4830P7E03M006	4830P9E03M006			484AP7E03M006
	1.0	4830P7E03M010	4830P9E03M010			484AP7E03M010
	2.0	4830P7E03M020	4830P9E03M020			484AP7E03M020
	3.0	4830P7E03M030	4830P9E03M030			484AP7E03M030
PUR	0.6	4830P7P03M006	4830P9P03M006			484AP7P03M006
	1.0	4830P7P03M010	4830P9P03M010			484AP7P03M010
	2.0	4830P7P03M020	4830P9P03M020			484AP7P03M020
	3.0	4830P7P03M030	4830P9P03M030			484AP7P03M030
Nano-Change® (M8) Straight						
PVC	0.6			484030E03M006	484032E03M006	484C30E03M006
	1.0			484030E03M010	484032E03M010	484C30E03M010
	2.0			484030E03M020	484032E03M020	484C30E03M020
	3.0			484030E03M030	484032E03M030	484C30E03M030
PUR	0.6			484030P03M006	484032P03M006	484C30P03M006
	1.0			484030P03M010	484032P03M010	484C30P03M010
	2.0			484030P03M020	484032P03M020	484C30P03M020
	3.0			484030P03M030	484032P03M030	484C30P03M030
Nano-Change® (M8) 90º			**Also compatible with Single I/O Multi-Ports**			
PVC	0.6			484031E03M006	484033E03M006	484C31E03M006
	1.0			484031E03M010	484033E03M010	484C31E03M010
	2.0			484031E03M020	484033E03M020	484C31E03M020
	3.0			484031E03M030	484033E03M030	484C31E03M030
PUR	0.6			484031P03M006	484033P03M006	484C31P03M006
	1.0			484031P03M010	484033P03M010	484C31P03M010
	2.0			484031P03M020	484033P03M020	484C31P03M020
	3.0			484031P03M030	484033P03M030	484C31P03M030

1 Brown
3 Blue
4 Black

1 Brown
2 White*
3 Blue
4 Black

* White not used on in-line splitter connectors

Options: NPN format LED indication, choice of cable and coupling materials, see page 40 for more information

Micro-Change® (M12) Jumper Cables

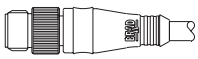


Female Connector

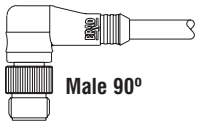
Cable

Length (m)

M12 Single I/O Multi-Port



Male Straight



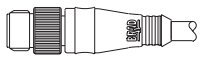
Male 90º



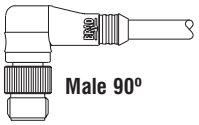
1 Brown
3 Blue
4 Black

WIRING CONFIGURATION

M12 Twin I/O Multi-Port



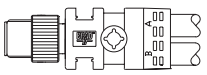
Male Straight



Male 90º



1 Brown 3 Blue
2 White 4 Black

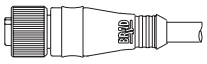


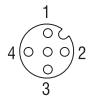


1 Brown
2 Black B
3 Blue
4 Black A

WIRING CONFIGURATION

Micro-Change® (M12) Straight

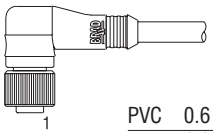


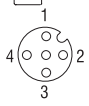


1 Brown
2 White*
3 Blue
4 Black

	Length (m)	Single I/O Multi-Port		Twin I/O Multi-Port		
PVC	0.6	883030E03M006	883032E03M006	884030E03M006	884032E03M006	884A30E03M006
	1.0	883030E03M010	883032E03M010	884030E03M010	884032E03M010	884A30E03M010
	2.0	883030E03M020	883032E03M020	884030E03M020	884032E03M020	884A30E03M020
	3.0	883030E03M030	883032E03M030	884030E03M030	884032E03M030	884A30E03M030
PUR	0.6	883030P03M006	883032P03M006	884030P03M006	884032P03M006	884A30P03M006
	1.0	883030P03M010	883032P03M010	884030P03M010	884032P03M010	884A30P03M010
	2.0	883030P03M020	883032P03M020	884030P03M020	884032P03M020	884A30P03M020
	3.0	883030P03M030	883032P03M030	884030P03M030	884032P03M030	884A30P03M030

Micro-Change® (M12) 90º



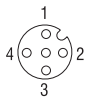


1 Brown
2 White*
3 Blue
4 Black

	Length (m)	Single I/O Multi-Port		Twin I/O Multi-Port		
PVC	0.6	883031E03M006	883033E03M006	884031E03M006	884033E03M006	884A31E03M006
	1.0	883031E03M010	883033E03M010	884031E03M010	884033E03M010	884A31E03M010
	2.0	883031E03M020	883033E03M020	884031E03M020	884033E03M020	884A31E03M020
	3.0	883031E03M030	883033E03M030	884031E03M030	884033E03M030	884A31E03M030
PUR	0.6	883031P03M006	883033P03M006	884031P03M006	884033P03M006	884A31P03M006
	1.0	883031P03M010	883033P03M010	884031P03M010	884033P03M010	884A31P03M010
	2.0	883031P03M020	883033P03M020	884031P03M020	884033P03M020	884A31P03M020
	3.0	883031P03M030	883033P03M030	884031P03M030	884033P03M030	884A31P03M030

Micro-Change® (M12) PNP LED

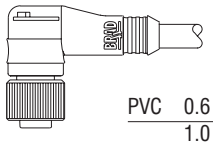


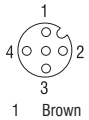


1 Brown
2 White*
3 Blue
4 Black

	Length (m)	Single I/O Multi-Port		Twin I/O Multi-Port		
PVC	0.6	8830P6E03M006	8830P8E03M006	8840P6E03M006	8840P8E03M006	884AP6E03M006
	1.0	8830P6E03M010	8830P8E03M010	8840P6E03M010	8840P8E03M010	884AP6E03M010
	2.0	8830P6E03M020	8830P8E03M020	8840P6E03M020	8840P8E03M020	884AP6E03M020
	3.0	8830P6E03M030	8830P8E03M030	8840P6E03M030	8840P8E03M030	884AP6E03M030
PUR	0.6	8830P6P03M006	8830P8P03M006	8840P6P03M006	8840P8P03M006	884AP6P03M006
	1.0	8830P6P03M010	8830P8P03M010	8840P6P03M010	8840P8P03M010	884AP6P03M010
	2.0	8830P6P03M020	8830P8P03M020	8840P6P03M020	8840P8P03M020	884AP6P03M020
	3.0	8830P6P03M030	8830P8P03M030	8840P6P03M030	8840P8P03M030	884AP6P03M030

Micro-Change® (M12) 90º PNP LED





1 Brown
2 White*
3 Blue
4 Black

	Length (m)	Single I/O Multi-Port		Twin I/O Multi-Port		
PVC	0.6	8830P7E03M006	8830P9E03M006	8840P7E03M006	8840P9E03M006	884AP7E03M006
	1.0	8830P7E03M010	8830P9E03M010	8840P7E03M010	8840P9E03M010	884AP7E03M010
	2.0	8830P7E03M020	8830P9E03M020	8840P7E03M020	8840P9E03M020	884AP7E03M020
	3.0	8830P7E03M030	8830P9E03M030	8840P7E03M030	8840P9E03M030	884AP7E03M030
PUR	0.6	8830P7P03M006	8830P9P03M006	8840P7P03M006	8840P9P03M006	884AP7P03M006
	1.0	8830P7P03M010	8830P9P03M010	8840P7P03M010	8840P9P03M010	884AP7P03M010
	2.0	8830P7P03M020	8830P9P03M020	8840P7P03M020	8840P9P03M020	884AP7P03M020
	3.0	8830P7P03M030	8830P9P03M030	8840P7P03M030	8840P9P03M030	884AP7P03M030

* White not used on Single I/O and in-line splitter connectors

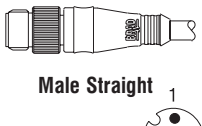
Options: NPN format LED indication, choice of cable and coupling materials, see page 40 for more information

