



OS10S-TOF SERIES

ARTICLE PROPERTIES

<b>SENSOR TYPE</b>	Photoelectric sensor	<b>CONNECTION TYPES</b> (see table)	
<b>SIZE</b>	See dimensions	• Cable	PVC, 0.14 mm <sup>2</sup> , 2 m**
<b>OPERATING DISTANCE</b>	See table	• M8 connector 3-pin, A-coded	
<b>DETECTION MODE</b>	BGS TOF	• M8 connector 4-pin, A-coded	

\*\* Other cable lengths are available on request

TECHNICAL DATA

<b>OPERATING VOLTAGE</b>	10 ... 30 V DC / 5 V DC (OS10S-K4000/UR)	<b>LOAD CURRENT</b>	≤ 100 mA
<b>RIPPLE VOLTAGE</b>	≤ 10 %	<b>HOUSING MATERIAL</b>	PC + PBT
<b>LASER CLASS</b>	Infrared laser (940 nm) / class 1	<b>VOLTAGE WITHSTANDING</b>	1000 V/AC, 50/60 Hz, 60 s
<b>LIGHT SPOT SIZE</b>	See beam pattern	<b>REVERSE POLARITY PROTECTION</b>	Yes
<b>OUTPUT</b>	PNP / NPN	<b>OVERLOAD RESISTANCE</b>	Yes
<b>FREQUENCY</b>	See table	<b>SHORT CIRCUIT PROTECTION</b>	Yes
<b>CURRENT CONSUMPTION</b>	24 V 25 mA	<b>MTTF</b>	141 years

ENVIRONMENTAL CONDITIONS

<b>OPERATING ENVIRONMENT HUMIDITY</b>	35 % to 85 % RH (no condensation)	<b>INSULATION IMPEDENCE</b>	≥ 50 MΩ (500 V DC)
<b>PROTECTION CLASS</b>	IP67	<b>SHOCK RESISTANCE (EN 60068-2-27)</b>	500 m/s <sup>2</sup> (50 G) 3 times X, Y, Z respectively
<b>STORAGE TEMPERATURE</b>	-40 ... +70 °C	<b>IMPACT RESISTANCE (EN 60068-2-6)</b>	Complex amplitude 1.5 mm 10 ... 50 Hz (2hr X, Y, Z respectively)
<b>AMBIENT TEMPERATURE</b>	-20 ... +60 °C	<b>ANTI-AMBIENT LIGHT</b>	≤ 5000 Lux

STANDARDS AND DIRECTIVES

<b>EMC DIRECTIVE 2014/30/EU</b>	EN IEC 60947-5-2	<b>ROHS DIRECTIVE 2011/65/EU</b>	EN IEC 63000
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APPROVALS



