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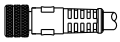
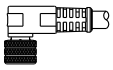
Brad® Nano-Change® M8 connectivity provides a rugged and space-saving solution to wire a wide range of sensors and actuators from proximity switches to rotary encoders in harsh environments.

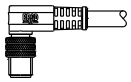
Brad® Nano-Change® M8 Sensor/Actuator Connectivity



Ordering Information

Brad® Nano-Change® M8 Single-Ended Cordsets



E02 PVC Cable									
		Female Straight		Female 90°		Male Straight		Male 90°	
Poles	Length	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.
3	1m	403000E02M010	120027-0400	403001E02M010	120086-8293	403006E02M010	120027-0364	403007E02M010	120086-8323
	2m	**403000E02M020***	**120027-0066***	**403001E02M020***	**120027-0090***	**403006E02M020***	**120086-8228***	**403007E02M020***	**120027-0106***
	5m	**403000E02M050***	**120027-0068***	**403001E02M050***	**120027-0092***	**403006E02M050***	**120027-0105***	**403007E02M050***	**120086-8324***
	10m	**403000E02M100***	**120027-0070***	**403001E02M100***	**120027-0093***	**403006E02M100***	**120086-8307***	**403007E02M100***	**120086-8325***
4	1m	404000E02M010	120027-0549	404001E02M010	120086-8356	404006E02M010	120086-8161	404007E02M010	120086-8489
	2m	**404000E02M020***	**120027-0127***	**404001E02M020***	**120027-0152***	**404006E02M020***	**120086-8368***	**404007E02M020***	**120027-0483***
	5m	**404000E02M050***	**120027-0129***	**404001E02M050***	**120027-0153***	**404006E02M050***	**120027-0376***	**404007E02M050***	**120086-8378***
	10m	**404000E02M100***	**120027-0131***	**404001E02M100***	**120027-0154***	**404006E02M100***	**120086-8369***	**404007E02M100***	**120086-8379***
H08 PUR Cable									
3	1m	403000H08M010	120027-1409	403001H08M010	120086-8497	403006H08M010	120086-8496	403007H08M010	120086-8490
	2m	403000H08M020	120086-8045	403001H08M020	120086-8052	403006H08M020	120086-8390	403007H08M020	120086-8393
	5m	403000H08M050	120086-8101	403001H08M050	120086-8054	403006H08M050	120086-8078	403007H08M050	120086-8491
	10m	403000H08M100	120086-8115	403001H08M100	120086-8004	403006H08M100	120086-8433	403007H08M100	120086-8492
4	1m	404000H08M010	120086-8487	404001H08M010	120086-8055	404006H08M010	120086-8409	404007H08M010	120086-8493
	2m	404000H08M020	120086-8207	404001H08M020	120027-1328	404006H08M020	120086-8392	404007H08M020	120086-8394
	5m	404000H08M050	120086-8053	404001H08M050	120086-8211	404006H08M050	120086-8227	404007H08M050	120086-8494
	10m	404000H08M100	120086-8117	404001H08M100	120086-8077	404006H08M100	120086-8488	404007H08M100	120086-8495

* Parts in bold belong to the BradExpress Program (see page 3)

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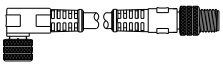
Ordering Information

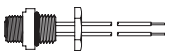
Brad® Nano-Change® M8 Double-Ended Cordsets

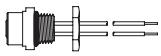




E02 PVC Cable					
		Female to Male Straight		Fem. 90° to Male Straight	
Poles	Length	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.
3	.6m	**443030E02M006***	**120087-5035***	**443031E02M006***	**120087-5016***
	1m	**443030E02M010***	**120087-8258***	**443031E02M010***	**120028-0016***
	2m	**443030E02M020***	**120028-0321***	**443031E02M020***	**120087-8305***
	5m	**443030E02M050***	**120028-0462***	**443031E02M050***	**120087-8308***
4	.6m	**444030E02M006***	**120087-8348***	**444031E02M006***	**120087-8364***
	1m	**444030E02M010***	**120087-8349***	**444031E02M010***	**120087-8365***
	2m	**444030E02M020***	**120087-8350***	**444031E02M020***	**120087-8366***
	5m	**444030E02M050***	**120087-8354***	**444031E02M050***	**120087-8368***
H08 PUR Cable					
4	.6m	443030H08M006	120087-8558	443031H08M006	120087-8557
	1m	443030H08M010	120087-8500	443031H08M010	120087-8499
	2m	443030H08M020	120087-8149	443031H08M020	120087-8128
	5m	443030H08M050	120087-8127	443031H08M050	120087-8130
5	.6m	444030H08M006	120087-8559	444031H08M006	120087-8554
	1m	444030H08M010	120087-8495	444031H08M010	120087-8196
	2m	444030H08M020	120087-8356	444031H08M020	120087-8555
	5m	444030H08M050	120087-8509	444031H08M050	120087-8556

