Product overview of Airyx GmbH



					Sub	ypes
Item#	Description	Comments	Related articles	Image	LED	rdrs
OPENPATH II	nstruments					
OpenPath In:	struments					
OP-UV2-LED3-2001	R OPEN PATH REMOTE SENSING INSTRUMENT LED > Trace gas measurements along open pathway between 0.2 km up to 3 km (long path DOAS method) > Trace gases: Nitrogen dioxide (NO2), Sulphur dioxide (SO2), Ozone (O3), Formaldehyde (HCHO), Nitrous acid (HONO), Bromine Monoxide (BrO) > Time resolution up to 2 seconds TELESCOPE: Focal length 800 mm • Diameter 200 mm • UV/VIS mirrors (aluminium coated) • Closed telescope (IP64) with front quartz glass window for UV application • Automatic light path adjustment on retro reflector • Light transmission with optical quartz glass fibre bundles • Length of fibre bundles 5 m • Automatic reference measurement • Optical camera with zoom objective for monitoring • Integrated telescope heating • Telescope unit size (approximately): 110x40x36 cm³ CONTROLLER UNIT WITH LED LIGHT SOURCE AND ANALYZER (SEPERATE): Light source: 3 high-power UV LEDs @ 275 nm, 310 nm and 370 nm • Light merged with a fibre bundle • Controller • UV Spectrometer (270 · 385 nm) with back-thinned detector for high UV sensitivity • Temperature stabilised (better 0.1 °C) • Analyser unit size: 40 x 40 x 13.2 cm³ • Data analysis software for gases providing average concentrations along the light path.	GENERAL: Open path instruments measure trace gases along a measurement path of several 100 meters to few kilometres. The built in light source enables non-stop 24h measurements. The system is selfaligning for constant high precision and light throughput. We recommend to use multiple retro reflector arrays for longer light paths above 1 km or if, on average, the viewing distance (and loss of light due to scattering) is decreased by fog or dust. The system consists of an IP64 rated telescope and an analyser unit, the latter is meant to be set up indoors sheltered from weather and direct sunlight and requires a control PC/Notebook which is not included and needs to be ordered separately. The two componentents are connected by 5m long cables. This version uses several high power LEDs as light source.	[OP-UV2-LED3-200REA] • Open Path tripod [ACC-OP-TP] • Open Path tripod floor mount [ACC-OP-TPFM]	of Artyx].	•	
OP-UV2-LDLS-2001	OPEN PATH REMOTE SENSING INSTRUMENT LDLS Trace gas measurements along open pathway between 0.2 km up to 3 km (long path DOAS method) Trace gases: Nitrogen dioxide (NO2), Sulphur dioxide (SO2), Ozone (O3), Formaldehyde (HCHO), Nitrous acid (HONO), Bromine Monoxide (BrO) Time resolution up to 2 seconds TELESCOPE: Focal length 800 mm • Diameter 200 mm • UV/VIS mirrors (aluminium coated) • Closed telescope (IP64) with front quartz glass window for UV application • Automatic light path adjustment on retro reflector • Light transmission with optical quartz glass fibre bundles • Length of fibre bundles 5 m • Automatic reference measurement • Optical camera with zoom objective for monitoring • Integrated telescope heating • Telescope unit size (approximately): 110x40x36 cm³ CONTROLLER UNIT AND ANALYZER (SEPERATE): Controller • UV Spectrometer (270 - 385 nm) with back-thinned detector for high UV sensitivity • Temperature stabilised (better 0.1 ° C) • Analyser unit size (approximately): 40x44x13 cm³ • Data analysis software for gases providing average concentrations along the light path LDLS LIGHTSOURCE: High power broad band LDLS (laser driven light source) ISTEQ XWS-30 (250 - 700 nm) • Light coupling to fibre with optical UV lense, adjustable • Motorised focal length adjustment for optimal light coupling and chromatic wavelength filtering • Motorised filter wheel with pre-selected filters according to the measurement wavelength range • Integrated shutter • Integrated Controller • for 24V power supply • Lamp lifetime 10.000 h • Laser and unit lifetime - 25.000h to 50.000 h	GENERAL: Open path instruments measure trace gases along a measurement path of several 100 meters to few kilometres. The built in light source enables non-stop 24h measurements. The system is self-aligning for constant high precision and light throughput. We recommend to use multiple retro reflector arrays for longer light paths above 1 km or if, on average, the viewing distance (and loss of light due to scattering) is decreased by fog or dust. The system consists of an IP64 rated telescope and an analyser unit, the latter is meant to be set up indoors sheltered from weather and direct sunlight and requires a control PC/Notebook which is not included and needs to be ordered separately. The two componentents are connected by 5m long cables. This version uses a laser driven xenon light sources with extremely high luminosity in the UV/range.	[OP-UV2-LED3-200REA] • Open Path tripod [ACC-OP-TP] • Open Path tripod floor mount [ACC-OP-TPFM]	AFUX Jo		•
OP-UV2-LED3- 200REA	OPEN PATH AZIMUTH & ELEVATION EXTENSION Extension of OP-telescope for motorised elevation and azimuth rotation > Azimuth rotation of telescope by -130" to 130" > Elevation of telescope between approximately 0" - 30" > Motors protected by a cover to protect mechanics from dust and rain > Accuracy of elevation and azimuth rotation for light paths up to 4 km > Motors controlled by OP system	This extension allow to realise several Open Path measurement paths to different reflectors. Further, in contrast to the basic Open Path version the extension allows an easy and flexible set up of the telescope since the fine alignment on the retro reflector(s) can be done automatically using the telescope motors.		artyx]		•
OP-RETRO20UV	OPEN PATH RETRO REFLEKTOR ARRAY > Each array with 20 x 1 inch fused silica corner cube reflectors > Material fused silica (JGS1) suitable for UV (190nm) to NIR (2μm) > Beam deviation < 9 arcsec > In weatherproof housing (IP67) > With desiccant and changeable reservoir > size 14,1 x 20,5 cm², thickness 3,5cm	Retro reflector are used to reflect the light of the Open Path system back to the telescope. recommended are min. two arrays for each light path up to 1 km. More Retro reflector arrays increase the reflected light and allow shorter measurement times. Measurements in the deep UV require more reflectors than in the visible spectral range. Mounted with 4 x M5 screws from the back side if the reflector array. Reflectivity for reflector - 90% (250-1000nm). Reflective surface cover		• · · · · · · · · · · · · · · · · · · ·	•	•