OS10S-TOF SERIES

**DETECTION MODE**

Article number	Operating distance	Light source	Frequency	Output (wiring diagram)	Switching mode	Connection	Dimensions
OS10S-AK1000CN6	50 ... 1000 mm	Infrared laser + Red light indication	30 Hz	NPN (WD1)	L.O / D.O	2 m cable	see Fig. 1
OS10S-AK1000CP6	50 ... 1000 mm	Infrared laser + Red light indication	30 Hz	PNP (WD2)	L.O / D.O	2 m cable	see Fig. 1
OS10S-AK1000CN6Q8	50 ... 1000 mm	Infrared laser + Red light indication	30 Hz	NPN (WD5)	L.O / D.O	M8 connector, 4-pin	see Fig. 2
OS10S-AK1000CP6Q8	50 ... 1000 mm	Infrared laser + Red light indication	30 Hz	PNP (WD6)	L.O / D.O	M8 connector, 4-pin	see Fig. 2
OS10S-AK1000CN6Q8.3	50 ... 1000 mm	Infrared laser + Red light indication	30 Hz	NPN (WD7)	L.O / D.O	M8 connector, 3-pin	see Fig. 2
OS10S-AK1000CP6Q8.3	50 ... 1000 mm	Infrared laser + Red light indication	30 Hz	PNP (WD8)	L.O / D.O	M8 connector, 3-pin	see Fig. 2
OS10S-AK1500CN6	50 ... 1500 mm	Infrared laser + Red light indication	30 Hz	NPN (WD1)	L.O / D.O	2 m cable	see Fig. 1
OS10S-AK1500CP6	50 ... 1500 mm	Infrared laser + Red light indication	30 Hz	PNP (WD2)	L.O / D.O	2 m cable	see Fig. 1
OS10S-AK1500CN6Q8	50 ... 1500 mm	Infrared laser + Red light indication	30 Hz	NPN (WD5)	L.O / D.O	M8 connector, 4-pin	see Fig. 2
OS10S-AK1500CP6Q8	50 ... 1500 mm	Infrared laser + Red light indication	30 Hz	PNP (WD6)	L.O / D.O	M8 connector, 4-pin	see Fig. 2
OS10S-AK1500CN6Q8.3	50 ... 1500 mm	Infrared laser + Red light indication	30 Hz	NPN (WD7)	L.O / D.O	M8 connector, 3-pin	see Fig. 2
OS10S-AK1500CP6Q8.3	50 ... 1500 mm	Infrared laser + Red light indication	30 Hz	PNP (WD8)	L.O / D.O	M8 connector, 3-pin	see Fig. 2
OS10S-AK4000CN6	50 ... 4000 mm	Infrared laser + Red light indication	30 Hz	NPN (WD1)	L.O / D.O	2 m cable	see Fig. 1
OS10S-AK4000CP6	50 ... 4000 mm	Infrared laser + Red light indication	30 Hz	PNP (WD2)	L.O / D.O	2 m cable	see Fig. 1
OS10S-AK4000CN6Q8	50 ... 4000 mm	Infrared laser + Red light indication	30 Hz	NPN (WD5)	L.O / D.O	M8 connector, 4-pin	see Fig. 2
OS10S-AK4000CP6Q8	50 ... 4000 mm	Infrared laser + Red light indication	30 Hz	PNP (WD6)	L.O / D.O	M8 connector, 4-pin	see Fig. 2
OS10S-AK4000CN6Q8.3	50 ... 4000 mm	Infrared laser + Red light indication	30 Hz	NPN (WD7)	L.O / D.O	M8 connector, 3-pin	see Fig. 2
OS10S-AK4000CP6Q8.3	50 ... 4000 mm	Infrared laser + Red light indication	30 Hz	PNP (WD8)	L.O / D.O	M8 connector, 3-pin	see Fig. 2

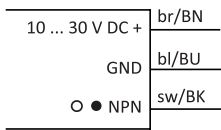
OS10S-TOF SERIES

DETECTION MODE

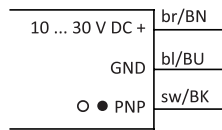
Article number	Operating distance	Light source	Repeatability	Output	Measurement accuracy	Connection	Dimensions
OS10S-K4000/485	50 ... 4000 mm	Infrared laser	10 mm	RS485 (WD3)	30 mm	2 m cable	see Fig. 1
OS10S-K4000/485/R-0.2-Q8	50 ... 4000 mm	Infrared laser + Red light indication	10 mm	RS485 (WD9)	30 mm	M8 Pigtail	see Fig. 3
OS10S-K4000/UR	50 ... 4000 mm	Infrared laser	10 mm	UR (WD4)	30 mm	2 m cable	see Fig. 1

