

**EXTRACTIVE MEASUREMENT (EMX) CELL  
ISA DATA SHEET**



<b>General</b>	1	Manufacturer	Boreal Laser Inc.
	2	Analyzer Model No.	Not Specified.
	3	Measurement Head Model No.	Extractive Measurement Cell (EMX) Assembly (e.g. BL-___-EMX-___)
	4	Warranty Period	3 years Full Warranty
<b>Cabling Options</b>	5	Cabling Type	Single Mode Fibre Optic (FC/APC) and Shielded CAT6/5e Cabling (RJ45)
	6	Allowable Cable Lengths	5 - 300 m (15 - 1,000 ft) available in 10m (30 ft) Increments (See Target Gas Requirements)
	7	Fiber Optic Cabling Specification	SMF-28 Family of Fibres (SFM-28e, SFM-28e+, SFM-28 Ultra)
	8	Fiber Optic Connector Specification	Threaded Fiber Connector / Angled Polished Connector (FC/APC) - Green Boot
	9	CAT6/5e Cabling Specification	CAT6 (625MHz), 4-Bonded Pair, F/UTP-Foil Shield, 23 AWG Solid Bare Conductors
	10	CAT6/5e Connector Specification	RJ45 (T-568A) Shielded Connector
	11	5-20 m (15-60 ft) Cable Lengths	3/4" Flexible Conduit with 3/4" Connectors
	12	30-300m (90-1,000ft) of Cable - Option #1	Standard PVC Jacketing to be ran in User supplied Conduit or Cable Tray
	13	30-300m (90-,1000ft) of Cable - Option #2	Armoured (Aluminium) and PVC Jacketed - 17.3mm (0.680") Fiber & 13mm (0.511") CAT6
	15	Measurement Head Junction Box Material	Poly Vinyl Chloride (PVC) with Removeable Front Cover
	16	Measurement Head Junction Box Size	175 x 175 mm (6.9 x 6.9 inches) with four (4) 7.11 (0.280") Thru Holes for Mounting
	17	Measurement Head Junction Box Fittings	Free Floating Bulkhead Connectors for Fiber Optic (FC/APC) and CAT6/5e (RJ45)
	<b>Extractive Measurement (EMX) Cell</b>	18	Optical Configuration
19		Assembly Composition	Window Fixtures, Transceiver and Retro-Reflector Covers, 1"FNPT and 1/4" FNPT Connections For Measurement
20		Assembly Weight	5.2 kg (11.5 lbs)
21		Assembly Dimension (LxWxH)	Variable Dependent on Application
22		Physical Configuration	Remote from Analyzer (GasFinder3-MC) via Fibre Optic and CAT6/5e Cabling
23		Mounting Hardware Configuration	N/A
24		Maximum Distance to Analyzer	Up to 300m of Single Mode Fibre and Shielded CAT6/5e Cabling (10m Increments)
25		Optics Enclosure Material	6061 Anodized Aluminium
26		Measurement Cell Material	316 Stainless Steel Standard, Custom Materials Available Upon Request
27		Area Classification	(A)Ex ib IIC T5 Tamb <70°C Gb (Equivalent to Class 1 Div/Zone 1 and Groups A,B,C,D)
28		Method of Protection	Intrinsic Safety "ib" & "Gb" as per IEC 60079-11
29		Process Connections	1/4" FNPT
30		EMX Cell Connections	1" FNPT for 1" NPT Pipe
31		Temperature (EMX Cell Enclosure)	-55 to 120°C (-67 to 248°F)
32		Temperature (Laser Beam)	-55°C to +150°C (-67 to +300°F) Active Measurement Path / Process
33		Process Pressure	50 to 200 kPa Absolute (7.25 to 29 psia)
34		Beam Divergence	32mm (1 1/4") @ 1m (3.3ft) = (32 milliradian x path length (m) = laser dot size (mm))
35		Window Material	Sapphire
36		Power	Non-powered (Passive)
37		Cable Connections	Single Mode Fibre (FC/APC) and CAT6/5e (RJ-45) - Included in Assembly
38		Dual Gas Configuration #1	Any two gases except O2, CO2L, COL, CO2UL can share an Extractive (EMX) Cell
39		Dual Gas Configuration #2	CO2L, COL, CO2UL can share a Extractive Measurement (EMX) Cell
40		Dual Gas Configuration #3	O2 always requires a dedicated EMX Cell
41		Retro Enclosure Material	6061 Anodized Aluminium
42		Retro Enclosure Window Material	Sapphire
43		Retro-Reflector Temperature	-55°C to +120°C (-67°F to 248°F) with Cornercube Retro-Array
44		Retro Enclosure Cable Entry	None (Passive)
45		Retro Array (IMOS)	50.8 mm (2") IMOS Retro
46		Path Length Ranges (Retro-Arrays)	Path Length depends on Detectable Range
<b>Recommended Accessories</b>		47	Alignment Kit
	48	In-Line Response Cell	BL-ILRC-___ (HF, HCN, NH3, or CH4)
	49	Commissioning and Spares Assembly	BL-CASA
	50	Calibration Certificate Extension	BL-QDRP
	51	120-220 VAC Power Supply	BL-HAPS or BL-HAPS-S
<b>Latest Revision</b>	52	2/03/21	