Brad® Nano-Change® M8 Front Mount Receptacles





Wires with PVC Jacket					
		Male		Female	
Poles	Mount Thread	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.
3	M8x0.5	**4R3F06E02C3003***	**120031-0004***	**4R3F30E02C3003***	**120031-0015***
	M12x1	**4R3F46E02C200***	**120090-5073***	**4R3L40E02C200***	**120090-5104***
4	M8x0.5	**4R4F06E02C3003***	**120031-0006***	**4R4F30E02C3003***	**120031-0049***
	M12x1	**4R4F46E02C200***	**120090-5078***	4R4L40E02C200	120090-8037

∗ Parts in bold belong to the BradExpress Program (see page 3)



E02 PVC M8 Cable Specification

For use in packaging machines and production lines in static or less demanding environments.

Conductors: 3x0,25 or 4x0,25mm²

(Black, Brown, Blue, White)

Jacket Material: Black PVC

Voltage Rating: 300V, Max 4 Amps

Operating Temperature: -30 to +80°C

Diameter 3 pole 4,5 $^{-0,1+0,3}$ mm
Diameter 4 pole 5,8 $^{-0,1+0,3}$ mm

Approvals: UL, CSA

H08 PUR M8 Cable Specification

For use in machine tools, metal cutting production with harsh fluid, mechanical or continuous flex requirements.

Conductors: 3x0,25 or 4x0,25mm²

(Black, Brown, Blue, White)

Jacket Material: Black PUR, halogen free, flame retardant

Voltage Rating: 300V, Max 4 Amps

Operating Temperature: -30 to +80°C

Bending Cycles: 2 Mio with 10 x D (60°C)

Diameter 3 pole 4,4 $^{\pm 0,2}$ mm
Diameter 4 pole 4,7 $^{\pm 0,2}$ mm

Approvals: UL, CSA

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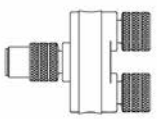
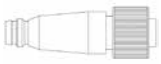
Ordering Information

Brad® Nano-Change® M8 Y-Splitters & Adapters

Y-Splitter		
	1x M8 Male to 2x M8 Female	
Poles	**Engineering No.**	**Standard Order No.**
4	080804LMF00000	120089-0033



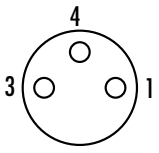
Adapter Connector		
	1x M8 Male to 1x M12 Female	
Poles	**Engineering No.**	**Standard Order No.**
3	853030	120017-0004
4	854030	120017-0003



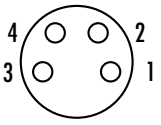
Note:
M8 male connector thread is fixed. To connect only with M8 female connectors.



Nano-Change® M8 Connector Pinout
(front view)



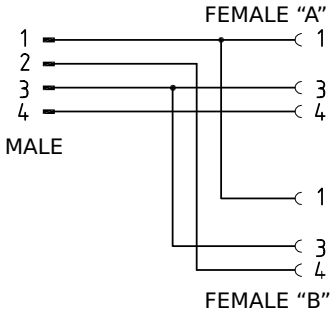
1 - Brown
3 - Blue
4 - Black



1 - Brown
2 - White
3 - Blue
4 - Black

Y-Splitter Wiring Schematic

M8 to M8 4 Pole



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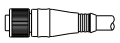
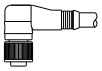
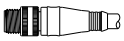
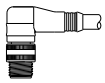
Brad® Micro-Change® M12 connectivity is a ready-to-use solution based on the A-Code M12 standard with IP67/68 rating to wire a wide range of sensors and actuators from proximity switches to rotary encoders in harsh environments.

