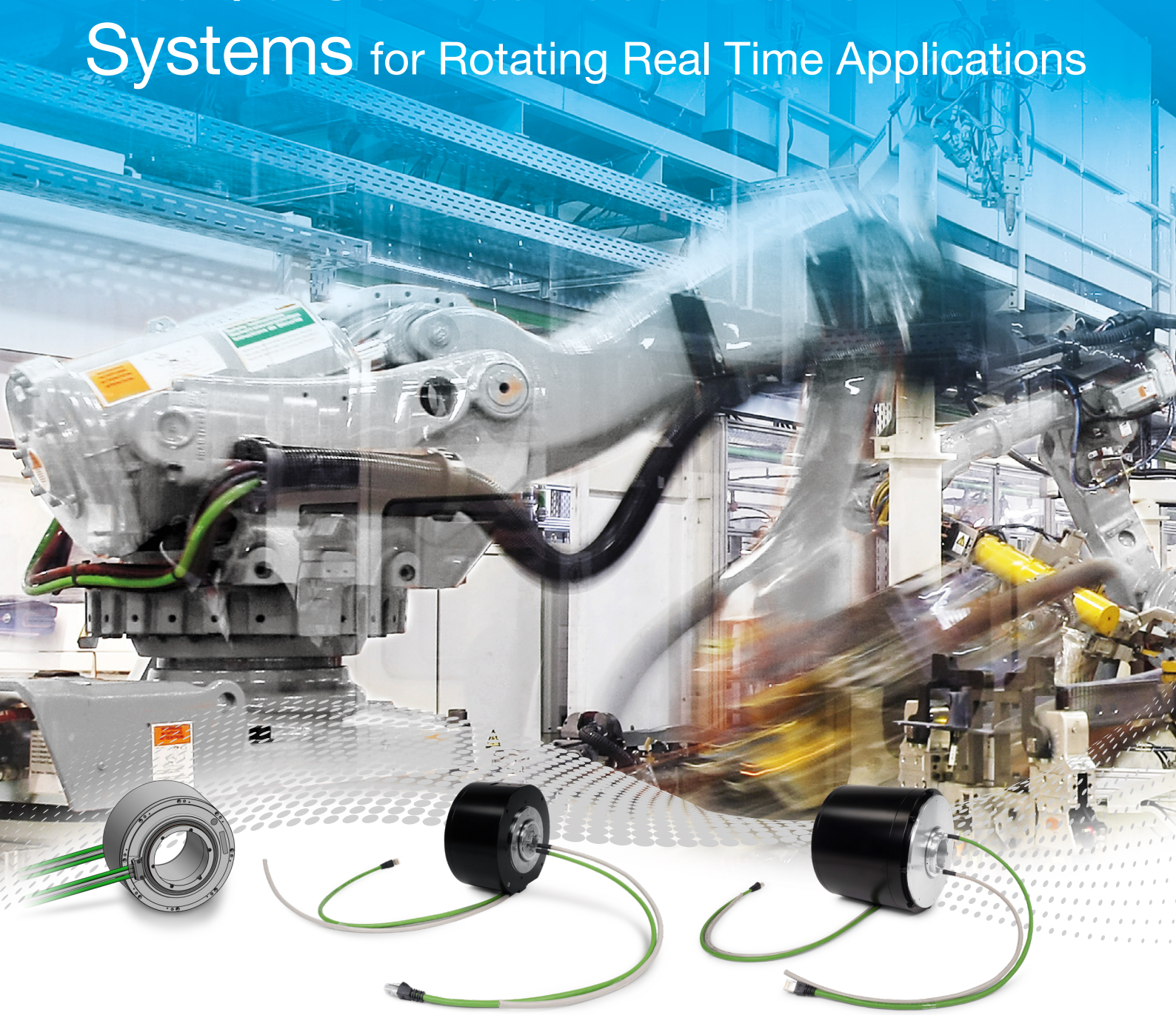


SPINNER

100 % Contactless Transmission Systems for Rotating Real Time Applications



Combined Contactless Data and Power Transmission Modules

PROFINET, EtherNet/IP, VARAN, IEEE-1588 v2 (PTP), and more

HIGH FREQUENCY PERFORMANCE WORLDWIDE
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Combined Contactless Data and Power Transmission Modules

SPINNER uniquely combines contactless data modules for rotary applications. The modules are designed for 24/7 use. No maintenance due to contactless transmission.