WIRING DIAGRAMS

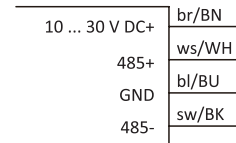
WD1 NPN / Light on | Dark on



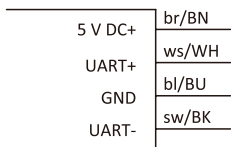
WD2 PNP / Light on | Dark on



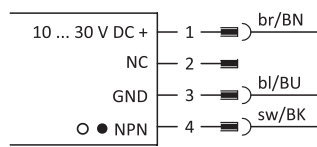
WD3 RS485 10 ... 30 V DC



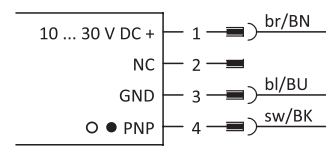
WD4 UR 5 V DC



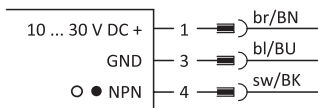
WD5 NPN / Light on | Dark on



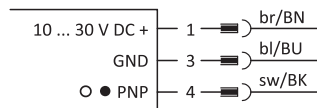
WD6 PNP / Light on | Dark on



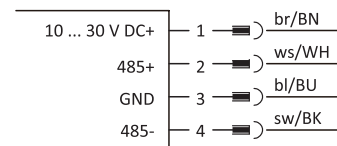
WD7 NPN / Light on | Dark on



WD8 PNP / Light on | Dark on



