



Products of our professional CCTV system solutions

Ypsilon-line

2-wire video transmission systems
LE 86 LE 90 LE 100

- For first-class 2-wire and coaxial transmission
- 650 - 4300 m range
- Excellent picture quality due to high bandwidth of 5 MHz
- Extremely cost-effective solution through efficient utilization of existing resources
- 1 to 16 color video pictures per module in 100 % real time
- Compatible with all video cameras with a 2-wire output



LE 86: Max. range 1500 m

Description

The 2-wire video transmission systems from plettac electronics offer outstanding performance capabilities for this most widely used transmission medium. The LE 86 system can simultaneously transmit up to 2 channels in real time and in color over up to 1500 m on coaxial or 2-wire lines. The LE 90 system can simultaneously transmit up to 16 channels in real time and in color over up to 1800 m on coaxial or 2-wire lines. The standard LE 100 range of 4300 m can even be extended to 12500 m using special LE 100-Z repeaters which permit a minimum of 5 cascades.

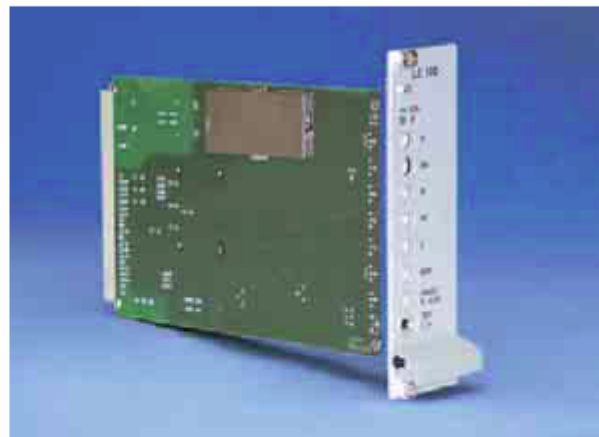
A further bonus of both systems is their ability to make efficient use of existing telephone or multi-strand cables, thus saving the costs of new installations and paving the most cost-effective way to maximum performance, exceptional picture quality and a 100 % real time display. The high bandwidth of 5 MHz and the equalizer amplifier in the receiver combine to produce perfectly focused reception. The equalizer amplifier can be configured line-specifically and can compensate for transmission losses of up to 50 dB, or 60 dB with preemphasis.

As LE 86 and LE 100 are both wire-based transmission systems, they can offer the highest possible degree of reliability, and the twisted wires ensure the highest level of interference resistance. In the unlikely event of a signal failure, the systems automatically activate an LED on the front panel of the unit as well as a floating alarm contact. The systems also offer protection from overvoltages, such as indirect lightning strikes or similar disturbances.

Needless to say, both systems are fully compatible with all 2-wire output video cameras from plettac electronics which no longer require a special type of transmitter. The LEV 86 module features two independent reception channels, which means that 2 video signals can be processed using a single module. The integrated remotely controlled video selector switch in LE 100 S makes it possible to select from up to 3 video signals for transmission.



LE 90: Max. range up to 850 m



LE 100: Max. range 12.500 m

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Transmitter



plettac CCTV cameras

or



LE 100 S

LE 100 S-W

Receiver



LEV 86

Cable type	Dimensions	Distance
2-wire	ø 0.8 PE	700 m
2-wire	ø 0.4 PE	400 m
2-wire	ø 0.6 PVC	300 m
Coaxial	1.0/5.6	1,500 m
Coaxial	0.6/3.7	600 m

Fitting Options

SG 87

max. 2 LE 100 S-W

max. 1 LEV 86, without front panel

SG 87
+
FSG 87

max. 2 LE 100 S-W

max. 2 LEV 86, without front panel

19"-
rack

max. 10 LE 100 units

TM 1 - power supply & kit

AE 2 connection board per unit

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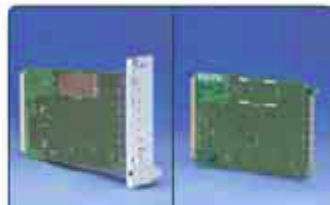


