

FIBER BRAGG GRATINGS INTERROGATOR UNIT FOR MULTISENSING INDUSTRIAL APPLICATIONS

Optical specifications

Dynamic
20 : 20dB

Reference	UCL-1104-20-D020	UCL-1144-20-D020	UCL-1103-20-A020	UCL-1104-XX-D200	UCL-1144-XX-D200	UCL-1108-XX-D200	UCL-1104-XX-A200	UCL-1144-XX-A200	UCL-1108-XX-A200
Wavelength range	1525-1570 nm	1525-1570 nm	1525-1570 nm	1525-1570 nm	1525-1570 nm	1525-1570 nm	1525-1570 nm	1525-1570 nm	1525-1570 nm
Number of optical channels	4	2x4 (*)	3	4	2x4 (*)	8	4	2x4 (*)	8
Average number of sensors per channel	20 per channel	20 per channel	20 per channel	20 per channel	20 per channel	20 per channel	20 per channel	20 per channel	20 per channel
Resolution, std-1σ	<1pm	<1pm	<1pm	<1pm	<1pm	<1pm	<1pm	<1pm	<1pm
Stability & relative accuracy short terms	± 2pm	± 2pm	± 2pm	± 2pm	± 2pm	± 2pm	± 2pm	± 2pm	± 2pm
Bragg Grating Full Width Half Maximum recommended (FWHM)	0.2 nm to 0.3 nm	0.2 nm to 0.3 nm	0.2 nm to 0.3 nm	0.2 nm to 0.3 nm	0.2 nm to 0.3 nm	0.2 nm to 0.3 nm	0.2 nm to 0.3 nm	0.2 nm to 0.3 nm	0.2 nm to 0.3 nm
Stability & relative accuracy long terms	(**)	(**)	(**)	(**)	(**)	(**)	± 4pm	± 4pm	± 4pm
Absolute accuracy & lon terms stability			± 4pm				option (**)	option (**)	option (**)
Scan frequency	20 Hz	20 Hz	20 Hz	200 Hz	200 Hz	100 Hz	200 Hz	200 Hz	100 Hz
FFT fonction 0-10KHz	NA	NA	NA	1 FBG/Channel	1 FBG/Channel	1 FBG/Channel	1 FBG/Channel	1 FBG/Channel	1 FBG/Channel
Dynamic range	20 dB	20 dB	20 dB	20/30/40/50 dB	20/30/40/50 dB	20/24/34/44dB	20/30/40/50 dB	20/30/40/50 dB	20/24/34/44dB
Optical Connectors	FC/APC	FC/APC	FC/APC	FC/APC	FC/APC	FC/APC	FC/APC	FC/APC	FC/APC

Electrical, mechanical and environmental specifications

Communication interfaces	RS-232 / RS-485	SubD9/Micro-Fit3.0	SubD9/Micro-Fit3.0	SubD9/Micro-Fit3.0	NA	NA	NA	NA	NA	NA
	USB 2.0	NA	NA	NA	mini-USB-B	mini-USB-B	mini-USB-B	mini-USB-B	mini-USB-B	mini-USB-B
	CAN OPEN DS301	Connector M12	Connector M12	Connector M12	Connector M12	Connector M12	Connector M12	Connector M12	Connector M12	Connector M12
	Booster CAN	NA	NA	NA	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)
	Profibus	NA	NA	NA	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)
	Ethernet	NA	NA	NA	RJ45	RJ45	RJ45	RJ45	RJ45	RJ45
	Wifi	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)
	GPRS	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)
Application Software	Open	Open	Open	Open	Open	Open	Open	Open	Open	
On/Off Input optically isolated :5V-12V-24V	10	10	10	10	10	10	10	10	10	
On/Off Output optically isolated :5V-12V-24V	NA	NA	NA	2	2	2	2	2	2	
Gating system	NA	NA	NA	0-5V	0-5V	0-5V	0-5V	0-5V	0-5V	
Data Logging (Internal memory/SC card)	128 Mb	128 Mb	128 Mb	128 Mb/1 Gb	128 Mb/1 Gb	128 Mb/1 Gb	128 Mb/1 Gb	128 Mb/1 Gb	1 Gb	
IP Interface	NA	NA	NA	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	Option (**)	
EMC resistance	EN61326-1	EN61326-1	EN61326-1	EN61326-1	EN61326-1	EN61326-1	EN61326-1	EN61326-1	EN61326-1	
Shock & vibration resistance	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6	
Protection	IP50	IP50	IP50	IP50	IP50	IP50	IP50	IP50	IP50	
Operating temperature range	-20°C à + 70°C	-20°C à + 70°C	-20°C à + 70°C	-20°C à + 70°C	-20°C à + 70°C	-20°C à + 70°C	-20°C à + 70°C	-20°C à + 70°C	-20°C à + 70°C	
Dimensions	270 mm x 205 mm x 65mm	270 mm x 205 mm x 65mm	270 mm x 205 mm x 65mm	285 mm x 205 mm x 65mm	285 mm x 205 mm x 65mm	285 mm x 205 mm x 65mm	285 mm x 205 mm x 65mm	285 mm x 205 mm x 65mm	285 mm x 205 mm x 65mm	
Weight	2Kg	2Kg	2Kg	2Kg	2Kg	2Kg	2Kg	2Kg	2Kg	
Power Supply	24Vdc	24Vdc	24Vdc	9-36 Vdc	9-36 Vdc	9-36 Vdc	9-36 Vdc	9-36 Vdc	9-36 Vdc	
Maximum power consumption at ambient temperature = 25°C	12W	12W	12W	12W à 20W	12W à 20W	12W à 20W	12W à 20W	12W à 20W	12W à 20W	
Maximum power consumption at ambient temperature = 60°C	20W	20W	20W	20W à 28W	20W à 28W	20W à 28W	20W à 28W	20W à 28W	20W à 28W	

Specifications provided for information and subject to change without notice

(*) : Do not use same wavelength FBG simultaneously on channels 1 & 2, 3 & 4, 5 & 6, et 7 & 8

(**): On request