

Infrared video transmission system IR-GEK

The IR-GEK equipment system is a solution for the wireless real and time transmission of a video signal in a crane system that has been configured in accordance with the customer's specifications. Transmitter and receiver move towards each other in concentric circles. The signals are transmitted at and from any place on this circular course, irrespective whether the crane is stationary or moving. Transmitter and receiver are located in such a geometrical position that the IR receiver will always be in a position to pick up a signal from one of the 16 IR transmitters.

The IR-GEK system consists of the infrared transmission system and the IR-GEK.E infrared receiver. The infrared transmission system consists of the IR-GEK.M master transmitter and the actual 16 IR-GEK.S infrared-transmitters.

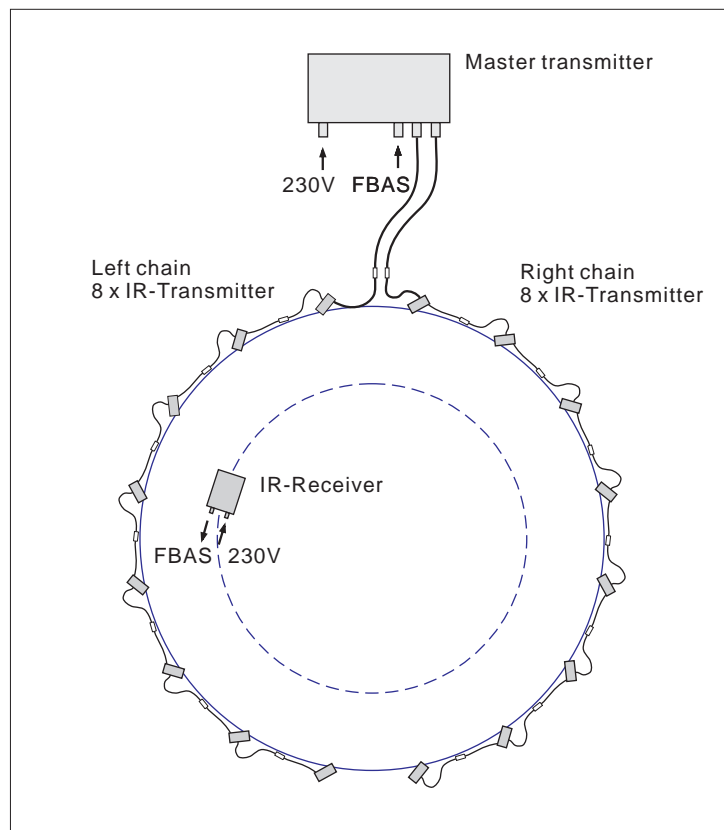


Fig. 1 • Schematic diagram of the equipment components

The master transmitter modulates the video signal fed in and supplies the HF signal and the supply voltage to the transmission output modules connected with it.

The 16 IR transmitters contain the actual transmission output modules that channel the HF current through the IR-LED. The IR transmitters are operated in two chains with eight transmitters each.

The infrared-receiver consists of altogether four visual display systems (imaging systems) with 8 photo diodes (two receivers for each imaging system). These open up a wide receiving fan with a horizontal angle of more than 30° and a vertical angle of 5°. A special electronic circuit will ensure that only the receiver diodes emitting the relevant signal make a contribution to the overall signal and that the noise of the others is suppressed. Consequently, the IR receiver will work as if it had only a narrow angle that is always aligned with the relevant location of the transmitter in the most optimal way.

All casings, cable entries and plug-in connections will ensure protection class IP 65.



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