The data channels are realized by rotating capacitive couplers and the power channel is based on an inductive technology.

Available Configurations (Data Transmission):

Type	
4	1 Channel ethernet for real-time applications 100BASE-TX, full duplex*
7	2 Channel ethernet (multiplexed) for real-time applications 100BASE-TX, full duplex*

*half-duplex on request

100BASE-TX Ethernet-Channel	One or two signal channels provided
OSI layer operation	Layer 1 (physical)
Supported protocols	All real-time Ethernet protocols
Ethernet frame loss ratio according to RFC2544	$\leq 1 \times 10^{-9}$ Measured for 800s with 64-byte frames at 99% channel utilization, corr. to BER $\leq 1 \times 10^{-12}$
Data interface connection	Cat.6A S/FTP 4x2xAWG26/7 (PiMF) on body and hollow core sides

Available models:

Version	BN 637440
Nominal output power	50 W
External power supply	Power Supply has to be a ES1 type acc. to DIN EN 62368-1
Input voltage range	24 V DC \pm 10%
Output voltage	24 V DC \pm 3%
	Potential-free with case ground
Output current, continuous	2.1 A
Efficiency	85% @ full load
Type of external load	Resistive
Protection	Output with overcurrent protection and short-circuit-protected

Standards and directives

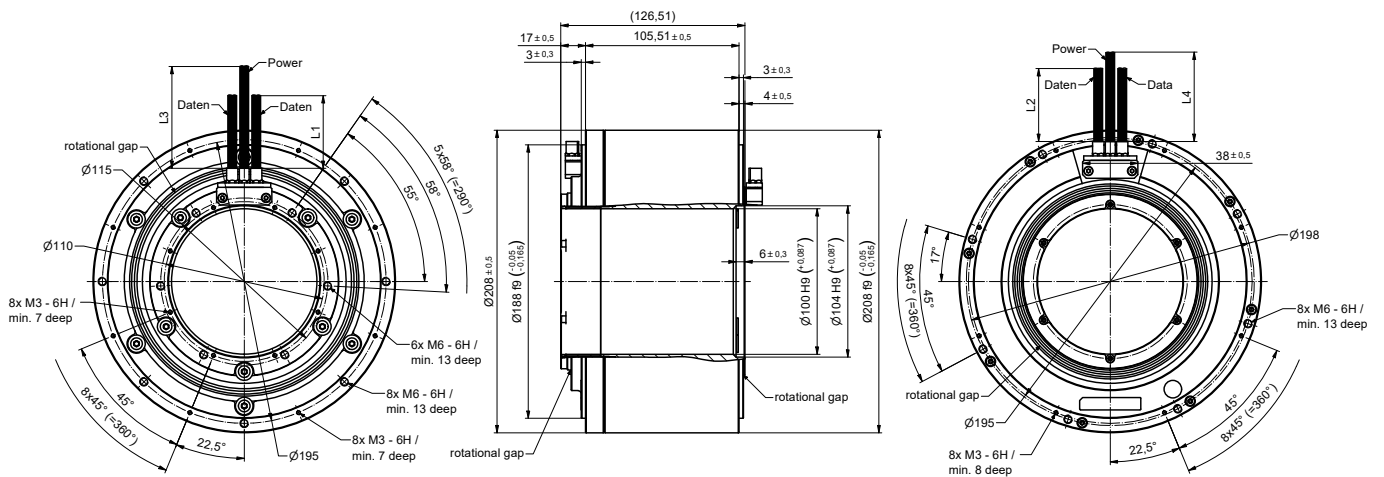
Applicable EU Directive	EMC Directive 2014/30/EU
Applied standards	DIN EN 55032 (Class B) Radio disturbance characteristics
	DIN EN 55024 Immunity characteristics

