Guide to swapping your KT5W-2P1116 (RS Stock No. 741-7666)

After a long period of continuous availability, SICK is phasing out the KT5W-2P1116 and to help you select a replacement sensor we have provided the following information;

The KT5 series has been replaced by the vastly superior KTX and KTS contrast sensors. They offer better performance, greater flexibility and are easier to use.

If you want to us the same mechanical mounting points then you can use one of these two KTX sensors as a direct replacement. Your choice depends on which optical exit you were using in your existing KT5 configuration.

To **replace long side** exit configuration

KTX-WP91141252ZZZZ
RS Stock No: 180-6335

To **replace short side** exit configuration

KTX-WP91142252ZZZZ
RS Stock No: 180-6334

If you would like to add IO-Link capability to be able to control the sensors from a PLC or capture performance data for remote monitoring or cloud storage then we recommend you look at this sensor. Please remember to verify its correct operation for your application.

KTS-WB9114115AZZZZ
RS Stock No: 180-6344

Feature comparison

	KT5W-2P1116	KTX-WP91141252ZZZZ	KTX-WP91142252ZZZZ	KTS-WB9114115AZZZZ
				
RS Stock No.	**741-7666**	180-6335	180-6334	180-6344
FEATURES				
Special applications		Standard		Standard
Dimensions (W x H x D)	30.4 mm x 53 mm x 80 mm	30 mm x 53 mm x 78.5 mm		26 mm x 62 mm x 47.5 mm
Sensing distance	10 mm (From front edge of lens)	13 mm		13 mm
Device type		Standard		Standard
Sensing distance tolerance		± 5 mm		± 5 mm
Housing design (light emission)	Rectangular			Rectangular
Light source	LED, RGB (Average service life: 100,000 h at TU = +25 °C)			LED, RGB (Average service life: 100,000 h at TU = +25 °C)
Wave length	470 nm, 525 nm, 640 nm	470 nm, 525 nm, 625 nm		470 nm, 525 nm, 625 nm
Light spot size	1.2 mm x 4.2 mm	0.9 mm x 3.8 mm		0.9 mm x 3.8 mm
Light spot direction	Vertical (in relation to long side of housing)			Vertical (in relation to long side of housing)
Light emission	Long and short side of housing, exchangeable	Long side of housing	Short device side	Long side of housing
Adjustment	Teach-in button			
Teach-in mode	Static 2-point teach-in	1-point teach-in, 2-point teach-in, teach-in dynamic, auto mode		1-point teach-in, 2-point teach-in, teach-in dynamic, auto mode
Receiving filters		None		None
Special features		-		-
Output function		Light/dark switching		Light/dark switching

Feature comparison

Delay time		Adjustable	Adjustable
Delivery status		2-point teach-in	2-point teach-in
Parameter presettings		None	None
MECHANICS/ELECTRONICS			
Supply voltage	10 V DC ... 30 V DC (Limit values when operated in short-circuit protected network: max. 8 A)	10.8 V DC ... 28.8 V DC (limit values: DC 12 V (–10 %) ... DC 24 V (+20 %). Operation in short-circuit protected network max. 8 A)	10.8 V DC ... 28.8 V DC (limit values: DC 12 V (–10 %) ... DC 24 V (+20 %). Operation in short-circuit protected network max. 8 A)
Ripple	≤ 5 Vpp (May not exceed or fall below Uv tolerances)		≤ 5 Vpp (May not exceed or fall below Uv tolerances)
Current consumption	< 80 mA (without load)	< 100 mA (without load)	< 100 mA (without load)
Switching frequency	10 kHz (with light/dark ratio 1:1)	50 kHz (with light/dark ratio 1:1) (1-point teach-in (color mode): 16 kHz)	50 kHz (with light/dark ratio 1:1) (1-point teach-in (color mode): 8 kHz)
Response time	50 µs (Signal transit time with resistive load)	10 µs (Signal transit time with resistive load) (1-point teach-in (color mode): 30 µs)	10 µs (Signal transit time with resistive load) (1-point teach-in (color mode): 60 µs)
Jitter		5 µs (1-point teach-in (color mode): 15 µs)	5 µs (1-point teach-in (color mode): 30 µs)
Switching output	PNP		PUSH/PULL
Switching output (voltage)	PNP: HIGH = VS– ≤ 2 V / LOW approx. 0 V	PNP: HIGH = VS - 3 V / LOW = 0 V	Push/Pull: HIGH = VS - 3 V / LOW ≤ 3 V
Switching mode	100 mA (Short-circuit-proof)	100 mA (Total current of all Outputs)	100 mA (Total current of all Outputs)
Output current Imax.	PNP	Teach: U = 10 V ... < VS	Teach: U = 10 V ... < VS
Input, teach-in (ET)	Teach: U = 10 V ... < UV	Blanked: U = 10 V ... < Uv	Blanked: U = 10 V ... < Uv
Input, blanking input (AT)	Run: U < 2 V		
Connection type	Male connector M12, 5-pin		Male connector M12, 5-pin
Input, fine/coarse (F/C)		Coarse: U = 10 V ... < Uv	Coarse: U = 10 V ... < Uv
Protection class	II (Reference voltage DC 50 V)	III	III

Feature comparison

Input, light/dark (L/D)		Light: U = 10 V ... < Uv		Light: U = 10 V ... < Uv
Circuit protection	UV connections, reverse polarity protected			UV connections, reverse polarity protected
	Output Q short-circuit protected			Output Q short-circuit protected
	Interference pulse suppression			Interference pulse suppression
Retention time (ET)	25 ms, non-volatile memory			25 ms, non-volatile memory
Enclosure rating	IP67			IP67
Weight	400 g	94 g		68 g
Housing material	Metal, zinc diecast	Plastic, VISTAL®		Plastic, VISTAL®
Optics material		Plastic, PMMA		Plastic, PMMA
COMMUNICATION INTERFACE				
IO-Link				yes , IO-Link
IO-Link (VendorID)				26
IO-Link (DeviceID HEX)				8000A4
IO-Link (DeviceID DEC)				8388772
Process data structure				Bit 0 = switching signal QL1
Digital output				Bit 1 = empty
Digital output (Number)				Bit 2 = Quality of Run Alarm
Digital input				Bit 3 ... 5 = Emission Color
Digital input (Number)				Bit 6 ... 15 = Measurment Value Emission Color
				Q1, Q2

				2
				In1, In2
				2
AMBIENT DATA				
Ambient operating temperature	–10 °C ... +55 °C	–20 °C ... +60 °C		–20 °C ... +60 °C
Ambient storage temperature	–25 °C ... +75 °C			–25 °C ... +75 °C
Shock load	According to IEC 60068	According to IEC 60068-2-27 (30 g/11 ms)		According to IEC 60068-2-27 (30 g/11 ms)
UL File No.		E181493		E181493