

F180 Ethernet

Axial coupler

Inductive coupler system

■ Contact free transmission of energy and signals



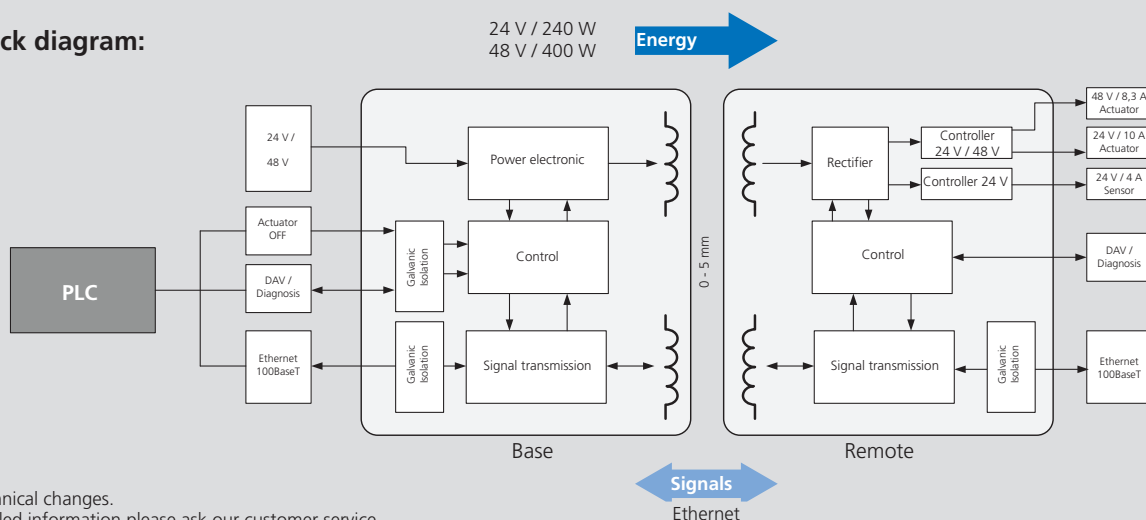
Application/customer benefits

- Contact free, safe transmission of energy and signals between moving / rotating and stationary components
- Application examples: Packaging machines, special machines, Automation, Machine Tools, Printing Machines
- 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 180 mm / Inner diameter 85 mm
- Supply voltage 24V / 48V
- Transmission distance 0 - 5 mm
- Transmission of energy 24V / 250W or 48V / 400W (selectable)
- Transmission of signals Ethernet 100 Base-T
- Transmission bandwidth Ethernet < 100 MBit
- Protection class: IP 67

Block diagram:



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

Inductive coupler F180 Ethernet

SMW-electronics Type	Base	Remote
Id. No.	0E011246	0E011247
Operating temperature (body surface)	-20° C ... +60° C	-20° C ... +60° C
Stocking temperature	-20° C ... +60° C	-20° C ... +60° C
Transmission distance	0 mm ... 5 mm (24 V) 0 mm ... 3 mm (48 V)	0 mm ... 5 mm (24 V) 0 mm ... 3 mm (48 V)
Operating voltage	24 V / 48 V	-
Output voltage (Actuator supply)*	-	24 V DC / 10 A 48 V DC / 8,3 A
Output voltage (Sensor supply)*	-	24 V / 4 A
Signal transmission	Ethernet 100 Base-T	Ethernet 100 Base-T
LED function display	3 LEDs 2x	3 LEDs 2x
Current consumption (base)	15 A (24 V) 12 A (48 V)	-
Overload protection / short-circuit protection	✓	✓
Residual ripple	-	< 50 mV
Reverse polarity protection	✓	-
Data valid output	max. 100 mA	-
Ready for Operation	< 1 s	< 1 s

*max 400 W total

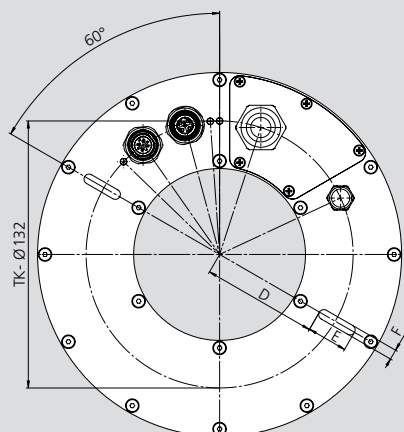
Inductive coupler system

- Stationary unit - Base
- Mobile unit - Remote

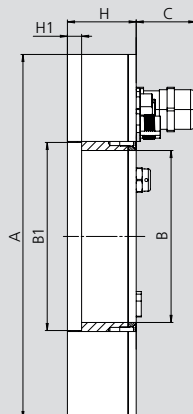
F180 Ethernet

Axial coupler

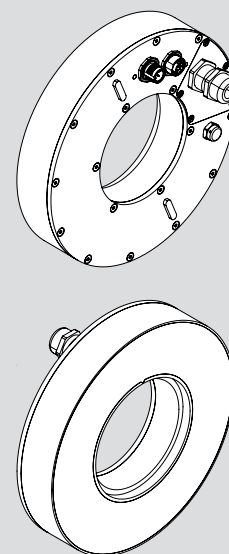
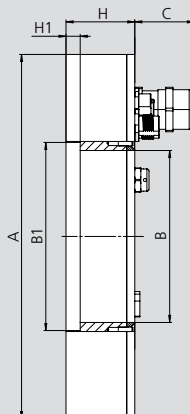
Base / Remote:



Base:



Remote:



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

Inductive coupler system F180 Ethernet

SMW-electronics Type		Base	Remote
Id. No.		0E011246	0E011247
A	mm	180	180
B	mm	85	85
B1	mm	93	93
C	mm	29.5	29.5
D	mm	57	57
E	mm	20	20
F	mm	5	5
H	mm	34	34
H1	mm	7	7
α	degree	60	60
Housing material		Al, GFK	Al, GFK
Protection class		IP 67	IP 67

Function Base

LED Power

Color	Green/red
	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
	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)

LED Energy transmission

Color	Yellow/red
	Off » No mobile unit detected
	On (yellow) » Unit coupled, voltage output ok
	1 Hz red/yellow » Short circuit at voltage output sensor
	3 Hz red/yellow » Short circuit at voltage output actuator
	3 Hz red » Short circuit at both voltage outputs
	5 Hz red » Internal error

Function Remote

LED Actuator

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

LED Sensor supply

Color	Green/red
	Off » Unit not paired
	On (green) » Unit paired, voltage output sensor (24 V) ok
	Flashes 2 Hz red » Unit paired but short circuit on sensor (24 V)
Function	Flashes 5 Hz red » Internal error

LED Signal transmission

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