

Industrial Networking and Connectivity

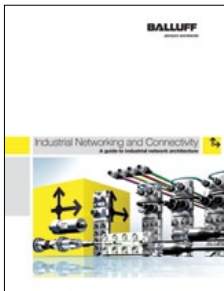
Cables, cordsets and connectors

From our extensive product line we have put together a selection for you that covers the most important applications in object detection.



Cables, cordsets and connectors

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You will find many additional products from our total product line in "Industrial networking and connectivity – A guide to industrial network architecture" or online at: www.balluff.us.

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Basic information and definitions can be found on page 952.



Connectivity Solutions

Overview quick selector



Sensor & Actuator Cables

Size	M5	M8	M12	
Configurations	Single-Ended & Double-Ended	Single-Ended, Double-Ended	Single-Ended, Double-Ended	
Conductors	3-wire, 4-wire	3-wire, 4-wire	3, 4, 4+PE, 5, 8, 12-wire	
LED Versions	No	Yes	Yes	
Shielded Versions	No	Yes	Yes	
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Mini Size Cables

Size	7/8"	1"	1 1/8"	
Configurations	Single-Ended, Double-Ended, Tees, Bulkheads, Converters	Single-Ended, Double-Ended	Single-Ended, Double-Ended	
Conductors	US Color Code: 3 & 4-wire DC Color Code: 4 & 5-wire	6, 7, 8-wire	9, 10, 12, 19-wire	
Color Codes Available	US AC, DC	---	---	
Shielded Versions	No	No	No	
Page #	940	See Networking Catalog	See Networking Catalog	



Junction Blocks (MIBs)

Size	M8	M12	M12, M16, M23	
Configurations	Quick Disconnect, Cable Out	Quick Disconnect, Cable Out, Terminal Blocks	Homerun Cables	
Conductors	4-port & 8-port, 3-wire & 4-wire	4-port & 8-port, 3+PE & 4+PE	8-wire, 12-wire, 19-wire	
LED Versions	Yes	Yes	No	
Shielded Versions	No	No	No	
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Connectivity Solutions

Overview quick selector



	M8 and M12 Specialty	Splitters	1/2" AC	DIN A, DIN B, IND B, DIN C, IND C
	High Temp, Coil Cable, Stainless, IP69K, ECOLAB, Global cable	M8 & M12, V & U Styles	Single-Ended, Double-Ended	Single-Ended, Pigtail, V-Splitter
	3-wire, 4-wire, 4+PE	3-wire, 3+PE	3, 4, 5, 6-wire	2+PE
	Yes	Yes	No	Yes
	No	No	Yes	Yes
	See Networking Catalog	938 - 939	930	See Networking Catalog



Receptacles

	M8	M12	1/2" AC, 7/8", 1", 1 1/8"	M23
	M8x0.5	1/4"-18NPT, 1/2"-14NPT, M16x1.5	1/4"-18NPT, 1/2"-14NPT, M16x1.5, M20x1.5	M20x1.5
	3-wire, 4-wire	3, 4, 4+PE, 5, 8-wire	3, 4, 5, 6-wire, 7, 8, 9, 10-wire, 12, 19-wire	12-wire, 19-wire
	DC	DC	US AC, DC	---
	Metal	Metal	Metal	Metal
	See Networking Catalog	See Networking Catalog	See Networking Catalog	See Networking Catalog



Cables, cordsets and connectors

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1/2" AC micro
M12 micro
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Junction Blocks /homerun cables
Field attachables
Wrenches



Field Attachables

	M8	M12	1/2" AC, 7/8"	M23
	Piercon, Screw Terminal, Soldercup	Insulation Displacement, Screw Terminal, Spring Clamp	Screw Terminal	Solder Cup
	3-wire, 4-wire	3, 4, 5, 8, 12-wire	3, 4, 5-wire	12, 19-wire
	No	No	No	No
	No	Yes	No	No
	944	946-949	950	See Networking Catalog

Connectivity Solutions

Sensor cable part number builder

Balluff's new line of sensor cordsets offers many benefits to the automation world. Balluff can globally offer cordsets that fit almost any standard sensor or actuator application. This offering includes features such as consistent and accurate IP ratings, a wide range of cable jackets, a full range of overmold configurations, and high quality rugged materials.

Select your cordset in 4 easy steps:

1. Pick your connector types (single/double, right angle/straight)
2. Pick your electrical information and LEDs
3. Pick your jacket material and color
4. Pick your cordset length

Complete Part Number Example:

BCC M415-0000-1A-008-VX44T2-050

- M12 single ended, straight female (M415-0000-1A)
- 4-wire, 2x PNP LED (008)
- Yellow PVC, 4-wire (VX44T2)
- 5 m cable (050)



Step 1

BCC - - - - -

Cordset Connector Selection

Single-ended and double-ended cordsets can be made using the chart below. Available in industry standard M8 and M12 sizes, these cordsets come in a variety of head combinations; single-ended, straight to straight, right angle to straight, and right angle to right angle. To select your cordset, start by selecting the female connector that will match your sensor. Next, follow the row across until you find the required end that will go back to your controller, homerun cordset, MIB, etc.

Female (sensor end)	Connector Types	Male (controller, homerun cable, MIB end)				
		Single Ended Female	3-wire M8 Straight Male	3-wire M8 Right Angle Male	4-wire M8 Straight Male	
	Single-Ended Male		M313-0000-20	M323-0000-20	M314-0000-20	
	M8 Straight Female 3-wire	M313-0000-10	M313-M313-30	M313-M323-30		
	M8 Right Angle Female 3-wire	M323-0000-10	M323-M313-30	M323-M323-30		
	M8 Straight Female 4-wire	M314-0000-10			M314-M314-30	
	M8 Right Angle Female 4-wire	M324-0000-10			M324-M314-30	
	M12 Straight Female	M415-0000-1A	M415-M313-3F	M415-M323-3F	M415-M314-3F	
	M12 Right Angle Female	M425-0000-1A	M425-M313-3F	M425-M323-3F	M425-M314-3F	



Single Ended



M8 Female 3-wire



M8 Female 3-wire



M8 Female 4-wire



M8 Female 4-wire



M8 Male 3-wire



M8 Male 3-wire



M8 Male 4-wire

Step 2

BCC - - - - -

Cordset Wiring and LEDs

Both 3- and 4-wire cordsets are available in single- and double-ended cordsets, as well as two and three LEDs. To select your cordset, start with Step 1 on previous page. Then decide if you need 3- or 4-wire and whether or not you want an LED in the overmolded head.

Single Ended Cordsets			
Head 1 and 2	3-wire N/O	3-wire N/C	4-wire
No LED	001	002	003
2x PNP LED	004	005	008
3x PNP LED**			010
2x NPN LED	006	007	009



No LED

Double Ended Cordsets			
Head 1	Head 2	3-wire N/O	4-wire
No LED	No LED	300	304
2x PNP LED	No LED	602	606
3x PNP LED**	No LED		650
2x NPN LED	No LED	603	607
2x PNP LED	2x PNP LED*	302	306
2x NPN LED	2x NPN LED*	303	307
3x PNP LED**	2x PNP LED*		651



2x LED

3x LED

2x = 1 power LED and 1 signal LED
3x = 1 power LED and 2 signal LEDs

*M12 right angle male only
**M12 right angle female only

Male (controller, homerun cable, MIB end)					
4-wire M8 Right Angle Male	3-wire M12 Straight Male	3-wire M12 Right Angle Male	4-wire M12 Straight Male	4-wire M12 Right Angle Male	
M324-0000-20	M413-0000-2A	M423-0000-2A	M414-0000-2A	M424-0000-2A	
	M313-M413-3E	M313-M423-3E			
	M323-M413-3E	M323-M423-3E			
M314-M324-30			M314-M414-3E	M314-M424-3E	
M324-M324-30			M324-M414-3E	M324-M424-3E	
M415-M324-3F	M415-M413-3A	M415-M423-3A	M415-M414-3A	M415-M424-3A	
M425-M324-3F	M425-M413-3A	M425-M423-3A	M425-M414-3A	M425-M424-3A	



M8 Male
4-wire

M12 Female

M12 Female

M12 Male
3-wire

M12 Male
3-wire

M12 Male
4-wire

M12 Male
4-wire

Step 3

BCC _ _ _ _ - _ _ _ - _ _ _ - _ _ _ _

Raw Cable Type

To select your raw cable, first decide on the correct jacket for the application and then on a jacket color.

