

## Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191


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Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 2 m



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 900045
GTIN	4017918900045

### Technical data

#### Dimensions

Length of cable	2 m
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#### Ambient conditions

Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
Degree of protection	IP65
	IP67

#### General

Note	Further products with variable cable type and variable cable length can be found in the accessories section
Rated current at 40°C	4 A
Rated voltage	48 V AC 60 V DC
Number of positions	5
Insulation resistance	≥ 100 MΩ
Coding	B - inverse
Signal type/category	INTERBUS, 16 Mbps
Status display	No
Overvoltage category	II

# Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191

## Technical data

### General

Degree of pollution	3
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

### Material

Flammability rating according to UL 94	V0
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material of grip body	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated
Sealing material	NBR

### Pin assignment

Contact   Color (signal designation)   Contact (optional)	1 (Plug)   YE (DO)   1 (Socket)
	2 (Plug)   GN (DO)   2 (Socket)
	3 (Plug)   GY (DI)   3 (Socket)
	4 (Plug)   PK (DI)   4 (Socket)
	5 (Plug)   BN (GND)   5 (Socket)

### Standards and Regulations

Flammability rating according to UL 94	V0
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### Cable

Cable type	INTERBUS
Cable type (abbreviation)	900
Cable structure	3 x 2 x 0.22 mm <sup>2</sup>
Conductor cross section	3x 2x 0.22 mm <sup>2</sup>
AWG signal line	24
Conductor structure signal line	32x 0.10 mm
Wire colors	Green-yellow, white-brown, gray-pink
Twisted pairs	2 cores to the pair
Overall twist	3 pairs to the core
Shielding	Braided copper wires
External sheath, color	may green RAL 6017
External cable diameter D	8 mm
Minimum bending radius, fixed installation	7.5 x D
Minimum bending radius, flexible installation	15 x D
Number of bending cycles	5000000
Bending radius	120 mm
Traversing path	10 m
Traversing rate	1.6 m/s
Acceleration	3.2 m/s <sup>2</sup>

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## Technical data

### Cable

Cable weight	70 kg/km
Outer sheath, material	PUR
Material conductor insulation	PE
Conductor material	Bare Cu litz wires
Insulation resistance	$\geq 5 \text{ G}\Omega \cdot \text{km}$
Loop resistance	$\leq 159.80 \text{ }\Omega/\text{km}$
Cable capacity	$\leq 60 \text{ nF/km}$ (At 800 Hz)
Wave impedance	$120 \text{ }\Omega \pm 20 \%$ (at 64 kHz)
	$100 \text{ }\Omega \pm 15 \%$ (with 1 MHz)
Near end crosstalk attenuation (NEXT)	$\geq 61 \text{ dB}$ (at 772 kHz)
	$\geq 59 \text{ dB}$ (with 1 MHz)
	$\geq 55 \text{ dB}$ (at 2 MHz)
	$\geq 50 \text{ dB}$ (at 4 MHz)
	$\geq 46 \text{ dB}$ (at 8 MHz)
	$\geq 44 \text{ dB}$ (at 10 MHz)
	$\geq 41 \text{ dB}$ (at 16 MHz)
	$\geq 40 \text{ dB}$ (at 20 MHz)
Attenuation	$\leq 15 \text{ dB/km}$ (at 256 kHz)
	$\leq 24 \text{ dB/km}$ (at 772 kHz)
	$\leq 27 \text{ dB/km}$ (with 1 MHz)
	$\leq 52 \text{ dB/km}$ (at 4 MHz)
	$\leq 84 \text{ dB/km}$ (at 10 MHz)
	$\leq 112 \text{ dB/km}$ (at 16 MHz)
	$\leq 119 \text{ dB/km}$ (at 20 MHz)
Signal speed	0.66 c
Coupling resistance	$< 250.00 \text{ m}\Omega/\text{m}$ (at 30 MHz)
Nominal voltage, cable	250 V (Peak value, not for high-power applications)
Test voltage Core/Core	$1500 \text{ V}_{\text{rms}}$
Test voltage Core/Shield	$1000 \text{ V}_{\text{rms}}$
Flame resistance	according to VDE 0472, Part 4, test type B
	according to IEC 60332-1
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-30 °C ... 70 °C (cable, flexible installation)

