

IP Based Pantograph Camera For Rolling Stock

eyeTrain is designed to rail group standards, and incorporates the very latest in video, storage and communications technology. The eyeTrain range offers digital (IP) technology matched to the harsh environment of rolling stock applications, providing the highest performance and resilience on the market.



Specifications

General

Type	IP Camera for Rolling Stock Use
Form Factor	Streamlined GRP Cover on Aluminum Baseplate
Part Number	PGC-ST-397
Approximate Dimensions	135 mm (W) x 253 mm (D) x 61 mm (H)
Weight	1.6 kg



Specifications

Sensor

Type	1/2.8" Progressive Scan CMOS Sensor		
Dynamic Range	WDR > 120 dB		
Signal to Noise Ratio	> 50 dB		
Sensitivity	0.001 lux min illumination (F1.2, Colour)		
Resolution	2M pixel		
Lens	M12 thread, focal length as below. Other focal lengths on request.		
Viewing Angle	Focal Length 3.6 mm	Horizontal Angle 75.3°	Vertical Angle 46.9°

Data Transmission

Communications Protocol	Ethernet I/P		
Compression	MJPEG, H.264, 32 Kbps to 16 Mbps CBR/VBR		
Video Frame Rate	Up to 25 fps		
Video Resolution	720p and 1080p		

Environmental

Temperature Range	-25°C to +70°C (Operational T3)		
Demisting	Internal thermostat controlled anti-condensation heater		
Ingress Protection	IP66		

Electrical

Power Consumption	4 W max (Camera) + 6 W (Demisting Heater)		
Power Supply	PoE to IEEE802.3af Mixed DC & Data (mode A)		



Specifications

Connectivity

Connector	Camera—M12 Female D-Coded (Camera)	
Type	Flying Lead	
Connections	Pin	Signal
	1	Tx Data +
	2	Rx Data +
	3	Tx Data -
	4	Rx Data -
Connector	Demisting Heater—3 Pin Wago	
Type	Flying Lead	
Connections	Pin	Signal
	1	+110 V DC
	2	n/c
	3	0 V



Specifications

Standards Compliance

Shock & Vibration	EN50155:2007, 12.2.11 EN61373:2010
Ingress Protection	EN60529:1992
Cooling	EN50155:2007, 12.2.3 EN60068-2-1:2007 Test Ad
Dry Heat	EN50155:2007, 12.2.4, EN60068-2-2:2007 Test Bd
Low Temp Storage	EN50155:2007, 12.2.14, EN60068-2-1
Damp Heat	EN50155:2007, 12.2.5 EN60068-2-30:2005 Test Db
Rapid Temp Cycling	EN60068-2-14:2009 Test Na
Earth Bonding	EN50155:2007
Conducted Emissions	EN50155:2007 12.2.8.2 EN50121-3-2:2015, EN55011:2009 +A1:2010
Radiated Emissions	EN50155:2007 12.2.8.2 EN50121-3-2:2015, EN55011:2009 +A1:2010
Radiated Susceptibility	EN50155:2007, 12.2.8.1 EN50121-3-2:2015, EN61000-4-3:2006 +A1:2010
Conducted Susceptibility	EN50155:2007, 12.2.8.1, EN50121-3-2:2015, EN61000-4-6:2009
Fast Transient Burst Sus.	EN50155:2007, 12.2.7.3, EN 50121-3-2:2015, EN61000-4-4:2004 A1:2010
Electrostatic Discharge	EN50155:2007, 12.2.7.2, EN50121-3-2:2015, EN61000-4-2:2009