Micro-Change® (M12) Jumper Cables

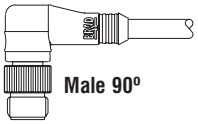


Female Connector

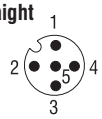
M12 Single I/O Multi-Port



Male Straight



Male 90º

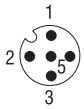


3 Blue
4 Brown
5 Yellow/Green

WIRING CONFIGURATION

M12 Twin I/O Multi-Port





2 Brown B
3 Blue
4 Brown A
5 Yellow/Green

WIRING CONFIGURATION

Cable	Length (m)	M12 Single I/O Multi-Port		M12 Twin I/O Multi-Port
Form A (18mm) 2 pole + earth				
PVC	0.6	E85000E12M006	E85002E12M006	E85A00E12M006
	1.0	E85000E12M010	E85002E12M010	E85A00E12M010
	2.0	E85000E12M020	E85002E12M020	E85A00E12M020
	3.0	E85000E12M030	E85002E12M030	E85A00E12M030
PUR	0.6	E85000P12M006	E85002P12M006	E85A00P12M006
	1.0	E85000P12M010	E85002P12M010	E85A00P12M010
	2.0	E85000P12M020	E85002P12M020	E85A00P12M020
	3.0	E85000P12M030	E85002P12M030	E85A00P12M030
Form A (18mm) 2 pole + earth – 24 V LED & VDR				
PVC	0.6	E850B0E12M006	E850B2E12M006	E85AB0E12M006
	1.0	E850B0E12M010	E850B2E12M010	E85AB0E12M010
	2.0	E850B0E12M020	E850B2E12M020	E85AB0E12M020
	3.0	E850B0E12M030	E850B2E12M030	E85AB0E12M030
PUR	0.6	E850B0P12M006	E850B2P12M006	E85AB0P12M006
	1.0	E850B0P12M010	E850B2P12M010	E85AB0P12M010
	2.0	E850B0P12M020	E850B2P12M020	E85AB0P12M020
	3.0	E850B0P12M030	E850B2P12M030	E85AB0P12M030
Form B Ind (11mm) 2 pole + 12 o'clock earth				
PVC	0.6	F85001E12M006	F85003E12M006	F85A01E12M006
	1.0	F85001E12M010	F85003E12M010	F85A01E12M010
	2.0	F85001E12M020	F85003E12M020	F85A01E12M020
	3.0	F85001E12M030	F85003E12M030	F85A01E12M030
PUR	0.6	F85001P12M006	F85003P12M006	F85A01P12M006
	1.0	F85001P12M010	F85003P12M010	F85A01P12M010
	2.0	F85001P12M020	F85003P12M020	F85A01P12M020
	3.0	F85001P12M030	F85003P12M030	F85A01P12M030
Form B Ind (11mm) 2 pole + 12 o'clock earth – 24 V LED & VDR				
PVC	0.6	F850B1E12M006	F850B3E12M006	F85AB1E12M006
	1.0	F850B1E12M010	F850B3E12M010	F85AB1E12M010
	2.0	F850B1E12M020	F850B3E12M020	F85AB1E12M020
	3.0	F850B1E12M030	F850B3E12M030	F85AB1E12M030
PUR	0.6	F850B1P12M006	F850B3P12M006	F85AB1P12M006
	1.0	F850B1P12M010	F850B3P12M010	F85AB1P12M010
	2.0	F850B1P12M020	F850B3P12M020	F85AB1P12M020
	3.0	F850B1P12M030	F850B3P12M030	F85AB1P12M030

1 Brown
2 Blue
3 Yellow/Green

Also compatible with Twin I/O Multi-Ports

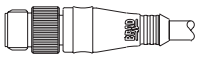
Options: Alternative types of suppression, choice of cables and coupling materials, see page 40 for more information

Micro-Change® (M12) Jumper Cables

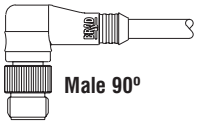


Female Connector

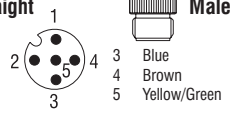
M12 Single I/O Multi-Port



Male Straight



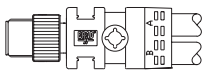
Male 90º

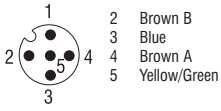


3 Blue
4 Brown
5 Yellow/Green

WIRING CONFIGURATION

M12 Twin I/O Multi-Port





2 Brown B
3 Blue
4 Brown A
5 Yellow/Green

WIRING CONFIGURATION

Cable	Length (m)	M12 Single I/O Multi-Port		M12 Twin I/O Multi-Port
Form B Ind (11mm) 2 pole + 6 o'clock earth				
PVC	0.6	F85000E12M006	F85002E12M006	F85A00E12M006
	1.0	F85000E12M010	F85002E12M010	F85A00E12M010
	2.0	F85000E12M020	F85002E12M020	F85A00E12M020
	3.0	F85000E12M030	F85002E12M030	F85A00E12M030
PUR	0.6	F85000P12M006	F85002P12M006	F85A00P12M006
	1.0	F85000P12M010	F85002P12M010	F85A00P12M010
	2.0	F85000P12M020	F85002P12M020	F85A00P12M020
	3.0	F85000P12M030	F85002P12M030	F85A00P12M030
Form B Ind (11mm) 2 pole + 6 o'clock earth – 24 V LED & VDR				
PVC	0.6	F850B0E12M006	F850B2E12M006	F85AB0E12M006
	1.0	F850B0E12M010	F850B2E12M010	F85AB0E12M010
	2.0	F850B0E12M020	F850B2E12M020	F85AB0E12M020
	3.0	F850B0E12M030	F850B2E12M030	F85AB0E12M030
PUR	0.6	F850B0P12M006	F850B2P12M006	F85AB0P12M006
	1.0	F850B0P12M010	F850B2P12M010	F85AB0P12M010
	2.0	F850B0P12M020	F850B2P12M020	F85AB0P12M020
	3.0	F850B0P12M030	F850B2P12M030	F85AB0P12M030
Form B DIN (10mm) 2 pole + 12 o'clock earth				
PVC	0.6	D85001E12M006	D85003E12M006	D85A01E12M006
	1.0	D85001E12M010	D85003E12M010	D85A01E12M010
	2.0	D85001E12M020	D85003E12M020	D85A01E12M020
	3.0	D85001E12M030	D85003E12M030	D85A01E12M030
PUR	0.6	D85001P12M006	D85003P12M006	D85A01P12M006
	1.0	D85001P12M010	D85003P12M010	D85A01P12M010
	2.0	D85001P12M020	D85003P12M020	D85A01P12M020
	3.0	D85001P12M030	D85003P12M030	D85A01P12M030
Form B DIN (10mm) 2 pole + 12 o'clock earth – 24 V LED & VDR				
PVC	0.6	D850B1E12M006	D850B3E12M006	D85AB1E12M006
	1.0	D850B1E12M010	D850B3E12M010	D85AB1E12M010
	2.0	D850B1E12M020	D850B3E12M020	D85AB1E12M020
	3.0	D850B1E12M030	D850B3E12M030	D85AB1E12M030
PUR	0.6	D850B1P12M006	D850B3P12M006	D85AB1P12M006
	1.0	D850B1P12M010	D850B3P12M010	D85AB1P12M010
	2.0	D850B1P12M020	D850B3P12M020	D85AB1P12M020
	3.0	D850B1P12M030	D850B3P12M030	D85AB1P12M030

1 Brown
2 Blue
3 Yellow/Green

Also compatible with Twin I/O Multi-Ports

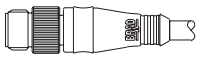
Options: Alternative types of suppression, choice of cables and coupling materials, see page 40 for more information

Micro-Change® (M12) Jumper Cables

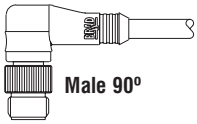


Female Connector

M12 Single I/O Multi-Port



Male Straight



Male 90º

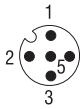


3 Blue
4 Brown
5 Yellow/Green

WIRING CONFIGURATION

M12 Twin I/O Multi-Port





2 Brown B
3 Blue
4 Brown A
5 Yellow/Green

WIRING CONFIGURATION

Cable	Length (m)	M12 Single I/O Multi-Port		M12 Twin I/O Multi-Port
Form B DIN (10mm) 2 pole + 6 o'clock earth				
PVC	0.6	D85000E12M006	D85002E12M006	D85A00E12M006
	1.0	D85000E12M010	D85002E12M010	D85A00E12M010
	2.0	D85000E12M020	D85002E12M020	D85A00E12M020
	3.0	D85000E12M030	D85002E12M030	D85A00E12M030
PUR	0.6	D85000P12M006	D85002P12M006	D85A00P12M006
	1.0	D85000P12M010	D85002P12M010	D85A00P12M010
	2.0	D85000P12M020	D85002P12M020	D85A00P12M020
	3.0	D85000P12M030	D85002P12M030	D85A00P12M030
Form B DIN (10mm) 2 pole + 6 o'clock earth – 24 V LED & VDR				
PVC	0.6	D850B0E12M006	D850B2E12M006	D85AB0E12M006
	1.0	D850B0E12M010	D850B2E12M010	D85AB0E12M010
	2.0	D850B0E12M020	D850B2E12M020	D85AB0E12M020
	3.0	D850B0E12M030	D850B2E12M030	D85AB0E12M030
PUR	0.6	D850B0P12M006	D850B2P12M006	D85AB0P12M006
	1.0	D850B0P12M010	D850B2P12M010	D85AB0P12M010
	2.0	D850B0P12M020	D850B2P12M020	D85AB0P12M020
	3.0	D850B0P12M030	D850B2P12M030	D85AB0P12M030
Form C DIN (8mm) 2 pole + earth				
PVC	0.6	H85000E12M006	H85002E12M006	H85A00E12M006
	1.0	H85000E12M010	H85002E12M010	H85A00E12M010
	2.0	H85000E12M020	H85002E12M020	H85A00E12M020
	3.0	H85000E12M030	H85002E12M030	H85A00E12M030
PUR	0.6	H85000P12M006	H85002P12M006	H85A00P12M006
	1.0	H85000P12M010	H85002P12M010	H85A00P12M010
	2.0	H85000P12M020	H85002P12M020	H85A00P12M020
	3.0	H85000P12M030	H85002P12M030	H85A00P12M030
Form C DIN (8mm) 2 pole + earth – 24 V LED & VDR				
PVC	0.6	H850B0E12M006	H850B2E12M006	H85AB0E12M006
	1.0	H850B0E12M010	H850B2E12M010	H85AB0E12M010
	2.0	H850B0E12M020	H850B2E12M020	H85AB0E12M020
	3.0	H850B0E12M030	H850B2E12M030	H85AB0E12M030
PUR	0.6	H850B0P12M006	H850B2P12M006	H85AB0P12M006
	1.0	H850B0P12M010	H850B2P12M010	H85AB0P12M010
	2.0	H850B0P12M020	H850B2P12M020	H85AB0P12M020
	3.0	H850B0P12M030	H850B2P12M030	H85AB0P12M030

