ICP DAS

HART Series Products

HART to Single Mode Fiber Converter

RoHS ✓


HRT-227CS

Left Side View | **Front View**

Dimensions

The HRT-227CS is a HART to Fiber converter paired used to extend HART communication distance via single mode fiber optic transmission medium. In order to solve the problem between HART and fiber transmission medium, HRT-227CS is specially designed for converting the HART signal to fiber optic cables. Built-in a HART 250 Ω loop resistor adjustable by dip switch. Therefore, users can make data collection and processing of HART network easier and quicker by applying HRT-227CS. In addition, we also provide the free HC_Tool utility for module configuration easily.

Features

- Support HART Short/Long frame
- Support HART Burst mode.
- Support point-to-point or multi-drop HART mode.
- Support connecting up to 15 HART slave devices.
- Allow two HART masters.
- Provide HC_Tool for module configuration.
- Support firmware update via ComPort
- Fiber broken line detection
- 4KV ESD Protection
- Built-in Watchdog
- Selectable 250Ω loop resistor
- Provide PWR/Fiber/HART LED
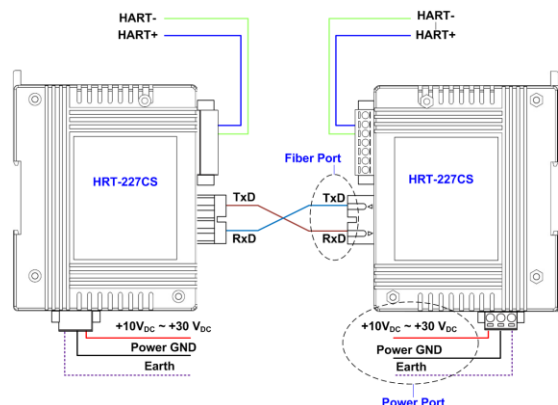- Fiber maximum transmission distance up to 30 km

Pin Assignments
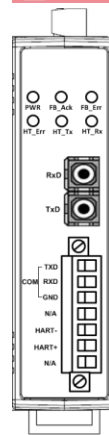
| Pin. No.	Meaning
RxD	Fiber RxD port
TxD	Fiber TxD port
COM TXD	TXD pin of RS-232 port for configuration
COM RXD	RXD pin of RS-232 port for configuration
COM GND	GND pin of RS-232 port for configuration
N/A	Non-available
HART-	HART- pin of HART network
HART+	HART+ pin of HART network

Block Diagram
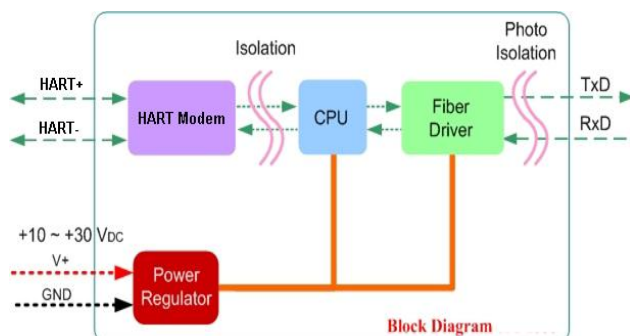
Block Diagram

Hardware Specifications

HART Interface	
Channel	1
Connector	2-pin screwed terminal block (HART+, HART-)
Terminator Resistor	Selectable 250Ω loop resistor
HART Data	Only Digital Data
Isolation	UL1577 Spec.
Fiber Interface	
Type	SC Duplex type ; Single mode ; 100 Base-FX
Wave Length (nm)	1310
Fiber Cable (µm)	8.3/125, 8.7/125, 9/125 or 10/125
Transmission Distance (km)	30 (indicative only)
Min./Max. TX Output (dBm)	-15 / -8
Max. RX Sensitivity (dBm)	-34
Max. RX Overload (dBm)	-5
Budget (dBm)	19
UART Interface	
COM 1	RS-232 (TXD / RXD / GND) for configuration (1200, O, 8 ,1)
LED	
Round LED	PWR, FB_Ack, FB_Err, HT_Err, HT_Tx and HT_Rx
Power	
Power supply	Unregulated +10 ~ +30 VDC
Protection	Power reverse polarity protection, Over-voltage brown-out protection
Power Consumption	3W
Mechanism	
Installation	DIN-Rail
Dimensions	33.0 mm x 126 mm x 101 mm (W x L x H)
Environment	
Operating Temperature	-25 to 75 °C
Storage Temperature	-30 to 80 °C
Humidity	10 to 90% RH, non-condensing

Applications
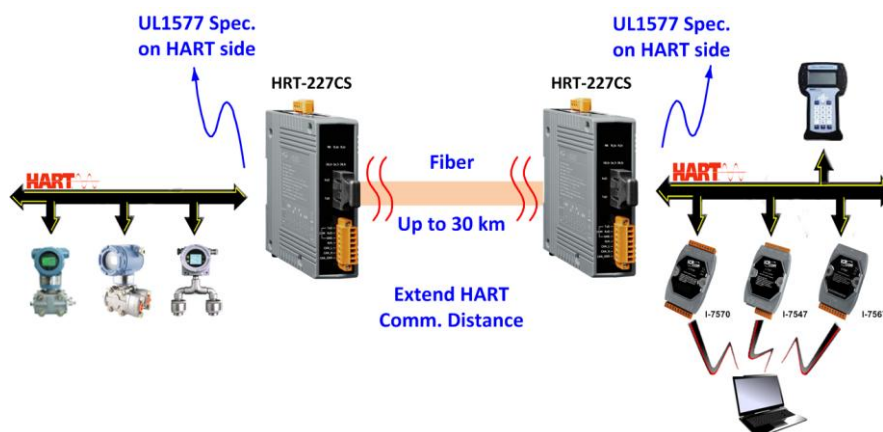
Ordering Information

HRT-227CS CR	HART to Single Mode Fiber Converter (RoHS)