2D LiDAR

Safety Laser Scanner

Type 3 (IEC61496-1, IEC61496-3)
SIL 2 (Type B, HFT=1) (IEC61508)

CE TÜV SÜD FUNCTIONAL SAFETY c(UL)us LISTED
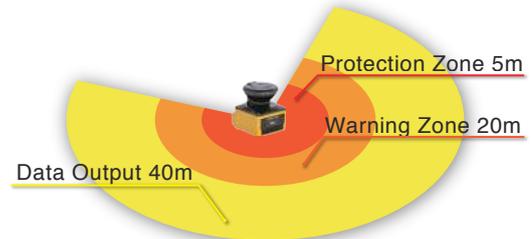
UAM-05LP-T301 / T301C

Protection Zone 5m
Warning Zone 20m
Data Output 40m

At a glance

■ Max. range for protection zone : 5m
■ Max. range for warning zone : 20m
■ Configurable patterns : Up to 32 options
■ High precision data : Available via Ethernet
■ Size : W80xD80xH95mm

Type	Model	Safety	Data output	No. of field sets
Detection output	**UAM-05LP series**	O	O	**32**
	UAM-05LPA series	O	O	128

Product description

· Safety standard certified
· UAM-05LP safety laser scanner offers comprehensive protection for a wide range of applications, from basic to complex.
· User-friendly safety Area Designer software, along with USB interface, provides an enhanced experience and superior performance.
· UAM offers a solution that allows a single unit to monitor two independent protection zones while supporting the management of up to four UAMs in a master/slave interface.
  This setup maximizes efficiency and minimizes wiring requirements.
· UAM is a safety laser scanner with top-level minimal volumetric weight, achieving exceptional detection capabilities.

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Specification		UAM-05LP-T301	UAM-05LP-T301C
Electronics	**Supply voltage**	24VDC ±10% (when operation using converter power supply) 24VDC -30%/+20% (when operation using battery)	
	Supply current	6W (without load) / 50W (with load)	
	Light source	Pulsed laser diode (905nm) , Laser class 1	
Detection	**Maximum distance (Protection zone)**	5m	
	Distance tolerance	+100mm	
	Maximum distance (Warning zone)	20m	
	Maximum distance (Data output)	40m	
	Distance accuracy (Data output)	±35mm	
	Detection capability	From black-reflector sheet（1.8%）to retro-reflector sheet	
	Minimum detectable width	φ30 mm	
	Angle	270˚	
	Scanning speed	30msec	
Function	**No. of OSSD**	Max. 2 sets	
	No. of area patterns	Max. 32	
	Response time	Delay time : 60msec to 2010msec Dwell time : 270msec to 2010msec	
Interface / Software	**Interface for area configuration**	micro USB type-B	
	Interface for data output	Ethernet	
	Interface for master slave function	RS485	
	Area configuration	Configured by software	
General	**Ambient illuminance**	Less than 1,500lx	
	Ambient operating temperature and humidity	Temperature : -10~50℃ Humidity : below 95%RH (without dew, frost)	
	Storage temperature and humidity	Temperature : -25~70℃ Humidity : below 95%RH (without dew, frost)	
	Vibration resistance	10 to 55Hz Sweep rate : 1 octave/min Amplitude : 0.35 mm ±0.05 mm	
	Shock resistance	98m/s^2 (10G)	
	IP protection	IP65	
	Weight	800g	500g
	Size W x D x H (mm)	80 x 80 x 95	
	Material	Optical window : Polycarbonate, Case : Aluminum	
	Connection cable	Flying lead cable : 3m	Waterproof connector : 0.3m
Standards	**Safety level**	PL d, SIL 2, Type 3	

Connection

Power source, I/O cable :

UAM-05LP-T301 :
       Cable length 3000mm flying lead

[Option cable for extension]
       UAM-5C10 : 10m / UAM-5C20 : 20m

UAM-05LP-T301C :
       Cable length 300mm with water proof connector
       ODU / Model No.S13K0C-P22PFG0-8500