1 Brown
2 Blue
3 Yellow/Green

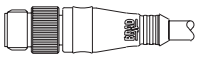
Also compatible with Twin I/O Multi-Ports

Options: Alternative types of suppression, choice of cables and coupling materials, see page 40 for more information

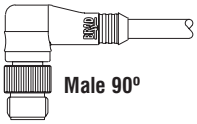
Micro-Change® (M12) Jumper Cables



M12 Single I/O Multi-Port Jumpers



Male Straight



Male 90º



3 Blue
4 Brown
5 Yellow/Green

M12 Twin I/O Multi-Port Jumpers





2 Brown B
3 Blue
4 Brown A
5 Yellow/Green

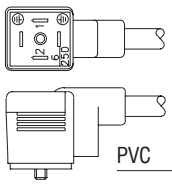
Female Connector

Cable | Length (m)

WIRING CONFIGURATION

WIRING CONFIGURATION

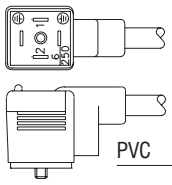
Form C Ind (9.4mm) 2 pole + earth



1 Brown
3 Blue
4 Black

Cable	Length (m)				
PVC	0.6	G85000E12M006	G85002E12M006		G85A00E12M006
	1.0	G85000E12M010	G85002E12M010		G85A00E12M010
	2.0	G85000E12M020	G85002E12M020		G85A00E12M020
	3.0	G85000E12M030	G85002E12M030		G85A00E12M030
PUR	0.6	G85000P12M006	G85002P12M006		G85A00P12M006
	1.0	G85000P12M010	G85002P12M010		G85A00P12M010
	2.0	G85000P12M020	G85002P12M020		G85A00P12M020
	3.0	G85000P12M030	G85002P12M030		G85A00P12M030

Form C Ind (9.4mm) 2 pole + earth – 24 V LED & VDR



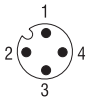
1 Brown
3 Blue
4 Black

Also compatible with Twin I/O Multi-Ports

Cable	Length (m)				
PVC	0.6	G850B0E12M006	G850B2E12M006		G85AB0E12M006
	1.0	G850B0E12M010	G850B2E12M010		G85AB0E12M010
	2.0	G850B0E12M020	G850B2E12M020		G85AB0E12M020
	3.0	G850B0E12M030	G850B2E12M030		G85AB0E12M030
PUR	0.6	G850B0P12M006	G850B2P12M006		G85AB0P12M006
	1.0	G850B0P12M010	G850B2P12M010		G85AB0P12M010
	2.0	G850B0P12M020	G850B2P12M020		G85AB0P12M020
	3.0	G850B0P12M030	G850B2P12M030		G85AB0P12M030

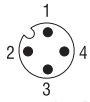
Micro-Change® (M12) Adapters and In-Line Splitters

M12 Single I/O Multi-Port

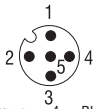


1 Brown 4 Black
3 Blue

M12 Twin I/O Multi-Port



1 Brown 3 Blue
2 White 4 Black



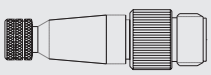
1 Brown 4 Black A
2 Black B 5 Yellow/Green
3 Blue

Female Connector

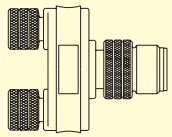
Adapter & In-line Splitter M8 to M12



1 Brown 4 Black
3 Blue



483030

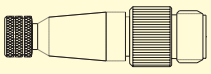


484A30

Adapter M8 to M12

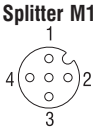


1 Brown 3 Blue
2 White 4 Black

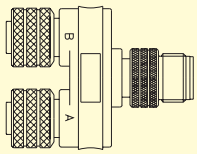


484030

In-line Splitter M12 to M12



1 Brown 4 Black
2 White 5 Yellow/Green
3 Blue



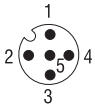
885A30

Options: Alternative types of suppression, choice of cables and coupling materials, see page 40 for more information

M12 Single I/O Multi-Port



Female Connector

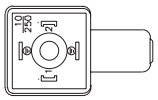


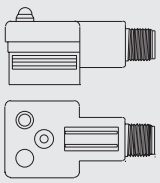
3 Blue
4 Brown
5 Yellow/Green

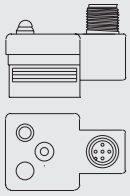
Circuit

WIRING CONFIGURATION

Form A (18mm) 2 pole + earth

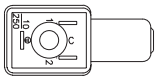


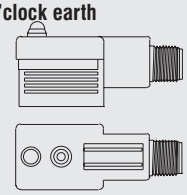


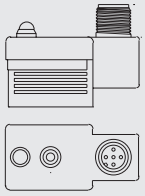


None	E85000	E85002
24 V LED & VDR	E850B0	E850B2

Form B (11mm) 2 pole + 12 o'clock earth

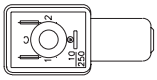


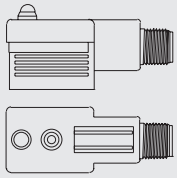


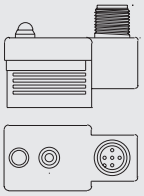


None	F85001	F85003
24 V LED & VDR	F850B1	F850B3

Form B (11mm) 2 pole + 6 o'clock earth

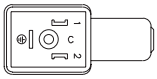


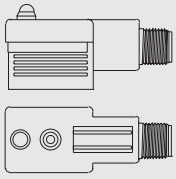


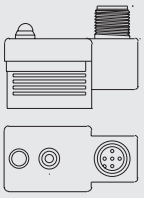


None	F85000	F85002
24 V LED & VDR	F850B0	F850B2

Form B (10mm) 2 pole + 12 o'clock earth

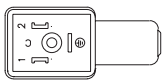


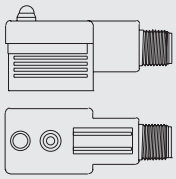


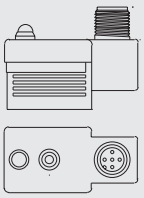


None	D85001	D85003
24 V LED & VDR	D850B1	D850B3

Form B (10mm) 2 pole + 6 o'clock earth







None	D85000	D85002
24 V LED & VDR	D850B0	D850B2

Options: Alternative types of suppression, see page 40 for more information

NANO-CHANGE® CONNECTORS

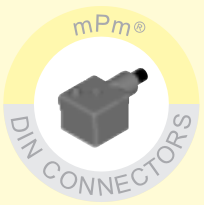












- **Quick disconnect provides simple and fast connection for the easy replacement and installation of control devices such as proximity switches**
- **Lightweight and compact, factory assembled and tested connectors reduce the risk of costly wiring errors**
- **Anti-vibration couplings ensure the connector remains secure in harsh environments, maintaining the IP67 waterproof seal and integrity of the system**





3 Pole

1 Brown
3 Blue
4 Black



4 Pole

1 Brown 3 Blue
2 White 4 Black



5 Pole

1 Brown 4 Black
2 White 5 Grey
3 Blue

Female Connector

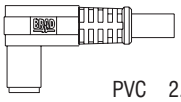
WIRING CONFIGURATION

Nano-Change® (M8) Straight



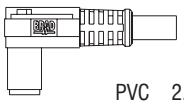
Cable	Length (m)			
PVC	2.0	503000E03M020	504000E03M020	
	5.0	503000E03M050	504000E03M050	
	10.0	503000E03M100	504000E03M100	
PUR	2.0	503000P03M020	504000P03M020	505000P02M020
	5.0	503000P03M050	504000P03M050	505000P02M050
	10.0	503000P03M100	504000P03M100	505000P02M100

Nano-Change® (M8) 90º



Cable	Length (m)			
PVC	2.0	503001E03M020	504001E03M020	
	5.0	503001E03M050	504001E03M050	
	10.0	503001E03M100	504001E03M100	
PUR	2.0	503001P03M020	504001P03M020	505001P02M020
	5.0	503001P03M050	504001P03M050	505001P02M050
	10.0	503001P03M100	504001P03M100	505001P02M100

Nano-Change® (M8) 90º PNP LED



Cable	Length (m)	
PVC	2.0	5030P1E03M020
	5.0	5030P1E03M050
	10.0	5030P1E03M100
PUR	2.0	5030P1P03M020
	5.0	5030P1P03M050
	10.0	5030P1P03M100



3 Pole

1 Brown
3 Blue
4 Black



4 Pole

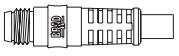
1 Brown 3 Blue
2 White 4 Black

Male Connector

(Fixed thread)

WIRING CONFIGURATION

Nano-Change® (M8) Straight



Cable	Length (m)			
PVC	2.0	503006E03M020	504006E03M020	
	5.0	503006E03M050	504006E03M050	
	10.0	503006E03M100	504006E03M100	
PUR	2.0	503006P03M020	504006P03M020	
	5.0	503006P03M050	504006P03M050	
	10.0	503006P03M100	504006P03M100	

Nano-Change® (M8) Coupler Moulded Connectors





3 Pole

1 Brown
3 Blue
4 Black



4 Pole

1 Brown 3 Blue
2 White 4 Black



5 Pole

1 Brown 4 Black
2 White 5 Grey
3 Blue

Female Connector

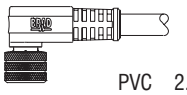
WIRING CONFIGURATION

Nano-Change® (M8) Straight



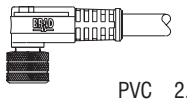
Cable	Length (m)			
PVC	2.0	403000E03M020	404000E03M020	
	5.0	403000E03M050	404000E03M050	
	10.0	403000E03M100	404000E03M100	
PUR	2.0	403000P03M020	404000P03M020	405000P02M020
	5.0	403000P03M050	404000P03M050	405000P02M050
	10.0	403000P03M100	404000P03M100	405000P02M100

