

# F100 Ethernet

Axial coupler

## Inductive Coupling System

■ Contact free transmission of energy and signals



### Application/customer benefits

- Contact free transmission of energy and signals between moving / rotating and stationary components
- Application examples: Robotic (END OF ARM TOOLING), Automation, Mechanical engineering
- Substitution of slip ring / connector
- Dynamic Pairing
- Wear and maintenance free
- Protective functions: temperature monitoring, foreign object detection, reverse polarity protection
- Multi-level LED with good visibility

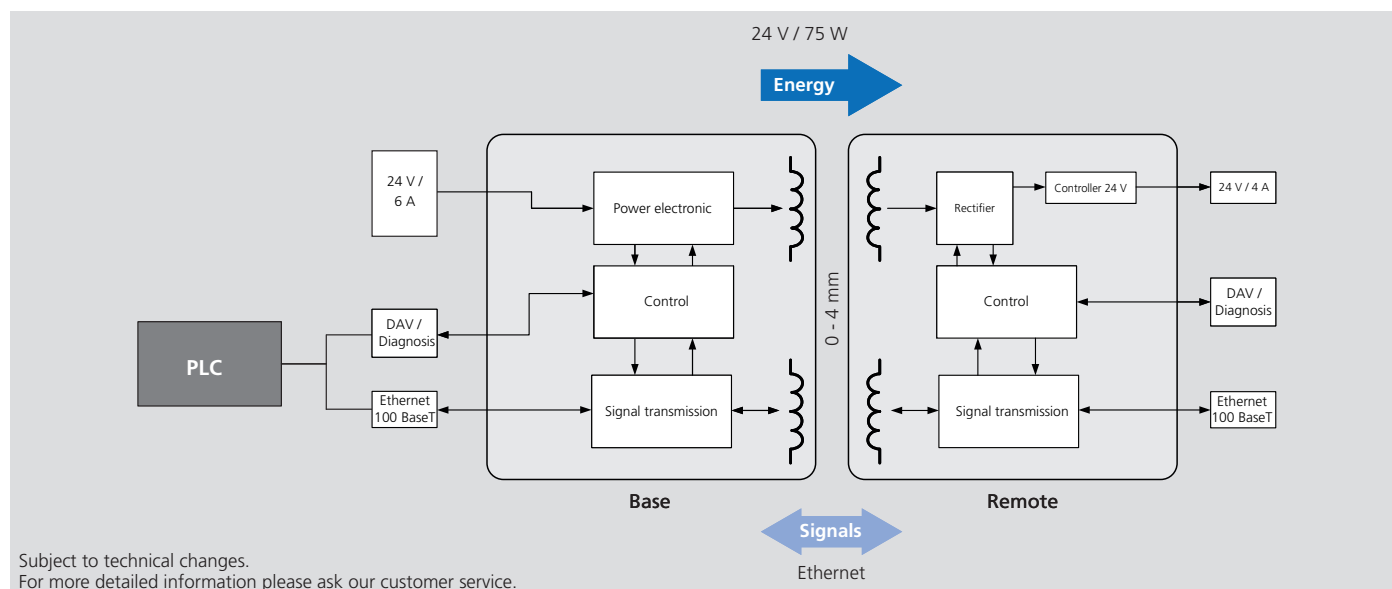
### Technical features

- Diameter 100 mm / Through hole 50 mm
- Operating voltage 24 V / max 6 A
- Transmission distance 0 - 4 mm
- Transmission of energy 24 V / 75 W
- Transmission of signals Ethernet 100 Base-T
- Transmission bandwidth: < 5 MBit/s
- Connections: M12 Ethernet (D-coded) / M12 Power (L-coded)
- Protection class: IP67

### Standard equipment

Inductive coupler base or remote

### Block diagram



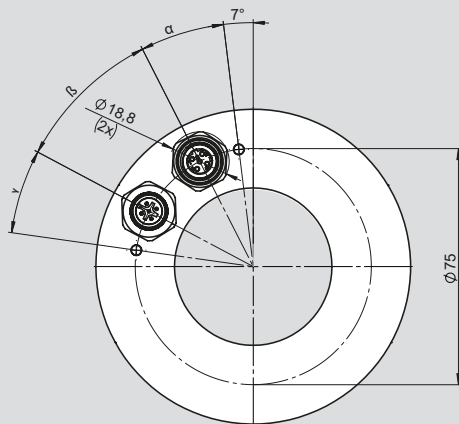
Inductive coupling system F100 Ethernet

Type	Base	Remote
<b>Id. No.</b>	<b>0E011420</b>	<b>0E011421</b>
Operating temperature (housing surface)	-20 °C ... +60 °C	
Storage temperature	-20 °C ... +60 °C	
Transmission distance	0 mm ... 4 mm	
Operating voltage	24 V	-
Output voltage	-	24 V (75 W)
Signal transmission Ethernet (bidirectional)	Ethernet 100 Base-T	
LED	2 LEDs 2-color	
Current consumption (Base)	6 A (24 V)	-
Overload protection / short circuit protection	✓	✓
Residual ripple	-	< 50 mV
Reverse polarity protection	✓	-
Data-Valid output	max. 100 mA	
Ready delay	< 1s	

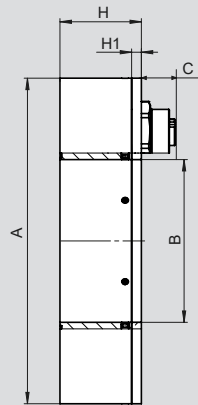
- Stationary unit - Base
- Mobile unit - Remote

Axial coupler

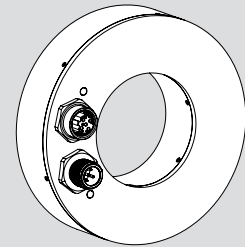
Base / Remote:



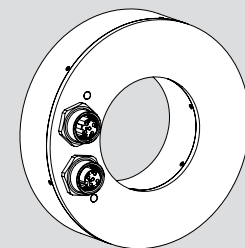
Base / Remote:



Base:



Remote:



Subject to technical changes.  
For more detailed information please ask our customer service.

