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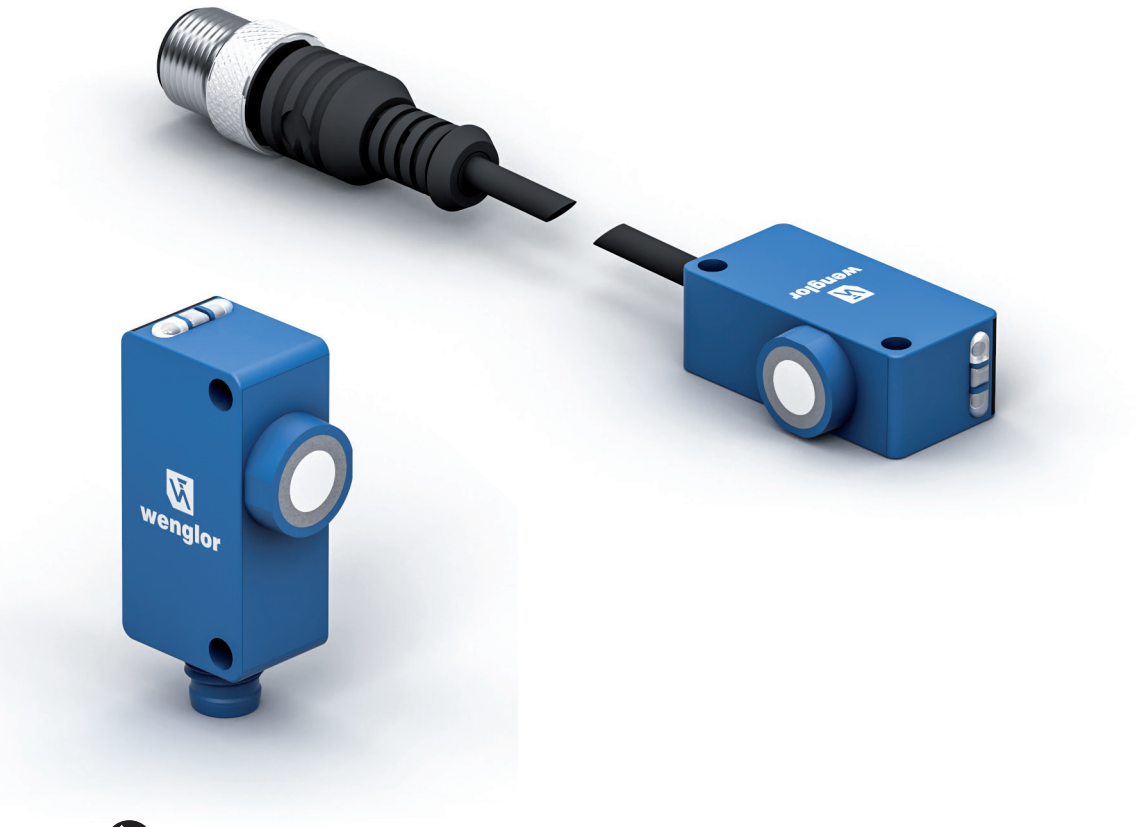
the innovative family

U1KTxxx

Ultrasonic Reflex Sensor



IO-Link

Interface Description

Original operating instructions
Available as PDF version only
Version: 1.6.0
Status: 04.12.2023
www.wenglor.com

IO-Link U1KTxxx

Vendor ID

Product	hex	dec	hex (Bytes)	dec (Bytes)
wenglor sensoric GmbH	0x0057	87	00 57	0 87

Device ID

Product	hex	dec	hex (Bytes)	dec (Bytes)
U1KT001	0x160501	1443073	16 05 01	22 5 1
U1KT002	0x160601	1443329	16 06 01	22 6 1
U1KT003	0x160701	1443585	16 07 01	22 7 1
U1KT004	0x160901	1444097	16 09 01	22 9 1

IO-Link Version: V 1.1
Data Storage: Yes
Blockparameter: Yes
Min Cycle Time: 2,3 ms
SIO-Mode: Yes
COM-Mode: COM2

Process data (Length: 16 Bit)
If “Processdatatype” = 0

Subindex	Name	Bit Offset	Length	Range
1	A1 Output	0	1 Bit	0 = false 1 = true
2	A2 Output	1	1 Bit	0 = false 1 = true
3	Measured Value in 1/10 mm	2…15	14 Bit	300…4500

Octet 0

Subindex	3 (MSB)							
Bit Offset	15	14	13	12	11	10	9	8

Octet 1

Subindex	3 (LSB)						2	1
Bit Offset	7	6	5	4	3	2	1	0

If “Processdatatype” = 1

Subindex	Name	Bit Offset	Length	Range
1	Measured Value in 1/10 mm	0…15	16 Bit	300…4500