						ypes
ltem#	Description	Comments	Related articles	lmage	LED	LDLS
OP-RETRO20VIS	OPEN PATH RETRO REFLEKTOR ARRAY > Each array with 20 x 1 inch fused silica corner cube reflectors > Material glass (H-K9L) suitable for visible (350nm) - NIR (2µm) > Beam deviation < 9 arcsec In weatherproof housing (IP67) > With desiccant and changeable reservoir > size 14,1 x 20,5 cm², thickness 3,5cm > weight 1,230 g	Retro reflector are used to reflect the light of the Open Path system back to the telescope. recommended are min. two arrays for each light path up to 1 km. More Retro reflector arrays increase the reflected light and allow shorter measurement times. Measurements in the deep UV require more reflectors than in the visible spectral range. Mounted with 4 x M5 screws from the back side if the reflector array. Reflectivity for reflector - 90% (390-1000nm). Reflective surface cover - 30% of front.		○ □ □ □ ○ □ □ □ ○ □ □ □ □ □ □ □ □ □ □ □	•	•
OP-LDLS-UV	OPEN PATH LIGHT SOURCE LDLS > Light source: high power broad band LDLS (laser driven light source) ISTEQ XWS-30 (250 nm - 700 nm) > Light coupling to fibre with optical UV lense, adjustable > Motorised focal length adjustment for optimal light coupling and chromatic wavelength filtering > Motorised filter wheel with pre-selected filters according to the measurement wavelength range > Integrated shutter > With 24 V power input > Lamp lifetime 10.000 h > Laser and unit lifetime - 25.000 h to 50.000 h		External Power Supply - 110 to 220 V - 24 V [ACC-PWR24-9A]			•
MEASUREME	ENT COMPUTERS					
PC-DE	MEASUREMENT COMPUTER - DESKTOP PC > Windows 10 or 11 Pro installed and optimised for Airyx instrument measurement applications > Installation and configuration of measurement and (if included) evaluation software packages. > Robust Dell tower PC with min 8GB RAM, min 512GB Harddrive and min. Intel i5 Processor > Delivered with keyboard, but without monitor	If a measurement computer is ordered with a Airyx instrument, the required measurement software (e.g. SKY-SOFT-*) will be installed and preconfigured on the computer at Airyx GmbH. Same applies if software extensions (e.g. SkySpec evaluation package SKY-EVAL-*) are ordered • The system will be pre-configured as a plug-and-play setup.			•	•
PC-NB	MEASUREMENT COMPUTER - NOTEBOOK > Windows 10 or 11 installed and optimised for Airyx instrument measurement applications > Installation and configuration of measurement and (if included) evaluation software packages. > Robust Dell Notebook with min. 8GB RAM, SSD Harddrive	If a measurement computer is ordered with a Airyx instrument, the required measurement software (e.g. SKY-SOFT-*) will be installed and preconfigured on the computer at Airyx GmbH. Same applies if software extensions (e.g. SkySpec evaluation package SKY-EVAL-*) are ordered • The system will be pre-configured as a plug-and-play setup.			•	•
PC-NBHP	MEASUREMENT COMPUTER - NOTEBOOK - HIGH PERFORMANCE > Windows 10 or 11 Pro installed and optimised for Airyx instrument measurement applications > Installation and configuration of measurement and (if included) evaluation software packages. > Robust Dell Notebook with min. 8GB RAM, min. 512GB SSD Harddrive and min. Intel i5 Processor	If a measurement computer is ordered with an Airyx instrument, the required measurement software (e.g. SKY-SOFT-*) will be installed and preconfigured on the computer at Airyx GmbH. Same applies if a software extension (e.g. SKY-EVAL-*) is ordered • the system will be preconfigured as a plug-and-play setup • In the "HIGH PERFORMANCE" configuration a fast (i7 processor with 16GB RAM will be used); recommended for Open Path systems and SkySpec applications with calculation intensive data processing (going beyond the Airyx standard software packages)			•	•
EXTENSIONS	S AND ACCESSORIES			+		
ACC-PWR-11A	EXTERNAL POWER SUPPLY - 110 TO 230 V - 12 V / 11.5 A IP68 connector configured for Airyx instruments with higher power consumption.	Power supply for Airyx instruments with IP68 connector configured for Airyx instruments • Input: 110 V to 220 V • Output: regulated 12 V / 11.5 A		8	•	•
ACC-PWR24-9A	EXTERNAL POWER SUPPLY - 110 TO 230 V - 24 V / 9.2 A for LDLS light source	Power supply for Airyx LDLS light source • Input: 110 V to 220 V • Output: regulated 24 V / 9.2 A		3	•	•
ACC-EXT-HG	HANDHELD HG (MERCURY) CALIBRATION-LAMP > with SMA optical fibre connector > Battery powered (4 x AA cells)	For manual acquisition of mercury emission line spectra with Airyx spectrometer systems • Useful for spectrometer wavelength calibration.		P 1	•	•