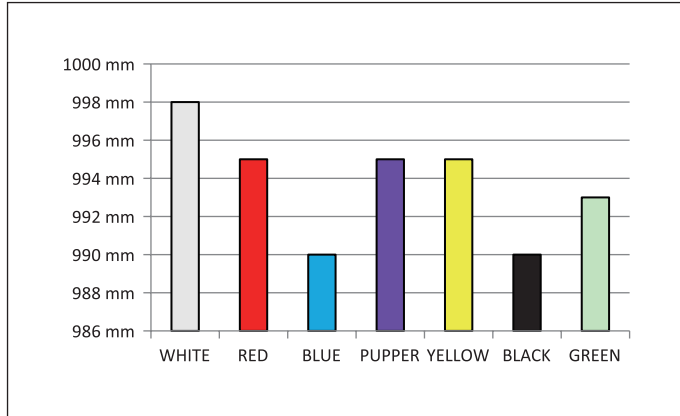
WD9 RS485 10 ... 30 V DC



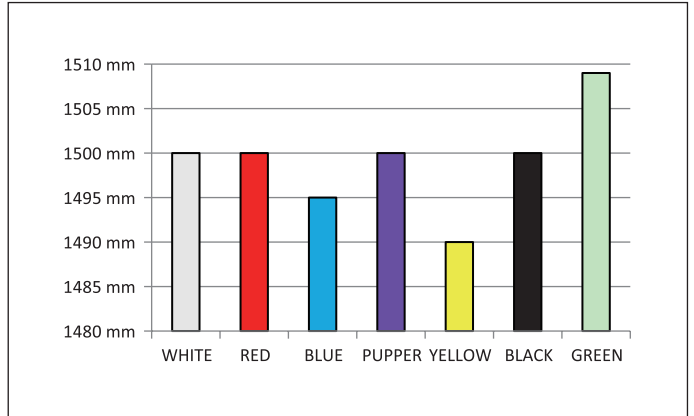
OS10S-TOF SERIES

ATTENUATION FIGURE

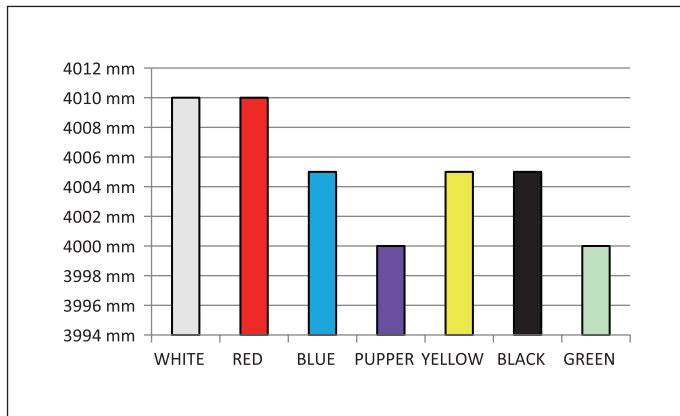
OS10S-AK1000



OS10S-AK1500

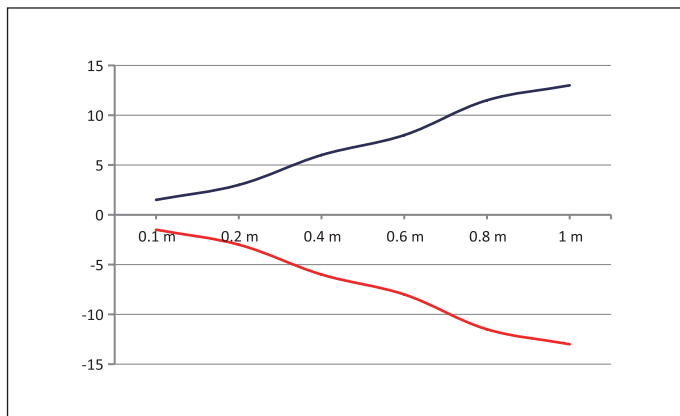


OS10S-AK4000

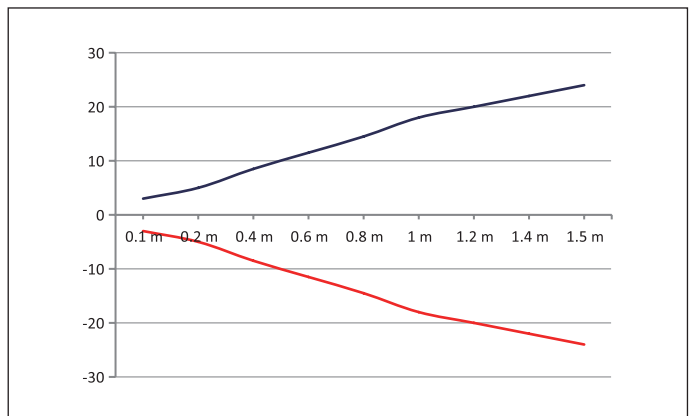


TRANSLATION CHARACTERISTIC CURVE

OS10S-AK1000 (mm)



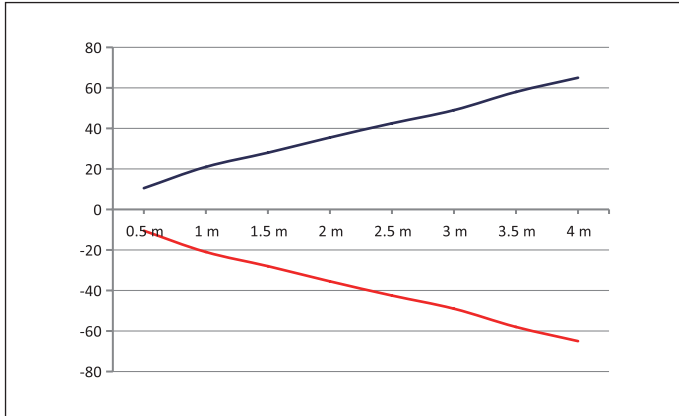
OS10S-AK1500 (mm)



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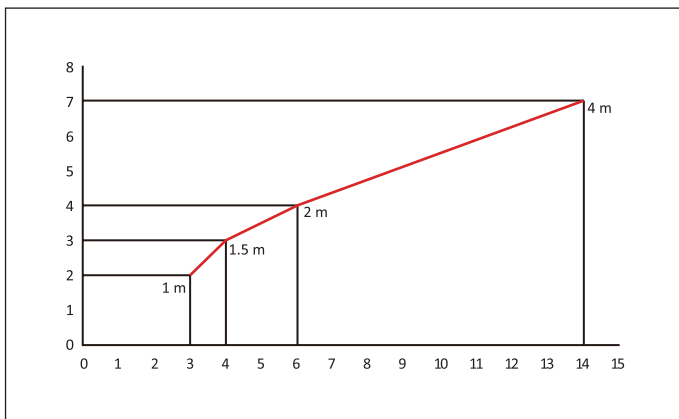
TRANSLATION CHARACTERISTIC CURVE