[Option connector cable]
       UAM-5C02C : 2m / UAM-5C05C : 5m / UAM-5C10C : 10m / UAM-5C20C : 20m

Ethernet connector :

       M8 waterproof connector 4 core A-code socket (Female)
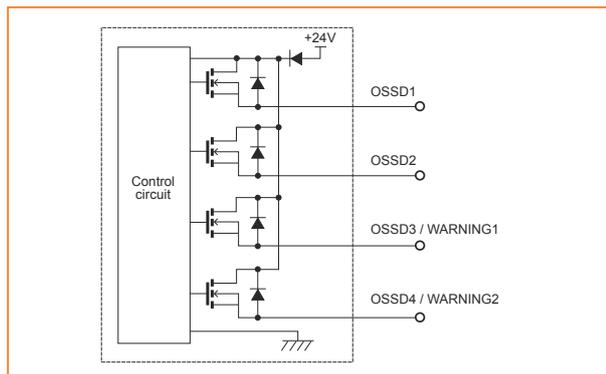
[Option cable]
       UAM-ENET : Cable with 3m length

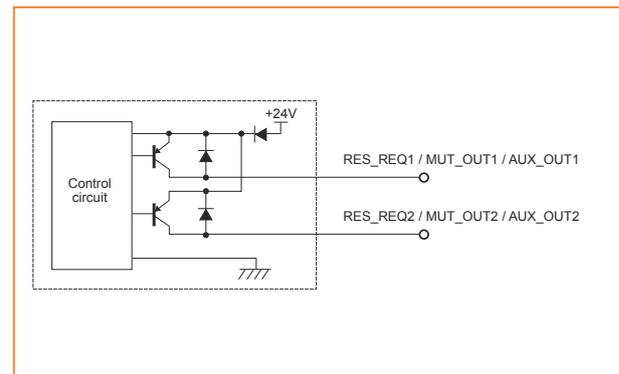| Color	Function
Brown	Power Supply : 24VDC
Blue	Power Supply : 0VDC
Red	Protection zone output 1
Yellow	Protection zone output 2
Red / Black	Warning zone output 1 / Protection zone output 3
Yellow / Black	Warning zone output 2 / Protection zone output 4
Purple	Area switching Input A
Gray	Area switching Input B / Muting input 3
White	Area switching Input C / Override input 1 / Encoder input 1_A
Pink	Area switching Input D / Muting input 1 / Encoder input 1_B
Green	Area switching Input E / External device monitoring 1

