
BALLUFF
06
156k
625k
2M5
5M
10M
CC-Link
Power
US
UA
RUN
ERR
Input/Output

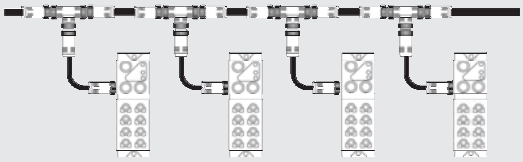
CC-Link

CC-Link

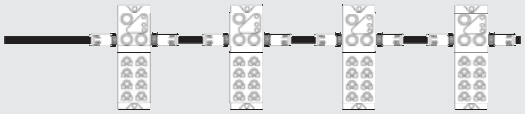
CC-Link is the most dominant and fastest growing fieldbus technology in Asia. The open network is supported by the global CC-Link partner association CLPA, which comprises more than 1000 companies.
CC-Link is a standardized fieldbus designed to integrate different automation components from a wide range of providers. CC-Link is an effective integral system that will fulfill 100 % of your application requirements.
Utilize the extensive, high-quality CC-Link portfolio from Balluff to implement your own powerful control topologies using products from a single source.

CC-Link
Product topology

Trunk and drop
- Very simple troubleshooting
- A single device can be disconnected without disrupting the network
- Extra cable requirements result in higher costs



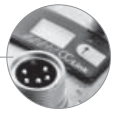
Connected in series
- Difficult troubleshooting
- Disconnecting a device interrupts the network
- Lower costs due to fewer cabling components



Clearly visible status LEDs
Low-quality LEDs that are often difficult to identify under demanding production conditions perform poorly when used in high-speed applications. Unlike Balluff status LEDs, which are large, bright, highly visible and provide maximum assistance. Balluff quality will help you complete setup and maintenance tasks and reduce machine downtimes with ease.

Powerful and safe outputs
With an output current of up to **2 amps**, Balluff output modules are capable of driving almost any load. Each output also offers an overload protection with LED indicator and a memory feature for easy troubleshooting.

Robust, solid metal housing
The fully encapsulated housing can withstand impacts, shaking, corrosive fluids, incorrect assembly as well as people treading on it and costs the same as a plastic housing.

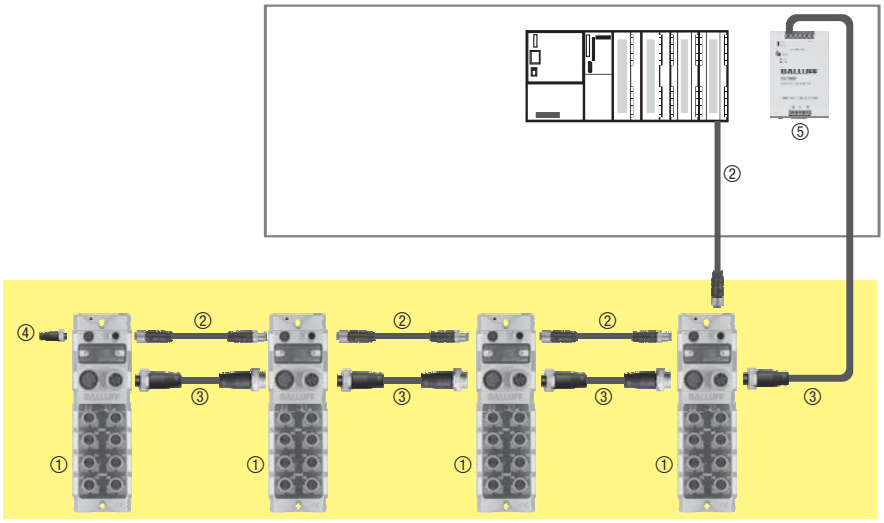


Addressable display
IP address, subnet mask and gateway address appear on the illuminated display. Push buttons can be used to set each octet of the addresses specified above. The display can be disabled via the PLC (controller).

Inputs with high density
All Balluff input blocks offer two input points for each connector, accessed via a V splitter. A Desina output is also optionally available via pin 2.

Innovative housing design
The extra-flat profile reduces potential dangers posed by cables. Rounded corners offer highly visible locations for channel markers and two mounting points are sufficient to secure the robust metal housing.