					Subty	
Item#	Description	Comments	Related articles	lmage	LED	LDLS
ACC-USB2	USB-B TO USB-A CABLE IP68 - 2 m	2 m IP68 connector on the instrument side. Only with these Usb cables the Usb connection on the IP65 Airyx instrument boxes are air and water tight. This is important to avoid humidity in the instrument.			•	•
ACC-USB3	USB-B TO USB-A CABLE IP68 - 3 m	3 m IP68 connector on the instrument side. Only with these Usb cables the Usb connection on the IP65 Airyx instrument boxes are air and water tight. This is important to avoid humidity in the instrument.			•	•
ACC-USB5	USB-B TO USB-A CABLE IP68 - 5 m	5 m IP68 connector on the instrument side. Only with these Usb cables the Usb connection on the IP65 Airyx instrument boxes are air and water tight. This is important to avoid humidity in the instrument.			•	•
ACC-PWR3	12 V POWER CABLE EXTENSION IP68 - 3 m	3 m extension 12 V connection between power supply and instrument • PUR outdoor cable with IP68 connectors on both sides • Can also be used to connect LiPo battery packs [ACC-BATPACK].		Q	•	•
ACC-PWR5	12 V POWER CABLE EXTENSION IP68 - 5 m	5 m extension 12 V connection between power supply and instrument • PUR outdoor cable with IP68 connectors on both sides • Can also be used to connect LiPo battery packs [ACC-BATPACK].		Q	•	•
ACC-PWRX	12 V POWER CABLE EXTENSION IP68 - CUSTOM LENGTH Price: 40 € + 6 €/m (Example price for 10 m)	Custom length extension 12 V connection between power supply and instrument • PUR outdoor cable with IP68 connectors on both sides. Flexible length, 30€ + 5€/M • Can also be used to connect LiPo battery packs [ACC-BATPACK].		Q	•	•
ACC-PWR1.5BE	12 V POWER CABLE IP68- 1.5 m - BLANK END	1.5 m connection between instrument and arbitrary 12 V power supply • PUR outdoor cable with IP68 connector on the instrument side • Other end with blank wires for flexible assembly.			•	•
ACC-PWR3BE	12 V POWER CABLE IP68 - 3 M - BLANK END	3 M connection between instrument and arbitrary 12 V power supply • PUR outdoor cable with IP68 connector on the instrument side • Other end with blank wires for flexible assembly.			•	•
ACC-LAN2	LAN DATA CABLE IP68 - 2 M	2 m LAN cable to connect Airyx instruments to an external PC • PUR outdoor cable with IP68 connector on the instrument side. Not for ICAD instruments in the rack, there a normal LAN cable is included and sufficient.			•	•
ACC-LANX	LAN DATA CABLE IP68 - CUSTOM LENGTH PUR Outdoor cable CAT 7 Price: 60€ + 7€/m (example price for 10 m)	Custom length LAN cable to connect Airyx instruments to an external PC \bullet PUR outdoor cable with IP68 connector on the instrument side \bullet Flexible length, $40 \in +7 \in Im$ Not for ICAD instruments in the rack, there a normal LAN cable is included and sufficient.		Q	•	•