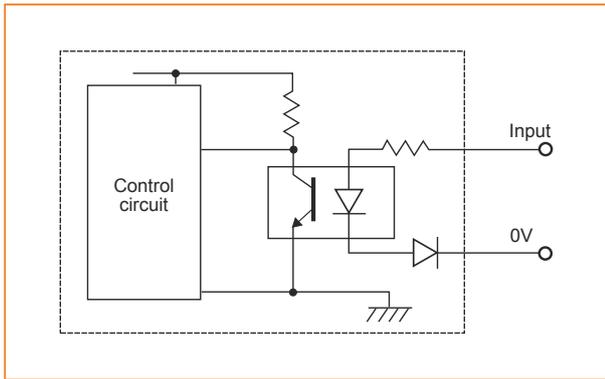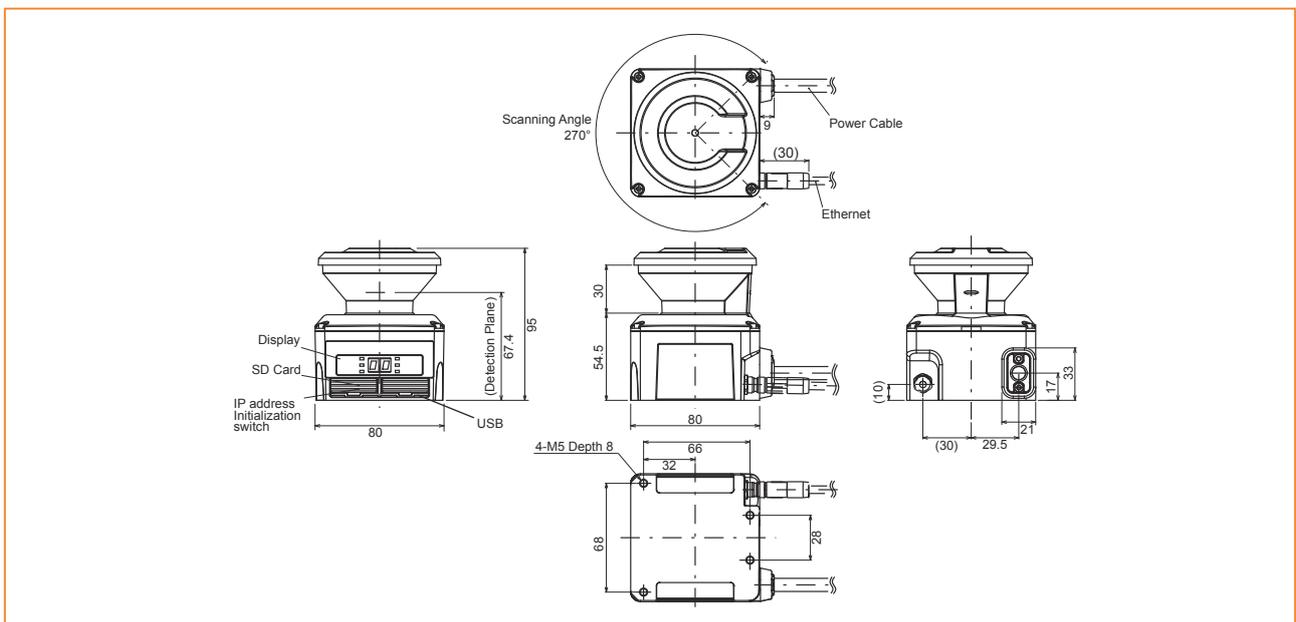| Color	Function
Purple / Black	Area switching Input A invert
Gray / Black	Area switching Input B invert / Muting input 4
White / Black	Area switching Input C invert / Override input 2 / Encoder input 2_A
Pink / Black	Area switching Input D invert / Muting input 2 / Encoder input 2_B
Green / Black	Area switching Input E invert / External device monitoring 2
Yellow / Green	Reset input 1
Yellow / Blue	Reset input 2
Orange	RES_REQ 1 / MUT_OUT 1 / AUX_OUT 1
Orange / Black	RES_REQ 2 / MUT_OUT 2 / AUX_OUT 2
White / Blue	RS485+
White / Red	RS485-
Shield wire	Frame ground

I/O circuit

OSSD / Warning output circuit

Other output circuits

Input circuit

External dimension

Option

Extension cable (for UAM-05LP-T301)

Model	Code	Length
UAM-5C10	UZ00066	10m
UAM-5C20	UZ00067	20m

Connector cable (for UAM-05LP-T301C)

Model	Code	Length
UAM-5C02C	UZ00081	2m
UAM-5C05C	UZ00082	5m
UAM-5C10C	UZ00083	10m
UAM-5C20C	UZ00084	20m

USB cable

Model	Code	Length
UAM-MUSB	UZ00065	1m

Ethernet cable

Model	Code	Length
UAM-ENET	UZ00062	3m

Bracket / Optical window

Model	Code	Ref.
UAM-BK03	UZ00059	Base mounting bracket
UAM-BK04	UZ00060	Rear mounting bracket
UAM-BK05	UZ00061	Cover bracket
UAM-BK06	UZ00103	Protection cover bracket
UAM-W002	UZ00064	Replacement optical window