CC-Link
Product topology



① **BNS CC-Link module**	Page 48
③ **BCC bus cables**	Page 52
④ **BCC power cables**	Page 50
⑤ **Terminating resistor**	Page 54
⑪ **BAE power supplies**	Page 274

Balluff is your established partner for fieldbus expansion modules. CC-Link IO modules enable the consistent, cost-optimized implementation of requirements using decentralized installation technology and lead the way in harsh industrial applications.

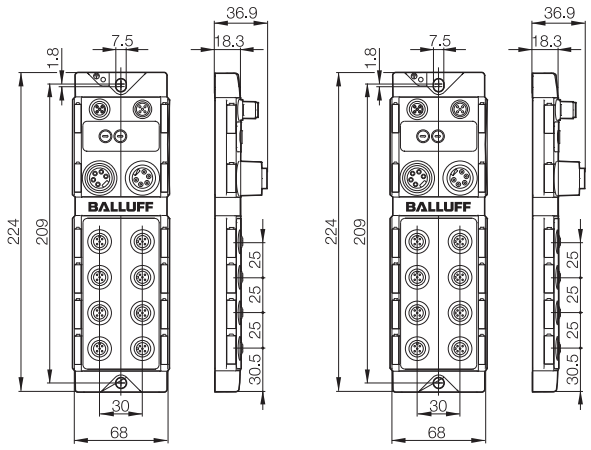
CC-Link offers the following advantages
– Constant data throughput, even when processing large data volumes
– Deterministic response for reliable realtime control
– Controllers programmed over the network
– Powerful diagnostic system for clear identification of problem areas
– Network stations switched on and off during operation
– Network stations restored automatically
– Standby master function
– Optional configuration software

Industries
– Semiconductor industry
– Automobile industry
– Food and beverage industry
– Pharmaceutical industry

Balluff expansion modules were the first decentralized I/O modules for the CC-Link fieldbus system available on the market.
The modules are enclosed in a robust metal housing and each have eight ports that are used as an input for sensors or an output for controlling actuators (max. 2 A), depending on the version.

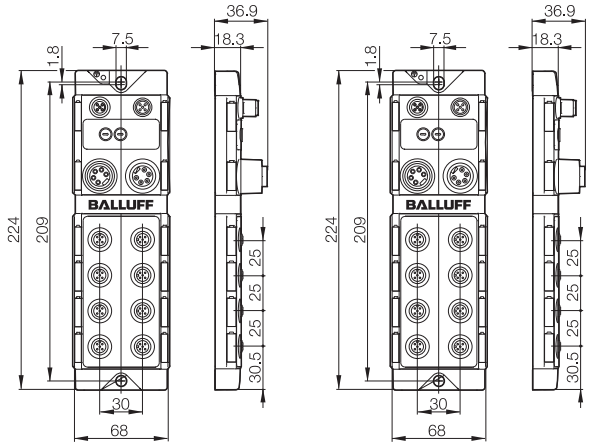
The module type BNI CCL-302-000-Z001 is fitted with 8 freely configurable ports and guarantees maximum functionality and flexibility.

Fieldbus	CC-Link	CC-Link
Version	16 inputs	8 outputs
Ordering code	**BNI002F**	**BNI002E**
Part number	BNI CCL-104-100-Z001	BNI CCL-202-100-Z001
Power supply U_B	18...30 V DC	18...30 V DC
Function indicator	Green LED	Green LED
Fault function indicator	Red LED	Red LED
Power indicator	Module/actuator/sensor supply	Module/actuator/sensor supply
Connection: Fieldbus	M12, 5-pin, female and male	M12, 5-pin, female and male
Connection: operating voltage	7/8", 5-pin, female and male	7/8", 5-pin, female and male
Connection: I/O ports	M12, A-coded, female	M12, A-coded, female
No. of I/O ports	8	8
No. of inputs	16	
No. of outputs		8
Configurable inputs/outputs	No	No
Max. load current sensors/channel	200 mA	200 mA
Max. output load current		2 A
Port status indicator (signal status)	Yellow LED	Yellow LED
Port diagnostic indicator (overload)	Red LED	Red LED
Total current $U_{Actuator}$	≤ 9 A	≤ 9 A
Total current U_{Sensor}	≤ 9 A	≤ 9 A
Degree of protection as per IEC 60529	IP 67 (when connected)	IP 67 (when connected)
Operating temperature T_a	–5...+55 °C	–5...+55 °C
Storage temperature range	–25...+75 °C	–25...+75 °C
Weight	Approx. 577 g	Approx. 577 g
Mounting	2 mounting holes	2 mounting holes
Dimensions (L×W×H)	224×68×36.9 mm	224×68×36.9 mm
Housing material	Nickel-plated Gd-Zn	Nickel-plated Gd-Zn



All modules include 4 screw plugs and 1 label set.