Mechanical Characteristics and Environmental Conditions

Clear inner diameter	BN 637440 100 mm
Max. rotational speed	300 rpm*
Min. service life	200 x 10 ⁶ revolutions
Duty cycle	100%
MTBF	300,000 h
Case material	Aluminum alloy
IP protection level	IP60
Operating ambient temperature range (near housing)	BN 637440 -25°C to +60°C
Storage ambient temperature range	-40°C to +85°C

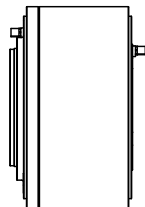
*Up to 3,000 rpm on request

Standard Outline BN 637440 (all dimensions in mm)

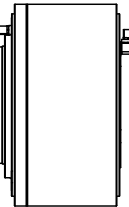


optional cable exits:

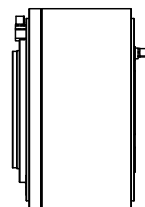
Stator Axial; Rotor Axial (1 : 3)



Stator Axial; Rotor Radial (1 : 3)



Stator Radial; Rotor Axial (1 : 3)



Combined Contactless Data and Power Transmission Modules

Contactless data and power transmission modules are available for the 24V and 48V industrial voltages in 300W and 750W versions with different clear inner diameters.

Available Configurations (Data Transmission):

Type	
4	1 Channel ethernet for real-time applications 100BASE-TX, full duplex*
7	2 Channel ethernet (multiplexed) for real-time applications 100BASE-TX, full duplex*

*half-duplex on request

100BASE-TX Ethernet-Channel	One or two signal channels provided
OSI layer operation	Layer 1 (physical)
Supported protocols	All real-time Ethernet protocols
Ethernet frame loss ratio according to RFC2544	$\leq 1 \times 10^{-9}$ Measured for 800s with 64-byte frames at 99% channel utilization, corr. to BER $\leq 1 \times 10^{-12}$
Data interface connection	Cat.6A S/FTP 4x2xAWG26/7 (PiMF) on body and hollow core sides

Available models:

Version	BN 637490 / 637493	BN 637491
Nominal output power	300 W	750 W
External power supply	Power Supply has to be a ES1 type acc. to DIN EN 62368-1	
Input voltage range	48 V DC \pm 10% / 24 V DC \pm 10%	48 V DC \pm 10%
Output voltage	48 V DC \pm 5% / 24 V DC \pm 5%	48 V DC \pm 5%
	Potential-free with case ground	
Output current, continuous	6.6 A	15.8 A
Efficiency	85% @ full load	90% @ full load
Type of external load	Resistive	
Protection	Output with overcurrent protection and short-circuit-protected	

Standards and directives

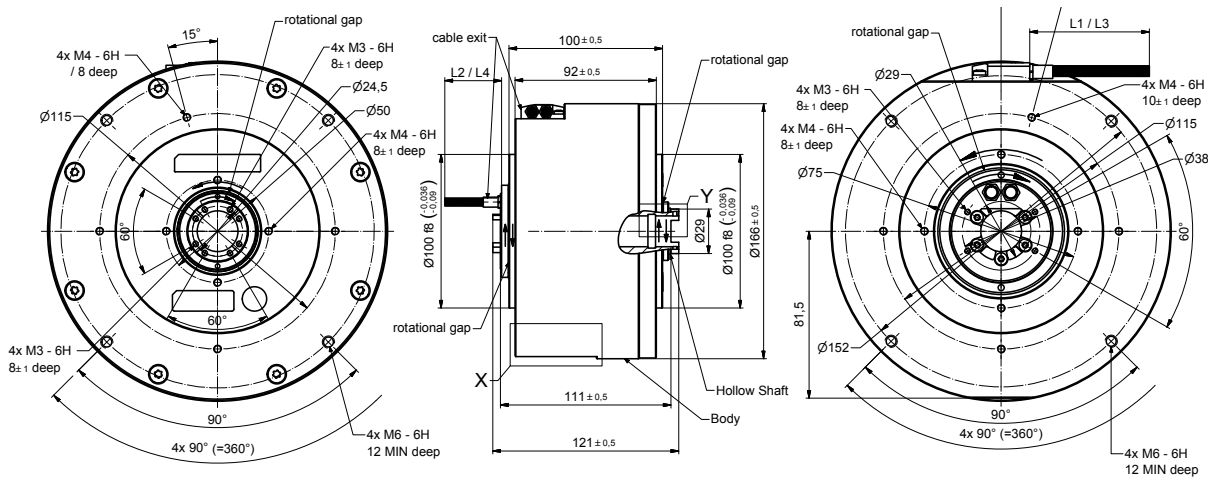
Applicable EU Directive	EMC Directive 2014/30/EU
Applied standards	DIN EN 55032 (Class B) Radio disturbance characteristics
	DIN EN 55024 Immunity characteristics

