



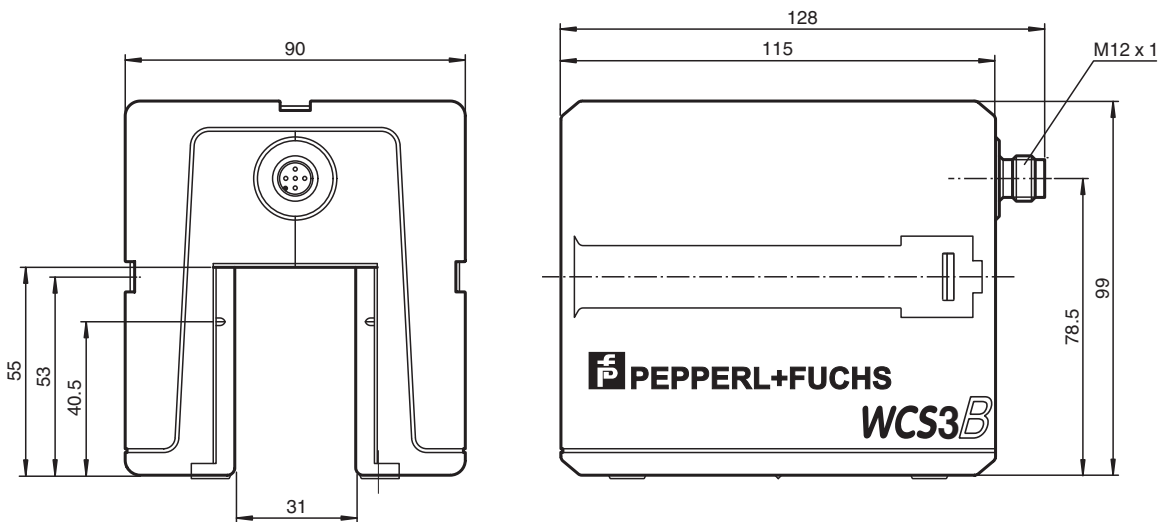
## Read head WCS3B-LS221ES

- Measuring length max. 629 m
- RS-485 interface
- Non-contact, absolute position encoder
- Automatic detection of dirt accumulation
- Speed transfer

Read head, RS-485 interface, with RS-485 termination resistor



### Dimensions



Release date: 2023-01-09 Date of issue: 2023-01-09 Filename: 199290-0045\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

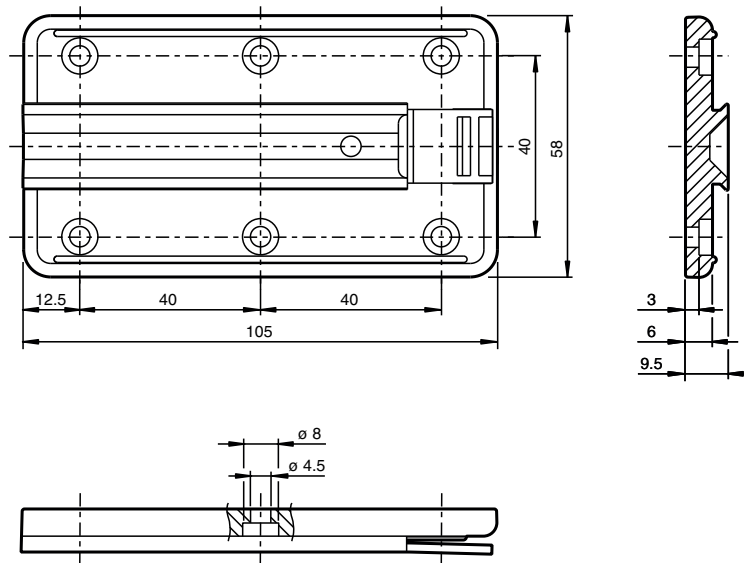
USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PF** PEPPERL+FUCHS

## Dimensions



## Technical Data

### General specifications

Passage speed	v	≤ 12.5 m/s
Measuring range		max. 629 m
Free tolerances to code rail		horizontal: 31 mm ( ± 15.5 mm ) vertical: 28 mm ( ± 14 mm )
Resolution		± 0.4 mm (1,250 positions/m)