Octet 0

Subindex	1 (MSB)							
Bit Offset	15	14	13	12	11	10	9	8

Octet 1

Subindex	1 (LSB)							
Bit Offset	7	6	5	4	3	2	1	0

Parameter

Name	Index (hex)	Index (dec)	Sub-index	R/W	Length	Data Storage	Dy-namic	Modify others	Default value	Range
Identification										
Vendor Name	0x0010	**16**	0	R	String				wenglor sensoric GmbH	
Vendor Text	0x0011	**17**	0	R	String				the innovative family	
Produkt Name	0x0012	**18**	0	R	String				U1KT001 U1KT002 U1KT003 U1KT004	
Product ID	0x0013	**19**	0	R	String				U1KT001 U1KT002 U1KT003 U1KT004	
Product Text	0x0014	**20**	0	R	String				Ultrasonic Distance Sensor	
Serial Number	0x0015	**21**	0	R	String				—	
Hardware Revision	0x0016	**22**	0	R	String				—	
Firmware Revision	0x0017	**23**	0	R	String				—	
Application Specific Name	0x0018	**24**	0	R/W	String 32 Byte	X			***	
Parameter										
Device Settings										
System Command	0x0002	**2**	0	W	Uint8			X	—	Factory Reset = 0x82 (130)
Device Access Locks. Parameter (write) Access Lock	0x000C	**12**	1	R/W	Bool	X			0	0 = unlocked 1 = Parameter Access locked
Device Access Locks. Data Storage Lock	0x000C	**12**	2	R/W	Bool	X			0	0 = unlocked 1 = Data Storage Locked
Button Lock Mode	0x004A	**74**	0	R/W	Uint8	X			0	0 = unlocked 1 = locked
Mesasured Value Settings										
Sensor Mode	0x0110	**272**	0	R/W	Uint8	X		X	0	0 = Normal 1 = Synchron Master 2 = Synchron Slave 3 = Mute 4 = Barrier Emitter 5 = Barrier Receiver
Filter	0x00D0	**208**	0	R/W	Uint8	X		X	0	0 1 … 20*
Sonic Cone	0x00E0	**224**	0	R/W	Uint8	X			0	0 = Standard 1 = Small
Processdatatype	0x005A	**90**	0	R/W	Uint8	X		X	0	0 = Outputs and Measure Value 1 = Measured Value Only
Temperature Mode	0x0049	**73**	0	R/W	Uint8	X		X	0	0 = Intern 1 = Extern
Extern Temperaturevalue in 1/100 °C	0x0059	**89**	0	R/W	s16				2300	–4000…8000
Pin Function										
A2 Pin Function (U1KT001, U1KT002, U1KT003)	0x0041	**65**	0	R/W	Uint8	X		X	3	0 = Extern Teach 1 = Synchron Input 2 = Synchron Output 3 = Switching Output 4 = Error Output 5 = Not used
A2 Pin Function (U1KT004)	0x0041	**65**	0	R/W	Uint8	X		X	6	0 = Extern Teach 1 = Synchron Input 2 = Synchron Output 3 = Switching Output 4 = Error Output 5 = Not used 6 = Switching Output antivalent

* U1KT0xx with firmware versons before V02.00.01: only filters 0…15 available versions

Name	Index (hex)	Index (dec)	Sub-index	R/W	Length	Data Storage	Dy-namic	Modify others	Default value	Range
A1 Settings (Switch Output)										
A1 Teach Mode	0x0290	**656**	0	R/W	Uint8	X		X	0	0 = Foreground 1 = Window
A1, A2 NPN/PNP	0x0220	**544**	0	R/W	Uint8	X			U1KT001: 0 U1KT002: 1 U1KT003: 0 U1KT004: 0	0 = PNP 1 = NPN
A1 NO/NC	0x0210	**528**	0	R/W	Uint8	X			0	0 = NO 1 = NC
A1 Teach-In	0x0200	**512**	0	W	Uint8	X		X	0	0 = no action 1 = Teach-In Foreground 2 = Teach-In Window Point 1 3 = Teach-In Window Point 2
A1 Switch Point	0x004D	**77**	0	R/W	Uint16	X			400 mm	30 mm…400 mm
A1 Window Switch Point Far	0x004F	**79**	0	R/W	Uint16	X			400 mm	30 mm…400 mm
A1 Window Switch Point Near	0x0051	**81**	0	R/W	Uint16	X			300 mm	30 mm…400 mm
A1 Hysteresis Additional	0x0230	**560**	0	R/W	Uint16	X			0 mm	0 mm…200 mm
A2 Input/Output										
A2 Teach Mode	0x0291	**657**	0	R/W	Uint8	X		X	0	0 = Foreground 1 = Window
A1, A2 NPN/PNP	0x0220	**544**	0	R/W	Uint8	X			U1KT001: 0 U1KT002: 1 U1KT003: 0 U1KT004: 0	0 = PNP 1 = NPN
A2 NO/NC	0x0211	**529**	0	R/W	Uint16	X			0	0 = NO 1 = NC
A2 Teach-In	0x0201	**513**	0	W	Uint8			X	0	0 = no action 1 = Teach-In Foreground 2 = Teach-In Window Point 1 3 = Teach-In-Window Point 2
A2 Switch Point	0x0053	**83**		R/W	Uint16	X			400 mm	30 mm…400 mm
A2 Window Switch Point Far	0x0055	**85**		R/W	Uint16	X			400 mm	30 mm…400 mm
A2 Window Switch Point Near	0x0057	**87**		R/W	Uint16	X			300 mm	30 mm…400 mm
A2 Hysteresis Additional	0x0231	**561**		R/W	Uint16	X			0 mm	0 mm…200 mm