Brad® Micro-Change® M12 Sensor/Actuator Connectivity



Ordering Information

Brad® Micro-Change® M12 Single-Ended Cordsets

E03 PVC Cable									
		Female Straight		Female 90°		Male Straight		Male 90°	
Poles	Length	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.
3	1m	803000E03M010	120065-8562	803001E03M010	120006-0175	803006E03M010	120065-8565	803007E03M010	120065-8567
	2m	803000E03M020	120006-0001	803001E03M020	120006-0007	803006E03M020	120006-0240	803007E03M020	120006-0273
	5m	803000E03M050	120006-0002	**803001E03M050***	**120006-0008***	803006E03M050	120006-0241	803007E03M050	120006-0275
	10m	803000E03M100	120006-0003	803001E03M100	120006-0009	803006E03M100	120006-0242	803007E03M100	120065-8506
4	1m	804000E03M010	120006-0426	804001E03M010	120006-0479	804006E03M010	120006-0559	804007E03M010	120006-0582
	2m	**804000E03M020***	**120006-0014***	**804001E03M020***	**120006-0021***	804006E03M020	120006-0560	804007E03M020	120006-1975
	5m	**804000E03M050***	**120006-0015***	**804001E03M050***	**120006-0022***	804006E03M050	120006-0562	804007E03M050	120006-0584
	10m	**804000E03M100***	**120006-0016***	**804001E03M100***	**120006-0023***	804006E03M100	120006-0563	804007E03M100	120006-2238
5	1m	805000E03M010	120006-3314	805001E03M010	120065-8573	805006E03M010	120006-2799	805007E03M010	120065-9138
	2m	805000E03M020	120006-0634	805001E03M020	120006-0652	805006E03M020	120006-0667	805007E03M020	120065-8096
	5m	**805000E03M050***	**120065-1978***	805001E03M050	120006-0654	805006E03M050	120006-1345	805007E03M050	120006-2929
	10m	**805000E03M100***	**120006-0638***	805001E03M100	120006-0657	805006E03M100	120006-2209	805007E03M100	120006-2498
H09 PUR Cable									
3	1m	803000H09M010	120065-8636	803001H09M010	120065-8713	803006H09M010	120065-8653	803007H09M010	120065-8720
	2m	803000H09M020	120065-8175	803001H09M020	120065-8715	803006H09M020	120065-8655	803007H09M020	120065-8722
	5m	803000H09M050	120065-8176	803001H09M050	120065-8718	803006H09M050	120065-8248	803007H09M050	120065-8725
	10m	803000H09M100	120065-8177	803001H09M100	120065-8719	803006H09M100	120065-8247	803007H09M100	120065-8726
4	1m	804000H09M010	120065-8640	804001H09M010	120065-8668	804006H09M010	120065-8727	804007H09M010	120065-8734
	2m	804000H09M020	120065-8178	804001H09M020	120065-8513	804006H09M020	120065-8729	804007H09M020	120065-8736
	5m	804000H09M050	120065-8179	804001H09M050	120065-8193	804006H09M050	120065-8732	804007H09M050	120065-8739
	10m	804000H09M100	120065-8190	804001H09M100	120065-8194	804006H09M100	120065-8733	804007H09M100	120065-8740
5	1m	805000H09M010	120065-8632	805001H09M010	120065-8664	805006H09M010	120065-8741	805007H09M010	120065-8748
	2m	805000H09M020	120065-8172	805001H09M020	120065-8296	805006H09M020	120065-8743	805007H09M020	120065-8750
	5m	805000H09M050	120065-8173	805001H09M050	120065-8297	805006H09M050	120065-8746	805007H09M050	120065-8753
	10m	805000H09M100	120065-8174	805001H09M100	120065-8298	805006H09M100	120065-8747	805007H09M100	120065-8754

∗ Parts in bold belong to the BradExpress Program (see page 3)

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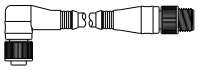
Ordering Information

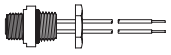
Brad® Micro-Change® M12 Double-Ended Cordsets