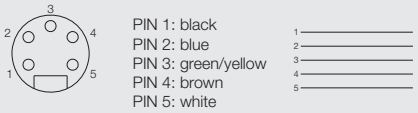
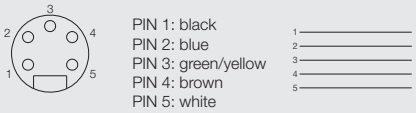
	CC-Link	CC-Link
	16 inputs/16 outputs	8 inputs/8 outputs
	BNI002A	**BNI002C**
	BNI CCL-302-100-Z001	BNI CCL-305-100-Z001
	18...30 V DC	18...30 V DC
	Green LED	Green LED
	Red LED	Red LED
	Module/actuator/sensor supply	Module/actuator/sensor supply
	M12, 5-pin, female and male	M12, 5-pin, female and male
	7/8", 5-pin, female and male	7/8", 5-pin, female and male
	M12, A-coded, female	M12, A-coded, female
	8	8
	max. 16	8
	max. 16	8
	Yes	No
	200 mA	200 mA
	2 A	2 A
	Yellow LED	Yellow LED
	Red LED	Red LED
	≤ 9 A	≤ 9 A
	≤ 9 A	≤ 9 A
	IP 67 (when connected)	IP 67 (when connected)
	–5...+55 °C	–5...+55 °C
	–25...+75 °C	–25...+75 °C
	Approx. 577 g	Approx. 577 g
	2 mounting holes	2 mounting holes
	224×68×36.9 mm	224×68×36.9 mm
	Nickel-plated Gd-Zn	Nickel-plated Gd-Zn



CC-Link
Power cables 7/8", 5-pin

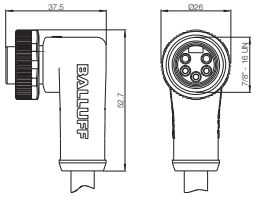
more added value

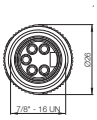
For improved fitting accuracy!
Connector with metal thread – adapted perfectly for CC-Link modules. Metal on metal guarantees durability and a high degree of protection in all applications!

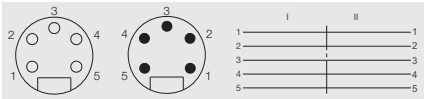
Connector diagram and wiring		
Version	**Female**	**Female**
Power supply max. U_B/current rating	300 V DC/9 A	300 V DC/9 A
Cable	PUR	PUR
No. of wires × cross-section	5×1.5 mm²	5×1.5 mm²
Degree of protection as per IEC 60529	IP 68	IP 68
Ambient temperature range T_a	–25...+80 °C	–25...+80 °C
Housing material	PUR	PUR
Knurled ring	Brass	Brass

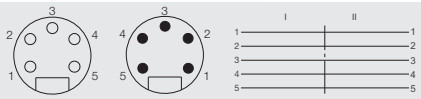
Cable material	Color	Length	Ordering code Part number	
PUR	Black	0.6 m		
PUR	Black	2 m	**BCC06HC** BCC A315-0000-10-063-PX05A5-020	**BCC06HH** BCC A325-0000-10-063-PX05A5-020
PUR	Black	5 m	**BCC06HE** BCC A315-0000-10-063-PX05A5-050	**BCC06HJ** BCC A325-0000-10-063-PX05A5-050
PUR	Black	10 m	**BCC06HF** BCC A315-0000-10-063-PX05A5-100	**BCC06HK** BCC A325-0000-10-063-PX05A5-100
PUR	Black	15 m		

Other cable materials, colors and lengths on request.



