

Model 2145



Profibus - DP Fiber Optic Bit-Driver



Features:

- Meets PROFIBUS-DP specification. **Tested & approved by PROFIBUS Lab**
- Modbus - RS485
- Multimode or single mode, plastic or glass fiber
- 2 port optical repeater, optical T-connector, optical to electrical converter
- 9600 bps to 12 Mbps - switch selectable
- DIN rail mounting
- Status indicators: power, TxD, RxD, invalid switch setting
- Conformal coated boards

The Model 2145 Bit-Driver used in a PROFIBUS-DP application is a two optic port repeater with single TIA/EIA-485-A electrical port. The 2145 operates at rate 9600 baud to 12 Mbaud in linear bus topology. The 2145 can be used as an optical repeater between the fiber optic segments, an optical to electrical converter between an fiber optic segment and electrical station(s), or T-connector/repeater between two fiber optic segments and electrical station(s). The 2145 is transparent and does not evaluate the PROFIBUS data exchange.

Using fiber optics over the physical layer, the 2145 provides longer segment distances, electromagnetic noise immunity and ground potential difference independence in the linear bus topology. The 2145 optics can be optionally equipped with optics of different characteristics.

The 2145 retimes the received optical signal and can link up to 32 fiber optic segments in series. The electrical port supports up to 31 stations.

The 2145 Termination switch can select an internal cable type-A termination. External terminations can derive power from the sub-D connector between pins 6 and 5.

The 2145 unit attaches to EN50022 (35mm DIN) mounting rail. Power is applied through screw terminals and data rate selection made through internal DIP switches.

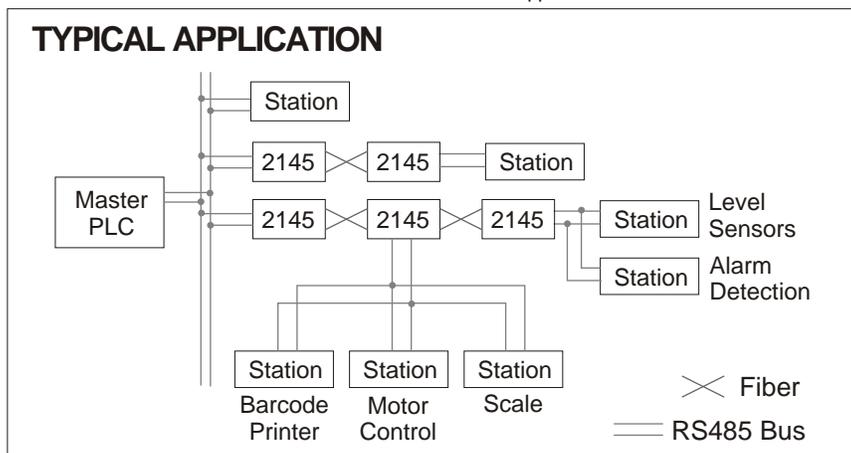
- Operation Mode:** RS485 - 2 wire
Profibus - DP
- Input/Output Interface:** EIA RS485A 2 wire
9600bps to 12Mbps
IEC 61158-2, Async, NRZ, 11 Bits
DB9 female
- Transmission Line Interface:** ST Connectors-standard (SMA option)
- Optical Power (TR):** See table 1
- Receiver Sensitivity:** See table 1
- Operating Temperature:** -25°C to +70°C
(-20°C to +60°C for SM)
- Metal Enclosure:** DIN Rail Mounting
- Weight:** 0.5 lb (220 grams)
- Input Power:** 24VDC, 3 Watts, Terminal block
- Electrical Isolation:** 1500V
- Conducted Emissions:** EN55022 Class B
- Mechanical:** IP 40

TABLE 1

Model	Wavelength (nm)	Fiber Diameter (Micron)	Fiber Type	Connector	TR PWR (-dBm)	REC SEN (-dBm)	Attenuation dB/Km	Distance Meters	Distance Feet	OPT Ports
2145-0	660/850	200	Plastic	BFOC/2.5(ST)	10	22	10/7	700/1000	2000/3000	2 PL
2145-00	660	1000	Plastic	BFOC/2.5(ST)	7	20	200	100	330	2 PL
2145-MM	850	50 or 62.5	Multimode	BFOC/2.5(ST)	12	24	3.0	3000	10000	1 MM
2145 or 2145-MM-MM	850	50 or 62.5	Multimode	BFOC/2.5(ST)	12	24	3.0	3000	10000	2 MM
2145-MM-SM	850/1300	50 or 62.5/9	MM/SM	BFOC/2.5(ST)	12/15	24/27	3.0/1.0	3000/10000	10000/33000	1 MM, 1 SM
2145-SM-SM	1300	9	SM/SM	BFOC/2.5(ST)	15	27	0.35	10000	33000	2 SM
2145-SM	1300	9	Single Mode	BFOC/2.5(ST)	15	27	0.35	10000	33000	1 SM

Note: Plastic fiber can be used for short distance applications.

TYPICAL APPLICATION



Meets FCC requirements of Class A, Part 15 Computing Devices Standard. Specifications subject to change without notice.

RS - 485 DB9 FEMALE CONNECTOR PINOUT

Sub-D	Signal Name	Function
1	Shield	Protective Ground
2	--	--
3	RxD/TxD-P	Data-P (B-Line)
4	--	--
5	DGND	Data Ground
6	VP	Voltage Plus (+5VDC)
7	--	--
8	RxD/TxD-N	Data-N (A-Line)
9	--	--
Body	Shield	Protective Ground