Nano-Change® (M8) 90º



Cable	Length (m)			
PVC	2.0	403001E03M020	404001E03M020	
	5.0	403001E03M050	404001E03M050	
	10.0	403001E03M100	404001E03M100	
PUR	2.0	403001P03M020	404001P03M020	405001P02M020
	5.0	403001P03M050	404001P03M050	405001P02M050
	10.0	403001P03M100	404001P03M100	405001P02M100

Nano-Change® (M8) 90º PNP LED



Cable	Length (m)			
PVC	2.0	4030P1E03M020		
	5.0	4030P1E03M050		
	10.0	4030P1E03M100		
PUR	2.0	4030P1P03M020		
	5.0	4030P1P03M050		
	10.0	4030P1P03M100		



3 Pole

1 Brown
3 Blue
4 Black



4 Pole

1 Brown 3 Blue
2 White 4 Black



5 Pole

1 Brown 4 Black
2 White 5 Grey
3 Blue

Male Connector

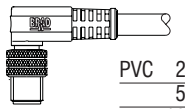
WIRING CONFIGURATION

Nano-Change® (M8) Straight



Cable	Length (m)			
PVC	2.0	403006E03M020	404006E03M020	
	5.0	403006E03M050	404006E03M050	
	10.0	403006E03M100	404006E03M100	
PUR	2.0	403006P03M020	404006P03M020	405006P02M020
	5.0	403006P03M050	404006P03M050	405006P02M050
	10.0	403006P03M100	404006P03M100	405006P02M100

Nano-Change® (M8) 90º



Cable	Length (m)			
PVC	2.0	403007E03M020	404007E03M020	
	5.0	403007E03M050	404007E03M050	
	10.0	403007E03M100	404007E03M100	
PUR	2.0	403007P03M020	404007P03M020	405007P02M020
	5.0	403007P03M050	404007P03M050	405007P02M050
	10.0	403007P03M100	404007P03M100	405007P02M100

Options: NPN format LED indication, choice of cables, see page 40 for more information

Nano-Change® (M8) Field Attachable Connectors



Female Attachable



3 Pole

1	Brown		
3	Blue		
4	Black		

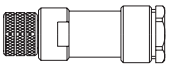


4 Pole

1	Brown	3	Blue
2	White	4	Black

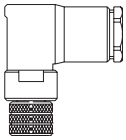
WIRING CONFIGURATION

Nano-Change® (M8) Straight



Wire length (mm)	3 Pole	4 Pole
	N03FA03124	N04FA03124

Nano-Change® (M8) 90º



Wire length (mm)	3 Pole	4 Pole
	N03FA04124	N04FA04124

Male Attachable



3 Pole

1	Brown		
3	Blue		
4	Black		

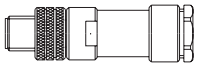


4 Pole

1	Brown	3	Blue
2	White	4	Black

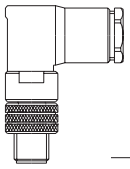
WIRING CONFIGURATION

Nano-Change® (M8) Straight



Wire length (mm)	3 Pole	4 Pole
	N03MA03124	N04MA03124

Nano-Change® (M8) 90º



Wire length (mm)	3 Pole	4 Pole
	N03MA04124	N04MA04124

Nano-Change® (M8) Receptacles

Female Receptacle



3 Pole

1	Brown		
3	Blue		
4	Black		



4 Pole

1	Brown	3	Blue
2	White	4	Black

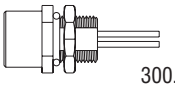


5 Pole

1	Brown	4	Black
2	White	5	Grey
3	Blue		

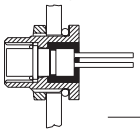
WIRING CONFIGURATION

Nano-Change® M8 Mounting Thread



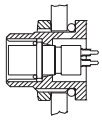
Wire length (mm)	3 Pole	4 Pole	5 Pole
300.0	4R3F30E02C3003	4R4F30E02C3003	4R5F30E02C3003

Nano-Change® PG7 Through Panel



Wire length (mm)	3 Pole	4 Pole	5 Pole
300.0	4R3H40E02C3003	4R4H40E02C3003	4R5H40E02C3003

Nano-Change® PG7 PCB Mount



Wire length (mm)	3 Pole	4 Pole	5 Pole
n/a	4R3H400013	4R4H400013	4R5H400013

Male Receptacle



3 Pole

1	Brown		
3	Blue		
4	Black		



4 Pole

1	Brown	3	Blue
2	White	4	Black

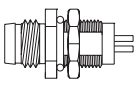


5 Pole

1	Brown	4	Black
2	White	5	Grey
3	Blue		

WIRING CONFIGURATION

Nano-Change® M8 Mounting Thread



Wire length (mm)	3 Pole	4 Pole	5 Pole
300.0	4R3F06E02C3003	4R4F06E02C3003	4R5F06E02C3003

Options: NPN format LED indication, choice of cables, see page 40 for more information

MICRO-CHANGE® CONNECTORS

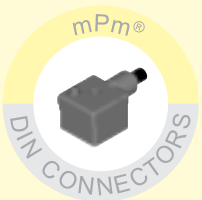










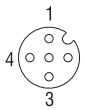


- **Weld splatter resistant coupling nuts and cables ensure reliability and serviceability in harsh operating conditions**
- **Compact and robust design sealed waterproof to IP68, with additional optional benefit of plastic or stainless steel couplings for corrosion resistance in wash down environments**
- **Choice of cable type and length reduces stock variations of I/O devices and provides solutions for food processing, machining and applications demanding shielded or halogen free cables**

Micro-Change® (M12) Moulded Connectors

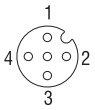


Female Connector



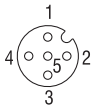
1 Brown
3 Blue
4 Black

5 Pole/3 Wire



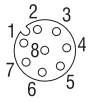
1 Brown 3 Blue
2 White 4 Black

5 Pole/4 Wire



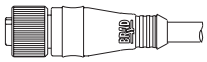
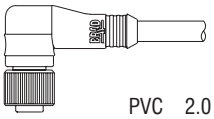
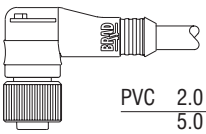
1 Brown 4 Black
2 White 5 Grey
3 Blue

5 Pole/5 Wire



1 White 5 Grey
2 Brown 6 Pink
3 Green 7 Blue
4 Yellow 8 Red

8 Pole

Cable	Length (m)	WIRING CONFIGURATION		WIRING CONFIGURATION	
Micro-Change® (M12) Straight					
					
PVC	2.0	803000E03M020	804000E03M020	805000E03M020	
	5.0	803000E03M050	804000E03M050	805000E03M050	
	10.0	803000E03M100	804000E03M100	805000E03M100	
PUR	2.0	803000P03M020	804000P03M020	805000P03M020	808000P02M020
	5.0	803000P03M050	804000P03M050	805000P03M050	808000P02M050
	10.0	803000P03M100	804000P03M100	805000P03M100	808000P02M100
SJTO	2.0	803000S20M020	804000S20M020	805000S26M020	
	5.0	803000S20M050	804000S20M050	805000S26M050	
	10.0	803000S20M100	804000S20M100	805000S26M100	
Micro-Change® (M12) 90º					
					
PVC	2.0	803001E03M020	804001E03M020	805001E03M020	
	5.0	803001E03M050	804001E03M050	805001E03M050	
	10.0	803001E03M100	804001E03M100	805001E03M100	
PUR	2.0	803001P03M020	804001P03M020	805001P03M020	808001P02M020
	5.0	803001P03M050	804001P03M050	805001P03M050	808001P02M050
	10.0	803001P03M100	804001P03M100	805001P03M100	808001P02M100
SJTO	2.0	803001S20M020	804001S20M020	805001S26M020	
	5.0	803001S20M050	804001S20M050	805001S26M050	
	10.0	803001S20M100	804001S20M100	805001S26M100	
Micro-Change® (M12) PNP LED					
					
PVC	2.0	8030P0E03M020	8040P0E03M020		
	5.0	8030P0E03M050	8040P0E03M050		
	10.0	8030P0E03M100	8040P0E03M100		
PUR	2.0	8030P0P03M020	8040P0P03M020		
	5.0	8030P0P03M050	8040P0P03M050		
	10.0	8030P0P03M100	8040P0P03M100		
SJTO	2.0	8030P0S20M020	8040P0S20M020		
	5.0	8030P0S20M050	8040P0S20M050		
	10.0	8030P0S20M100	8040P0S20M100		
Micro-Change® (M12) 90º PNP LED					
					
PVC	2.0	8030P1E03M020	8040P1E03M020		
	5.0	8030P1E03M050	8040P1E03M050		
	10.0	8030P1E03M100	8040P1E03M100		
PUR	2.0	8030P1P03M020	8040P1P03M020		
	5.0	8030P1P03M050	8040P1P03M050		
	10.0	8030P1P03M100	8040P1P03M100		
SJTO	2.0	8030P1S20M020	8040P1S20M020		
	5.0	8030P1S20M050	8040P1S20M050		
	10.0	8030P1S20M100	8040P1S20M100		

Options: NPN format LED indication, choice of cable and coupling materials, see page 40 for more information