		_				OP) otypes
Item#	Description	Comments	Related articles	Image	LED	LDLS
ACC-PWR3CAR	12V POWER CABLE FOR CAR CIGARETTE LIGHTER IP68 - 3 m, plus adaptercable to connect 12V buffer battery	3 m power cable for connection of Airyx instruments to a 12 V cigarette lighter in a car • connectable additional 12 V power source (battery) as 12V buffer to avoid power cuts when car power is off • PUR outdoor cable • IP68 connector on instrument side.		00	•	•
ACC-BAT-50Ah	LIPO BATTERY 12 V/50.4 Ah IP67 - PELICASE > Included: 5 A charger > Included 1.5 m power cable for Airyx instrument connection (shipped separately) > 3.37 kg > Rugged Peli 1150 case (24 x 19 x 11 cm³) > This item will be shipping from battery manufacturer directly > This item is only available in Europe	Battery pack for instrument power supply in remote areas • IP67 • 3.37 kg • Allow -15 h of ICAD operation • 3 IP67 power connectors • Battery is directly shipped from the company producing the battery for Airyx • Batteries can only be sold within Europe due to transport restrictions.		8	•	
ACC-OP-TP	OPEN PATH TRIPOD for setting up Open Path telescopes on flat surface. Stability for high weight. Including OPEN PATH TRIPOD FLOOR MOUNT [OP-TPFM]	This tripod can carry any Open Path telescope configuration. Floor mount [OP-TPFM] required for application of hard surfaces (e.g., asphalt, metal).	OPEN PATH TRIPOD FLOOR MOUNT [OP-TPFM]	Artux	•	•
	CE EQUIPMENT AND SPARE PARTS DIGITAL TEMPERATURE AND HUMIDITY SENSOR FOR SPECTROMETER CONTROL	1 x digital sensor to control spectrometer temperature and monitor humidity • On micro printed circuit board with 30 cm connection ribbon cable • Humidity monitoring to avoid water condensation on sensitive spectrometer • 12C digital address 0 • Direct connection to internal Airyx controller board.			•	•
SPARE-TSENS-DX	DIGITAL TEMPERATURE SENSOR FOR MONITORING > Digital sensor address selectable = 0, 1, 2, 3	1 x digital ADT temperature sensor for monitoring. Internal used in Airyx instruments • On micro printed circuit board with 30 cm connection ribbon cable • Digital IZC-adress is selectable (0, 1, 2 or 3) • Also used in older instruments (instead of [SPARE-TSENS-SPD]) to control spectrometer temperature • Direct connection to internal Airyx controller board.			•	•
SPARE-CGLAND	WEATHERPROOF M16 CABLE GLAND WITH SEALING, UV	Weatherproof M16 power and data cable gland with sealing (large size) • For a water and air tight cable feedthrough • For outdoor use (UV resistant).			•	•
SPARE-TGLAND	WEATHERPROOF M12 CABLE GLAND WITH SEALING, UV	Weatherproof M12 temperature sensor cable gland with sealing (small size) • For a water and air tight cable feedthrough • For outdoor use (UV resistant).			•	•
OP-SPARE-SET-LED	SPARE PART SET WITH LEDS FOR OP-UV2-LED3-200R > 3 high-power UV LEDs @ 275nm, 310nm and 370nm > LED lifetime >15.000h > Mounted on electronic board with connection cable			× 00	•	