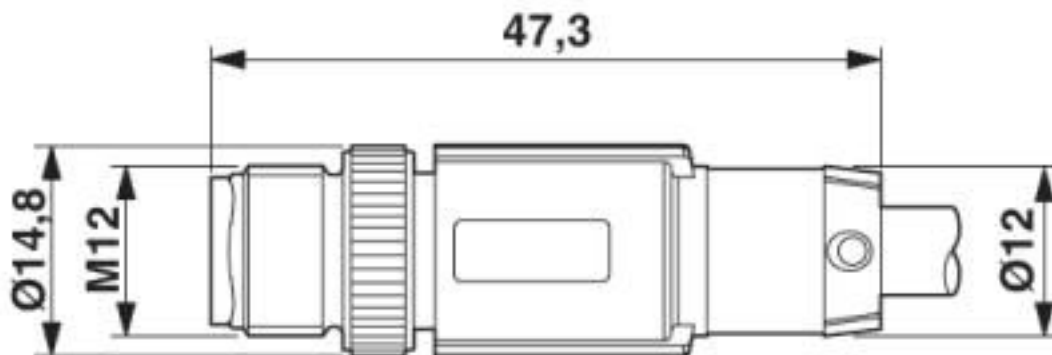
### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

### Drawings

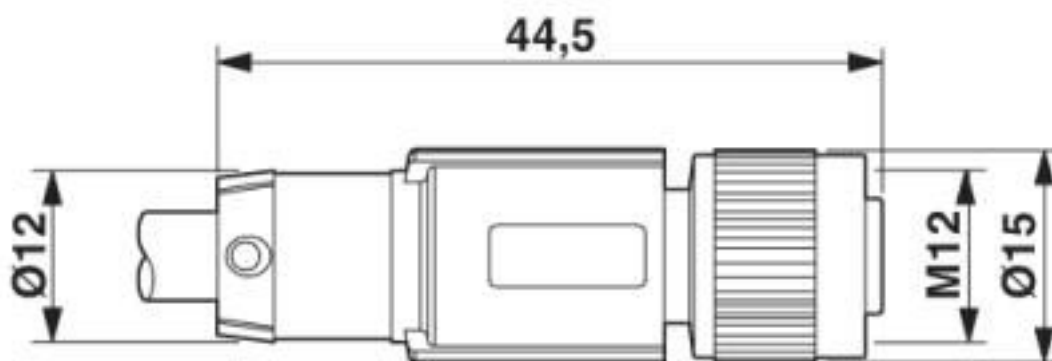
## Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191

