

# COEX™ C3000-1V Ex d Camera Station

The C3000 camera series has a unique compact and lightweight design specifically developed for hazardous area applications. The camera stations are designed for toughness and durability to operate in the most adverse environments – from offshore oil and natural gas rigs to FPSO / FSO's and LPG / LNG tanker vessels.



COEX™ C3000 Ex d analog camera stations are manufactured from high grade, corrosion resistant, electro-polished 316 stainless steel – incorporating state of the art cameras, control and transmission modules.

The advanced mechanical design of a virtually indestructible gearbox combined with backlash eliminating technology ensures smooth proportional speed control at fast and slow speeds. Preset accuracy and repeatability of <math><0.05^\circ</math> provides a reliable solution for both security and process monitoring.

C3000 camera stations can operate in the most extreme environments and are certified for temperatures as low as

## Features

- ATEX Certification
- IECEx Certification
- CSAus Certification
- CSA Canadian Certification
- DNV Type Approval
- C-Tick Compliance
- EAC-TR CU Certification
- IP66 & IP68 Rated – completely protected against dust & water ingress, for the most demanding environments
- Type 6 Enclosure
- Electro-polished 316 stainless steel, for optimum corrosion resistance
- Low voltage operation
- Pre-heat mode

- AC stepper motor drive for variable speed control with high preset accuracy and repeatability
- On-screen menu display allowing easy configuration and diagnostics
- Multi-protocol telemetry for extensive system compatibility

## Options

- Continuous rotation
- Thermal imaging
- Integral wiper [W]
- COEX™ 'FEWS' Ex pressurized wash system
- Integral fiber optic transmission with Base Type 2
- IR Lamp

# Specifications

CERTIFICATIONS / RATINGS		[OPTIONS]
ATEX / IECEx	ATEX II 2GD, Ex db IIB/IIC Gb; Ex tb IIIC Db; T4 / T5 / T6	
CSAus US Class / Division	Class I, Div 1, Groups A, B, C, D; Class II, Div I, Groups E, F, G; T4 / T5 / T6	
CSAus US Class / Zone	Class I, Zone 1, AEx d IIC Gb; Zone 21, AEx tb IIIC Db; T4 / T5 / T6	
CSA Canadian	Ex d IIC Gb; Ex tb IIIC Db; Class II, Div 1, Groups E, F, G, Class III, Div 1; T4 / T5 / T6	
EMC	CFR 47, 15.109 and 15.107, EN55022, EN55024, EN61000-6-4, EN 61000-6-2	
CE	CE Compliant	
Ingress Protection	IP66 & IP68 (30m submersion for 4 hrs) to IEC 60529, Type 6 Enclosure	
DNV	A-13470	
EAC	RU C-GB.ГБ06.В00398	
C-Tick	On Request	
ENVIRONMENTAL		
Rated Temperature	-55°C to +60°C (T5) [+70°C (T4)] -67°F to 140°F (T5) [158°F (T4)]	
MECHANICAL		
Material	Electro-polished 316 Stainless Steel	
Window	Toughened glass, thermostatically operated demister [Wiper*3]	
Pan Operation	360° rotation; 18°/sec; mechanical limits; programmable soft-stops; preset positioning	
Tilt Operation	180° rotation; 0° to 21°/sec; mechanical limits; programmable soft stops; preset positioning	
Mounting	4 x M8 tapped holes, equispaced on a 101.6 mm / 4" P.C.D.	
Dimensions (W x D x H)	Base Type 1: 375 x 310 x 352 mm / 14.76" x 12.20" x 13.86" Base Type 2: 375 x 310 x 363 mm / 14.76" x 12.20" x 14.29"	
Pan Turning Circle	Ø 560 mm / 22.04"	
Tilt Turning Circle	Ø 360 mm / 14.14"	
Mounting Orientation	Upright or inverted	
Weight*1	Base Type 1: 25 kg / 55 lbs Base Type 2: 29 kg / 64 lbs	
ELECTRICAL		
Power Requirements	24Vac 50 / 60Hz or 24Vdc (±10%)	
Power Consumption	75VA maximum	
CAMERA OPERATION		
Interface	RS485 serial asynchronous data	
Protocols*2	Synectics™, Pelco®, and other industry standard protocols available	
Camera Station Functions*1	Wipe, wash, Aux1 [Aux2] and Aux In (2)	
Preset Functions	Pan, tilt, zoom and focus accuracy <0.05°, smart zoom control, absolute positioning, return to home function	
Wash Functions	24Vac/dc (0.45A max) switched output	
Day / Night Camera Functions*1	Optical zoom, digital zoom, BLC, manual / automatic focus, color / mono (IRC filter), manual / automatic iris, frame integration, white balance	
OSD	Password protected on-screen menu system for camera station configuration and diagnostics	

CAMERA/LENS	
Video Output	1.0 Vpk-pk CVBS into 75Ω color PAL 50Hz [NTSC 60Hz]
Image Sensor	¼" EXview HAD CCD
Resolution	>550TVL
S/N Ratio	>50dB
Zoom Range	36x zoom (up to 432x with digital zoom)
Minimum Illumination	1.4 lux 0.1 lux (with 1/3 sec integration) 0.01 lux mono (with 1/3 sec integration)
Fixed Focal Length	3.4 to 122.4 mm
Angle of View (H)	57.8° to 1.7°
Aperture	F1.6 to 4.5

FIBER OPTICS	
Fibers Required	Single Fiber
Optical Interface	Analog Video and Data
Standard Optical Link Budget	>17dB: >3 km on multimode fiber @ 1310nm (fiber bandwidth limited) >14dB: >30 km on singlemode fiber @ 1310nm (fiber loss limited)
Transmitter Optical Power	-10 to -5dBm into multimode fiber -13 to -6dBm into singlemode fiber
Transmitter Sensitivity	<-32dBm
Transmitter Saturation	>-3dBm
Receiver Optical Power	-9 to -4dBm into multimode fiber -10 to -5dBm into singlemode fiber
Receiver Sensitivity	<-27dBm
Receiver Saturation	>-3dBm

NOTE: \*1 Dependant on equipment fitted. \*2 Refer to Synectics for availability and compatibility with other control systems. \*3 Wipers are consumable items that need regular replacement. Please refer to the manual for recommendations and maintenance.

## Synectics

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Specifications subject to change. E & OE.

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MANUFACTURER OF



CAMERA STATIONS

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