Transmitter



plettac CCTV cameras

or



LE 100 S

LE 100 S-W

Repeater



LE 100 Z

LE 100 Z-W

Number of repeaters	Distance
0	2,500 m
1	5,000 m
2	7,500 m
3	10,000 m
4	12,500 m

Cable type	Dimensions	Distance
2-wire	ø 0,8 PE	2,500 m
2-wire	ø 0,4 PE	1,500 m
2-wire	ø 0,6 PVC	900 m
Coax	1,0/6,6	4,300 m
Coax	0,6/3,7	2,400 m

Receiver



LE 100 E

LE 100 E-W

Fitting options

SG 87



max. 2 LE 100 S-W



max. 2 LE 100 S-W



max. 2 LE 100 S-W

SG 87
+
FSG 87



max. 2 LE 100 S-W



max. 2 LE 100 S-W



max. 2 LE 100 S-W

19"-
rack



max. 10 LE 100 units

TM 1 - power supply & kit



AE 2 connection board per unit

Technical Data LE 90 • LE 100		
	LE 90 Line equalizer amplifier	LE 100 Line equalizer amplifier
Video inputs	16x 1 Vpp at 75 Ω +3 dB asym.	(local) 3x 1 Vpp ±3 dB pos. CVBS asym. at 75 Ω
Symmetrical inputs	16x 1 Vpp ±3 dB sym. CVBS at 124 Ω	1x 2 Vpp ±3 dB sym. CVBS at 124 Ω
Symmetrical outputs	16x 1 Vpp ± 3 dB sym. CVBS at 124Ω	1x 2 Vpp ±3 dB sym. CVBS at 124Ω
Video outputs	16x 1 Vpp asym. at 75 Ω , adjustable 16x 1 Vpp asym. at 75 Ω +3 dB/ -8 dB (Test)	2x 1 Vpp ±3 dB CVBS-Signal asym. 1x 1 Vpp, at 75 Ω (Test)
Video bandwidth	5 MHz ± 2 dB	5 MHz
Amplitude frequency tolerance range	≤ ±3 %	±2 dB (50 Hz - 5 MHz) at 40 dB and 5 MHz
Differential amplification	≤ ±3 %	≤ ±3 %
Differential phase	≤ ±3 °	≤ ±3 °
Pre-amplification (switchable)	-	10 dB
Equalizing	0 dB ... 16 dB/ 5 MHz 6 dB ... 20 dB/ 5 MHz (switchable)	0 dB ... 50 dB on basis-equalization, in 10dB steps up to 40 dB, continuously adjustable
Isolation	Input-Earth 500 V DC Input-Input 500 V DC Ground-Earth 50 V DC	between symmetrical Input/Output 3 kVeff
EMC	Acc. to CE	Acc. to CE, with low-frequency magnetic fields to 100 A/m
Operational voltage	230 V AC (-15/+10 %) 115 V AC (-15/+10 %) optionally via jumper 24 V DC (20 V ... 30 V)	+10 V DC ... 30 V DC
Power consumption	0.5 A	0.18 A ... 0.06 A (at 10 ... 30 VDC)
Power	115/230 V AC: < 20 VA 24 V DC < 12 W	1.8 W
Storage temperature	-15 °C ... +70 °C	-35 °C ... +55 °C
Operational temperature	+15 °C ... +55 °C	0 °C ... +40 °C (19" rack)
Operational temperature	+5 °C ... +55 °C (wheather-proof version)	-35 °C ... +50 °C (wheather-proof version)
Mechanical Data		
Weight (kg)	3.8	0.2
Weight incl. packaging (kg)	6.5	0.6
Dimensions (mm)	440 x 45 x 290 (19" 1 HU)	100-160 mm 19" Eurocard für, 3 HU/7 DU
Pack dimensions (mm)	500 x 125 x 360 (L x W x H)	300 x 155 x 110 (L x W x H)
Order numbers		
LE 90 16-channel 2-Wire receiver		943445110100
LE 100 19" Line equalizer amplifier		943442150100
LE 100 W Line equalizer amplifier		943442150200
19"-rack unit 6 HU for LE 100		941955110100
AE 2 connection board for LE 100 im 19" rack unit		943442110500
Power supply TM 1 for 19" rack unit		943435120200
TM 1 mounting kit		943437110200
Dummy panel for 19" rack unit		943437110300
SG 87 Wheather-proof housing		943442140100
FSG 87 Switched power supply kit		943442140200