Product overview of Airyx GmbH



(OP) Subtypes E Item# Description Comments Related articles OP-SPARE-SET-LDLS | SPARE PART SET WITH SPARE LDLS LIGHT BULB COMPATIBLE WITH: OPEN PATH REMOTE SENSING INSTRUMENT LDLS Spare light bulb for replacement in open path light source LDLS [OP-UV2-LDLS-200R] or OPEN PATH LIGHT SOURCE LDLS [OP-LDLS-UV] lamp lifetime 10.000h SPARE-PELTIER-V2 PELTIER COOLER AIRYX Peltier cooler in Airyx instruments with cooling function. Peltier regulate the heating / cooling of the instrument between the heat sinks. Silicon sealed version SPARE-FAN80V3 HEAT EXCHANGER FAN - 80 MM Fan fitting to Airyx temperature stabilisation heat exchangers. Long life and high powe SPARE-FANEIL TRO FAN FILTER - 80 MM - WASHABLE Fan filter fitting to Airyx temperature stabilisation heat exchangers. • SPARE-SILICA SILICA DESICCANT - 0.9 KG (11) 0.9 kg silica desiccant with colour indicator (orange -> greenish) to be used in Airyx instruments and zero air systems (ICAD instruments). **SERVICES** IC-SERV-OP-LED POST WARRANTY MAINTENANCE SERVICE EXTENSION - OPEN PATH REMOTE SENSING INSTRUMENT LED This is analogue to a longer warranty for this instrument. This does not Optional extension package • Starts after expiring of warranty • Price per year and OP system • include shipping costs if required. Required to be ordered with a new Consumption parts like lamps, LEDs, filters and pumps not included. instrument. IC-SERV-OP-LDLS POST WARRANTY MAINTENANCE SERVICE EXTENSION - OPEN PATH REMOTE SENSING INSTRUMENT LDLS This is analogue to a longer warranty for this instrument. This does not Optional extension package • Starts after expiring of warranty • Price per year and OP system • include shipping costs if required. Required to be ordered with a new Consumption parts like lamps, LEDs, filters and pumps not included. SERV-NONLIN SPECTROMETER NON-LINEARITY CHARACTERISATION Included when buying an Airyx instrument Spectrometer non-linearity • Quantification and analysis • Protocol (per spectrometer) OP-SERV-INSTL ONLINE INSTALLATION AND OPERATION SUPPORT - OPEN PATH Open Path online installation and operation support via remote desktop (not on site) for 1 year. Price per RENTAL / TRAINING / MEASUREMENT SERVICE Airyx provide a large range of Measurement services, instrument rental and training. Please contact Airyx for more details. ACC-RENT-BAT-50Ah- WEEKLY RENTAL OF AIRYX INSTRUMENT LIPO BATTERY 12 V/50.4 Ah IP67 - PELICASE Battery pack for instrument power supply in remote areas • IP67 • 3.37 Included: 5 A charger kg • Allow ~15 h of ICAD operation • 3 IP67 power connectors Included 1.5 m power cable for Airyx instrument connection > 3.37 kg Rugged Peli 1150 case (24 x 19 x 11 cm³) Including extra shipping fees for batteries in EU OP-RENT-MONTHLY RENTAL - OPEN PATH RETRO REFLEKTOR ARRAY Rental for customer measurement or testing projects. Airvx provide 75% RETRO20UV Each array with 20 x 1 inch fused silica corner cube reflectors of rental fee reimbursement, if within 3 months after the rental the Material fused silica (JGS1) suitable for UV (190nm) to NIR (2µm) same or similar type of instrument is purchased. In weatherproof housing (IP67) With desiccant and changeable reservoir size 14,1 x 20,5 cm² , thickness 3,5cm