- PVC: For standard automation applications
- PUR: For abrasion and extreme fluid resistance
- TPE: For High-flex and for use in heavy duty environments

Jacket Color and Material				
Material	Color	Conductor	3-wire	4-wire
PVC	Yellow	22 AWG	VX43T2	VX44T2
PVC	Gray	0.34 mm ²	VX8334	VX8434
PUR	Yellow	22 AWG	PX43T2	PX44T2
PUR	Black	0.34 mm ²	PX0334	PX0434
TPE	Yellow	22 AWG	EX43T2	EX44T2



PVC, PUR, TPE



PVC



PUR

Step 4

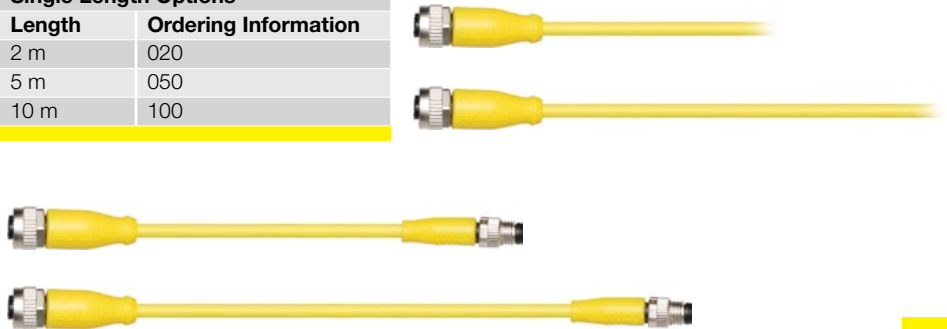
BCC - - - - -

Cordset Length

Select from our standard cordset lengths below. Contact the factory for custom cordset length selections.

Double Length Options	
Length	Ordering Information
0.3 m	003
0.6 m	006
1 m	010
1.5 m	015
2 m	020
3 m	030
5 m	050

Single Length Options	
Length	Ordering Information
2 m	020
5 m	050
10 m	100



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Need help finding a cross?
Need help selecting a part?

Visit us online: www.balluff.us
Call or email our technical support group at:
1-800-543-8390
technical.support@balluff.com

BCC M415 - M424 - 3A - 304 - VX44T2 - 020 - C008

Head 1

Head 2

Code

Wiring

Raw Cable

Length

Custom

Head 1 & Head 2 Configuration

Connector Size & Type:

M3	M8 Nano DC - Ni Plated Brass
M4	M12 Micro DC - Ni Plated Brass
S3	M8 Nano DC - Stainless 1.4404
S4	M12 Micro DC - Stainless 1.4404
0000	(Head 2) Single-Ended Cable

Connector Direction:

1	Straight Plastic Overmolded
2	Right Angle Plastic Overmolded

Number of Visible Connections:

5	M12 Female
no. poles	Any other configuration

Code Configuration

Gender Type:

1	Female Internal Threads
2	Male External Threads
3	Female Int - Male Ext
5	Female Int - Female Int
6	Male Ext - Male Ext

Connector Coding

A	M12 Sensor Cables (typical) (A-coded)
0	M8 Sensor Cables (typical) (No coding)
B	M12 Profibus Cables (B-coded)
D	M12 Ethernet Cables (D-coded) (Profinet, EtherNet/IP)
E	M8-M12 Double-Ended Cables
F	M12-M8 Double-Ended Cables

Wiring Configurations

See next page for configurations

Note: Part Number Matrix is designed for information purposes only. Not all configurations are possible. Consult factory for part number availability.

Raw Cable Configuration

Jacket Material:

V	PVC
P	PUR
E	TPE

Special Designator:

X	Nothing
C	Coiled Cable
H	High Temperature
S	Shielded
W	Weld Resistant / High Shore
M	Solid Conductor, Unshielded

Jacket Color:

0	Black	2	Red (CC-Link)
3	Orange	4	Yellow (standard)
5	Green (Profinet)	6	Blue (EtherNet/IP)
7	Violet (Profibus)	8	Grey (standard/DeviceNet)

Number of Poles

#	3-pole thru 9-poles
A	10-pole
C	12-pole

Conductor Profile

T2	22 AWG	W8	18 AWG
25	0.25mm ²	34	0.34mm ²
50	0.50mm ²		

Length Configuration

Cable Length:

003	0.3 meters
020	2.0 meters
100	10.0 meters

Special Lengths:

05/14	0.5m coiled, 1.4m stretch
2D5	2.5 decimeters (25cm)
10X	100 meters

Custom Configurations

Custom Values:

C002	Grey Overmold
C008	WeldRepel™ Applied
C013	GlobalLine, Black Overmold

Connectivity Solutions

BCC part number matrix

Standard Cordsets

Wiring	Poles	Shield	Head 1	Head 2
001	3-wire	---	N/O	---
002	3-wire	---	N/C	---
003	4-wire	---	Comp.	---
004	3-wire	---	N/O PNP LED	---
005	3-wire	---	N/C PNP LED	---
006	3-wire	---	N/O NPN LED	---
007	3-wire	---	N/C NPN LED	---
008	4-wire	---	N/O PNP LED	---
009	4-wire	---	N/O NPN LED (M12 Female Only)	---
010	4-wire	---	Comp. PNP LED	---
300	3-wire	---	N/O	N/O
302	3-wire	---	N/O PNP LED	N/O PNP LED
304	4-wire	---	Comp.	Comp.
306	4-wire	---	N/O PNP LED	N/O PNP LED
313	5-wire	---	Comp. and Gnd	---
602	3-wire	---	N/O PNP LED	N/O
603	3-wire	---	N/O NPN LED	N/O
606	4-wire	---	N/O PNP LED	Comp.
607	4-wire	---	N/O NPN LED	Comp.
650	4-wire	---	Comp. PNP LED	Comp.
651	4-wire	---	Comp. PNP LED	N/O PNP LED

Shielded Cordsets and High Conductor Counts

014	4-wire	Nut	BN,WH,BU,BK	---
016	5-wire	Nut	BN,WH,BU,BK,GY	---
017	5-wire	---	BN,WH,BU,BK,GY	---
034	4-wire+PE	---	BN,WH,BU,BK,GNYE	---
036	3-wire	Nut	BN,BU,BK (N/O)	---
037	3-wire	Nut	BN,BU,BK (N/C)	---
039	5-wire	---	Comp. PNP LED	---
040	4-wire+PE	---	Comp. PNP LED	---
043	4-wire+PE	Nut	BN,WH,BU,BK,GNYE	---
044	8-wire	---	WH,GN,YE,GY,BN,PK,BU,RD	---
046	8-wire	Nut	WH,BN,GN,YE,GY,PK,BU,RD	---
049	12-wire	---	BN,BU,WH,GN,PK,YE,BK,GY,RD,VI,GYPK,RDBU	---
325	12-wire	---	BN,BU,WH,GN,PK,YE,BK,GY,RD,VI,GYPK,RDBU	---



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Wrenches

BCC M414 - M425 - M425 - U2010 - 003

Head 1 (Splitter) Head 2 (Head A) Head 3 (Head B) Splitter Code Length

Head 1 Configuration

Connector Size & Type:

M4 M12 Micro DC - Ni Plated Brass

Connector Direction:

1 Straight Plastic Overmolded

Number of Visible Connections:

3-pole thru 8-poles

Head 2 & Head 3 Configuration

Connector Size & Type:

M3 M8 Nano DC - Ni Plated Brass

M4 M12 Micro DC - Ni Plated Brass

0000 (Head 2, Head 3) Open Splitter

Connector Direction:

1 Straight Plastic Overmolded

2 Right Angle Plastic Overmolded

Number of Visible Connections:

5 M12 Female

no. poles Any other configuration

Splitter Code

Code	Type	Wiring	Head 1	Head 2	Head 3	Cable	Body
U0003	U Splitter	A00	M12 Male	M12 Female	M12 Female	---	BK PVC
U0014	U Splitter	A00	M12 Male	M8 3-pole Female	M8 3-pole Female	---	BK PVC
U2002	V Splitter	A00	M12 Male	M12 Female	M12 Female	YE TPE	YE TPU
U2009	V Splitter	A13	M12 Male	Leads	Leads	YE PVC	YE TPU
U2010	V Splitter	A00	M12 Male	M12 Female	M12 Female	YE PVC	YE TPU
U2011	V Splitter	A07	M12 Male	M12 Female	M12 Female	YE TPE	YE TPU
U2012	V Splitter	A00	M12 Male	M8 Female	M8 Female	YE PVC	YE TPU

Wiring Configuration

Wiring	Head 1	Head 2	Head 3	Logic	LED
A00	4-wire	3-wire N/O (H1=pin 4)	3-wire N/O (H1=pin 2)	Splitter	---
A07	4-wire	3-wire N/O (H1=pin 4)	3-wire N/O (H1=pin 2)	Splitter	(H2&H3) PNP
A13	4-wire	BN,BU,BK (H1=pin 4)	BN,BU,BK (H1=pin 2)	Splitter	---

Length Configuration

Cable Length:

003 0.3 meters

020 2.0 meters

100 10.0 meters

*Head 2 & Head 3 lengths are equal

Note: Part Number Matrix is designed for information purposes only. Not all configurations are possible. Consult factory for part number availability.

