



CV-A50/A60

Compact Industrial Monochrome CCD Camera



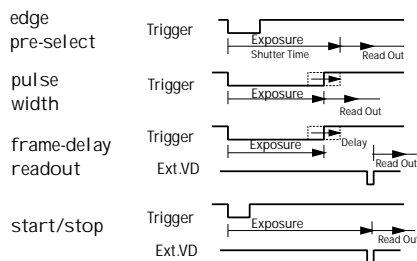
- New compact size 1/2" and 1/3" monochrome CCD cameras
- CCIR: 752 (h) x 582 (v) pixels. EIA: 768 (h) x 494 (v) pixels
- Improved sensitivity, dynamic range and smear performance
- High S/N ratio up to 60 dB
- Extended range of functions and options compared with CV-M50
- Shutter speeds from Off to 1/10,000 sec.
- Programmable exposure
- Interlaced or non-interlaced scanning. Field or frame accumulation
- Internal, external HD/VD or random trigger synchronization
- Edge pre-select, pulse width control, start/stop trigger modes
- Long time exposure with external VD pulse interval
- Frame-delay read out in connection with pulse width controlled shutter
- Exposure enable EEN, write enable WEN and pixel clock output
- Short ASCII commands for fast mode setup via serial port
- Setup by Windows 95/98/NT software via RS 232C

The leading manufacturer of high performance camera solutions

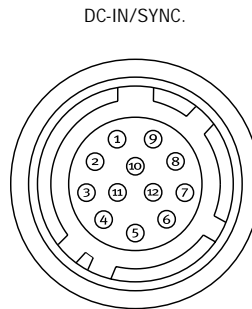
Specifications for CV-A50/A60

Specifications	CCIR	EIA
Scanning system	625 lines 25 frames/sec.	525 lines 30 frames/sec.
CCD sensor CV-A50	Monochrome 1/2" IT CCD	
CCD sensor CV-A60	Monochrome 1/3" IT CCD	
Sensing area	CV-A50 6.4 (h) x 4.8 (v) mm	CV-A60 4.9 (h) x 3.7 (v) mm
Effective pixels	752 (h) x 582 (v)	768 (h) x 494 (v)
Pixels in video output	737 (h) x 575 (v)	758 (h) x 486 (v)
Cell size	CV-A50 8.6 (h) x 8.3 (v) μm	CV-A60 8.4 (h) x 9.8 (v) μm 6.5 (h) x 6.25 (v) μm
Resolution horizontal	570 TV lines	
Sensitivity on sensor CV-A50	0.03 Lux, Max gain, 50% video	
CV-A60	0.05 Lux, Max gain, 50% video	
S/N ratio	CV-A50 59 dB	CV-A60 60 dB 59 dB
Video output	Composite VS signal, 1.0 Vpp, 75 Ω	
Gamma	0.45 or 1.0	
Gain	Manual – Automatic	
Gain range	0 to +15 dB	
Accumulation	Field – Frame	
Synchronization	Int. X-tal. Ext HD/VD or random trigger	
Scanning	2:1 interlaced, non-interlaced	
HD sync. input/output	4 V, 75 Ω	
Trigger input	4 V, 75 Ω	
WEN output (write enable)	4 V, 75 Ω	
EEN out. (exposure enable)	4 V, 75 Ω	
Pixel clock output	4 V, 75 Ω	
Shutter	(off), 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10,000 sec.	
Pulse width control	1.5 H to 1000 H	
Start/stop	1/50 to 1/10,000 sec. 1/60 to 1/10,000 sec.	
Long time exposure	1 field to ∞	
Programmable exposure	2.5 H to 252.5 H	
Frame delay readout	Time from PWC trigger input to ext. VD input	
Functions controlled by RS 232C	Scanning format, Trigger mode, Shutter speed, Trigger/WEN polarity, Accumulation, Shutter mode, Programmable exposure, AGC level, White clip, Setup, Manual gain, AGC/manual gain, Internal/ potentiometer gain set, Gamma, Pixel clock, Commands and internal adjustments.	
Functions controlled by DIP switches	VD input/output, HD input/output, internal HD and VD 75 Ω termination on/off	
Operating temperature	-5°C to +45°C.	
Humidity	20 - 80% non-condensing	
Storage temp./humidity	-25°C to 60°C./20% - 90 %	
Power	12V DC \pm 10%. 1.5 W	
Lens mount	C-mount	
Dimensions	29 x 44 x 66 mm (HxWxD)	
Weight	150 g	

Trigger/Readout Modes



Connection Description

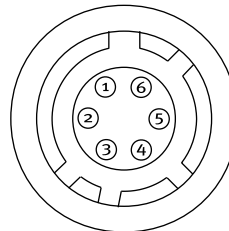


HIROSE HR10A-10R-12P

- Pin 1 Ground
2 +12V DC
3 Ground
4 Video output
5 Ground
6 HD input/HD output
7 VD input/VD output
8 Ground
9 Pixel clock output
10 WEN output
11 Trigger input
12 Ground

