

MODEL: KLS 24/24-D



FEATURES

- Power and Data transfer
- Half-duplex RS 422 serial data
- 115 K baud data transfer rate
- 24 V DC in 24 V DC @ 1A out
- 2 +/-1-mm air gap
- Aluminum housing
- Electronics are fully potted
- -20 to 70 C° operating temperature
- CE listed
- Ø 100-mm

OVERVIEW

The **NEW** KLS 24/24-D Inductive Power Coupler transfers 1 amp of power @ 24 V DC and half-duplex RS 422 serial data across a 2-mm air-gap. The inductively coupled power is used to power electronics and the Coupler's data capability. The applied serial data stream is modulated as a FSK signal and transferred via the air gap between the Mobile Coupler and the Stationary Coupler. In the receiving Coupler, the signal is demodulated and transferred via cable to the relevant data sink. The desired data direction can be selected with a control signal.

The system is powered with a 24 V DC (+/- 10 %) supply. The DC supply voltage is converted to AC in the Stationary Coupler, then inductively coupled to the Mobile Coupler where the voltage is rectified to supply 24 V DC @ 1 A to power external loads and electronics. Any Stationary Coupler will operate with any Mobile Coupler.

BENEFITS

- NO mechanical contact = NO wear
- Any Stationary Coupler operates with any Module Coupler
- Stable 24 V dc @ 1 Amp output
- Water, solvents, dirt or oil do not interfere with performance or life
- Stable Aluminum housing

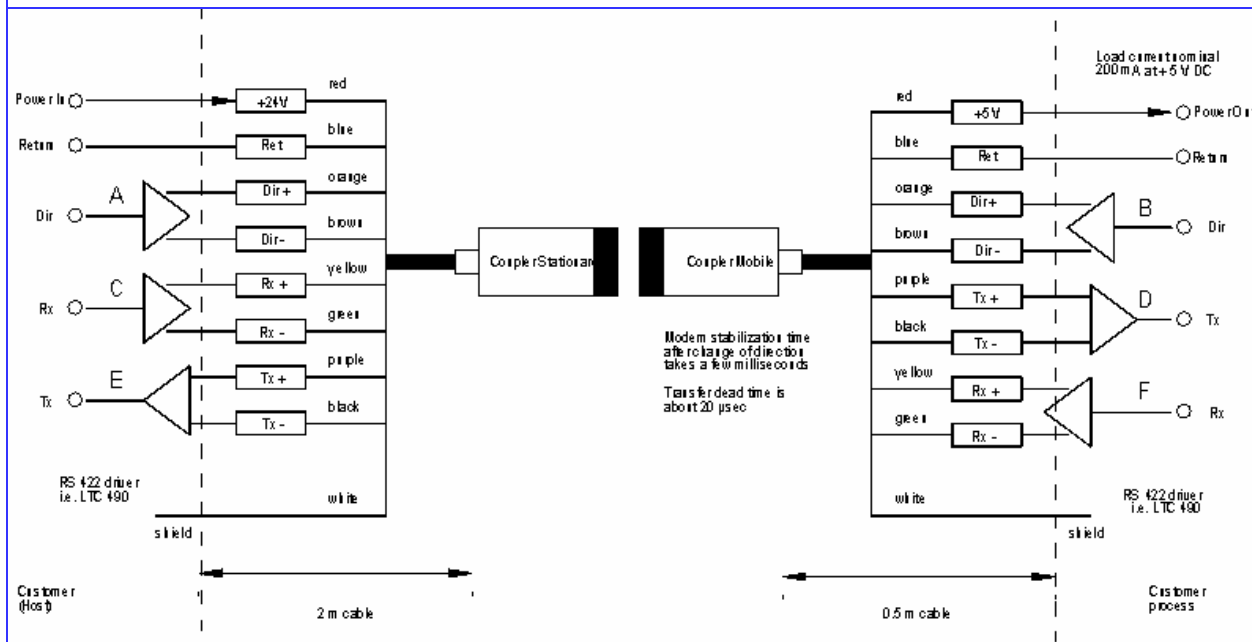
OPTIONS

- Full Duplex RS 232 Interface
- CAN bus coupler
- Power Only

SPECIFICATIONS: Model KLS 24/24-D

DETAIL	STATIONARY COUPLER	MOBILE COUPLER
POWER (voltage/current):	Nominal supply power: 24 V DC +/- 10 % @ ~ 2A	Nominal supply power: 24 V DC @ 1A.
DATA INTERFACE AND BAUD RATE:	RS 422 half-duplex with direction signal, 115 K baud, master/slave configuration	RS 422 half-duplex with direction signal, 115 K baud, master/slave configuration
AIR GAP TOLERANCE:	2-mm +/- 1-mm	
OPERATING TEMPERATURE RANGE, C° (F°):	-20 to 70 C°, (-4 to 158 F°)	
OPERATING STATUS:	Green LED on Stationary Coupler shows 24 V DC power is applied to the system.	Green LED on Mobile Coupler confirms availability of transferred 24 V dc.
MECHANICS: dimensions, weight, cable length:	100-mm diameter aluminium housing with mounting holes, 50-mm height, 700-g, cable: 2-meter long	100-mm diameter aluminium housing with mounting holes, 50-mm height, 700-g, cable: 2-meter long

CONNECTION DIAGRAM: KLS 24/24-D



Sequence Control: One side (i.e. Remote) is declared as the master, the other as the slave.

1. Master permanently transmits data (Dir = 0).
2. Slave permanently receives data (Dir = 1).
3. If Master needs data from Slave, it sends a message to Slave: Send data.
4. Master sets Dir to 1 and listens to the receive data stream.
5. Slave reacts to send data command, sets Dir to 0 and transmits the requested data.
6. After data transferred, Slave sends End of message and stops transmission.
7. Slave sets Dir to 1 and starts receiving again.
8. Master recognizes End of message, sets Dir to 0 and starts again transmission.

After any change of direction, a stabilization time (few milliseconds) for the modems must be taken into consideration.