					Subtypes
ltem#	Description	Comments	Related articles	lmage	LED
OP-RENT- RETRO20VIS	MONTHLY RENTAL - OPEN PATH RETRO REFLEKTOR ARRAY > Each array with 20 x 1 inch fused silica corner cube reflectors > Material glass (H-K9L) suitable for visible (350nm) - NIR (2µm) > Beam deviation < 9 arcsec > In weatherproof housing (IP67) > With desiccant and changeable reservoir > size 14,1 x 20,5 cm², thickness 3,5cm > weight 1.230 g	Rental for customer measurement or testing projects. Airyx provide 75% of rental fee reimbursement, if within 3 months after the rental the same or similar type of instrument is purchased.		○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	•
SHIPPING A	/ PACKING CUSTOMS (REGULAR)				
SHIP-D-S1	SHIPPING TO GERMANY - SIZE 1, including shipping insurance	< 5 kg e.g. Spare Parts			
SHIP-D-S4	SHIPPING TO GERMANY - SIZE 4, including shipping insurance	> 40 kg e.g. OPENPATH			•
SHIP-EU-S1	SHIPPING TO EU COUNTRIES - SIZE 1, including shipping insurance	< 5 kg EU countries excl. Germany e.g. e.g. Spare Parts			
SHIP-EU-S4	SHIPPING TO EU COUNTRIES - SIZE 4, including shipping insurance	> 40 kg, large Size EU countries excl. Germany e.g. OPENPATH			•
SHIP-W1-S1	SHIPPING TO WORLD 1 DISTANCE COUNTRIES - SIZE 1, including shipping insurance, export custom documents	< 5 kg incl. export customs, Europe excl. EU e.g. Spare Parts			
SHIP-W1-S4	SHIPPING TO WORLD 1 DISTANCE COUNTRIES - SIZE 4, including shipping insurance, export custom documents	> 40 kg, large size incl. export customs, Europe excl. EU e.g. OPENPATH			
SHIP-W2-S1	SHIPPING TO WORLD 2 DISTANCE COUNTRIES - SIZE 1, including shipping insurance, export custom documents	< 5 kg incl. export customs, non-Europe countries e.g. e.g. Spare Parts			
SHIP-W2-S4	SHIPPING TO WORLD 2 DISTANCE COUNTRIES - SIZE 4, including shipping insurance, export custom documents	> 40 kg, large size incl. export customs, non-Europe countries e.g. OPENPATH			

Product overview of Airyx GmbH



						/pes	
ltem#	Description	Comments	Related articles	lmage	LED	LDLS	

Product overview of Airyx GmbH



						ypes	!
Item#	Description	Comments	Related articles	lmage	LED	LDLS	

Product overview of Airyx GmbH



						ypes	
Item#	Description	Comments	Related articles	lmage	LED	LDLS	