Connectivity Solutions

BCC part number matrix

BCC A315 - A325 - 30 - 335 - VX45W6 - 020

Head 1

Head 2

Code

Wiring

Raw Cable

Length

Head 1 & Head 2 Configuration

Connector Size & Type:

A3	7/8" MINI Size I
A4	1" MINI Size II
A5	1 1/8" MINI Size III
0000	(Head 2) Single-Ended Cable

Connector Direction:

1	Straight Plastic Overmolded
2	Right Angle Plastic Overmolded

Number of Visible Connections:

#	3-pole thru 9-poles
A	10-pole
C	12-pole
L	19-pole

Code Configuration

Gender Type:

1	Female Internal Threads
2	Male External Threads
3	Female Int - Male Ext
7	Female Int - Male Int
C	Male Internal Threads
D	Female External Threads

Connector Coding:

0	All configurations (typical)
----------	------------------------------

Wiring Configurations

Single-Ended	Double-Ended	Poles
003	304	4-wire DC
063	335	5-wire DC
071	345	3-wire AC
072	346	4-wire AC
085	357	6-wire
086	358	7-wire
087	359	8-wire
088	360	9-wire
089	355	10-wire
090	362	12-wire
091	363	19-wire

Raw Cable Configuration

Jacket Material:

V	PVC
P	PUR
E	TPE

Special Designator:

X	nothing
S	Shielded

Jacket Color:

0	Black
4	Yellow (standard)
8	Grey

Number of Poles:

#	1-pole thru 9-poles
A	10-pole
C	12-pole
L	19-pole

Conductor Profile:

W6	16 AWG
W8	18 AWG
A5	1.50mm2

Length Configuration

Cable Length:

003	0.3 meters
020	2.0 meters
100	10.0 meters



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Note: Part Number Matrix is designed for information purposes only. Not all configurations are possible. Consult factory for part number availability.

BCC M434 - 0000 - 2A - 000 - 55X450 - 000

Connector (Place Holder) Code (Place Holder) Configuration (Place Holder)

Field Attachable Connector

Connector Size & Type:

M3	M8 Nano DC
M4	M12 Micro DC
S3	M8 Nano DC - Stainless
S4	M12 Micro DC - Stainless
A2	1/2" Micro AC
A3	7/8" MINI Size I

Connector Direction:

3	Straight Plastic Field Attachable
4	Right Angle Plastic Field Attachable
7	Straight Metal Field Attachable
8	Right Angle Metal Field Attachable

Number of Visible Connections:

5	M12 Female
no. poles	Any other configuration

Code Configuration

Gender Type:

1	Female Internal Threads
2	Male External Threads

Connector Coding

A	M12 Sensor Connectors (typical)
0	M8 & 7/8" (typical)
B	M12 Profibus Connectors
D	M12 Ethernet Connectors (Profinet, EtherNet/IP)

Configuration Breakdown

Cable Gland Minimum Diameter

1	min Ø 2.5mm	2	min Ø 3.0mm
3	min Ø 3.5mm	4	min Ø 4.0mm
5	min Ø 6.0mm	6	min Ø 8.0mm
7	min Ø 10mm	8	min Ø 12mm
9	min Ø 14mm	0	min Ø 5.0mm
A	min Ø 2.1mm or 4.0mm		

Connection Technology

1	Screw Terminals
2	PIERCECON Terminals
3	Insulation Displacement Terminals
4	Solder Cup Terminals
5	Spring Type Terminals

Cable Type

X	no cable
----------	----------

Number of Poles

#	1-pole thru 9-poles
A	10-pole
C	12-pole

Maximum Conductor Profile

25	0.25mm ²	34	0.34mm ²
50	0.50mm ²	75	0.75mm ²
A5	1.50mm ²		

Note: Part Number Matrix is designed for information purposes only. Not all configurations are possible. Consult factory for part number availability.

Connectivity Solutions

Technical specifications



22AWG Bulk Cables

Jacket Material	PVC		PUR		TPE	
Application	General Automation		Cut & Fluid Resistant, Halogen Free		High Flex, Weld Slag Resistant	
Jacket Color	Yellow		Yellow		Yellow	
Conductor Gauge	22AWG		22AWG		22AWG	
Ambient temp (moving)	-5...105°C		-25...80°C		-40...105°C	
Ambient temp (fixed)	-40...105°C		-50...80°C		-50...105°C	
Bending Cycles	> 2 Million		> 2 Million		> 10 Million	
Rating					PTLC tray rated	
Bulk Cable (100 m)	BCC0AE7	BCC0AE8	BCC0AE9	BCC0AEA	BCC0AEC	BCC0AEE
Number of Conductors	3	4	3	4	3	4
Cable Diameter (mm)	4.7 ± 0.15	5.0 ± 0.15	4.3 ± 0.20	4.7 ± 0.20	5.3 ± 0.13	5.3 ± 0.13



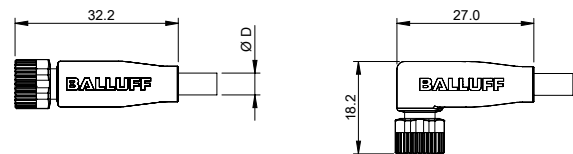
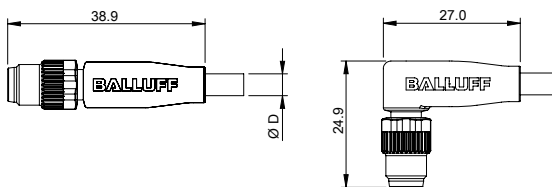
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M8 connectors, male straight and right-angle



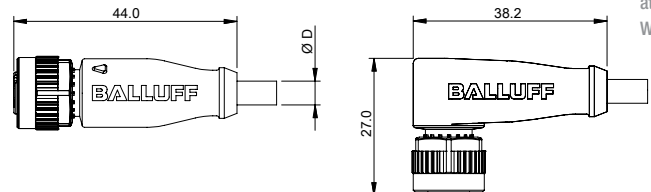
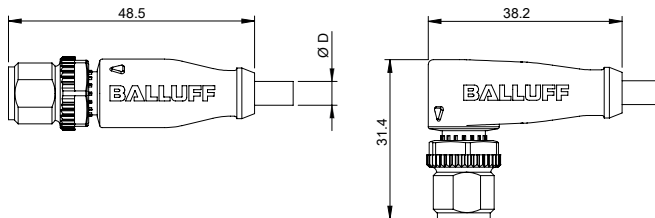
M8 connectors, female straight and right-angle



M12 connectors, male straight and right-angle



M12 connectors, female straight and right-angle



Connectivity Solutions

M5 single-ended cordsets

M5-M8 double-ended cordsets



M5 Single-Ended

Type	M5 Female	M5 Female
Configuration	Straight	Right Angle
Voltage Rating	30 VAC/VDC	30 VAC/VDC
Amperage	1 A	1 A
3-wire, non-LED	BKS-B 25-1-PU-03	BKS-B 26-1-PU-03
4-wire, non-LED	BKS-B 25-3-PU-03	BKS-B 26-3-PU-03



M5-M8 Double-Ended

Type	M5 Female - M8 Male	M5 Female - M8 Male
Configuration	Straight - Straight	Right Angle - Straight
Voltage Rating	30 VAC/VDC	30 VAC/VDC
Amperage	1 A	1 A
3-wire, non-LED	BKS-B 25-1/GS49-PU-01	BKS-B 26-1/GS49-PU-01

Connectivity Solutions

M8 Nano single-ended cordsets



M8 Single-Ended Female

Type	M8 Female	M8 Female
Configuration	Straight	Right Angle
Voltage Rating	60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire)	60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire), 10-30 VDC (LED)
Amperage	4 A	4 A
3-wire, non-LED	BCC M313-0000-10-001-EX43T2- _ _ _	BCC M323-0000-10-001- _ X43T2- _ _ _
3-wire, PNP-LED, N/O signal		BCC M323-0000-10-004- _ X43T2- _ _ _
3-wire, NPN-LED, N/O signal		BCC M323-0000-10-006- _ X43T2- _ _ _
4-wire, non-LED	BCC M314-0000-10-003-EX44T2- _ _ _	BCC M324-0000-10-003- _ X44T2- _ _ _

Standard Cable Jackets:

V = PVC
P = PUR
E = TPE

Standard Lengths Available:

020 = 2 m
050 = 5 m
100 = 10 m



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M8 Single-Ended Shielded

Type	M8 Female	M8 Female
Configuration	Straight	Right Angle
Voltage Rating	60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire)	60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire)
Amperage	4 A	4 A
Conductor Cross-Section	0.34 mm ²	0.34 mm ²
3-wire, non-LED, shielded	BCC M313-0000-10-036- _ S_334- _ _ _	BCC M323-0000-10-036- _ S_334- _ _ _
4-wire, non-LED, shielded	BCC M314-0000-10-014- _ S_434- _ _ _	BCC M324-0000-10-014- _ S_434- _ _ _

Standard Cable Jackets:

VS8 = PVC (grey, 8)
PS0 = PUR (black, 0)

Standard Lengths Available:

020 = 2 meters
050 = 5 meters
100 = 100 meters

Connectivity Solutions

M8-M8 double-ended cordsets

M8-M12 double-ended cordsets



M8-M8 Double-Ended

Type	M8 Female - M8 Male	M8 Female - M8 Male	
Configuration	Straight - Straight	Right Angle - Straight	
Voltage Rating	60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire)	60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire), 10-30 VDC (LED)	
Amperage	4 A	4 A	
3-wire, non-LED	BCC M313-M313-30-300-_X43T2-_ _ _	BCC M323-M313-30-300-_X43T2-_ _ _	
3-wire, PNP-LED, N/O, Head 1		BCC M323-M313-30-602-_X43T2-_ _ _	
3-wire, NPN-LED, N/O, Head 1		BCC M323-M313-30-603-_X43T2-_ _ _	
4-wire, non-LED	BCC M314-M314-30-304-_X44T2-_ _ _	BCC M324-M314-30-304-_X44T2-_ _ _	



M8-M12 Double-Ended

Type	M8 Female - M12 Male	M8 Female - M12 Male	
Configuration	Straight - Straight	Right Angle - Straight	
Voltage Rating	60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire)	60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire), 10-30 VDC (LED)	
Amperage	4 A	4 A	
3-wire, non-LED	BCC M313-M413-3E-300-_X43T2-_ _ _	BCC M323-M413-3E-300-_X43T2-_ _ _	
3-wire, PNP-LED, N/O, Head 1		BCC M323-M413-3E-602-_X43T2-_ _ _	
3-wire, NPN-LED, N/O, Head 1		BCC M323-M413-3E-603-_X43T2-_ _ _	
4-wire, non-LED	BCC M314-M414-3E-304-_X44T2-_ _ _	BCC M324-M414-3E-304-_X44T2-_ _ _	

Connectivity Solutions

M8-M8 double-ended cordsets

M8-M12 double-ended cordsets



M8 Female - M8 Male	M8 Female - M8 Male
Straight - Right Angle	Right Angle - Right Angle
60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire)	60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire), 10-30 VDC (LED)
4 A	4 A
BCC M313-M323-30-300- _X43T2- _ _ _	BCC M323-M323-30-300- _X43T2- _ _ _
	BCC M323-M323-30-602- _X43T2- _ _ _
	BCC M323-M323-30-603- _X43T2- _ _ _
BCC M314-M324-30-304- _X44T2- _ _ _	BCC M324-M324-30-304- _X44T2- _ _ _

Standard Cable Jackets:

V = PVC

P = PUR

E = TPE

Standard Lengths Available:

003 = 0.3 m

006 = 0.6 m

010 = 1.0 m

015 = 1.5 m

020 = 2 m

030 = 3 m

050 = 5 m



M8 Female - M12 Male	M8 Female - M12 Male
Straight - Right Angle	Right Angle - Right Angle
60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire)	60 VAC/VDC (3-wire), 30 VAC/VDC (4-wire), 10-30 VDC (LED)
4 A	4 A
BCC M313-M423-3E-300- _X43T2- _ _ _	BCC M323-M423-3E-300- _X43T2- _ _ _
	BCC M323-M423-3E-602- _X43T2- _ _ _
	BCC M323-M423-3E-603- _X43T2- _ _ _
BCC M314-M424-3E-304- _X44T2- _ _ _	BCC M324-M424-3E-304- _X44T2- _ _ _

Standard Cable Jackets:

V = PVC

P = PUR

E = TPE

Standard Lengths Available:

003 = 0.3 m

006 = 0.6 m

010 = 1.0 m

015 = 1.5 m

020 = 2 m

030 = 3 m

050 = 5 m



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Connectivity Solutions

1/2" Micro AC single-ended cordsets



1/2" Dual Keyway Single-Ended

Type	1/2" Dual Keyway Female	1/2" Dual Keyway Female
Configuration	Straight	Right Angle
Voltage Rating	250 VAC / VDC	250 VAC / VDC
Amperage	4 A	4 A
3-wire, 22AWG	C21 AE3-00-_Y-__F	C21 BE3-00-_Y-__F
3-wire, 22 AWG, Stainless Steel Nut	C21 AS3-00-_Y-__F	C21 BS3-00-_Y-__F
3-wire, 18AWG	C21 AE3-00-VY-__F-8	C21 BE3-00-VY-__F-8
4-wire, 18AWG	C21 AE4-00-VY-__F-8	C21 BE4-00-VY-__F-8
4-wire, 22 AWG, Braided Shield	C21 AE4-00-VY-__FB	C21 BE4-00-VY-__FB
5-wire, 22 AWG, Braided Shield	C21 AE5-00-VY-__FB	
6-wire, 22 AWG, Braided Shield	C21 AE6-00-VY-__FB	C21 BE6-00-VY-__FB

Standard Cable Jackets:

V = PVC

T = TPE

Single-Ended Std Lengths:

060F = 6 feet

120F = 12 feet

150F = 15 feet

300F = 30 feet

Connectivity Solutions

M12 Micro DC single-ended cordsets



M12 Single-Ended

Type	M12 Female	M12 Female
Configuration	Straight	Right Angle
Voltage Rating	250 VAC/VDC (3&4-wire), 36 VDC (LED)	250 VAC/VDC (3&4-wire), 36 VDC (LED)
Amperage	4 A	4 A
3-wire, non-LED, N/O signal	BCC M415-0000-1A-001- _X43T2- _ _ _	BCC M425-0000-1A-001- _X43T2- _ _ _
3-wire, non-LED, N/C signal	BCC M415-0000-1A-002- _X43T2- _ _ _	BCC M425-0000-1A-002- _X43T2- _ _ _
3-wire, PNP-LED, N/O signal	BCC M415-0000-1A-004- _X43T2- _ _ _	BCC M425-0000-1A-004- _X43T2- _ _ _
3-wire, PNP-LED, N/C signal	BCC M415-0000-1A-005- _X43T2- _ _ _	BCC M425-0000-1A-005- _X43T2- _ _ _
3-wire, NPN-LED, N/O signal	BCC M415-0000-1A-006- _X43T2- _ _ _	BCC M425-0000-1A-006- _X43T2- _ _ _
3-wire, NPN-LED, N/C signal	BCC M415-0000-1A-007- _X43T2- _ _ _	BCC M425-0000-1A-007- _X43T2- _ _ _
4-wire, non-LED, N/O and N/C signal	BCC M415-0000-1A-003- _X44T2- _ _ _	BCC M425-0000-1A-003- _X44T2- _ _ _
4-wire, PNP-LED, N/O signal	BCC M415-0000-1A-008- _X44T2- _ _ _	BCC M425-0000-1A-008- _X44T2- _ _ _
4-wire, PNP-LED, N/O and N/C signal		BCC M425-0000-1A-010- _X44T2- _ _ _
4-wire, NPN-LED, N/O signal	BCC M415-0000-1A-009- _X44T2- _ _ _	BCC M425-0000-1A-009- _X44T2- _ _ _

Standard Cable Jackets:

V = PVC

P = PUR

E = TPE

Standard Lengths Available:

020 = 2 m

050 = 5 m

100 = 10 m



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Connectivity Solutions

M12-M12 double-ended cordsets



M12-M12 Double-Ended

Type	M12 Female - M12 Male		
Configuration	Straight - Straight		
Voltage Rating	250 VAC / VDC (non-LED), 10-30 VDC (LED)		
Amperage	4 A		
	Female LED	Male LED	
3-wire, non-LED	---	---	BCC M415-M413-3A-300-_X43T2-__
3-wire, PNP-LED, Head 1	N/O	---	BCC M415-M413-3A-602-_X43T2-__
3-wire, PNP-LED, Head 1&2	N/O	N/O	
3-wire, NPN-LED, Head 1	N/O	---	BCC M415-M413-3A-603-_X43T2-__
4-wire, non-LED	---	---	BCC M415-M414-3A-304-_X44T2-__
4-wire, PNP-LED, Head 1	N/O	---	BCC M415-M414-3A-606-_X44T2-__
4-wire, PNP-LED, Head 1	N/O and N/C	---	
4-wire, PNP-LED, Head 1 & 2	N/O	N/O	
4-wire, PNP-LED, Head 1 & 2	N/O and N/C	N/O	
4-wire, NPN-LED, Head 1	N/O	---	BCC M415-M414-3A-607-_X44T2-__

Standard Cable Jackets:

V = PVC

P = PUR

E = TPE

Standard Lengths Available:

003 = 0.3 m

006 = 0.6 m

010 = 1.0 m

015 = 1.5 m

020 = 2 m

030 = 3 m

050 = 5 m

Connectivity Solutions

M12-M12 double-ended cordsets



M12 Female - M12 Male	M12 Female - M12 Male	M12 Female - M12 Male
Right Angle - Straight	Straight - Right Angle	Right Angle - Right Angle
250 VAC / VDC (non-LED), 10-30 VDC (LED)	250 VAC / VDC (non-LED), 10-30 VDC (LED)	250 VAC / VDC (non-LED), 10-30 VDC (LED)
4 A	4 A	4 A
BCC M425-M413-3A-300- _X43T2- _ _ _	BCC M415-M423-3A-300- _X43T2- _ _ _	BCC M425-M423-3A-300- _X43T2- _ _ _
BCC M425-M413-3A-602- _X43T2- _ _ _	BCC M415-M423-3A-602- _X43T2- _ _ _	BCC M425-M423-3A-602- _X43T2- _ _ _
BCC M425-M413-3A-603- _X43T2- _ _ _	BCC M415-M423-3A-602- _X43T2- _ _ _	BCC M425-M423-3A-602- _X43T2- _ _ _
BCC M425-M414-3A-304- _X44T2- _ _ _	BCC M415-M423-3A-302- _X43T2- _ _ _	BCC M425-M423-3A-302- _X43T2- _ _ _
BCC M425-M414-3A-606- _X44T2- _ _ _	BCC M415-M423-3A-603- _X43T2- _ _ _	BCC M425-M423-3A-603- _X43T2- _ _ _
BCC M425-M414-3A-650- _X44T2- _ _ _	BCC M415-M424-3A-304- _X44T2- _ _ _	BCC M425-M424-3A-304- _X44T2- _ _ _
BCC M425-M414-3A-651- _X44T2- _ _ _	BCC M415-M424-3A-606- _X44T2- _ _ _	BCC M425-M424-3A-606- _X44T2- _ _ _
BCC M425-M414-3A-607- _X44T2- _ _ _	BCC M415-M424-3A-306- _X44T2- _ _ _	BCC M425-M424-3A-650- _X44T2- _ _ _
	BCC M415-M424-3A-607- _X44T2- _ _ _	BCC M425-M424-3A-306- _X44T2- _ _ _
		BCC M425-M424-3A-651- _X44T2- _ _ _
		BCC M425-M424-3A-607- _X44T2- _ _ _



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Connectivity Solutions

M12-M8 double-ended cordsets



M12-M8 Double-Ended

Type	M12 Female - M8 Male		
Configuration	Straight - Straight		
Voltage Rating	60 VAC/VDC (3-wire)		
	30 VAC/VDC (4-wire)		
	10-30 VDC (LED)		
Amperage	4 A		
	Female LED	Male LED	
3-wire, non-LED	---	---	BCC M415-M313-3F-300-_X43T2-__ _
3-wire, PNP-LED, Head 1	N/O	---	BCC M415-M313-3F-602-_X43T2-__ _
3-wire, NPN-LED, Head 1	N/O	---	BCC M415-M313-3F-603-_X43T2-__ _
4-wire, non-LED	---	---	BCC M415-M314-3F-304-_X44T2-__ _
4-wire, PNP-LED, Head 1	N/O	---	BCC M415-M314-3F-606-_X44T2-__ _
4-wire, PNP-LED, Head 1	N/O and N/C	---	
4-wire, NPN-LED, Head 1	N/O	---	BCC M415-M314-3F-607-_X44T2-__ _

Standard Cable Jackets:

V = PVC

P = PUR

E = TPE

Standard Lengths Available:

003 = 0.3 m

006 = 0.6 m

010 = 1.0 m

015 = 1.5 m

020 = 2 m

030 = 3 m

050 = 5 m

Connectivity Solutions

M12-M8 double-ended cordsets



M12 Female - M8 Male	M12 Female - M8 Male	M12 Female - M8 Male
Right Angle - Straight	Straight - Right Angle	Right Angle - Right Angle
60 VAC/VDC (3-wire)	60 VAC/VDC (3-wire)	60 VAC/VDC (3-wire)
30 VAC/VDC (4-wire)	30 VAC/VDC (4-wire)	30 VAC/VDC (4-wire)
10-30 VDC (LED)	10-30 VDC (LED)	10-30 VDC (LED)
4 A	4 A	4 A
BCC M425-M313-3F-300- _X43T2- _ _ _	BCC M415-M323-3F-300- _X43T2- _ _ _	BCC M425-M323-3F-300- _X43T2- _ _ _
BCC M425-M313-3F-602- _X43T2- _ _ _	BCC M415-M323-3F-602- _X43T2- _ _ _	BCC M425-M323-3F-602- _X43T2- _ _ _
BCC M425-M313-3F-603- _X43T2- _ _ _	BCC M415-M323-3F-603- _X43T2- _ _ _	BCC M425-M323-3F-603- _X43T2- _ _ _
BCC M425-M314-3F-304- _X44T2- _ _ _	BCC M415-M324-3F-304- _X44T2- _ _ _	BCC M425-M324-3F-304- _X44T2- _ _ _
BCC M425-M314-3F-606- _X44T2- _ _ _	BCC M415-M324-3F-606- _X44T2- _ _ _	BCC M425-M324-3F-606- _X44T2- _ _ _
BCC M425-M314-3F-650- _X44T2- _ _ _		BCC M425-M324-3F-650- _X44T2- _ _ _
BCC M425-M314-3F-607- _X44T2- _ _ _	BCC M415-M324-3F-607- _X44T2- _ _ _	BCC M425-M324-3F-607- _X44T2- _ _ _



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M12 4-wire+PE, 5-wire, 8-wire, 12-wire cordsets



M12 Single-Ended

Type	M12 Female	M12 Female
Configuration	Straight	Right Angle
Voltage Rating	(4p+PE, 5p = 125 V), (8p = 60 V), (12p = 30 V)	(4p+PE, 5p = 125 V), (8p = 60 V), (12p = 30 V)
Amperage	(4p+PE, 5p = 4 A), (8p = 2 A), (12p = 1 A)	(4p+PE, 5p = 4 A), (8p = 2 A), (12p = 1 A)
Conductor Cross-Section	(5p = 0.34 mm ²), (8p, 12p = 0.25 mm ²)	(5p = 0.34 mm ²), (8p, 12p = 0.25 mm ²)
4-wire+PE, non-LED	BCC M415-0000-1A-034-PX0534-__ _	BCC M425-0000-1A-034-PX0534-__ _
4-wire+PE, PNP-LED, N/O & N/C signals		BCC M425-0000-1A-040-PX0534-__ _
5-wire, non-LED	BCC M415-0000-1A-017-PX0534-__ _	BCC M425-0000-1A-017-PX0534-__ _
5-wire, PNP-LED, N/O & N/C signals		BCC M425-0000-1A-039-PX0534-__ _
8-wire, non-LED	BCC M418-0000-1A-044-PX0825-__ _	BCC M428-0000-1A-044-PX0825-__ _
12-wire, non-LED	BCC M41C-0000-1A-049-_X_C25-__ _	BCC M42C-0000-1A-049-_X_C25-__ _

Standard Cable Jackets:

VX8= PVC (grey, 8)

PX0 = PUR (black, 0)

Standard Lengths Available:

020 = 2 m

050 = 5 m

100 = 100 m



M12 Double-Ended

Type	M12 Female - M12 Male	M12 Female - M12 Male
Configuration	Straight - Straight	Right Angle - Straight
Voltage Rating	4p+PE & 5p = 125V, 8p=60V, 12p = 30V	125V
Amperage	4p+PE & 5p = 4A, 8p=2A, 12p = 1A	4A
Conductor Cross-Section	4p+PE & 5p = 0.34 mm ² , 8p & 12p = 0.25 mm ² . Yellow = 22 AWG	0.34 mm ²
Cable Jacket Material	Black PUR, Yellow TPE, Yellow PVC	Black PUR
4-wire+PE, non-LED	BCC M415-M415-3A-313-PX0534-__ _	BCC M425-M415-3A-313-PX0534-__ _
4-wire+PE, PNP-N/O & N/C signals		BCC M425-M415-3A-661-PX0534-__ _
5-wire, non-LED	BCC M415-M415-3A-312-PX0534-__ _	BCC M425-M415-3A-312-PX0534-__ _
5-wire, PNP-N/O & N/C signals		BCC M425-M415-3A-660-PX0534-__ _
8-wire, non-LED	BCC M418-M418-3A-342-PX0825-__ _	
12-wire, non-LED	BCC M41C-M41C-3A-325-PX0C25-__ _	

Available Lengths:

003 = 0.3 m 020 = 2.0 m

006 = 0.6 m 030 = 3.0 m

010 = 1.0 m 050 = 5.0 m

015 = 1.5 m 100 = 10.0 m

Connectivity Solutions

M12 shielded cordsets



M12 Single-Ended Shielded

Type	M12 Female	M12 Female
Configuration	Straight	Right Angle
Voltage Rating	(3p, 4p = 250 V), (4p+PE, 5p = 125 V), (8p = 60 V)	(3p, 4p = 250 V), (4p+PE, 5p = 125 V), (8p = 60 V)
Amperage	(3p, 4p = 4 A), (5p = 4 A), (8p = 2 A)	(3p, 4p = 4 A), (5p = 4 A), (8p = 2 A)
Conductor Cross-Section	(3p, 4p, 5p = 0.34 mm ²), (8p = 0.25 mm ²)	(3p, 4p, 5p = 0.34 mm ²), (8p = 0.25 mm ²)
3-wire, non-LED, N/O signal, shielded	BCC M415-0000-1A-036- _S_ 334- _ _ _	BCC M425-0000-1A-036- _S_ 334- _ _ _
3-wire, non-LED, N/C signal, shielded	BCC M415-0000-1A-037- _S_ 334- _ _ _	BCC M425-0000-1A-037- _S_ 334- _ _ _
4-wire, non-LED, shielded	BCC M415-0000-1A-014- _S_ 434- _ _ _	BCC M425-0000-1A-014- _S_ 434- _ _ _
4-wire+PE, non-LED, shielded	BCC M415-0000-1A-043-PS0534- _ _ _	BCC M425-0000-1A-043-PS0534- _ _ _
5-wire, non-LED, shielded	BCC M415-0000-1A-016-PS0525- _ _ _	
8-wire, non-LED, shielded	BCC M418-0000-1A-046-PS0825- _ _ _	BCC M428-0000-1A-046-PS0825- _ _ _

Standard Cable Jackets:

VS8 = PVC (grey, 8)

PS0 = PUR (black, 0)

Standard Lengths Available:

020 = 2 meters

050 = 5 meters

100 = 100 meters



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Connectivity Solutions

M8 and M12 splitters



M8 Splitters

Type	M8 Female (x2) - M12 Male	M8 Female (x2) - M12 Male	
Configuration	Straight - Straight	Right Angle - Straight	
Voltage Rating	60 VAC / 75 VDC	60 VAC / 75 VDC	
Amperage	4 A	4 A	
Wiring	Jacket Mat.		
3-wire, non-LED	PVC	BCC M414-M313-M313-U2012-__ _	BCC M414-M323-M323-U2012-__ _
3-wire, non-LED	PUR (black)		
3-wire, OR Logic	PUR (black)		



M12 Splitters

Type	Flying Leads (x2) - M12 Male	M12 Female (x2) - M12 Male	
Configuration	Open - Straight	Straight - Straight	
Voltage Rating	250 VAC/ VDC	250 VAC / VDC	
Amperage	4 A	4 A	
Wiring	Jacket Mat.		
3-wire, non-LED, N/O	PVC	BCC M414-0000-0000-U2009-__ _	BCC M414-M415-M415-U2010-__ _
3-wire, non-LED, N/O	TPE		BCC M414-M415-M415-U2002-__ _
3-wire, PNP-LED, N/O	TPE		BCC M414-M415-M415-U2011-__ _
3-wire+PE, non-LED, N/O	PVC (black)		
3-wire, AND Logic	TPE		C04 EEC-04-TY-002M-V-F039
4-wire+PE, OR Logic	PVC (black)		
4-wire, N/C or N/O, non-LED	PUR (black)		BCC M414-M415-M415-U2018-002

Connectivity Solutions

M8 and M12 splitters



M8 Female (x2) - M8 Male	M8 Female (x2) - M12 Male
Straight - Straight	U-style
30 VAC / 30 VDC	60 VAC / 60 VDC
4 A	4 A
	BCC M415-M313-M313-U0014-000
BCC M314-M313-M313-U2024-_-_-	
BCC M313-M313-M313-U2017-003	

Standard Lengths Available:

003 = 0.3 m
006 = 0.6 m
010 = 1.0 m
020 = 2 m
050 = 5 m



M12 Female (x2) - M12 Male	M12 Female (x2) - M12 Male
Right Angle - Straight	U-style
250 VAC / VDC	250 VAC / VDC
4 A	4 A
BCC M414-M425-M425-U2010-_-_-	
BCC M414-M425-M425-U2002-_-_-	
BCC M414-M425-M425-U2011-_-_-	
	BCC M415-M415-M415-U0003-000
	BCC M415-M415-M415-U0016-000

Standard Lengths Available:

003 = 0.3 m
006 = 0.6 m
010 = 1.0 m
020 = 2 m
050 = 5 m

Flying Lead Standard Lengths:

020 = 2 m
050 = 5 m



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Connectivity Solutions

7/8" single-ended MINI cordset



7/8" Single-Ended

Type	7/8" Female (Int Threads)	7/8" Female (Int Threads)
Configuration	Straight	Right Angle
Voltage Rating	300 V AC/DC	300 V AC/DC
Amperage	12 A (3-wire)/9 A (4- and 5-wire)	12 A (3-wire)/9 A (4- and 5-wire)
Conductor Cross-Section	16 AWG	16 AWG
3-wire US-Color Code	BCC A313-0000-10-071-VX43W6-__ _	BCC A323-0000-10-071-VX43W6-__ _
4-wire US-Color Code	BCC A314-0000-10-072-VX44W6-__ _	BCC A324-0000-10-072-VX44W6-__ _
4-wire DC-Color Code	BCC A314-0000-10-003- _X44W6-__ _	BCC A324-0000-10-003- _X44W6-__ _
5-wire DC-Color Code	BCC A315-0000-10-063-VX45W6-__ _	BCC A325-0000-10-063-VX45W6-__ _

Standard Cable Jackets:

V = PVC

E = TPE

Standard Lengths Available:

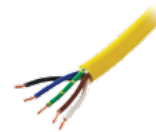
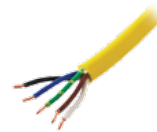
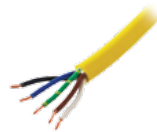
020 = 2 meters

050 = 5 meters

100 = 10 meters

150 = 15 meters

200 = 20 meters



16 AWG Bulk Cables

Bulk Cable	BCC0AEF	BCC0AEH	BCC0AEJ	BCC0APC	BCC0AEK
Jacket Material	PVC	PVC	PVC	TPE	PVC
Length	100 m	100 m	100 m	100 m	100 m
Number of Conductors	3	4	4	4	5
Conductor Color Code	US AC	US AC	DC	DC	DC
Jacket Color	Yellow	Yellow	Yellow	Yellow	Yellow
Conductor Gauge	16 AWG	16 AWG	16 AWG	16 AWG	16 AWG
Cordsets Used	7/8"	7/8"	7/8"	7/8"	7/8"
Temperature Rating	-40...105°C	-40...105°C	-40...105°C	-40...105°C	-40...105°C
Cable Diameter (mm)	10.24 ± 0.20 mm	10.67 ± 0.25 mm	10.67 ± 0.25 mm	10.67 ± 0.25 mm	12.57 ± 0.25 mm

Connectivity Solutions

7/8" to M12 adapters



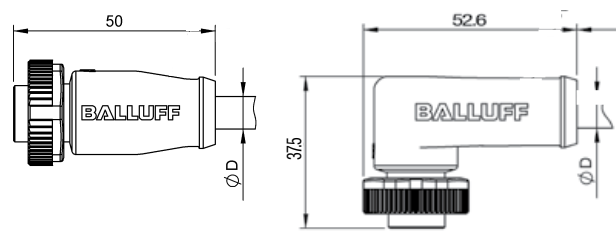
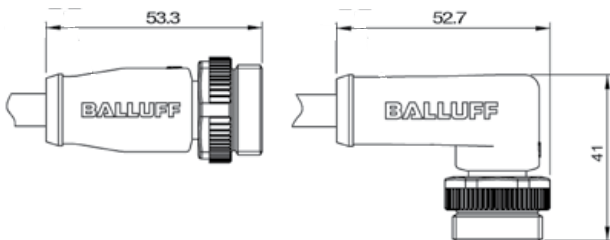
7/8" Double-Ended - Internal Threads to External Threads

Type	7/8" to M12 Converter	M12 to 7/8" Converter
Configuration	Female - Male	Female - Male
Voltage Rating	300 V	300 V
Amperage	4 A	4 A
3-wire	BCC0A7E BCC A313-M413-3E-RA031-000	BCC0A7J BCC M415-A313-3F-RA023-000
4-wire	BCC0A7F BCC A314-M414-3E-RA032-000	BCC0A7K BCC M415-A314-3F-RA034-000
5-wire	BCC0A7H BCC A315-M415-3E-RA033-000	BCC0A7L BCC M415-A315-3F-RA035-000

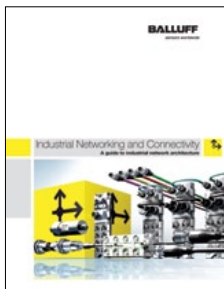
7/8" connectors, male straight and right-angle



7/8" connectors, female straight and right-angle



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You will find many additional products in our total product line, "Industrial networking and connectivity – A guide to industrial network architecture" or online at: www.balluff.us.

