

Optex Sensors that Can be used with the UQ1 series

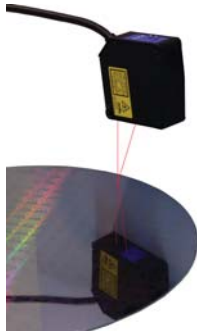
CD33 Series Serial Communications type



NPN	PNP	Sensing Distance	Resolution
CD33-30N-422	CD33-30P-422	30mm +-4mm RS422 Communications	2µm
CD33-50N-422	CD33-50P-422	50mm +-10mm RS422 Communications	5µm
CD33-85N-422	CD33-85P-422	85mm +-20mm RS422 Communications	10µm
CD33-120N-422	CD33-120P-422	120mm +-60mm RS422 Communications	30µm
CD33-250N-422	CD33-120P-422	250mm +-150mm RS422 Communications	75µm

Analog and QD versions also available

CD5 Series High Accuracy Type



Narrow Beam	Wide Beam	Sensing Distance	Resolution
CD5-L25A	CD5-LW25A	25mm +-1mm RS422 Communications	0.37µm
CD5-30A	CD5-W30A	30mm +-5mm RS422 Communications	.23µm
CD5-85	CD5-W85A	85mm +-20mm RS422 Communications	1µm
	CD5-W350	350mm +-100mm RS22 Communications	5µm
	CD5-W500	500mm +-200mm RS422 Communications	10µm
	CD5-W2000	2000mm +-500mm RS422 Communications	30µm

Can also be connected to exclusive LCD Controller CD5A-N (or P)
Serial Connection Cable DOL-1212-G05M

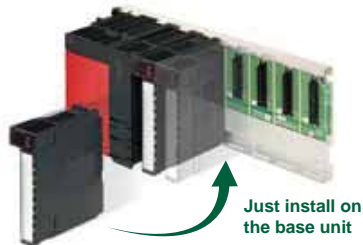


Easy connection & Easy setup

■ Communication setup is not needed

UQ1 series is recognized simply by installing on the MELSEC-Q series base unit with no communication setup required.

There is also no communication setup needed between CD5 sensor and UQ1 series.



■ Easy reading LED display

You can see following information on the LED display easily.

- Measurement result (Q1~Q5)
- Error status (sensor head connection etc.)
- I/O status
- Bar graph (simple status of distance or distribution status)

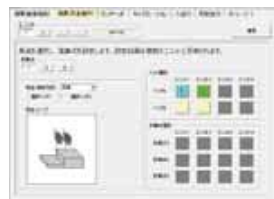


■ Easy access software

Dedicated software "UQ1 Navigator" is now available. Easily access the intuitive software, change the setup parameters and check the measurement status without needing knowledge of PLC and ladder programming.



Measurement result



Calculation result



Measurement result on the GOT



Storage data on the GOT

■ Data/Ladder program for GOT are ready

Data/Ladder program (sample) for HMI touch panel GOT are ready. You can setup just by loading them. You can also utilize data storage function of UQ1.

Please contact distributor to get software and data


■ UQ1 major specifications

I/O points to occupy		32 points / 1 slot	Trigger input	Logic	ON by connecting to GND (0V)
Sampling period		UQ1-01: 100μs Min., UQ1-02: 500μs Min.		Voltage	ON voltage: 1.0V Max. / OFF voltage: 2.0V Min.
Communication method		Infrared		Input impedance	Approximately 10kΩ
Terminal block	Usable wire	Core: 0.3 ~ 0.75mm ² (Outer diameter: Max. 2.8mm)	Function	Setup sensor head, Control output, Calculation, Hold function, Filter function, Bank setup, Storage function	
	Usable solderless terminal	R1.25-3 without sleeve			
Communication I/F (between UQ1 and CD5)	No. of head	2 Heads Max.	High speed logging point	262,144 points Max.	
	Protocol	RS-422	EEPROM over writing limit	Max. 1,000,000 times for same memory area	
	Baud rate	UQ1-01: 921.6kbps, UQ1-02: 256kbps	DC5V current consumption	0.5A Max.	
	Cable	DOL-1212-G05M (5m sensor head cable)*	Noise tolerance	500Vp-p (simulator), Noise width: 1μs Fast transient noise 1kV (IEC 61000-4-4)	
	Cable extension	Up to 50m using optional extension cable (unbundled)*			
Control input / output	No. of I/O	2 Input / 2 Output	Insulation resistance	Min. 10MΩ (insulation resistance meter)	
	Mode	NPN open collector	Protection category	IP2X	
	Output voltage	DC12-24V (±10%)	Operating Temp./Humid.	-10 ~ +55deg.C/ 35 ~ 85%RH (non condensation)	
	Output current	80mA (DC12-24V)	Storage Temp./Humid.	-20 ~ +70deg.C/ 35 ~ 85%RH (non condensation)	
	Residual voltage	2V Max.	Vibration resistance	10~55Hz, 1.5mm, X-Y-Z each for 2 hours	
	Leak current	0.2mA Max.	Dimensions	98(H) * 27.4(W) * 90(D) [mm]	
	Protection	Over current protection circuitry	Weight	Approximately 150g	

* Only for UQ1-01

18 model

High performance laser displacement sensor CD5 series




- Top level repeat accuracy in the class
- Longest stand off 2000mm type in the industry
- Industry first direct connection to PLC
- Utilizing C-MOS linear image sensor
- Linearity: +/- 0.05%F.S. ~ +/- 0.1%F.S.

36 model


Compact laser displacement sensor CD33 series

Digital output type with RS-422 I/F
specular and diffuse type




- Compact and light weight: good for installing in the machine
- Cost effective
- Utilizing C-MOS linear image sensor
- Linearity: +/- 0.1%F.S. ~ +/- 0.3%F.S.

Controlling glass thickness



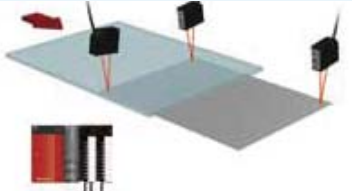
You can control glass thickness by feedback control utilizing storage function of UQ1. For example, UQ1-01 and CD5-30 sensor head can store data for 10ms and check the quality of the glass surface then, feedback and control glass thickness. Conventional system using serial I/F for PLC will take time so it won't work stably.

Height controlling of exposure head



You can control height of the exposure head by specular type displacement sensor CD33-L30. CD33 series is compact and light so you can mount on movable exposure head and it doesn't prevent moving smoothly. You can also setup the sensor head easily in a short time by using dedicated software.

Height controlling of mask and measurement of glass thickness



You can control height of the mask and measure the glass thickness at a time. Single specular type displacement sensor CD33-L30 can measure the thickness of the glass which thickness is more than 0.7mm. You can also utilize multiple sensor heads for calculation by UQ1 series.