Micro-Change® (M12) Moulded Connectors



Male Connector



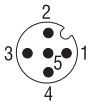
1 Brown
3 Blue
4 Black

5 Pole/3 Wire



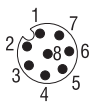
1 Brown 3 Blue
2 White 4 Black

5 Pole/4 Wire



1 Brown 4 Black
2 White 5 Grey
3 Blue

5 Pole/5 Wire



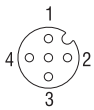
1 White 5 Grey
2 Brown 6 Pink
3 Green 7 Blue
4 Yellow 8 Red

8 Pole

Cable	Length (m)	WIRING CONFIGURATION		WIRING CONFIGURATION	
Micro-Change® (M12) Straight					
PVC	2.0	803006E03M020	804006E03M020	805006E03M020	
	5.0	803006E03M050	804006E03M050	805006E03M050	
	10.0	803006E03M100	804006E03M100	805006E03M100	
PUR	2.0	803006P03M020	804006P03M020	805006P03M020	808006P02M020
	5.0	803006P03M050	804006P03M050	805006P03M050	808006P02M050
	10.0	803006P03M100	804006P03M100	805006P03M100	808006P02M100
SJTO	2.0	803006S20M020	804006S20M020	805006S26M020	
	5.0	803006S20M050	804006S20M050	805006S26M050	
	10.0	803006S20M100	804006S20M100	805006S26M100	
Micro-Change® (M12) 90º					
PVC	2.0	803007E03M020	804007E03M020	805007E03M020	
	5.0	803007E03M050	804007E03M050	805007E03M050	
	10.0	803007E03M100	804007E03M100	805007E03M100	
PUR	2.0	803007P03M020	804007P03M020	805007P03M020	808007P02M020
	5.0	803007P03M050	804007P03M050	805007P03M050	808007P02M050
	10.0	803007P03M100	804007P03M100	805007P03M100	808007P02M100
SJTO	2.0	803007S20M020	804007S20M020	805007S26M020	
	5.0	803007S20M050	804007S20M050	805007S26M050	
	10.0	803007S20M100	804007S20M100	805007S26M100	

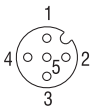
Micro-Change® (M12) Field Attachable Connectors

Female Attachables



1 Brown 3 Blue
2 White 4 Black

4 Pole



1 Brown 4 Black
2 White 5 Grey
3 Blue

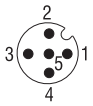
5 Pole

Male Attachable



1 Brown 3 Blue
2 White 4 Black

4 Pole



1 Brown 4 Black
2 White 5 Grey
3 Blue

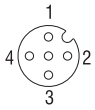
5 Pole

Gland size	WIRING CONFIGURATION		WIRING CONFIGURATION	
Micro-Change® (M12) Straight				
PG7	8A4000-315	8A5000-315	8A4006-315	8A5006-315
PG9	8A4000-325	8A5000-325	8A4006-325	8A5006-325
Micro-Change® (M12) 90º				
PG7	8A4001-315	8A5001-315	8A4007-315	8A5007-315

Options: Choice of cable and coupling materials, see page 40 for more information

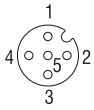


Female Receptacle



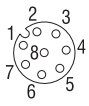
1	Brown	3	Blue
2	White	4	Black

4 Pole



1	Brown	4	Black
2	White	5	Grey
3	Blue		

5 Pole



1	White	5	Grey
2	Brown	6	Pink
3	Green	7	Blue
4	Yellow	8	Red

8 Pole

Wire length (mm)

WIRING CONFIGURATION

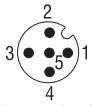
	Wire length (mm)	4 Pole	5 Pole	8 Pole
Micro-Change® Female M14 Panel Mount	300.0	8R4E30E03C3003	8R5E30E03C3003	8R8E30E03C3003
Micro-Change® Female PG9 Panel Mount	300.0	8R4J30E03C3003	8R5J30E03C3003	8R8J30E03C3003
Micro-Change® Female PG9 PCB Mount	n/a	8R4J400013	8R5J400013	n/a
Micro-Change® Female PG9 Through Panel	300.0	8R4J40E03C3003	8R5J40E03C3003	n/a

Male Receptacle



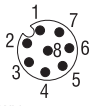
1	Brown	3	Blue
2	White	4	Black

4 Pole



1	Brown	4	Black
2	White	5	Grey
3	Blue		

5 Pole



1	White	5	Grey
2	Brown	6	Pink
3	Green	7	Blue
4	Yellow	8	Red

8 Pole

Wire Length (mm)

WIRING CONFIGURATION

	Wire Length (mm)	4 Pole	5 Pole	8 Pole
Micro-Change® Male M14 Panel Mount	300.0	8R4E36E03C3003	8R5E36E03C3003	8R8E36E03C3003
Micro-Change® Male PG9 Panel Mount	300.0	8R4J36E03C3003	8R5J36E03C3003	8R8J36E03C3003
Micro-Change® Male PG9 PCB Mount	n/a	8R4J460003	8R5J460003*	n/a
Micro-Change® Male PG9 Through Panel	300.0	8R4J46E03C3003	8R5J46E03C3003	n/a
Micro-Change® Male PG13.5 Short Sensor Mount	300.0	8R4D26E03C3003	8R5D26E03C3003	n/a

* Check sales office for availability

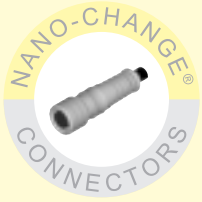
Choice of coupling materials, see page 40 for more information

mPm® Din 43650 Connectors

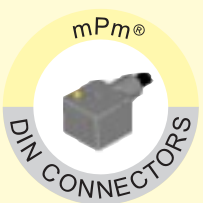






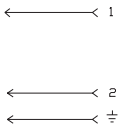




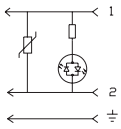


- **Integral LED indication and suppression, provide indication of function and elimination of potentially damaging induced spikes**
- **Simple screw termination of field attachable connectors or factory moulded and tested connectors for simple installation of devices**
- **Choice of Form A, B and C connectors to both DIN 43650 and industrial standards are compatible with solenoid valves from all leading manufacturers**

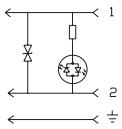




Ño circuit



24 V VDR & LED



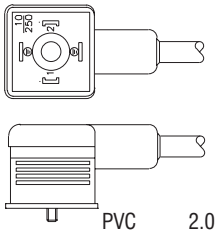
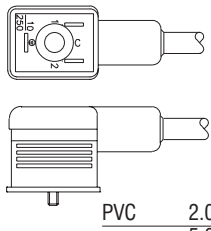
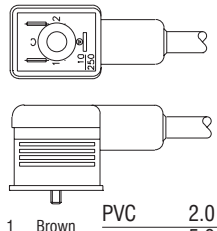
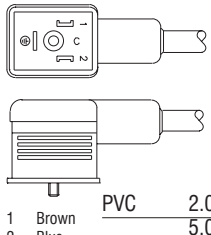
24 V Zenner Diode & LED

Moulded Connector

Cable

Length (m)

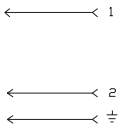
WIRING INFORMATION & CIRCUIT

			None	AC/DC 24 V VDR & LED	AC/DC 24 V Zenner Diode & LED
Form A (18mm) 2 pole + earth					
					
1 Brown 2 Blue 3 Yellow/ Green	PVC	2.0	E152N20011	E452N20011C4H	E452N20011SOH
		5.0	E152N50011	E452N50011C4H	E452N50011SOH
		10.0	E152N10K11	E452N10K11C4H	E452N10K11SOH
	PUR/PVC	2.0	E152P20011	E452P20011C4H	E452P20011SOH
		5.0	E152P50011	E452P50011C4H	E452P50011SOH
		10.0	E152P10K11	E452P10K11C4H	E452P10K11SOH
Form B Ind (11mm) 2 pole + 12 o'clock earth					
					
1 Brown 2 Blue 3 Yellow/ Green	PVC	2.0	E162N20021	E462N20021C4H	E462N20021SOH
		5.0	E162N50021	E462N50021C4H	E462N50021SOH
		10.0	E162N10K21	E462N10K21C4H	E462N10K21SOH
	PUR/PVC	2.0	E162P20021	E462P20021C4H	E462P20021SOH
		5.0	E162P50021	E462P50021C4H	E462P50021SOH
		10.0	E162P10K21	E462P10K21C4H	E462P10K21SOH
Form B Ind (11mm) 2 pole + 6 o'clock earth					
					
1 Brown 2 Blue 3 Yellow/ Green	PVC	2.0	E162N20061	E462N20061C4H	E462N20061SOH
		5.0	E162N50061	E462N50061C4H	E462N50061SOH
		10.0	E162N10K61	E462N10K61C4H	E462N10K61SOH
	PUR/PVC	2.0	E162P20061	E462P20061C4H	E462P20061SOH
		5.0	E162P50061	E462P50061C4H	E462P50061SOH
		10.0	E162P10K61	E462P10K61C4H	E462P10K61SOH
Form B DIN (10mm) 2 pole + 12 o'clock earth					
					
1 Brown 2 Blue 3 Yellow/ Green	PVC	2.0	E072N20021	E472N20021C4H	E472N20021SOH
		5.0	E072N50021	E472N50021C4H	E472N50021SOH
		10.0	E072N10K21	E472N10K21C4H	E472N10K21SOH
	PUR/PVC	2.0	E072P20021	E472P20021C4H	E472P20021SOH
		5.0	E072P50021	E472P50021C4H	E472P50021SOH
		10.0	E072P10K21	E472P10K21C4H	E472P10K21SOH