OS10S-AK4000 (mm)



BEAM PATTERN

OS10S-AK1000/1500/4000 (cm)



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DIMENSIONS (mm)

Fig. 1 Cable

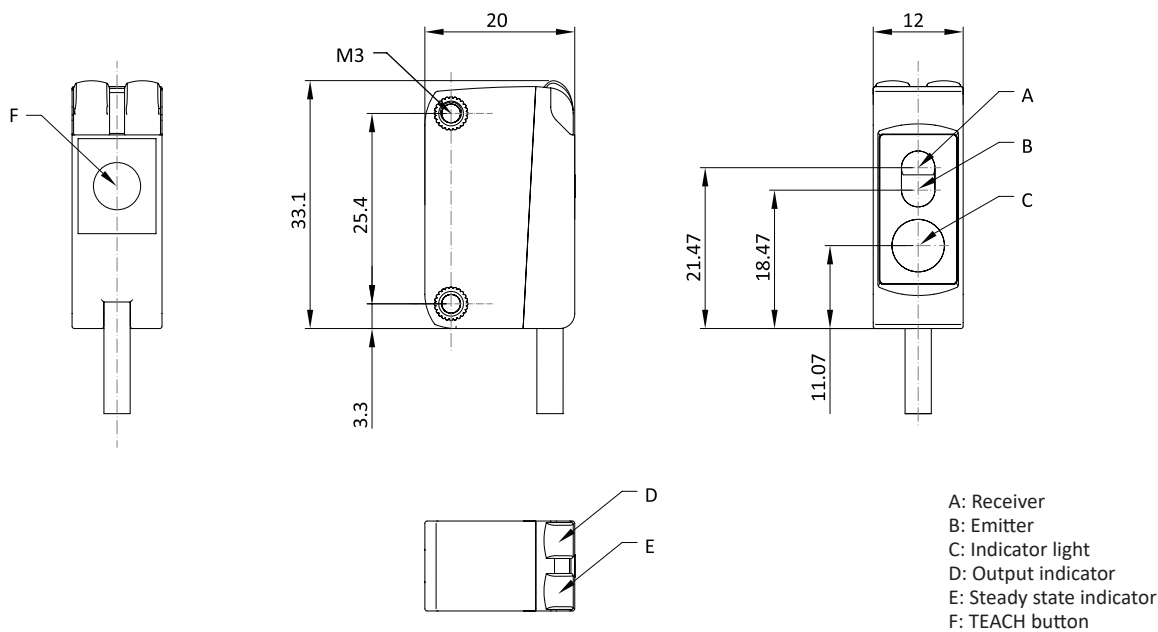
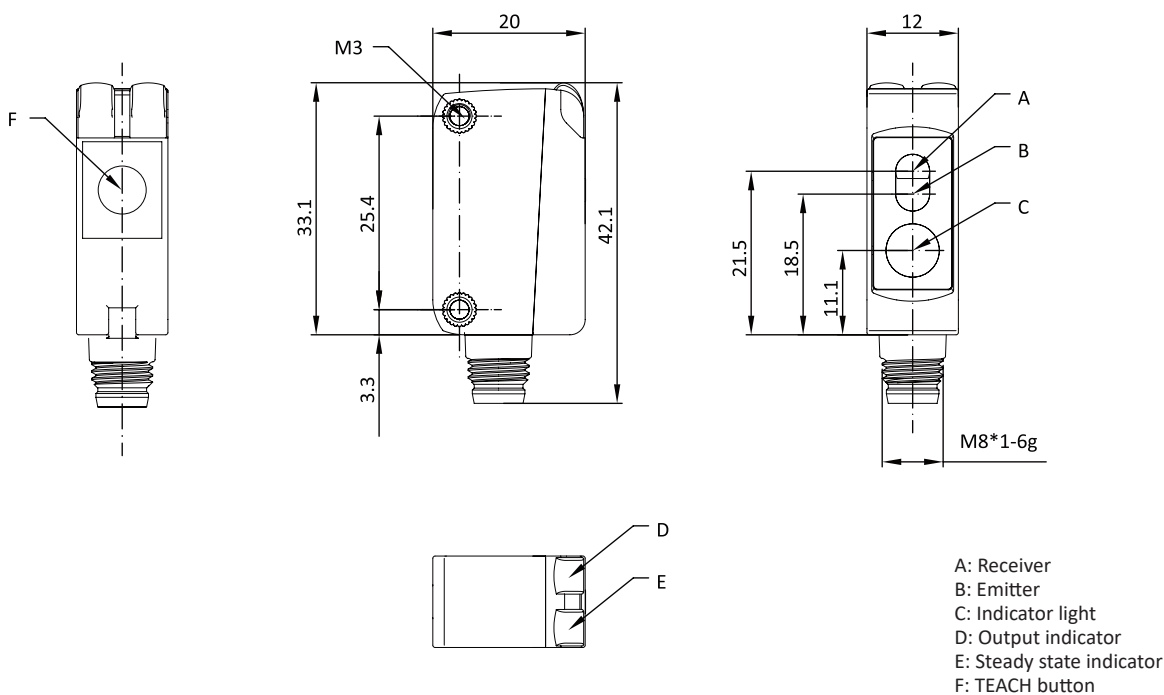