### Functional safety related parameters

MTTF <sub>d</sub>		151 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %

### Indicators/operating means

Data flow indicator		1 LED yellow flashing: data communication active
Velocity indicator		2 LED yellow on: if the speed limit is not exceeded off, if speed limit is exceeded
Error indicator		3 Dual LED green on: code rail detected, normal function green flashing: invalid position red on: internal diagnostic test failed red flashing: read head outside of code rail

### Electrical specifications

Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Power consumption	P <sub>0</sub>	2.2 VA

### Interface

Interface type		RS 485 interface
Data output code		binary code
Protocol		2 , extended to 629 m
Transfer rate		62.5 kBit/s
Address		0
Termination		with RS 485 termination
Query cycle time		≥ 5 ms

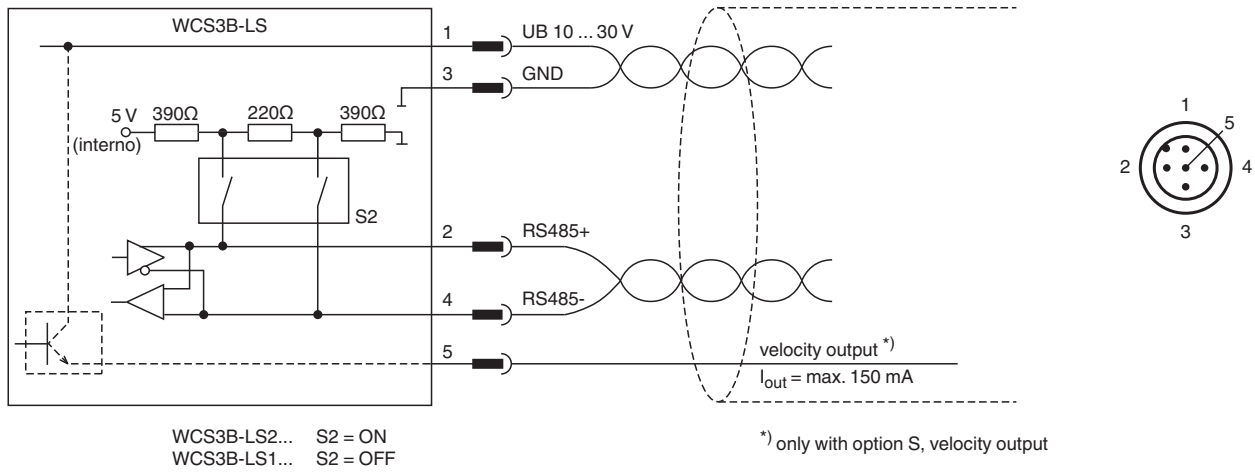
Release date: 2023-01-09 Date of issue: 2023-01-09 Filename: 199290-0045\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

**Technical Data**

<b>Output</b>	
Output velocity	switching output
Output type	1 switch output PNP, NO , short-circuit protected
Switching voltage	Operating voltage
Switching current	150 mA
<b>Standard conformity</b>	
Emitted interference	EN 61000-6-4:2007+A1:2011
Noise immunity	EN 61000-6-2:2005
Shock resistance	EN 60068-2-27:2009
Vibration resistance	EN 60068-2-6:2008
<b>Approvals and certificates</b>	
CSA approval	cCSAus Certified, General Purpose Class 2 power source
CCC approval	CCC approval / marking not required for products rated ≤36 V
<b>Ambient conditions</b>	
Operating temperature	0 ... 60 °C (32 ... 140 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Relative humidity	90 % , noncondensing
<b>Mechanical specifications</b>	
Connection type	5-pin, M12 x 1 connector
Degree of protection	IP54
Material	
Housing	ABS , PC (Polycarbonate)
Mass	500 g
<b>General information</b>	
Ordering information	Mounting plate included with delivery

**Connection**



**Accessories**

	<b>WCS3B-PL2</b>	Transparent protective case and seal for WCS3B reader
	<b>WCS-MP1</b>	Mounting plate for reading heads WCS2 and WCS3

Release date: 2023-01-09 Date of issue: 2023-01-09 Filename: 199290-0045\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".