(Pin configuration compatible with EIAJ standard)

TRIGGER



HIROSE HR10A-7R-6P

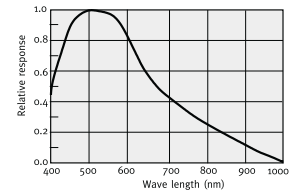
- Pin 1 TXD
2 RXD
3 Ground
4 Ground
5 Trigger input
6 EEN output

Plugs for cable:
12 pin: HIROSE HR10A-10P-12S
6 pin: HIROSE HR10A-7P-6S

Ordering Information

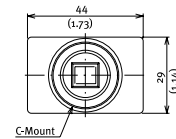
CV-A50C 1/2" Monochrome Camera. CCIR
CV-A60C 1/3" Monochrome Camera. CCIR
CV-A50E 1/2" Monochrome Camera. EIA
CV-A60E 1/3" Monochrome Camera. EIA
MP40 Tripod Adapter (must be ordered separately)

Spectral Sensitivity

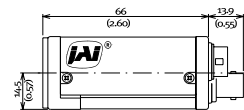


Dimensions

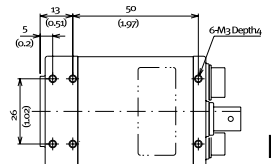
Front view



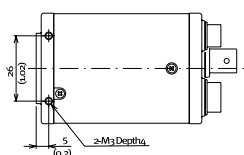
Side view



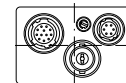
Bottom view



Top view



Rear view



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Technical Data: SPU15A-105

15W Desk Top Switching Power Supply for I.T.E

Description:

The SPU15A AC/DC switching mode power supply provides 15 Watts of continuous output power. This supply is UL 94V-0 min compliant, and includes IEC-320-C14 input for worldwide applications. This model meets FCC Part-15 class B and CISPR class B emission Limits and are designed to comply with UL, C-UL, TUV and new CE requirements. All units are 100% burned in and tested.

Features:

- Wide Input Voltage 90 - 264 VAC, 47 to 63 Hz
- IEC-320-C14 Input Inlet
- Output Voltage from 11 VDC thru 13 VDC
- Single Output
- Splash proof
- Class I insulation



Electrical Characteristics:

Parameter	Test Conditions	Min	Type	Max	Unit
Input Voltage	Operating Voltage	90		264	VAC
Input Frequency		47		63	Hz
Output Power Range	Vin=90 to 264VAC	0		15	
Output Voltage Range					W
Output Current Range					VAC
Input Current (Low Line)	Io=Full Load, Vin=115VAC			0.4	A
Input Current (High Line)	Io=Full Load, Vin=230VAC			0.26	A
Low Line Inrush Current	Io=Full Load, 25c, Cool Start, Vin=115VAC		12	15	A
High Line Inrush Current	Io=Full Load, 25c, Cool Start, Vin=230VAC		26	30	A
Efficiency	Io=Full Load, Vin=230VAC	60	75	85	%
Line Regulation	Io=Full Load		0.5	1	%
Load Regulation	Vin=230VAC		3	5	%
Over Voltage Protection	Optional				
Over Current Protection	Nil. But, Output protected to short circuit conditions				%
Transient Response	Io=Full Load to Half Load, Vin=100VAC			4	mS
Hold-up Time	Io=Full Load, Vin=110VAC	5			mS
Start Up Time	Io=Full Load, Vin=100VAC	0.3	1	2	S
Ripple & Noise (Peak to Peak)	Full Load, Vin=90VAC		0.5	1	%
Safety Ground Leakage Current	Io=Full Load, Vin=240VAC		0.5	0.75	mA
Temperature Coefficient	All output	-0.04		0.04	% / c

Environmental:

Parameter	Test Conditions	Min	Type	Max	Unit
Operating Temperature		0		70	C
Storage Temperature		-40		85	C
Relative Humidity		5		95	%
Derate linearly from 100% load at 40C to 50% load at 70C					
Dielectric Withstanding Volt Primary to Secondary	Primary to Secondary	4242			VDC
Dielectric Withstanding Volt Primary to Ground	Primary to Ground	2121			VDC
Isolation Resistance	Test Voltage=500VDC	50			M ohm
EMI Requirements CISPR-22	Vin=220VAC	B			CLASS
EMI Requirements FCC PART-15	Vin=110VAC	B			CLASS

Technical Data: SPU15A-105

15W Desk Top Switching Power Supply for I.T.E

Output Voltage and Current Rating

Model (Base) Number	Output Voltage	Output Current	Regulation	Max. Output Power
SPU15A-105	11 ~ 13 VDC	1.36 ~ 1.15 A	5%	15W

PSE aproval

Weight: 165 gs approximately