Dimensional drawing



Plug, M12 x 1, straight, shielded

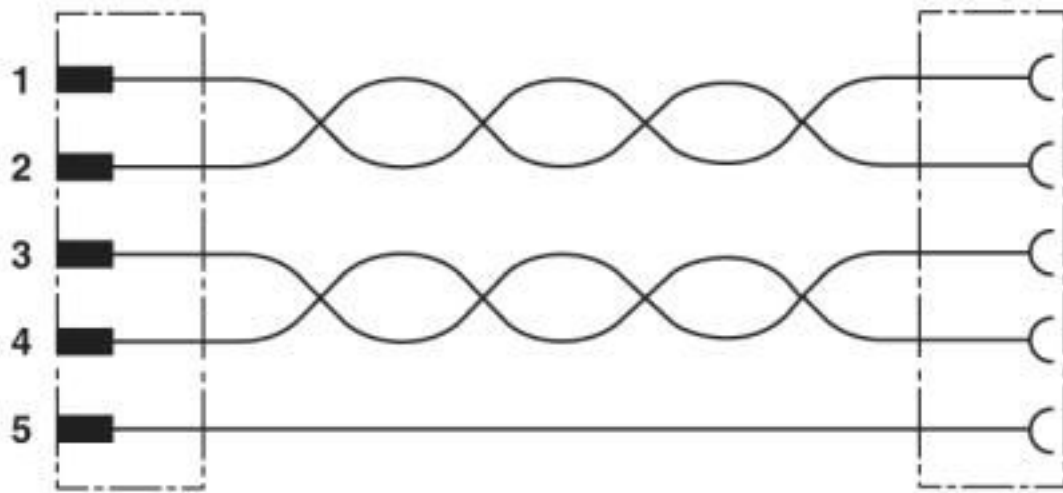
Dimensional drawing



M12 x 1 socket, straight, shielded

## Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191

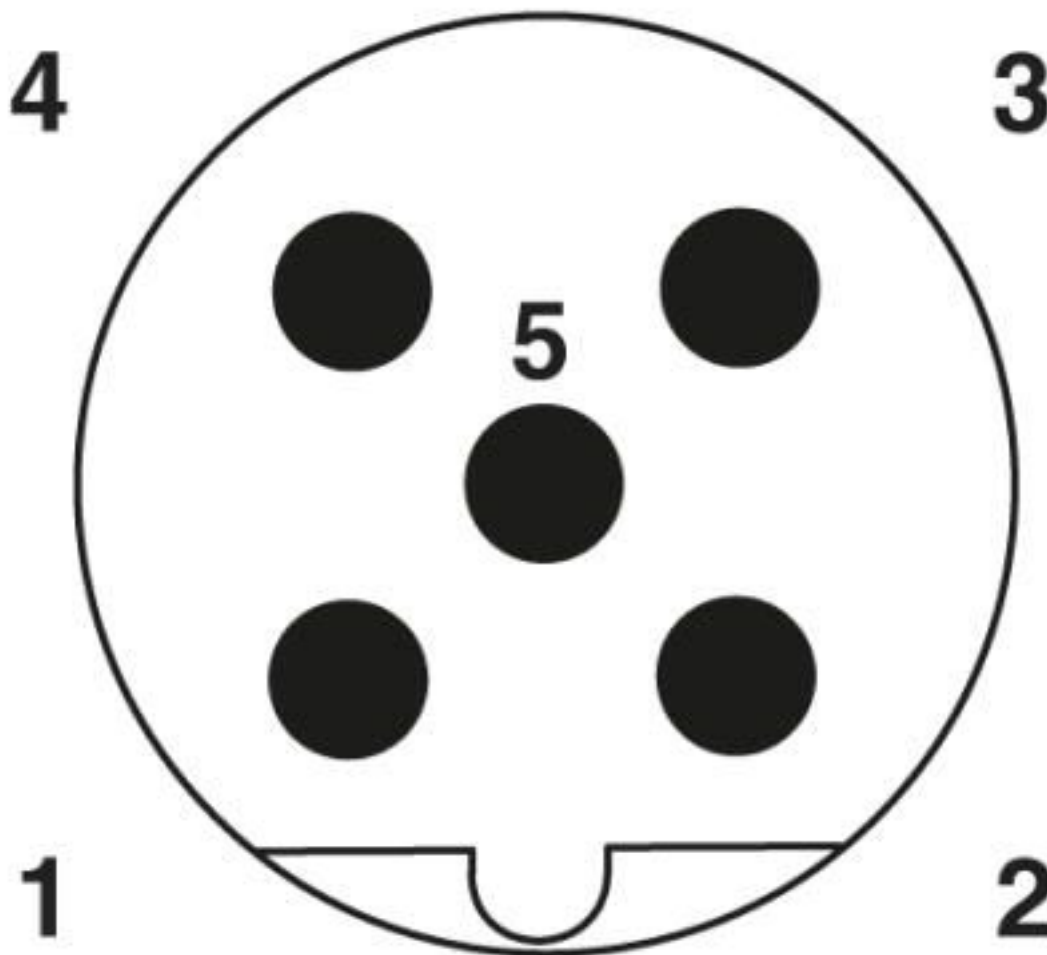
Circuit diagram



Contact assignment of the M12 connector and the M12 socket

# Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191

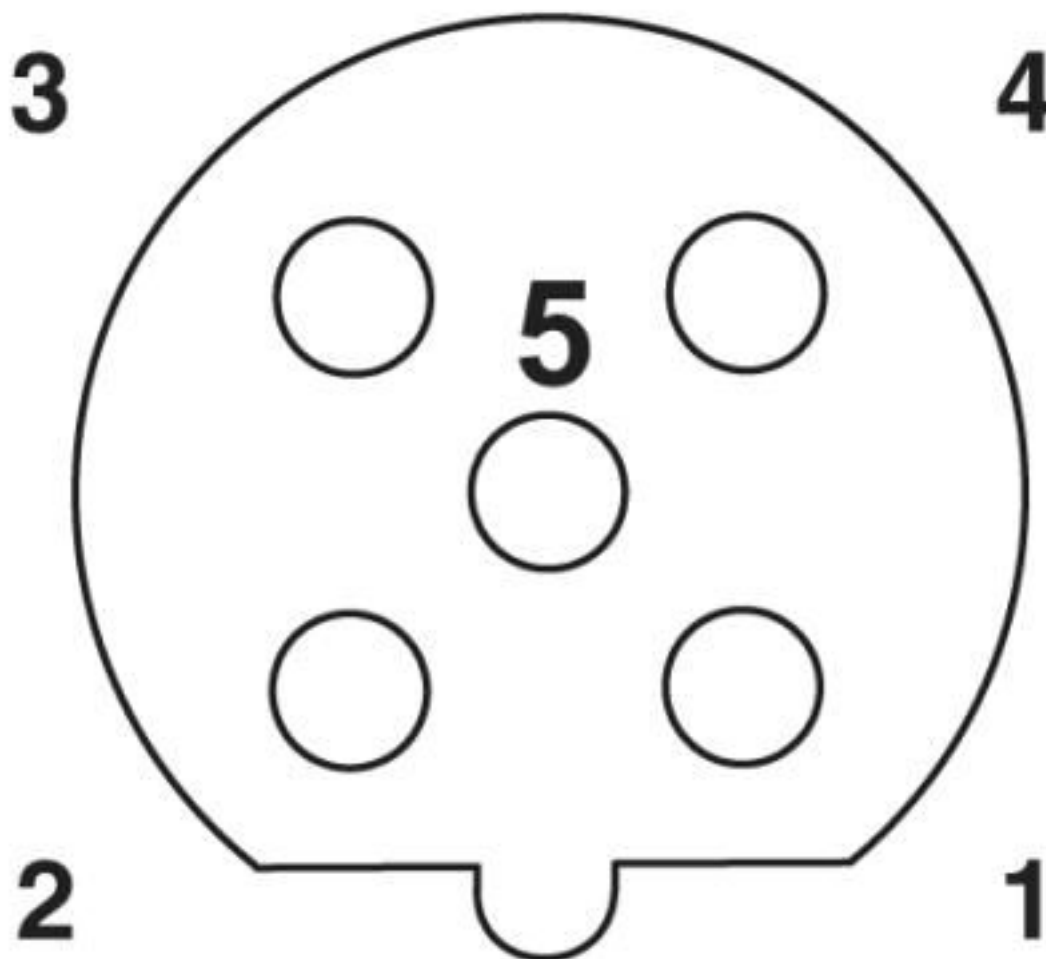
Schematic diagram



Pin assignment M12 male connector, 5-pos., B-coded, male side

# Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191

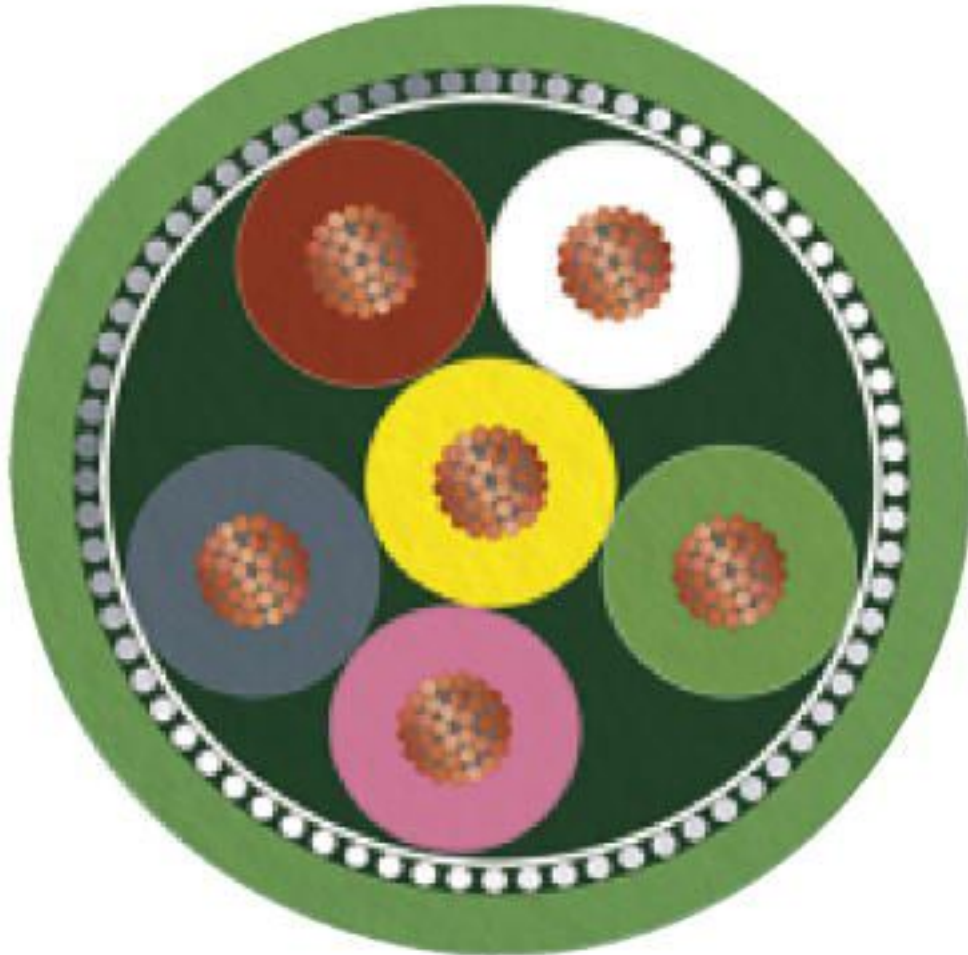
Schematic diagram



Pin assignment M12 socket, 5-pos., B-coded, female side

## Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191

Cable cross section



INTERBUS [900]

### Classifications

eCl@ss

eCl@ss 10.0.1	27060308
eCl@ss 4.0	27060300
eCl@ss 4.1	27060300
eCl@ss 5.0	27061800
eCl@ss 5.1	27061800
eCl@ss 6.0	27279200
eCl@ss 7.0	27279218
eCl@ss 8.0	27279218
eCl@ss 9.0	27060308



# Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191

## Classifications

### ETIM

ETIM 2.0	EC000830
ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC002599