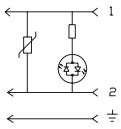
Options: Alternative types of suppression, choice of cables, see page 40 for more information

mPm® DIN 43650 Moulded Connectors

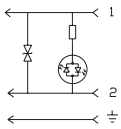




Ño circuit



24 V VDR & LED



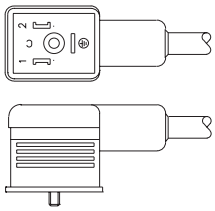
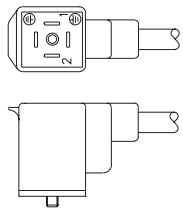
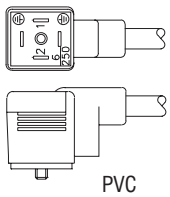
24 V Zenner Diode & LED

Moulded Connector

Cable

Length (m)

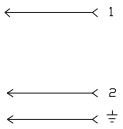
WIRING INFORMATION & CIRCUIT

			None	AC/DC 24 V VDR & LED	AC/DC 24 V Zenner Diode & LED
Form B DIN (10mm) 2 pole + 6 o'clock earth					
					
1 Brown 3 Blue 4 Black	PVC	2.0	E072N20061	E472N20061C4H	E472N20061SOH
		5.0	E072N50061	E472N50061C4H	E472N50061SOH
		10.0	E072N10K61	E472N10K61C4H	E472N10K61SOH
	PUR/PVC	2.0	E072P20061	E472P20061C4H	E472P20061SOH
		5.0	E072P50061	E472P50061C4H	E472P50061SOH
		10.0	E072P10K61	E472P10K61C4H	E472P10K61SOH
Form C DIN (8.0mm) 2 pole + earth					
					
1 Brown 3 Blue 4 Black	PVC	2.0	E432N20011	E492N20011C4H	E492N20011SOH
		5.0	E432N50011	E492N50011C4H	E492N50011SOH
		10.0	E432N10K11	E492N10K11C4H	E492N10K11SOH
	PUR/PVC	2.0	E432P20011	E492P20011C4H	E492P20011SOH
		5.0	E432P50011	E492P50011C4H	E492P50011SOH
		10.0	E432P10K11	E492P10K11C4H	E492P10K11SOH
Form C Ind (9.4mm) 2 pole + earth					
					
1 Brown 3 Blue 4 Black	PVC	2.0	E332N20011	E392N20011C4H	E392N20011SOH
		5.0	E332N50011	E392N50011C4H	E392N50011SOH
		10.0	E332N10K11	E392N10K11C4H	E392N10K11SOH
	PUR/PVC	2.0	E332P20011	E392P20011C4H	E392P20011SOH
		5.0	E332P50011	E392P50011C4H	E392P50011SOH
		10.0	E332P10K11	E392P10K11C4H	E392P10K11SOH

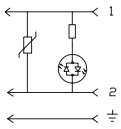
Options: Alternative types of suppression, choice of cables, see page 40 for more information



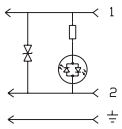
Attachable Connector



Ño circuit



24 V VDR & LED



24 V Zenner Diode & LED

Gland Size

WIRING INFORMATION & CIRCUIT

Gland Size	None	AC/DC 24 V VDR & LED	AC/DC 24 V Zenner Diode & LED
Form A (18mm) 2 pole + earth			
PG9	C18209N21	S18209TC421	S18209TS021
PG11	C18211N21	S18211TC421	S18211TS021
Form B Ind (11mm) 2 pole + earth			
PG7	C12207N21	S02207TC421	S02207TS021
PG9	C12209N21	S02209TC421	S02209TS021
Form B DIN (10mm) 2 pole + earth			
PG7	C62207N21	S62207TC421	S62207TS021
PG9	C62209N21	S62209TC421	S62209TS021
Form C DIN (8.0mm) 2 pole + earth			
PG7	C05207N62	S05207TC422	n/a
Form C Ind (9.4mm) 2 pole + earth			
PG7	C19207N62	S19207TC422	n/a

Options: Alternative types of suppression see page 40 for more information

Options

Multi-Port Splitter Box Matrix

B T Y 8 0 0 P - F B P - 0 5

Nano-Change® Multi-Ports
BEY - End Cable Entry
BNY - Top Cable Entry & Connector
Micro-Change® Multi-Ports
BTY - Top Mount
BSY - Side Mount

Number of Ports
4 - 4 Ports
6 - 6 Ports
8 - 8 Ports
A - 10 Ports

Wiring Configuration
00/01 - 5 Pole/4 Wire - Single I/O per port
03/05 - 5 Pole/5 Wire - Twin I/O per port
04 - 4 Pole/3 Wire - Single I/O per port - no earth

LED Configuration
P - PNP Format
N - NPN Format**
0 - No LEDs**

Length
05 - 5 metres
10 - 10 metres
20 - 20 metres

Termination Options

Pre-wired versions*
E - PVC Cable
P - PUR Cable
M - PUR/PVC Cable

Connectorised versions
B - Mini-Change® Connector
C - M16 or M23 Connector

Receptacle Material
FB - Standard
FX - Plastic**
FS - Stainless Steel**

Connect orMatrix

Options:

Not all are available on standard delivery terms, please consult our sales office before ordering

* Refer to cable specification and use code indicated in matrix above

**NPN or no LED indication, select from above part number matrixes, minimum order quantity 25 pieces for Connectors and 5 pieces for Multi-Ports

**Coupling materials and connector colour minimum quantities apply to all orders

**Choice of suppression and LED colour for mPm® product, please request separate catalogue

8 0 3 0 0 0 E 0 3 M 0 2 0

Connector Type

Nano-Change® M8 Snap
50 - Moulded Connector
55 - Nano Jumper
58 - Nano to Micro Jumper

Nano-Change® M8 Coupler
40 - Moulded Connector
44 - Nano Jumper
48 - Nano to Micro Jumper

Micro-Change® M12 Coupler
80 - Moulded Connector
88 - Micro Jumper
84 - Micro to Nano Jumper

mPm® DIN 43650 Jumpers
D4 - Form B (10mm) to Nano
E4 - Form A (18mm) to Nano
F4 - Form B (11mm) to Nano
G4 - Form C (9.4mm) to Nano
H4 - Form C (8.0mm) to Nano
D8 - Form B (10mm) to Micro
E8 - Form A (18mm) to Micro
F8 - Form B (11mm) to Micro
G8 - Form C (9.8mm) to Micro
H8 - Form C (8.0mm) to Micro

Cable ID No.*
E03 - Yellow PVC 0.34mm^2
P03 - Black PUR 0.34mm^2
S20 - Yellow SJTO type 0.34mm^2

Cable Length
M010 - 1.0 metres
M020 - 2.0 metres
M030 - 3.0 metres

Coupling Materials**
1 - Stainless Steel
5 - Plastic

Connector Colour**
A - Grey Head Moulding
G - Black Head Moulding

Head Configuration

Moulded Connectors
000 - Female Straight
001 - Female 90°
0N0 - Female Straight NPN LED**
0N1 - Female 90° NPN LED**
0P0 - Female Straight PNP LED
0P1 - Female 90° PNP LED
006 - Male Straight
007 - Male 90°

Jumpers - Basic Brad® Only
030 - Female Straight to Male Straight
031 - Female 90° to Male Straight
032 - Female Straight to Male 90°
033 - Female 90° to Male 90°
0P6 - Female Straight PNP LED to Male Straight
0P7 - Female 90° PNP LED to Male Straight
0P8 - Female Straight PNP LED to Male 90°
0P9 - Female 90° PNP LED to Male 90°

Number of Poles
3 - 3 Pole
4 - 4 Pole
5 - 5 Pole
8 - 8 Pole

Connector Specification

Series		40, 4R, 44, 50, 5R, 55	N03, N04	80, 8R, 88	8A	30		L0	K0
Product		Nano-Change®	Nano-Change®	Micro-Change®	Micro-Change®	Mini-Change®	mPm® DIN 43650	M16 Connector	M23 Connector
Connector Type		Moulded & Receptacles	Attachables	Moulded & Receptacles	Attachables	Moulded	Moulded & Attachable	Moulded	Moulded
Connector Size		M8 Coupler & Snap	M8 Coupler	M12 Coupler	M12 Coupler	1 1/8" UNF Coupler	Form A, B & C	M16 Coupler	M23 Coupler
Number of Poles		3 to 5	3 & 4	3, 4, 5 & 8	4 & 5	12 & 19	2 + earth	14	12 & 19
Contact Material	Female	Gold plated Brass	Gold plated Brass	Gold Plated Brass	Silver plated Brass	Gold plated Brass	Silver plated Brass	Gold plated Brass	Gold plated Brass
	Male	Gold plated Brass	Gold plated Brass	Gold plated Brass	Silver plated Brass	Gold plated Brass	n/a	n/a	Gold plated Brass
Insert Material		PUR	PA	PA	PA	PVC	PA (+G)	PPO	PUR
O-ring Material		Viton	Viton	Viton	Viton	n/a	Profiled NBR	EPDM - Rubber	NBR
Body Material		PVC	PA	PVC	PA	PVC	PP	PUR	PUR
Coupling Material		Nickel plated Brass	Nickel plated Brass	Epoxy Coated Zinc	Nickel plated Brass	Epoxy Coated Zinc	n/a	Aluminium	Nickel plated Brass
Voltage Rating	Standard	60 Vac/75 Vdc	60 Vac/75 Vdc	3, 4 & 5 pole - 250 Vac/300 Vdc 8 pole - 30 Vac/36 Vdc	4 pole - 250 Vac/300 Vdc 5 pole - 30 Vac/36 Vdc	600 Vac/dc	250 Vac/dc	150 Vac/dc	63 Vac/dc
	With LED	10 to 30 Vdc	n/a	10 to 30 Vdc	n/a	n/a	24 Vac/dc	n/a	n/a
Contact Current Rating		4 Amps	4 Amps	4 Amps	4 Amps	Ø 1.0mm - 4 Amps Ø 2.0mm - 13 Amps	Form A & B - 18 Amps Form C - 10 Amps	3 Amps	Ø 1.0mm - 6 Amps Ø 1.5mm - 12 Amps
Protection Class		IP67	IP67	IP68	IP68	IP68	IP65	IP67	IP67

Environmental Rating - IP68. To avoid confusion, we at Woodhead Connectivity have defined IP68 as immersion in water at a pressure of 100 pounds per square inch for a duration of one hour, and wash down at a pressure of 1000 pounds per square inch. When used with a mating pair of Brad Harrison® connectors.