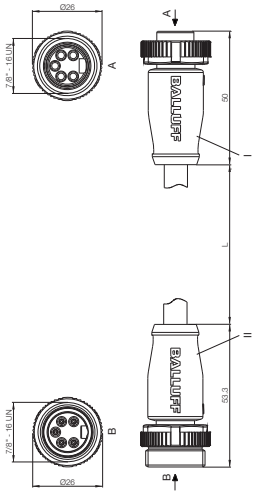


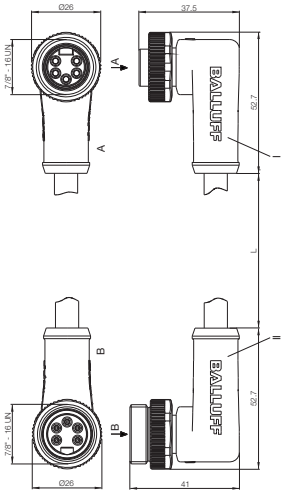




Female/male	**Female/male**	
300 V DC/9 A	300 V DC/9 A	
PUR	PUR	
5×1.5 mm²	5×1.5 mm²	
IP 68	IP 68	
–25...+80 °C	–25...+80 °C	
PUR	PUR	
Brass	Brass	

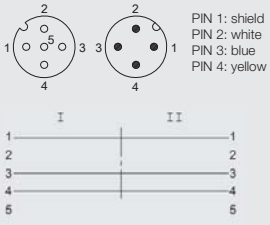
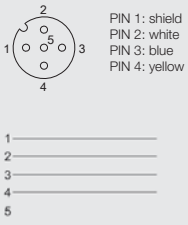
Ordering code		
Part number		
BCC06FM	**BCC06H6**	
BCC A315-A315-30-335-PX05A5-006	BCC A325-A325-30-335-PX05A5-006	
BCC06FN	**BCC06H7**	
BCC A315-A315-30-335-PX05A5-020	BCC A325-A325-30-335-PX05A5-020	
BCC06FP	**BCC06H8**	
BCC A315-A315-30-335-PX05A5-050	BCC A325-A325-30-335-PX05A5-050	
BCC06FR	**BCC06H9**	
BCC A315-A315-30-335-PX05A5-100	BCC A325-A325-30-335-PX05A5-100	
BCC06FT	**BCC06HA**	
BCC A315-A315-30-335-PX05A5-150	BCC A325-A325-30-335-PX05A5-150	





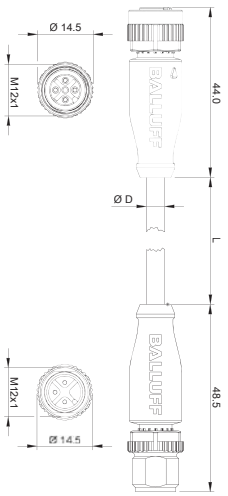
Product topology
Modules
Power cables
Power tee
Bus cables
Bus connectors
Terminating resistor
Accessories

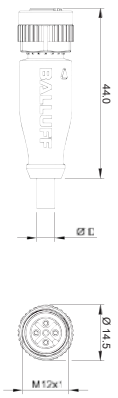
CC-Link
Bus cable, M12, 4-pin, A-coded

Connector diagram and wiring		
Version	**Female/male**	**Female**
Power supply max. U_B/current rating	250 V	250 V
Cable	PVC	PVC
No. of wires × cross-section	3×1×AWG20	3×1×AWG20
Degree of protection as per IEC 60529	IP 67	IP 67
Ambient temperature range T_a	–25...+70 °C	–25...+70 °C
Housing material	PUR	PUR
Knurled ring	Brass	Brass

Cable material	Color	Length	Ordering code	
			Part number	
PUR	red	0.6 m	**BCC06WU**	
			BCC M415-M414-3A-337-VS24N7-006	
PUR	Red	2 m	**BCC06WW**	**BCC06Y1**
			BCC M415-M414-3A-337-VS24N7-020	BCC M415-0000-1A-068-VS24N7-020
PUR	Red	5 m	**BCC06WY**	**BCC06Y2**
			BCC M415-M414-3A-337-VS24N7-050	BCC M415-0000-1A-068-VS24N7-050
PUR	Red	10 m	**BCC06WZ**	**BCC06Y3**
			BCC M415-M414-3A-337-VS24N7-100	BCC M415-0000-1A-068-VS24N7-100
PUR	Red	15 m	**BCC06Y0**	
			BCC M415-M414-3A-337-VS24N7-150	

Other cable materials, colors and lengths on request.