Mechanical Characteristics and Environmental Conditions

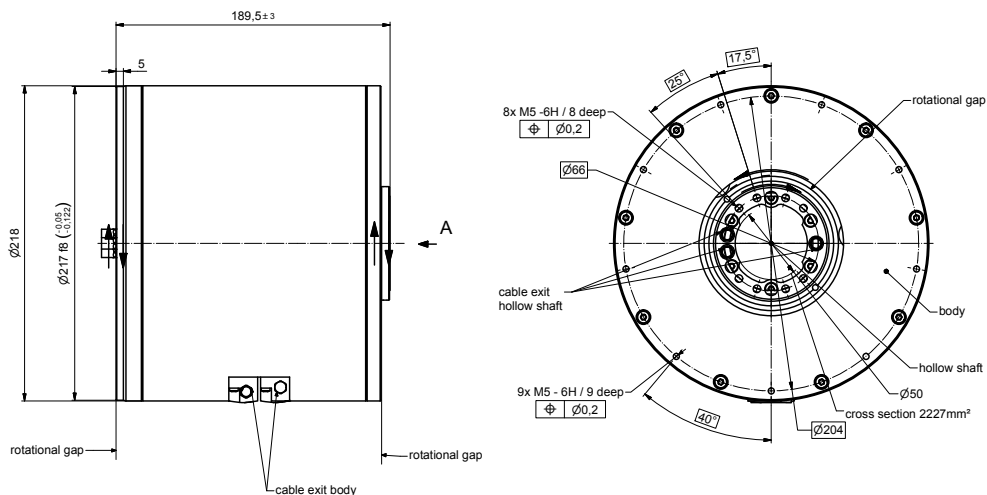
Clear inner diameter	BN 637490 / BN 637493 20 mm	BN 637491 50 mm
Max. rotational speed	300 rpm*	
Min. service life	200 x 10 ⁶ revolutions	
Duty cycle	100%	
MTBF	300,000 h	
Case material	Aluminum alloy	
IP protection level	IP60	
Operating ambient temperature range (near housing)	BN 637490 / BN 637493 -25°C to +60°C	BN 637491 -25 °C to + 45 °C
Storage ambient temperature range	-40°C to +85°C	

*BN 637490 / 637493: up to 3,000 rpm on request

Standard Outline BN 637490 (all dimensions in mm)



Standard Outline BN 637491 (all dimensions in mm)





HIGH FREQUENCY PERFORMANCE WORLDWIDE

SPINNER designs and builds cutting-edge radio frequency systems, setting performance and longevity standards for others to follow. The company's track record of innovation dates back to 1946, and many of today's mainstream products are rooted in SPINNER inventions.

Industry leaders continue to count on SPINNER's engineering excellence to drive down their costs of service and ownership with premium-quality, off-the-shelf products and custom solutions. Headquartered in Munich, Germany, the global frontrunner in RF components remains the first choice in simple-yet-smart RF solutions.

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