Multi-Port Specification

Series	BEY & BNY	BEY & BNY	BTY	BTY	BSY
Product	Nano-Change - Single I/O	Nano-Change - Twin I/O	Micro-Change Top Mount Single I/O	Micro-Change Top Mount Twin I/O	Micro-Change Side Mount Single I/O
I/O Connectors	M8 Coupler	M8 Coupler	M12 Coupler	M12 Coupler	M12 Coupler
Number of I/O	4, 6, 8 & 10	8, 12, 16 & 20	4, 6 & 8	8, 12 & 16	4, 6 & 8
Contact Material	Gold plated Brass	Gold plated Brass	Gold plated Brass	Gold plated Brass	Gold plated Brass
Insert Material	PUR	PUR	PBT	PBT	PA
O-ring Material	Viton	Viton	Viton	Viton	Viton
Body Material	PBT	PBT	PBT	PBT	PA
Coupling Material	Nickel plated Brass	Nickel plated Brass	Nickel plated Brass	Nickel plated Brass	Epoxy coated Zinc
Voltage Rating with LED	10 to 30 Vdc	10 to 30 Vdc	10 to 30 Vdc	10 to 30 Vdc	10 to 30 Vdc
Current Rating Per I/O	2 Amps	1 Amps	2 Amps	2 Amps	2 Amps
Total Unit - Cable Version	6 Amps	6 Amps	12 Amps	12 Amps	12 Amps
Total Unit - Connector Version	6 Amps	3 Amps	12 Amps	12 Amps	12 Amps
Protection Class	Cable - IP68 M16 Connector - IP67	Cable - IP68 M16 Connector - IP67	Cable - IP68 M23 Connector - IP67 Mini-Change - IP68	Cable - IP68 M23 Connector - IP67 Mini-Change - IP68 Attachable - IP67	Cable - IP68 Mini-Change - IP68

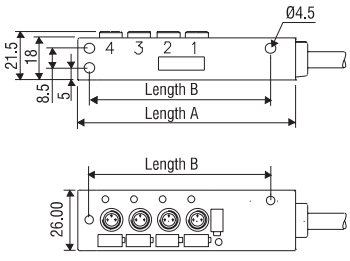
Cable Specification

ID No	No of Cores	Jacket Colour	Cross Section	Stranding Group	Screen	Nominal Diameter	Nano-Change	Micro-Change	Mini-Change	M23 Connctr.	M16 Connctr.	mPm DIN 43650	Nano Multi Ports	Micro Multi Ports
PVC - General Purpose - Conveyors, Food Processing, etc - 300 V, -5°C to +70°C, PVC Outer Jacket over PVC Insulation														
E02	3 & 4	Yellow	0.25mm^2	B	None	4.5mm	✓	✓						
E03	3 & 4	Yellow	0.34mm^2	C	None	5.0mm	✓	✓						
	5					5.5mm		✓						
E12	3	Black	0.50mm^2	E	None	5.5mm	✓	✓				✓		
E18	3 & 4	Yellow	0.20mm^2	C	80% Braid	5.0mm	✓	✓						
E51	4	Grey	0.25mm^2	B	None	4.5mm	✓	✓						
E52	3 & 4	Grey	0.34mm^2	C	None	5.0mm	✓	✓						
	5					5.5mm		✓						
PVC for Multi-Ports - General Purpose - Conveyors, Food Processing, etc - 300 V, -5°C to +70°C, PVC Outer Jacket over PVC Insulation														
E80	7	Yellow	4x0.34 & 3x0.75mm^2	C & E	None	8.4mm			✓	✓				✓
	9					9.5mm			✓	✓				✓
	11					9.5mm			✓	✓				✓
	15					9.8mm			✓	✓				✓
	19					11.4mm			✓	✓				✓
CEI PVC - IEC332.3A - Self Extinguishing, Flame Retardant Oil Resistant PVC - 300 V, -5°C to +70°C, CEI PVC Outer Jacket over CEI PVC Insulation														
I02	3 & 4	Grey	0.25mm^2	B	None	4.5mm	✓	✓						
I03	3 & 4	Grey	0.34mm^2	C	None	5.0mm	✓	✓						
	5					5.5mm		✓						
I20	3	Grey	0.34mm^2	C	80% Braid	5.0mm		✓						
	4					6.3mm		✓						
SJTO Type - UL listed/CSA Approved - Self Extinguishing & Flame Retardant - Good weld splatter resistance & rough duty use - 300 V, -40°C to +105°C, UL/CSA PVC Outer Jacket over UL/CSA PVC Insulation														
S20	3 & 4	Yellow	0.34mm^2	D	50% Braid	6.3mm		✓				✓		
S26	5	Yellow	0.34mm^2	D	50% Braid	6.5mm		✓				✓		
PUR - General Purpose, Oil resistant for machining applications - 300 V, -5°C to +90°C, PUR Outer Jacket over PVC Insulation														
P03	3 & 4	Black	0.34mm^2	C	None	5.0mm	✓	✓						
	5					5.5mm		✓						
P08	3 & 4	Yellow	0.25mm^2	A	None	4.5mm	✓	✓						
P09	3 & 4	Black	0.34mm^2	A	None	5.0mm		✓						
P12	3	Black	0.50mm^2	E	None	5.5mm	✓	✓				✓		
P18	4 & 5	Black	0.20mm^2	C	80% Braid	5.0mm	✓	✓						
PUR for Multi-Ports - General Purpose, Oil resistant for machining applications - 300 V, -5°C to +90°C, PUR Outer Jacket over PVC Insulation														
P80	7	Yellow	4x0.34 & 3x0.75mm^2	C & E	None	8.4mm			✓	✓				✓
	9					9.5mm			✓	✓				✓
	11					9.5mm			✓	✓				✓
	15					9.8mm			✓	✓				✓
	19					11.4mm			✓	✓				✓
P78	6	Black	4x0.34 & 2x0.75mm^2	C & C	None	8.4mm			✓	✓	✓		✓	✓
	8					9.5mm			✓	✓	✓		✓	✓
	10					9.8mm			✓	✓	✓		✓	✓
	12					9.8mm			✓	✓	✓		✓	✓
	14					9.8mm			✓	✓	✓		✓	✓
	18					11.4mm			✓	✓	✓		✓	✓
P75	22		20x0.25 & 2x0.50mm^2	C & C		11.4mm			✓	✓	✓		✓	✓
LSOH PUR - Low Smoke Zero Halogen - Baggage handling, public building use - 300 V, -40°C to +70°C, LSOH PUR Outer Jacket over Polyethylene Insulation														
H03	4	Yellow	0.34mm^2	C	None	5.0mm	✓	✓						
H69	4	Grey	0.20mm^2	C	Foil with Drain	4.5mm	✓	✓						
P20	3	Black	0.34mm^2	C	80% Braid	5.0mm		✓						
	4					5.5mm		✓						
	5					5.8mm		✓						
Irradiated PUR - Machine tool and welding applications - 300 V, -5°C to +105°C, Irradiated PUR Outer Jacket over PVC Insulation														
P82	3 & 4	Orange	0.34mm^2	E	None	5.0mm		✓						

Stranding and Cross Sectional Area Table

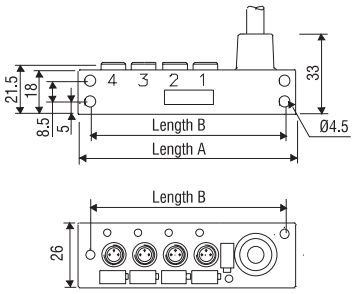
Stranding Group	Number of Strands 0.20mm^2	0.25mm^2	0.34mm^2	0.50mm^2	0.75mm^2	Diameter of Strands
A		128	174			0.05mm
B		65				0.07mm
C	27	32	42	64	95	0.10mm
D			26			0.13mm
E			19	28	42	0.15mm