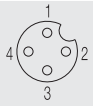
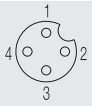




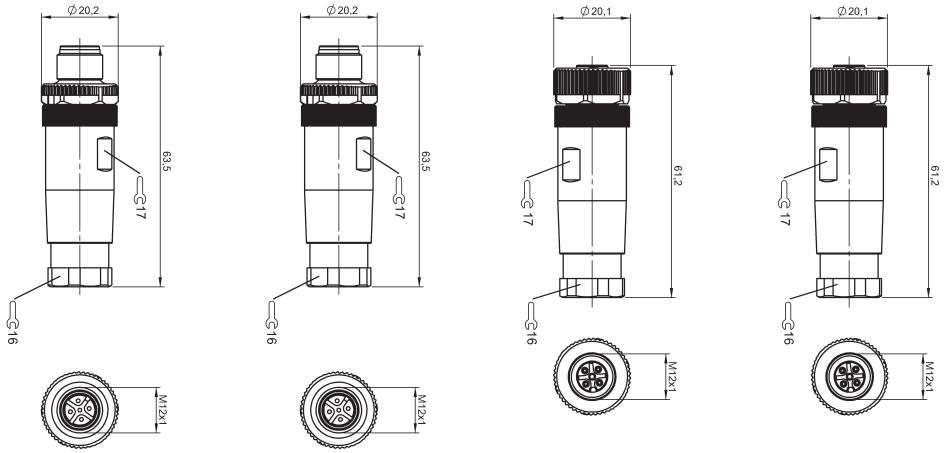
CC-Link

M12 bus connector, 4-pin, A-coded, Customized assembly, shieldable

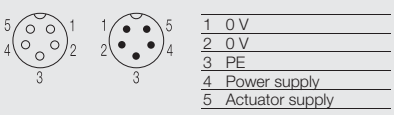


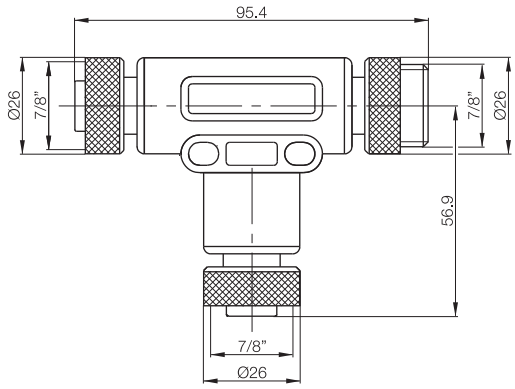

View of female/male side				
Connector	M12	M12	M12	M12
Version	A-coded 4-pin	A-coded 4-pin	A-coded 4-pin	A-coded 4-pin
Version	Male	Male	Female	Female
Ordering code	**BCC06F7**	**BCC06Y5**	**BCC06F6**	**BCC06Y6**
Part number	BCC M434-0000-2A-000-51X475-000	BCC M434-0000-2A-000-55X450-000	BCC M435-0000-1A-000-51X475-000	BCC M435-0000-1A-000-55X450-000
No. of wires × cross-section	4×0.75 mm²	4×0.75 mm²	4×0.75 mm²	4×0.75 mm²
Cable diameter min.	Max. 8.0 mm	Max. 8.0 mm	Max. 8.0 mm	Max. 8.0 mm
Connection	Screw terminal	Spring clamp terminal	Screw terminal	Spring clamp terminal
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67	IP 67
Ambient temperature range T_a	–25...+85 °C	–25...+85 °C	–25...+85 °C	–25...+85 °C
Housing material	PA	PA	PA	PA
Shielded version	Yes*	Yes*	Yes*	Yes*

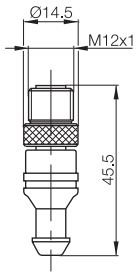
*Knurled ring used for shielding



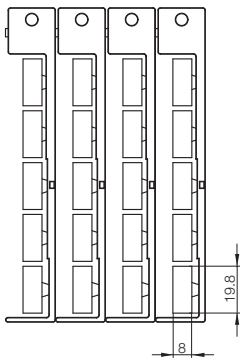
CC-Link
Power tee, terminating resistor, accessories