Connectivity Solutions

M8 junction blocks



M8 Junction Blocks (MIBs) - Quick Disconnect

Type	M12 Quick Disconnect	M12 Quick Disconnect
Configuration	4 port	8 port
Voltage Rating	10...30 VDC	10...30 VDC
Current Rating / Block	6 A	6 A
Current Rating / Contact	2 A	2 A
Suggested Homerun Cable	BCC M4_8-0000-1A-044-PX0825-_-_-	BCC M4_C-0000-1A-049-PX0C25-_-_-
3-wire, PNP-LED	BPI 4M303P-2K-00-SM48T	BPI 8M303P-2K-00-SM4CT



M8 Junction Blocks (MIBs) - Cable Out

Type	Cable Out	Cable Out
Configuration	4 port	8 port
Voltage Rating	10...30 VDC	10...30 VDC
Current Rating / Block	6 A	6 A
Current Rating / Contact	2 A	2 A
3-wire, PNP-LED	BPI 4M303P-2K-00-KPX60-_-_-	BPI 8M303P-2K-00-KPXA0-_-_-
4-wire, PNP-LED	BPI 4M304P-2K-00-KPXA0-_-_-	BPI 8M304P-2K-00-KP XK0-_-_-

Standard Lengths Available:

030 = 3 meters
050 = 5 meters
100 = 10 meters
150 = 15 meters



M8 Blocks - M12 Homerun Cables

Type	M12 Female	M12 Female
Configuration	Straight	Right Angle
Voltage Rating	(8p = 60 V), (12p = 30 V)	(8p = 60 V), (12p = 30 V)
Amperage	(8p = 2 A), (12p = 1 A)	(8p = 2 A), (12p = 1 A)
8-wire	BCC M418-0000-1A-044-PX0825-_-_-	BCC M428-0000-1A-044-PX0825-_-_-
12-wire	BCC M41C-0000-1A-049-PX0C25-_-_-	BCC M42C-0000-1A-049-PX0C25-_-_-

Standard Lengths Available:

020 = 2 meters
050 = 5 meters
100 = 10 meters

For more variations see
Networking Catalog



Connectivity Solutions

M12 junction blocks



M12 Junction Blocks (MIBs) - Quick Disconnect

Type	M23 Quick Disconnect	M23 Quick Disconnect
Configuration	4 port	8 port
Voltage Rating	10...30 VDC	10...30 VDC
Current Rating / Block	6 A	12 A
Current Rating / Contact	2 A	2 A
Suggested Homerun Cable (3-wire)	BCC M6_C-0000-10-065-PX0BP4-__ _	BCC M6_C-0000-10-065-PX0BP4-__ _
Suggested Homerun Cable (4-wire)	BCC M6_L-0000-10-022-PX0LP4-__ _	BCC M6_L-0000-10-022-PX0LP4-__ _
3-wire+PE, PNP-LED	BPI 4M4A4P-2K-00-SM6CT	BPI 8M4A4P-2K-00-SM6CT
4-wire+PE, PNP-LED	BPI 4M4A5P-2K-00-SM6LT	BPI 8M4A5P-2K-00-SM6LT



M12 Junction Blocks (MIBs) - Cable Out

Type	Cable Out	Cable Out
Configuration	4 port	8 port
Voltage Rating	10...30 VDC	10...30 VDC
Current Rating / Block	6 A	12 A
Current Rating / Contact	2 A	2 A
3-wire+PE, PNP-LED	BPI 4M4A4P-2K-00-KPX70-__ _	BPI 8M4A4P-2K-00-KPXB0-__ _
4-wire+PE, PNP-LED	BPI 4M4A5P-2K-00-KPXB0-__ _	BPI 8M4A5P-2K-00-KPXL0-__ _



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Standard Lengths Available

030 = 3 meters
050 = 5 meters
100 = 10 meters
150 = 15 meters



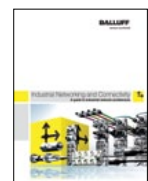
M12 Blocks - M23 Homerun Cables

Type	M23 Female	M23 Female
Configuration	Straight	Right Angle
Voltage Rating	(12p = 250 VAC/VDC), (19p = 125 VAC/VDC)	(12p = 250 VAC/VDC), (19p = 125 VAC/VDC)
Amperage	(12p = 8 A), (19p = 3x8 A)	(12p = 8 A), (19p = 3x8 A)
12-wire	BCC M61C-0000-10-065-PX0BP4-__ _	BCC M62C-0000-10-065-PX0BP4-__ _
19-wire	BCC M61L-0000-10-022-PX0LP4-__ _	BCC M62L-0000-10-022-PX0LP4-__ _

Standard Lengths Available:

020 = 2 meters
050 = 5 meters
100 = 10 meters

For more variations see
Networking Catalog





M8 Female Field Attachables

Type	M8 Female	M8 Female	
Configuration	Straight	Straight	
Housing	Plastic/Metal	Plastic	
Connection	Piercon Terminals	Screw Terminals	
Conductor Maximum	0.14...0.38 mm ² (26...22 AWG)	0.14...0.50 mm ² (26...20 AWG)	
No. of Conductors	Cable Ø Range	Order Code Part Number	
3-wire	3...5 mm	BCC09EU BCC M333-0000-10-000-22X334-000	
	3.5...5 mm		BCC06Z1 BCC M333-0000-10-000-31X350-000
4-wire	3...5 mm	BCC09EY BCC M334-0000-10-000-22X434-000	
	3.5...5 mm		BCC06Z5 BCC M334-0000-10-000-31X450-000



M8 Male Field Attachables

Type	M8 Male	M8 Male	
Configuration	Straight	Straight	
Housing	Plastic/Metal	Plastic	
Connection	Piercon Terminals	Screw Terminals	
Conductor Maximum	0.14...0.38 mm ² (26...22 AWG)	0.14...0.50 mm ² (26...20 AWG)	
No. of Conductors	Cable Ø Range	Order Code Part Number	
3-wire	3...5 mm	BCC09EW BCC M333-0000-20-000-22X334-000	
	3.5...5 mm		BCC0E7N BCC M333-0000-20-000-31X350-000-C027
4-wire	3...5 mm	BCC09EZ BCC M334-0000-20-000-22X434-000	
	3.5...5 mm		BCC06Z7 BCC M334-0000-20-000-31X450-000

Connectivity Solutions

M8 field attachables



M8 Female	M8 Female
Straight	Right Angle
Plastic/Metal	Plastic
Solder Cup	Solder Cup
0.14...0.38 mm ² (26...22 AWG)	0.14...0.38 mm ² (26...22 AWG)
BCC06YW	BCC06YY
BCC M333-0000-10-000-34X325-000	BCC M343-0000-10-000-34X325-000

Standard Cable Information

Jacket	Wires	Conductors	Diameter
Yellow PVC	3	22 AWG	4.7 ± 0.15 mm
Yellow PVC	4	22 AWG	5.0 ± 0.15 mm
Grey PVC	3	0.34 mm ²	4.5 ± 0.15 mm
Grey PVC	4	0.34 mm ²	4.8 ± 0.15 mm
Yellow PUR	3	22 AWG	4.3 ± 0.20 mm
Yellow PUR	4	22 AWG	4.7 ± 0.20 mm
Black PUR	3	0.34 mm ²	4.3 ± 0.20 mm
Black PUR	4	0.34 mm ²	4.7 ± 0.20 mm
Yellow TPE	3	22 AWG	5.3 ± 0.13 mm
Yellow TPE	4	22 AWG	5.3 ± 0.13 mm



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M8 Male	M8 Male
Straight	Right Angle
Plastic/Metal	Plastic
Solder Cup	Solder Cup
0.14...0.38 mm ² (26...22 AWG)	0.14...0.38 mm ² (26...22 AWG)
BCC06YZ	BCC06Z0
BCC M333-0000-20-000-34X325-000	BCC M343-0000-20-000-34X325-000

Standard Cable Information

Jacket	Wires	Conductors	Diameter
Yellow PVC	3	22 AWG	4.7 ± 0.15 mm
Yellow PVC	4	22 AWG	5.0 ± 0.15 mm
Grey PVC	3	0.34 mm ²	4.5 ± 0.15 mm
Grey PVC	4	0.34 mm ²	4.8 ± 0.15 mm
Yellow PUR	3	22 AWG	4.3 ± 0.20 mm
Yellow PUR	4	22 AWG	4.7 ± 0.20 mm
Black PUR	3	0.34 mm ²	4.3 ± 0.20 mm
Black PUR	4	0.34 mm ²	4.7 ± 0.20 mm
Yellow TPE	3	22 AWG	5.3 ± 0.13 mm
Yellow TPE	4	22 AWG	5.3 ± 0.13 mm