Dimensional Information



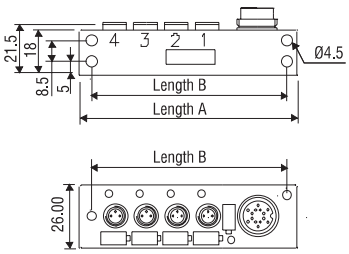
Nano-Change® Cable End Multi-Port

No. of Ports	Length A (mm)	Length B (mm)
4	95	79
6	120	104
8	145	129
10	170	154



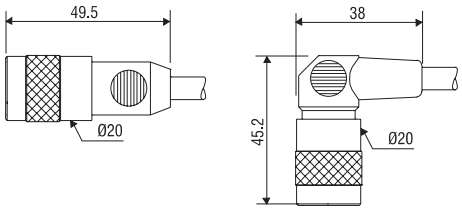
Nano-Change® Cable Top Multi-Port

No. of Ports	Length A (mm)	Length B (mm)
4	88	79
6	113	104
8	138	129
10	163	154

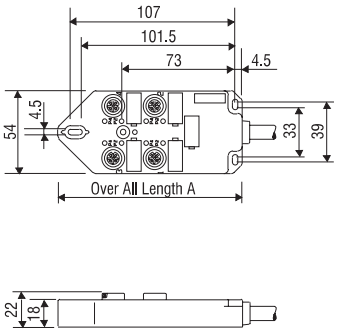


Nano-Change® M16 Con Multi-Port

No. of Ports	Length A (mm)	Length B (mm)
4	88	79
6	113	104
8	138	129
10	163	154

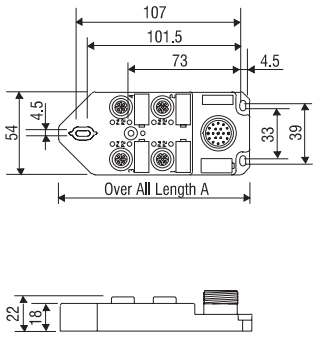


M16 Home Run Connectors for Nano-Change® Multi-Port



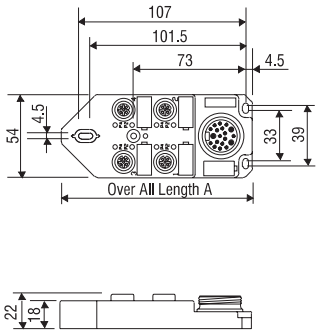
Micro-Change® Top Mount Cable End

No. of Ports	Length A (mm)
4	120
6	125
8	152



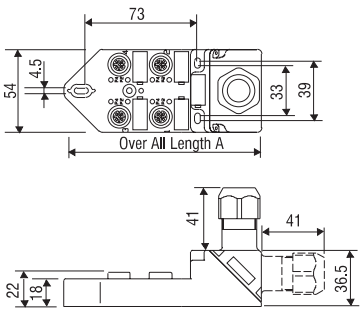
Micro-Change® Top Mount M23 Con

No. of Ports	Length A (mm)
4	120
6	125
8	152



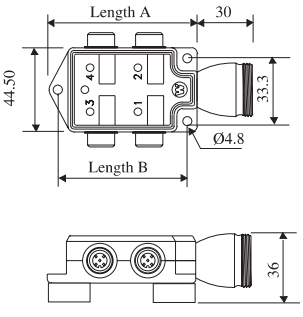
Micro-Change® Top Mount Mini-Change

\No. of Ports	Length A (mm)
4	120
6	125
8	152



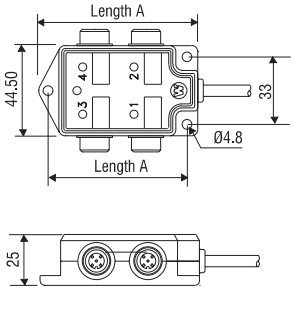
Micro-Change® Field Attachable

No. of Ports	Length A (mm)
4	128.8
6	133.8
8	160.8



Micro-Change® Mini-Con Multi-Port

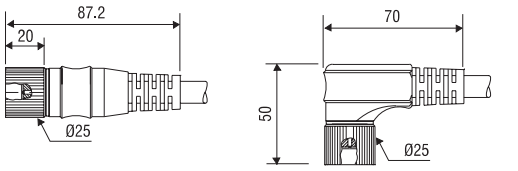
No. of Ports	Length A (mm)	Length B (mm)
4	78	68
6	104	94
8	129	119



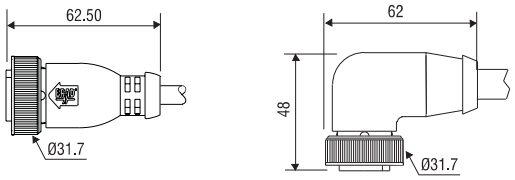
Micro-Change® Cable End Multi-Port

No. of Ports	Length A (mm)	Length B (mm)
4	78	68
6	104	94
8	129	119

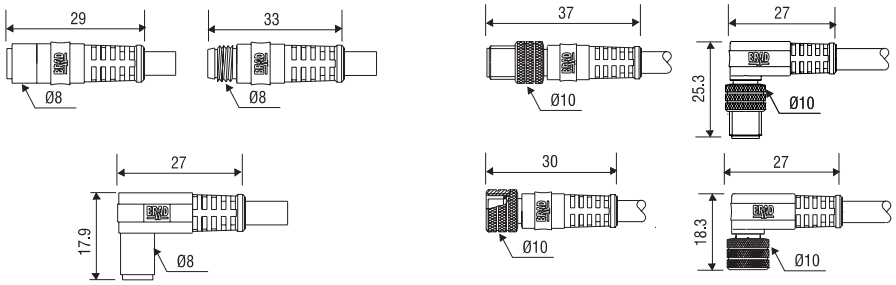
Dimensional Information



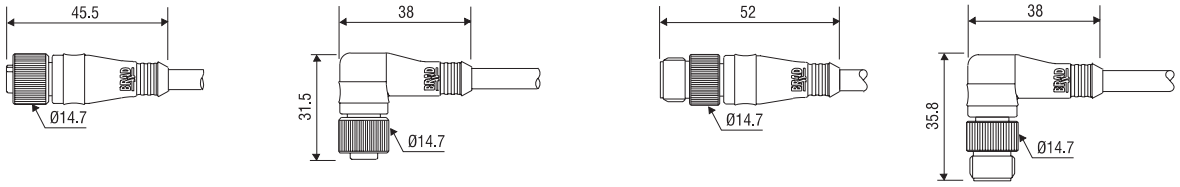
M23 Home Run Connectors for Micro-Change® Multi-Port



Mini-Change® Home Run Connectors for Micro-Change® Multi-Port

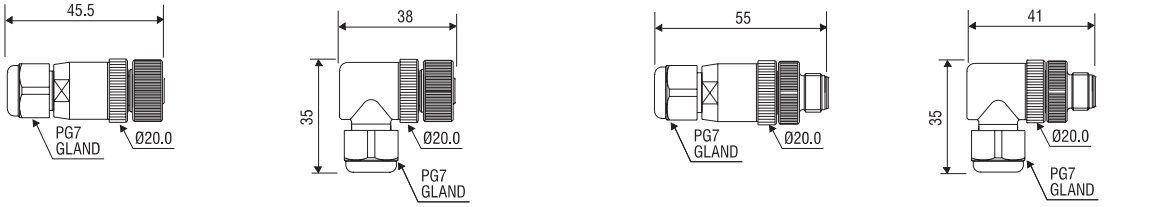


Nano-Change (M8) Snap Moulded Connectors



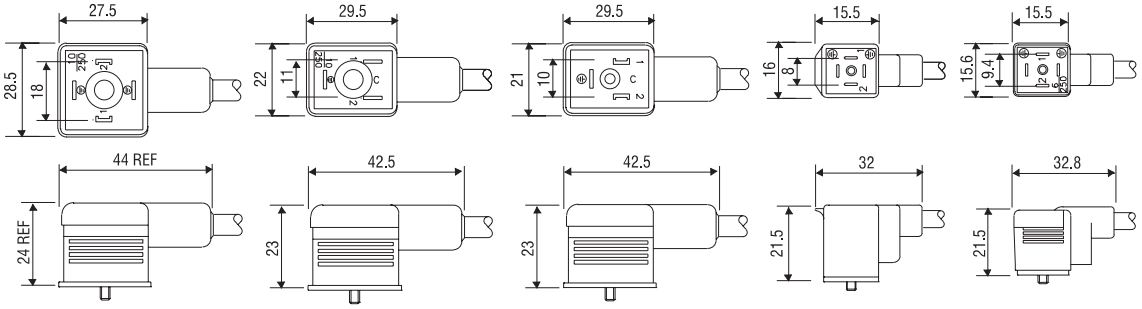
Micro-Change® (M12) Moulded Connectors - Female

Micro-Change® (M12) Moulded Connectors - Male

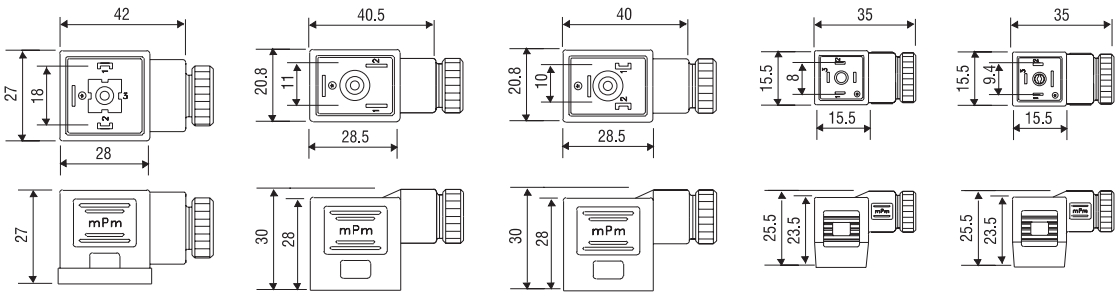


Micro-Change® (M12) Field Attachable Connectors - Female

Micro-Change® (M12) Field Attachable Connectors - Male



mPm® DIN 43650 Moulded Connectors



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