Inductive coupling system F100 Ethernet

Type		Base	Remote
Id. No.		0E011420	0E011421
A	mm	100	
B	mm	50	
C	mm	13	10
H	mm	25	
H1	mm	3	
α	degree	27	
β	degree	35	
γ	degree	20	
Housing material		Al, GFK	
Protection class		IP67	
Weight	kg	0.45	0.45

Function Base

LED Power

Color	Green / red
Function	Off » Unit not supplied with voltage (or undervoltage) On (green) » Voltage ok and mobile unit has been detected 2 Hz green 50 / 50% » Operating temperature in critical range 1 Hz green 25 / 75% » Voltage ok but no mobile unit detected 1 Hz red / green » Incompatible mobile unit detected 2 Hz red » Foreign element detected 5 Hz red » Internal error

LED Signal transmission Ethernet

Color	Yellow / red
Function	Off » No mobile unit detected On / yellow » Signal transmission ready 1 Hz yellow » Data packets are being transmitted 3 Hz yellow » 50% of the transmission bandwidth used (10 s) 8 Hz red » Data packets were discarded (in the last 10 s) On / red » Error in data transmission (internal error)

Function Remote

LED Power

Color	Green / red
Function	Off » Unit not paired On (green) » Unit paired, voltage output ok Flashes 2 Hz red » Paired but short circuit Flashes 5 Hz red » Internal error

LED Signal transmission Ethernet

Color	Yellow / red
Function	Off » No mobile unit detected On / yellow » Signal transmission ready 1 Hz yellow » Data packets are being transmitted 3 Hz yellow » 50% of the transmission bandwidth used (10 s) 8 Hz red » Data packets were discarded (in the last 10 s) On / red » Error in data transmission (internal error)

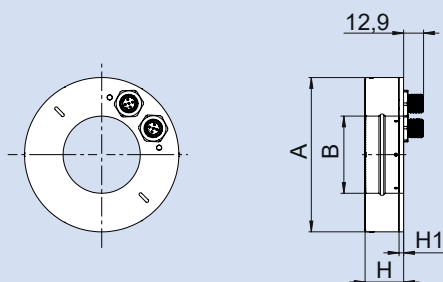
# F100-2IOL F100-ETH

Axial coupler

## Inductive Coupling Systems

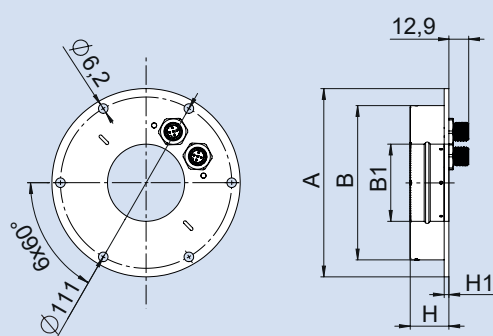
■ Ordering overview flange

### Standard flange



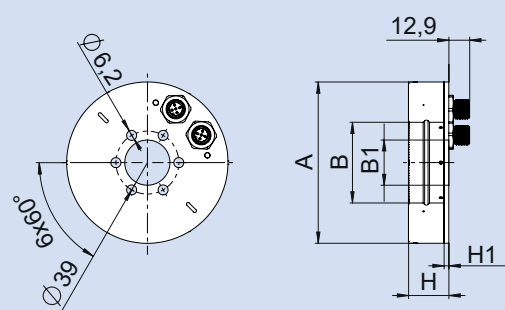
Type	IC-Base F100-2IOL D100/050	IC-Base F100-ETH D100/050
Id.-No.	0E012330	0E011420
A	100	
B	50	
B1	-	
B2	-	
H	25	
H1	3	

### Outer flange with feed-through



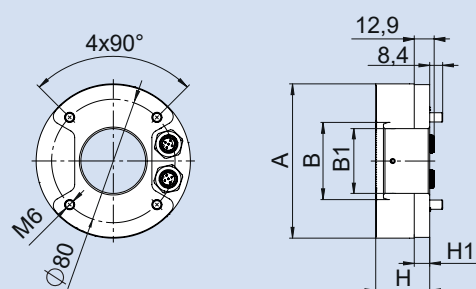
Type	IC-Base F100-2IOL D122/050	IC-Base F100-ETH D122/050
Id.-No.	0E012332	0E011320
A	122	
B	100	
B1	50	
B2	-	
H	25	
H1	3	

### Inner flange with feed-through



Type	IC-Base F100-2IOL D100/028	IC-Base F100-ETH D100/028
Id.-No.	0E012334	0E011322
A	100	
B	50	
B1	28	
B2	-	
H	25	
H1	3	

### Flangering with feed-through



Type	IC-Base F100-2IOL D100/042	IC-Base F100-ETH D100/042
Id.-No.	0E012336	0E011324
A	100	
B	50	
B1	42	
B2	-	
H	25	
H1	10	

#### FURTHER OPTIONS AVAILABLE ON REQUEST!

- Outer flange without feed-through
- Inner flange without feed-through
- Threaded sleeve with without feed-through