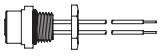




E03 PVC Cable					
		Fem. To Male Straight		Fem. 90° To Male Straight	
Poles	Length	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.
4	0.6m	**884030E03M006***	**120007-0472***	884031E03M006	120007-0508
	1m	884030E03M010	120007-0473	884031E03M010	120007-0509
	2m	**884030E03M020***	**120007-0474***	884031E03M020	120007-0511
	3m	884030E03M030	120007-0475	884031E03M030	120007-0512
	5m	**884030E03M050***	**120006-0049***	884031E03M050	120007-0904
	10m	884030E03M100	120007-0476	884031E03M100	120007-1278
5	0.6m	885030E03M006	120066-8338	885031E03M006	120066-8339
	1m	885030E03M010	120007-0906	885031E03M010	120066-8189
	2m	885030E03M020	120007-0970	885031E03M020	120066-8278
	3m	885030E03M030	120007-0586	885031E03M030	120066-8340
	5m	885030E03M050	120007-0969	885031E03M050	120066-8279
	10m	885030E03M100	120066-8347	885031E03M100	120066-8348
H09 PUR Cable					
4	0.6m	884030H09M006	120066-8378	884031H09M006	120066-8669
	1m	884030H09M010	120066-8379	884031H09M010	120066-8484
	2m	884030H09M020	120066-8234	884031H09M020	120066-8212
	3m	884030H09M030	120066-8174	884031H09M030	120066-8215
	5m	884030H09M050	120066-8244	884031H09M050	120066-8670
	10m	884030H09M100	120066-8381	884031H09M100	120066-8671
5	0.6m	885030H09M006	120066-8509	885031H09M006	120066-8512
	1m	885030H09M010	120066-8497	885031H09M010	120066-8496
	2m	885030H09M020	120066-8500	885031H09M020	120066-8513
	3m	885030H09M030	120066-8510	885031H09M030	120066-8514
	5m	885030H09M050	120066-8501	885031H09M050	120066-8515
	10m	885030H09M100	120066-8511	885031H09M100	120066-8516

Brad® Micro-Change® M12 Front Mount Receptacles





Wires with PVC Jacket					
		Male		Female	
Poles	Mount Thread	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.
4	PG9	**8R4J36E03C3003***	**120070-0156***	**8R4J30E03C3003***	**120070-0395***
	M14x1	8R4E36E03C3003	120011-0017	8R4E30E03C3003	120011-0013
5	PG9	**8R5J36E03C3003***	**120070-0231***	**8R5J30E03C3003***	**120070-0229***
	M14x1	8R5E36E03C3003	120011-0035	**8R5E30E03C3003***	**120011-0033***



E03 PVC M12 Cable Specification

For use in packaging machines and production lines, in static or less demanding environments.

Conductors: 3x0,34 4x0,34 or 5x0,34mm²

(Black, Brown, Blue, White, Grey)

Jacket Material: Black PVC

Voltage Rating: 300V, Max 4 Amps

Operating Temperature: -30 to+80°C

Diameter 3 pole 4,9 $^{-0,1+0,3}$ mm
Diameter 4 pole 5,4 $^{-0,1+0,3}$ mm
Diameter 5 pole 5,8 $^{-0,1+0,3}$ mm

Approvals: UL, CSA

H09 PUR M12 Cable Specification

For use in machine tools, metal cutting production with harsh fluid, mechanical or continuous flex requirements.

Conductors: 3x0,34 4x0,34 or 5x0,34mm²

(Black, Brown, Blue, White, Grey)

Jacket Material: Black PUR, halogen free, flame retardant

Voltage Rating: 300V, Max 4 Amps

Operating Temperature: -30 to +80°C

Bending Cycles: 2 Mio with 10 x D (60°C)

Diameter 3 pole 4,3 $^{\pm 0,2}$ mm
Diameter 4 pole 4,7 $^{\pm 0,2}$ mm
Diameter 5 pole 5,0 $^{\pm 0,2}$ mm

Approvals: UL, CSA

* Parts in bold belong to the BradExpress Program (see page 3)

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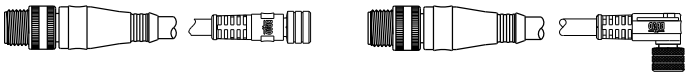
Ordering Information

