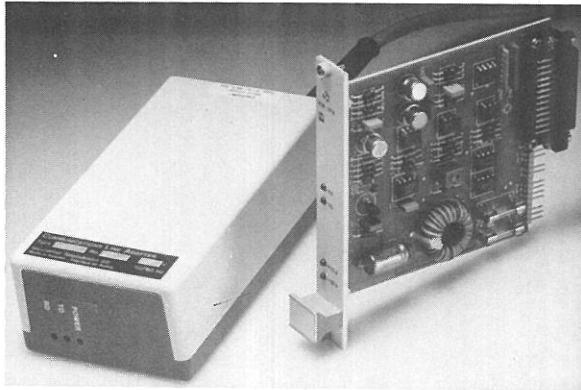


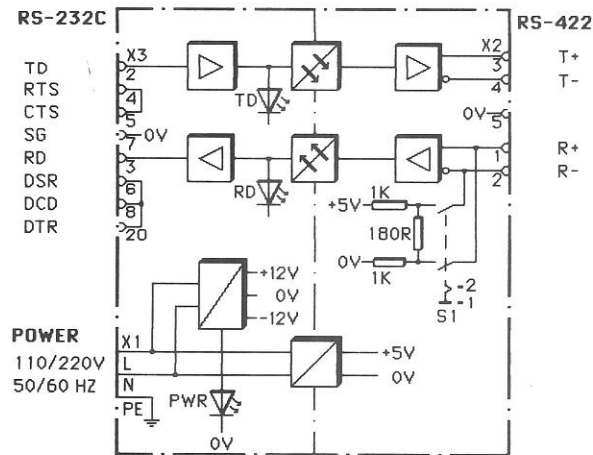
# KM-1F RS-422 CONVERTER



KM-1F

KM-1FR

## BLOCK DIAGRAM



The KM-1F is a low cost, high performance EIA RS-232 (CCITT V.24/V.28) to EIA RS-422 converter.

The unit can be used when equipment with the two different interfaces are to be connected. It can also be used as the transmission device in local communication links over distances up to 1.2 km.

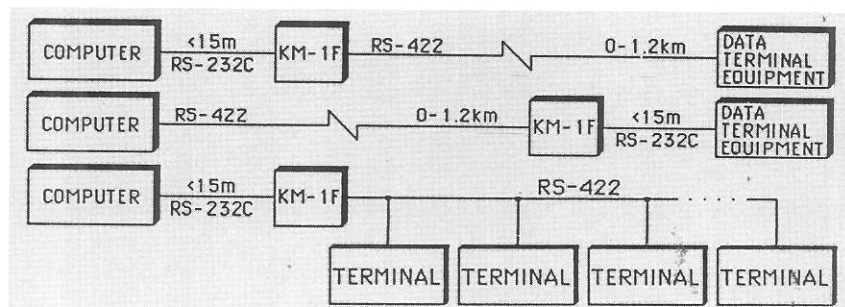
The two interfaces are completely isolated from each other, i.e. both the transmitter and the receiver are electrically isolated.

The KM-1F is intended for asynchronous transmission at any speed ranging from 0 to 38400 bps. It has full duplex capability, which means that transmission and receiving can occur simultaneously on two twisted pairs. Up to ten receiving RS-422 units can be connected to one twisted pair.

By means of a two-position switch one selects high-impedance or terminated receiver. No other adjustment or strapping is necessary.

The KM-1F can either be supplied in a table top box or as a plug-in unit (KM-1FR) for the WESTERMO 19" rack system type RV.

## TYPICAL SYSTEM APPLICATIONS



## FEATURES

- Asynchronous transmission
- Full duplex
- 0-38400 bps (any rate)
- EIA RS-422
- EIA RS-232C or CCITT V.24/V.28
- Isolation between interfaces
- Distance up to 1.2 km
- LED indicators
- Easy to install
- Small size
- Low cost
- Table top or rackmounting

## SPECIFICATIONS

Interface no 1	According to EIA RS-232C and CCITT V.24/V.28
Interface no 2	According to EIA RS-422A, balanced transmission
Speed	Any rate from 0 to 38400 bps (no strapping necessary)
RS-422 Line	Simplex: One twisted pair. Full duplex: Two twisted pairs.
Max line distance	1.2 km (any speed) when using 24AWG (0.2 mm <sup>2</sup> ), 52.5pF/meter cable.
Isolation	Transmitter and receiver isolated from both power supply (transformer) and transmission line (opto coupler).
Power	110/220 VAC $\pm$ 10 %, 40-60 Hz (KM-1F). (Factory wired). Other supplies on request. +20V and -20V (KM-1FR)
Temperature range	5-50°C
Humidity	0-95 % RH, non-condensing
Dimensions	80x150x50 mm (KM-1F) appr. 100x100 mm (KM-1FR)
Weight	0.5 kg (KM-1F) 80 g (KM-1FR)
LED Indicators	Power On Transmitted Data Received Data

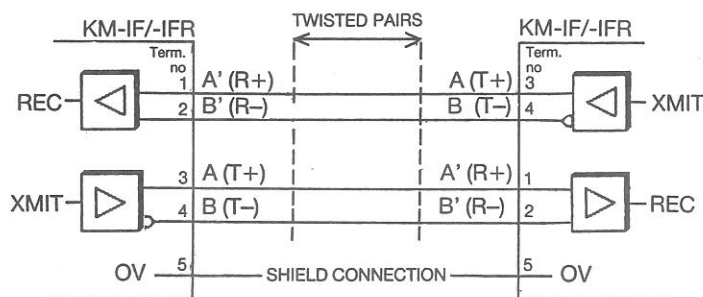
## DTE CONNECTION (RS-232C)

Pin No	Mnemonic/Signal Name	CCITT V.24 Designation	RS-232 C Designation
2	TD /Transmitted Data	103	BA
3	RD /Received Data	104	BB
7	GND /Signal Ground	102	AB
4	RTS /Request To Send	105	CA
5	CTS /Clear To Send	106	CB
6	DSR /Data Set Ready	107	CC
8	DCD /Carrier On	109	CF
20	DTR /Data Terminal Ready	108/2	CD

Note: RTS looped back to CTS.  
DTR looped back to DSR and DCD.

## TRANSMISSION LINE CONNECTION (RS-422)

(To KM-1F/-1FR Screw Terminals)



Note: If shielded cable is used, just connect the shield at one end of the transmission line.

## WALL MOUNTING OF KM-1F

- Drive in two 4 mm dia. screws (e.g. wood-screws) to the wall, 127 mm center to center.
- Remove the cover of the box.
- Hang the KM-1F on the wall and then tighten the two screws.
- Connect the line to the screw terminals as shown above.  
(Observe polarity)
- Reassemble the box.
- Apply power.
- The KM-1F is ready to operate.



WESTERMO TELEINDUSTRI AB  
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