Connectivity Solutions

M12 female field attachables



M12 Female Field Attachables

Type	M12 Female	M12 Female	M12 Female	
Configuration	Straight	Straight	Straight	
Housing	Plastic	Plastic	Plastic	
Connection	Screw Terminals	Insulation Displacement	Spring Clamp	
Conductor Range	0.14...0.75 mm ² (26...18 AWG)	0.14...0.34 mm ² (26...22 AWG)	0.14...0.50 mm ² (26...20 AWG)	
No. of Conductors	Allowable Cable Ø	Order Code Part Number		
4-wire	4...6 mm	BCC06Z9 BCC M435-0000-1A-000-41X475-000	BCC06ZY BCC M435-0000-1A-000-43X434-000	
	5...8 mm			
	6...8 mm	BCC06F6 BCC M435-0000-1A-000-51X475-000		BCC06Y6 BCC M435-0000-1A-000-55X450-000
5-wire	2.1...3 mm or 4...5 mm	BCC09JP BCC M435-0000-1A-000-A1X575-000		
	4...6 mm	BCC06ZF BCC M435-0000-1A-000-41X575-000		
	5...8 mm			
	6...8 mm	BCC06W9 BCC M435-0000-1A-000-51X575-000		
8-wire	4...6 mm (shielded)		BCC04MC BCC M478-0000-1A-000-43X834-000	
	6...8 mm (0.14...0.50 mm ²)	BCC0A03 BCC M438-0000-1A-000-51X850-000		
12-wire	6...8 mm (0.14...0.25 mm ²)			BCC0A05* (solder cup) BCC M43C-0000-1A-000-54XC25-000

Jacket	Wires	Conductors	Diameter
Yellow PVC	3	22 AWG	4.7 ± 0.15 mm
Yellow PVC	4	22 AWG	5.0 ± 0.15 mm
Grey PVC	3	0.34 mm ²	4.5 ± 0.15 mm
Grey PVC	4	0.34 mm ²	4.8 ± 0.15 mm
Yellow PUR	3	22 AWG	4.3 ± 0.20 mm
Yellow PUR	4	22 AWG	4.7 ± 0.20 mm

Jacket	Wires	Conductors	Diameter
Black PUR	3	0.34 mm ²	4.3 ± 0.20 mm
Black PUR	4	0.34 mm ²	4.7 ± 0.20 mm
Yellow TPE	3	22 AWG	5.3 ± 0.13 mm
Yellow TPE	4	22 AWG	5.3 ± 0.13 mm

*Consult factory for availability.

Connectivity Solutions

M12 female field attachables



M12 Female	M12 Female	M12 Female	M12 Female
Right Angle	Straight	Straight	Right Angle
Plastic	Metal (shielded)	Stainless Steel	Stainless Steel
Screw Terminals	Screw Terminals	Screw Terminals	Screw Terminals
0.14...0.75 mm² (26...18 AWG)	0.14...0.75 mm² (26...18 AWG)	0.14...0.75 mm² (26...18 AWG)	0.14...0.75 mm² (26...18 AWG)
BCC06ZA			
BCC M445-0000-1A-000-41X475-000			
	BCC06ZM		
	BCC M475-0000-1A-000-01X475-000		
BCC06Y8			
BCC M445-0000-1A-000-51X475-000			
BCC06ZH		BCC097P	BCC097T
BCC M445-0000-1A-000-41X575-000		BCC S435-0000-1A-000-41X575-000	BCC S445-0000-1A-000-41X575-000
	BCC06ZN		
	BCC M475-0000-1A-000-01X575-000		
BCC06ZJ		BCC097R	BCC097U
BCC M445-0000-1A-000-51X575-000		BCC S435-0000-1A-000-51X575-000	BCC S445-0000-1A-000-51X575-000
BCC04ME (IDC)			
BCC M488-0000-1A-000-43X834-000			



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Connectivity Solutions

M12 male field attachables




M12 Male Field Attachables

Type	M12 Male	M12 Male	M12 Male	
Configuration	Straight	Straight	Straight	
Housing	Plastic	Plastic	Plastic	
Connection	Screw Terminals	Insulation Displacement	Spring Clamp	
Conductor Maximum	0.14...0.75 mm ² (26...18 AWG)	0.14...0.34 mm ² (26...22 AWG)	0.14...0.50 mm ² (26...20 AWG)	
No. of Conductors	Allowable Cable Ø	Order Code Part Number		
4-wire	4...6 mm	BCC06M4 BCC M434-0000-2A-000-41X475-000	BCC08C0 BCC M434-0000-2A-000-43X434-000	
	5...8 mm			
	6...8 mm	BCC06F7 BCC M434-0000-2A-000-51X475-000		BCC06Y5 BCC M434-0000-2A-000-55X450-000
5-wire	2.1...3 mm or 4...5 mm	BCC09JW BCC M435-0000-2A-000-A1X575-000		
	4...6 mm	BCC06YA BCC M435-0000-2A-000-41X575-000		
	5...8 mm			
	6...8 mm	BCC06EY BCC M435-0000-2A-000-51X575-000		
8-wire	4...6 mm	BCC01KR C04 CNT-9		
	6...8 mm (0.14...0.50 mm ²)	BCC0A04 BCC M438-0000-2A-000-51X850-000		
12-wire	6...8 mm (0.14...0.25 mm ²)			BCC0A06* (solder cup) BCC M43C-0000-2A-000-54XC25-000

Jacket	Wires	Conductors	Diameter
Yellow PVC	3	22 AWG	4.7 ± 0.15 mm
Yellow PVC	4	22 AWG	5.0 ± 0.15 mm
Grey PVC	3	0.34 mm ²	4.5 ± 0.15 mm
Grey PVC	4	0.34 mm ²	4.8 ± 0.15 mm
Yellow PUR	3	22 AWG	4.3 ± 0.20 mm
Yellow PUR	4	22 AWG	4.7 ± 0.20 mm

Jacket	Wires	Conductors	Diameter
Black PUR	3	0.34 mm ²	4.3 ± 0.20 mm
Black PUR	4	0.34 mm ²	4.7 ± 0.20 mm
Yellow TPE	3	22 AWG	5.3 ± 0.13 mm
Yellow TPE	4	22 AWG	5.3 ± 0.13 mm

*Consult factory for availability.



Wrenches

Connectivity Solutions

1/2" Micro AC and 7/8" mini field attachables



1/2" Field Attachables

Type	1/2" Female	1/2" Male
Configuration	Straight	Right Angle
Housing	Plastic	Plastic
Connection	Screw Terminals	Screw Terminals
Cable Gland	PG7	PG7
No. of Conductors	Order Code Part Number	
Female	BCC01ZL	BCC08AU
	C21 AN3-7	BCC A233-0000-10-000-41X3W8-000
Male	BCC080J	BCC08AY
	C21 CN3-7	BCC A233-0000-20-000-41X3W8-000
	BCC0206	BCC08AW
	C21 BN3-7	BCC A243-0000-10-000-41X3W8-000
	BCC020E	BCC08AZ
	C21 DN3-7	BCC A243-0000-20-000-41X3W8-000



7/8" Field Attachables

Type	7/8" Female	7/8" Male
Configuration	Straight	Straight
Housing	Plastic	Plastic
Connection	Screw Terminals	Screw Terminals
Conductor Maximum	0.14...1.50 mm ² (26...16 AWG)	0.14...1.50 mm ² (26...16 AWG)
No. of Conductors	Allowable Cable Ø	Order Code Part Number
3-wire	10...12 mm	BCC0ATA
		BCC A333-0000-10-000-71X3A5-000
4-wire	10...12 mm	BCC0708
		BCC A334-0000-10-000-71X4A5-000
5-wire	12...14 mm	BCC0ATH
		BCC A335-0000-10-000-81X5A5-000
		BCC0ATE
		BCC A333-0000-20-000-71X3A5-000
		BCC070C
		BCC A334-0000-20-000-71X4A5-000
		BCC0ATF
		BCC A335-0000-20-000-81X5A5-000

Jacket Material	PVC	PVC	PVC	PVC
Number of Conductors	3	4	4	5
Cable Diameter (mm)	10.24 ± 0.20 mm	10.67 ± 0.25 mm	10.67 ± 0.25 mm	12.57 ± 0.25 mm

IP67 Torque Wrenches

By using a calibrated IP67 torque wrench on the hex nut with every cordset, you can ensure the IP67 rating at the sensor or at the MIB, which will protect your sensor signals even in the wettest environments.



Description	Order Code Part Number
M8, 0.4 Nm torque rating	BAM00ZL BAM TO-CC-001-M3-0,4/8,0
M12, 0.6 Nm torque rating	BAM00ZM BAM TO-CC-001-M4-0,6/12,0
7/8", 1.5 Nm torque rating	BAM00ZN BAM TO-CC-001-A3-1,5/24,0



Cables,
cordsets and
connectors
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M8 nano
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M12 micro
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Possible Wet/Oily Environment



In this scenario there is a connection between cordsets, with the final connection to a sensor. This scenario is characteristic of homerun cables, patch cables, and adapter cables. The connection between cordsets can sometimes lie in an unexpected, oily or wet environment at the bottom of a work cell. By using a combination of a new Balluff cordset with hexagonal coupling nut and a properly calibrated torque wrench, the sensor connection is IP67 guaranteed. By ratcheting when the connection is properly sealed, it does not allow over-torque, which can be just as bad as too little torque.