Brad® Micro-Change® M12 Cordsets to M8 Sensors

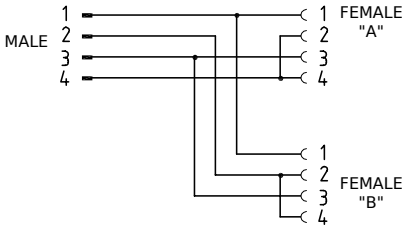


E02 PVC Cable					
		M12 Male Straight to M8 Female Straight		M12 Male Straight to M8 Female 90°	
Poles	Length	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.
3	.6m	483030E02M006	120087-8038	483031E02M006	120087-8421
	1m	483030E02M010	120087-8406	483031E02M010	120087-8422
	2m	483030E02M020	120087-8039	483031E02M020	120087-8167
	5m	483030E02M050	120087-8409	483031E02M050	120087-8425
4	.6m	484030E02M006	120087-8461	484031E02M006	120087-8477
	1m	484030E02M010	120087-8073	484031E02M010	120087-8478
	2m	484030E02M020	120087-8463	484031E02M020	120087-8480
	5m	484030E02M050	120087-8468	484031E02M050	120087-8483
H08 PUR Cable					
3	.6m	483030H08M006	120086-8221	483031H08M006	120087-8560
	1m	483030H08M010	120087-8510	483031H08M010	120087-8513
	2m	483030H08M020	120087-8255	483031H08M020	120087-8561
	5m	483030H08M050	120087-8511	483031H08M050	120087-8514
4	.6m	484030H08M006	120087-8565	484031H08M006	120087-8562
	1m	484030H08M010	120087-8516	484031H08M010	120087-8563
	2m	484030H08M020	120087-8566	484031H08M020	120087-8564
	5m	484030H08M050	120087-8567	484031H08M050	120087-8517

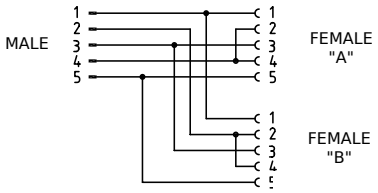


Y-Splitter Wiring Schematic

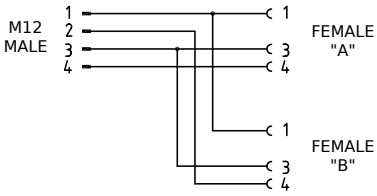
M12 to M12 4 Pole



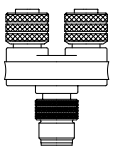
M12 to M12 5 Pole



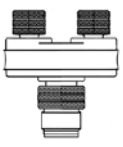
M12 to M8 4 Pole



Brad® Micro-Change® M12 Y-Splitters & Adapters



Y-Splitter		
	1x M12 Male to 2x M12 Female	
Poles	Engineering No.	Standard Order No.
4	081204EMF00000	120068-0294
5	081205EMF00000	120068-0139



Y-Splitter		
	1x M12 Male to 2x M8 Female	
Poles	Engineering No.	Standard Order No.
4	080804EMF00000	120089-0031



Adapter Connector		
	1xM12 Male to 1xM8 Female	
Poles	Engineering No.	Standard Order No.
3	483030	120033-0002
4	484030	120033-0001

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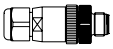
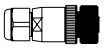
Ordering Information

Brad® Micro-Change® M12 Field Attachable Connectors

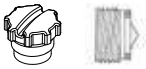



		Male Straight		Male 90°	
Poles	Max. Wire Size	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.
4	3.3-6.6	8A4006-31	120071-0038	8A4007-31	120071-0040
	4.1-8.1	8A4006-32	120071-0039	8A4007-32	120071-5011
5	3.3-6.6	8A5006-31	120071-0045	8A5007-31	120071-0049
	4.1-8.1	8A5006-32	120071-0047	8A5007-32	120071-0071




		Female Straight		Female 90°	
Poles	Max. Wire Size	Engineering No.	Standard Order No.	Engineering No.	Standard Order No.
4	3.3-6.6	8A4000-31	120071-0035	8A4001-31	120071-0037
	4.1-8.1	8A4000-32	120071-0036	8A4001-32	120071-5010
5	3.3-6.6	8A5000-31	120071-0041	8A5001-31	120071-0044
	4.1-8.1	8A5000-32	120071-0043	8A5001-32	120071-0070

Brad® Micro-Change® M12 Closure Caps



Plastic Closure Cap

To Cover Male		To Cover Female	
Engineering No.	Standard Order No.	Engineering No.	Standard Order No.
—	120308-0680	—	120358-0030



Rubber Closure Cap with Leash

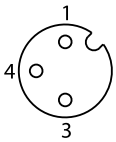
To Cover Male		To Cover Female	
Engineering No.	Standard Order No.	Engineering No.	Standard Order No.
—	120076-5046	—	**120076-5047***

* Parts in bold belong to the BradExpress Program (see page 3)



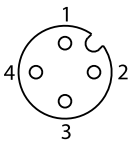
Micro-Change® M12 Connector Pinout

3 Pole



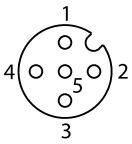
1 - Brown 4 - Black
3 - Blue

4 Pole



1 - Brown 3 - Blue
2 - White 4 - Black

5 Pole



1 - Brown 4 - Black
2 - White 5 - Gray
3 - Blue

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