ETIM 6.0	EC001262
ETIM 7.0	EC001262

### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501
UNSPSC 18.0	26121604
UNSPSC 19.0	26121604
UNSPSC 20.0	26121604
UNSPSC 21.0	26121604

## Approvals

### Approvals

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#### Approvals

EAC / EAC-RoHS / EAC

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#### Ex Approvals

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### Approval details

EAC		RU C- DE.BL08.B.00286
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EAC-RoHS		RU D- DE.HB35.B.00387
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EAC		EAC-Zulassung
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## Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191

### Accessories

#### Accessories

#### Data cable preassembled

#### Bus system cable - SAC-5P-M12MSB/900/... - 1537983



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on free cable end, cable length: Free input (0.2 ... 40.0 m)

#### Bus system cable - SAC-5P-M12FSB/900/... - 1538005



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, free cable end, on Socket straight M12, coding: B, cable length: Free input (0.2 ... 40.0 m)

#### Bus system cable - SAC-5P-M12MSB-M12FSB/900/... - 1538021



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: Free input (0.2 ... 40.0 m)

### Plug for cable screw gland

#### Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



### Protective cap

#### Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



## Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191

### Accessories

#### Safety locking

Locking clip - SAC-M12-EXCLIP-M - 1558988



Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

Locking clip - SAC-M12-EXCLIP-F - 1558991



Locking clip for the socket side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

#### Screwdriver tools

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

Tool - SAC BIT M12-D15 - 1208432



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

#### Torque tool

Torque screwdriver - TSD 04 SAC - 1208429



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

## Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191

### Accessories

Torque screwdriver - TSD-M 1,2NM - 1212224



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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