View of female/male side			
Configuration	7/8" power distributor	M12 terminating resistor	
Version	Standard 5-pin	A-coded 5-pin	
Version	Female/male		
Ordering code	**BCC00AZ**	**BCC06Y4**	
Part number	BKS-S248-TL2-01	BCC M415-0000-2A-R03	
Power supply U_B	300 V AC	10...30 V DC	
Degree of protection as per IEC 60529	IP 67	IP 67	
Ambient temperature range T_a	–40...+90 °C	–40...+85 °C	
Housing material	Plastic	Nickel-plated Gd-Zn	





Description	Tamperproof cover	Marking sleeve	Label set	
Version	with 4 openings	For labeling connectors	Labeling the ports for modules BNI PBS..., BNI PNT..., BNI DNT..., BNI EIP..., BNI CCL...	
Ordering code			**BAM01AT**	
Part number	BAM FK-NI-003-BPS-01	BAM IA-CC-002-01	BNI ACC-L01-000	
Housing material			Plastic	



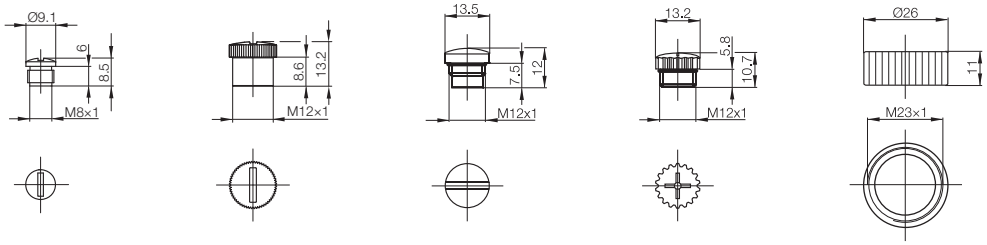
more added value

Customized components for quick and easy CC-Link installation!

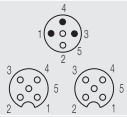
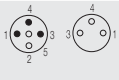
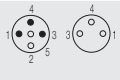




Description	M8 screw plug	M12 screw plug	M12 screw plug	M12 screw plug	M23 screw plug
Version	IP 65 screw plug for unused ports	IP 65 screw plug for unused ports	IP 65 screw plug for unused ports	IP 65 screw plug for unused ports	IP 65 screw plug for unused ports
Ordering code	**BAM01C1**	**BAM01C2**	**BAM0114**	**BAM0115**	**BAM012P**
Part number	BAM CS-XA-001-M8-C	BAM CS-XA-002-M12-A	BKS 12-CS-01	BKS 12-CS-02	BKS 23-CS-00
Ambient temperature T_a	–20...+80 °C	–20...+80 °C	–20...+80 °C	–20...+80 °C	–20...+80 °C
Housing material	Plastic	Plastic	Nickel-plated brass	PA 6	Nickel-plated brass



CC-Link
Product topology
Modules
Power cables
Power tee
Bus cables
Bus connectors
Terminating resistor
Accessories

View of female/ male side					
Description	Tee	Adapter	Adapter	Screw plug 7/8"	Screw plug 7/8"
Version	M12 male to M12 female 2× 2 signals to one port	M8 male 3-pin to M12 female 3-pin	M12 male 3-pin to M8 female 3-pin	Cover for the power ports	Cover for the power ports
Ordering code	**BCC02CL**	**BCC007W**	**BCC02CK**		
Part number	BKS-S4-TM1-01	BKS-S49-GM1/S4	BKS-S4-GM1-01/S49	BKS-7/8-CS-00-A	BKS-7/8-CS-00-I
Power supply U_B	Max. 24 V DC	Max. 24 V DC	Max. 24 V DC		
Rated operating current I_e	Max. 4 A per contact	Max. 4 A per contact	Max. 4 A per contact		
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67		
Ambient temperature range T_a	–25...+90 °C	–25...+85 °C	–25...+85 °C	–20...+80 °C	–20...+80 °C
Housing material	Nickel-plated Gd-Zn	Nickel-plated Gd-Zn	Nickel-plated Gd-Zn	Nickel-plated brass	Nickel-plated brass