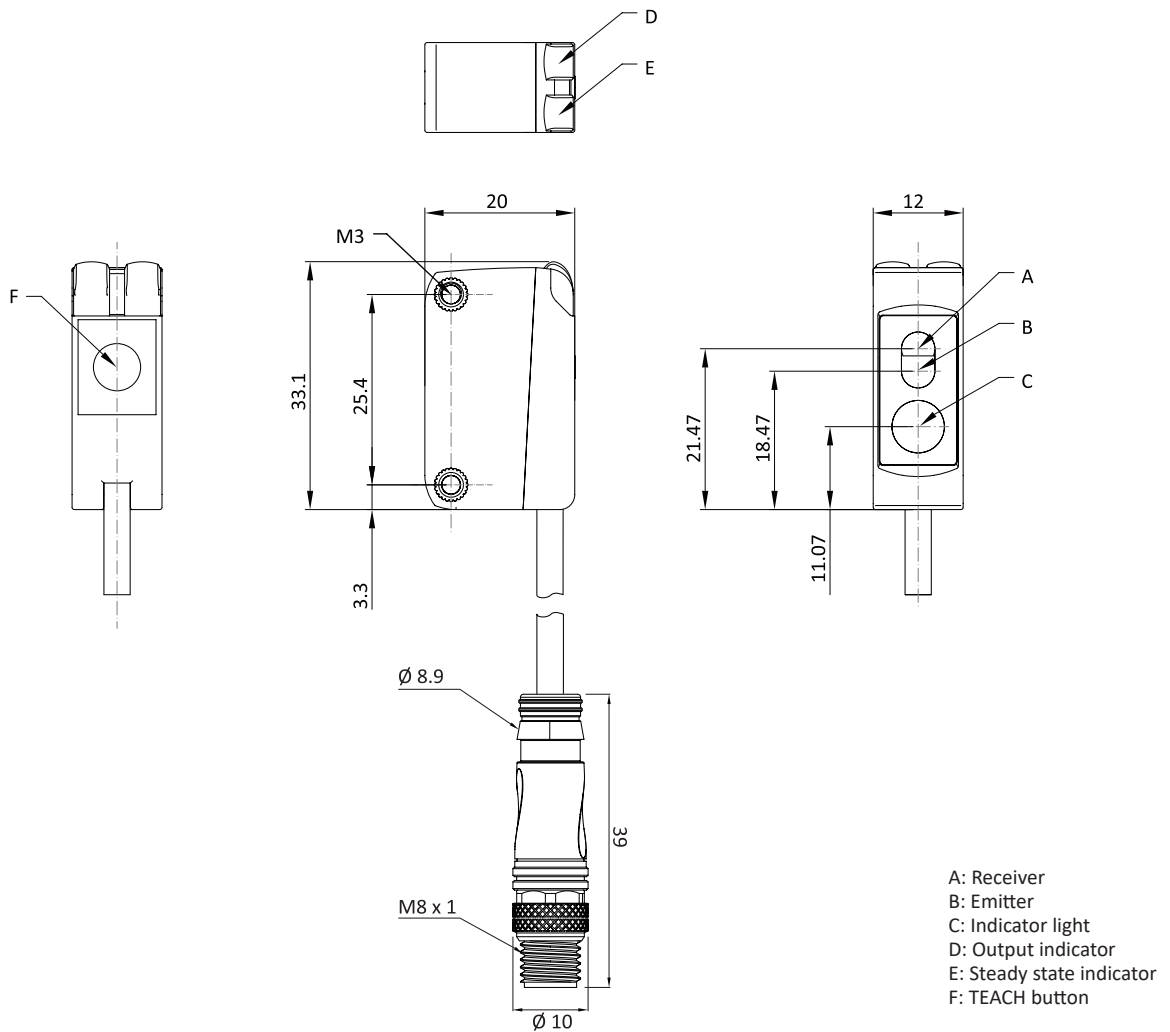
Fig. 2 M8 connector



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DIMENSIONS (mm)

Fig. 3 M8 Pigtail



## OS10S-TOF SERIES

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### SALES AND SERVICE

**Tianjin Elco Automation Co., Ltd**

No. 12, 4th XEDA Branch Road  
Xiqing Economic-Technological Development Area  
Tianjin 300385, P.R. China  
Office Phone: 022 23788282  
E-Mail: [info@elco.cn](mailto:info@elco.cn)  
[www.elco-holding.com.cn](http://www.elco-holding.com.cn)

**Elco Industrie Automation GmbH**

Benzstrasse 7  
71720 Oberstenfeld,  
Deutschland  
Office Phone: +49 7062 / 6599-260  
E-Mail: [info@elco-automation.de](mailto:info@elco-automation.de)  
[www.elco-automation.de](http://www.elco-automation.de)

**Elco Automation LLC**

1097 Highway 101 South, Suite D-3 Greer  
South Carolina 29651, USA  
Office Phone: +1 864-581-7431  
E-Mail: [infousa@elcoautomation.com](mailto:infousa@elcoautomation.com)  
[www.elcoautomation.com](http://www.elcoautomation.com)

**Elco Industrial Automation Pvt Ltd.**

No 80, 1<sup>st</sup> Main, 2<sup>nd</sup> Cross, Royal Enclave,  
Sidedahalli, Nagasandra Bangalore 560073, India  
Office Phone: +91-7259931777  
E-Mail: [info@elcoautomation.in](mailto:info@elcoautomation.in)  
[www.elcoautomation.com](http://www.elcoautomation.com)

**Elco Automation Korea Ltd.**

706, 17 Daehak 4-ro, Yeongtong-gu, Suwon-si,  
Gyeonggi-do, Republic of Korea, 16226  
Office Phone: +82-31-216-7890  
E-Mail: [sales@elcoautomation.co.kr](mailto:sales@elcoautomation.co.kr)  
[www.elcoautomation.com](http://www.elcoautomation.com)