Technical Data LE 86

LEV 86/16 Receiver	
Video inputs	2x 1 Vpp ± 3 dB CVBS asym. at 75 Ω
Symmetrical inputs	2x (2x1 Vpp) ± 3 dB CVBS sym. at 124 Ω , Switchable input resistor: 124, 76, 40 Ω
Video outputs	2x 1 Vpp pos. CVBS at 75 Ω ; switchable "MAN, GAIN" or autogain Ag > 20 dB/Sync. base < 1 V
Equalizing	Adjustable from 0 dB +1/-2 dB...16 dB (5 MHz)
Video bandwidth	> 5 MHz dependent on cable type
Gain differential	< ± 3 % at 0 dB equalization
Phase differential	< ± 3 ° at 0 dB equalization
Resistance to interference	< 60 dB at 0 dB equalization
Indicators/controls	Green LED (voltage); yellow LED (good signal), equalizer settings for high, medium and low controlled output
Operational voltage	15 V DC ... 30 V DC
Power consumption	ca. 150 mA (one output terminated with 75 Ω)
Operating temperature	0 °C ... +40 °C (in 19" rack)
Storage temperature	-35 °C ... +55 °C
High voltage protection	≤ 500 Veff (symmetrical input)
EMC	CE compliant
Mechanical Data	
Weight (kg)	0.2
Weight incl. packaging (kg)	0.6
Dimensions (mm)	100-160 mm 19" Eurocard, 3 HU/7 DU
Pack dimensions (mm)	300 x 155 x 110 (L x W x H)
Order numbers	
LEV 86/16 receiver	943442120300
19" rack unit 6HE for LE 86	941955110100
AE 2 connection board for LE 86 in 19" rack unit	943442110500
Power supply TM 1 for 19" rack unit	943435120200
Kit for TM 1	943437110200
Dummy panel for 19" rack unit	943437110300

Technical Data Power Supplies			
	TM 119" power supply	SG 87 incl. power supply	FSG 87 switched PSU
Input voltage	220/240 V AC \pm 10%; 50/60 Hz	110/230 V AC \pm 10%; 50/60 Hz	21 V DC ... 90 V DC
Power consumption	120 VA	max. 10 W	10 W
Output voltage	+12 V DC/-12 V DC 50 mA 22 V DC \pm 5%	24 V DC (non stabilized)	+15 V DC ... 30 V DC
Output load	3.5 A	180 mA	350 mA
Environmental Data			
Temperature	0 °C ... +40 °C	-35 °C ... +55 °C	0 °C ... +40 °C
Protection class	class II	IP 54 (DIN 40050)	IP 40
Security	-	VDE0805, VDE0860 H, class II	-
EMC	CE compliant	CE compliant	CE compliant
Mechanical Data			
Weight (kg)	2.1	1.6	0.054
Weight incl. packaging (kg)	2.3	2.3	0.1
Dimensions (mm) (L x W x H)	100-160 mm 19" Eurocard 3 HU/12 DU	266 x 120 x 105 mm	60 x 70 x 25 mm
Pack dimensions (mm) (L x W x H)	230 x 270 x 145 mm	420 x 327 x 218 mm	145 x 100 x 60 mm

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Specifications Subject To Change Without Notice