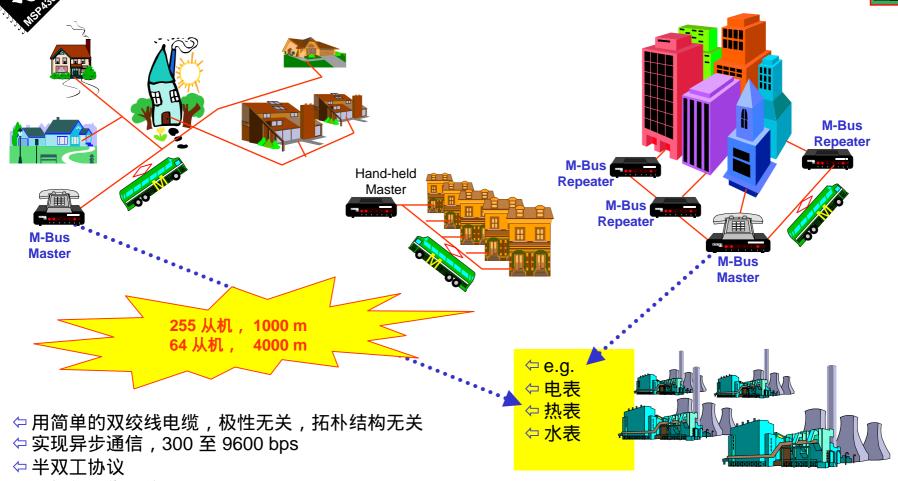
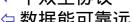
Meter-BUS: 家用仪表总线标准







- ← 数据能可靠远传
- ⇒从机远程供电





Merter-BUS: 网络结构



层	标准
应用层(Application Layer)	EN1434-3
表示层(Presentation Layer)	空
会话层(Session Layer)	空
传输层(Transport Layer)	空
网络层(Network Layer)	可选
数据链路层(Data Link Layer)	IEC-870
物理层(Physical Layer)	M-BUS

应用层

EN1434-3: 热量表标准,作为通用应用层标准制定基础

网络层

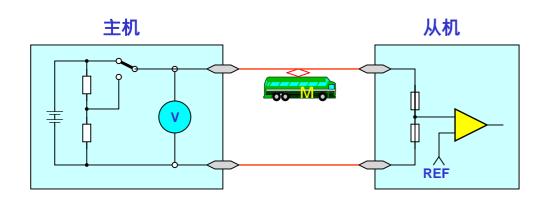
当网络拓朴复杂时,为仪表信息传输选择最佳路径

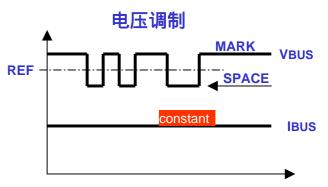


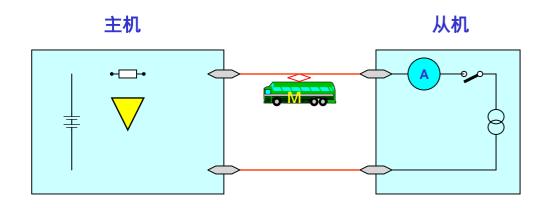
Merter-BUS: 物理层原理

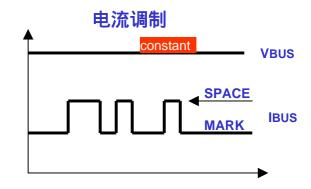


传输原理





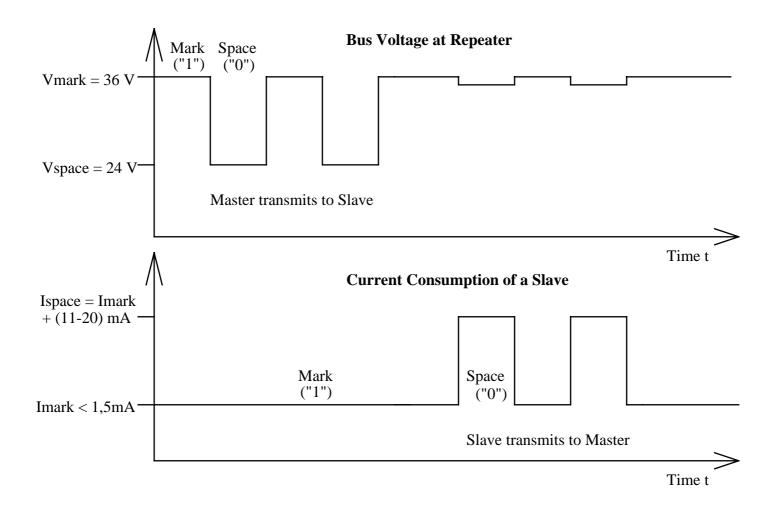






Merter-BUS: 物理层原

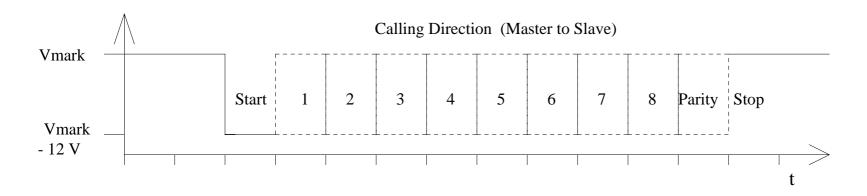


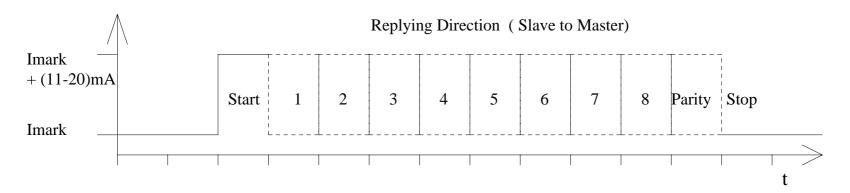




Merter-BUS:数据链路层数据格式









Merter-BUS: 数据链路层协议



要素: 异步,半双工,8位

报文格式:

单字符 0E5h

短帧 ST(10h) C A Check-SUM SP(16h)

长帧 ST(68h) L L ST(68h) C A CI User-Data Check-SUM SP(16h)

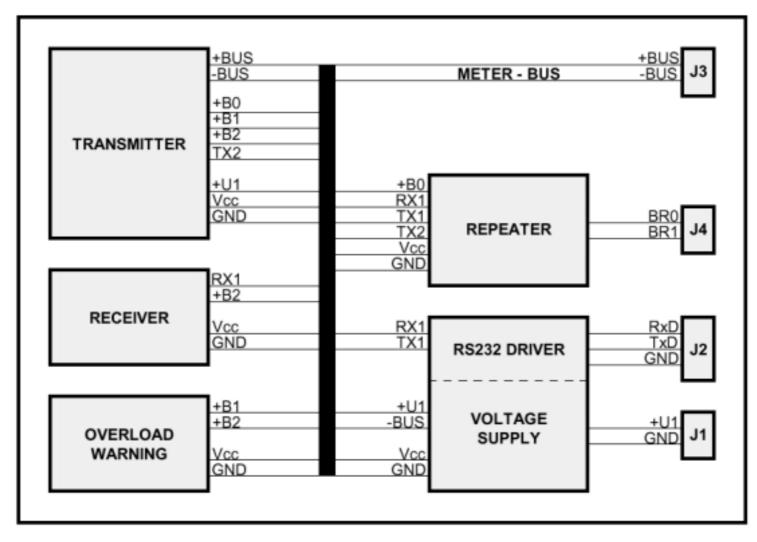
控制帧 ST(68h) 3 3 ST(68h) C A CI Check-Sum SP(16h)

A: 地址 L: 长度 User-Data: 1-253 字节



Merter-BUS: 主机接口(评估板)

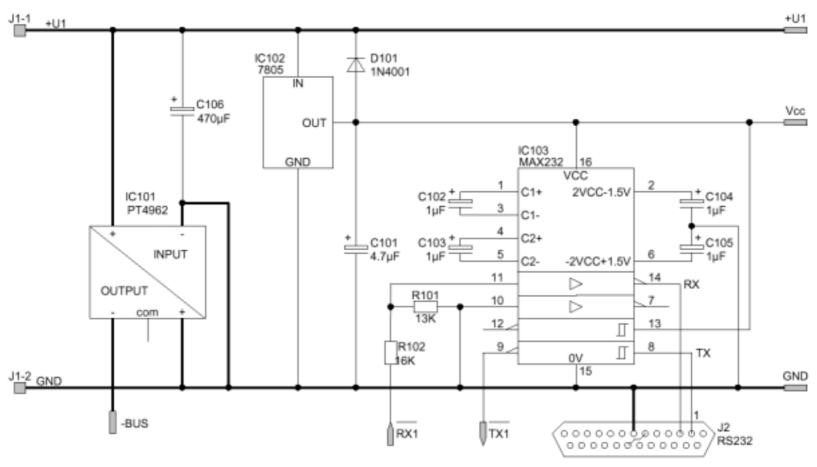






Merter-BUS:主机接口 --- RS232,电源

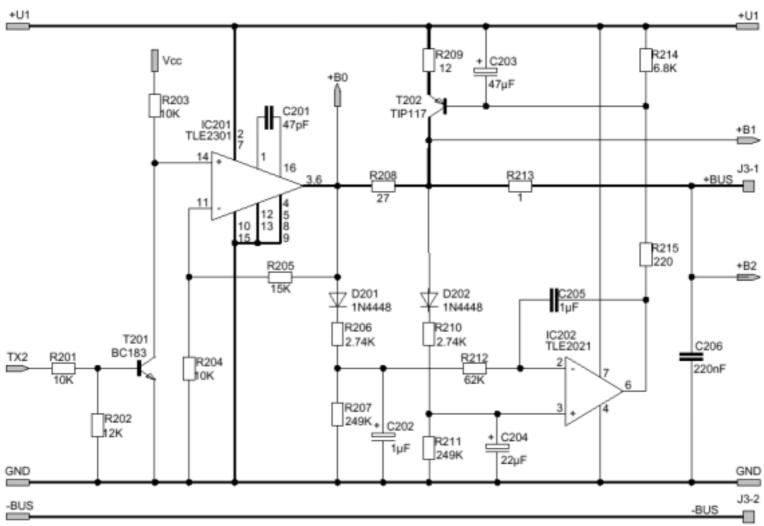






Merter-BUS: 主机接口 --- 发送

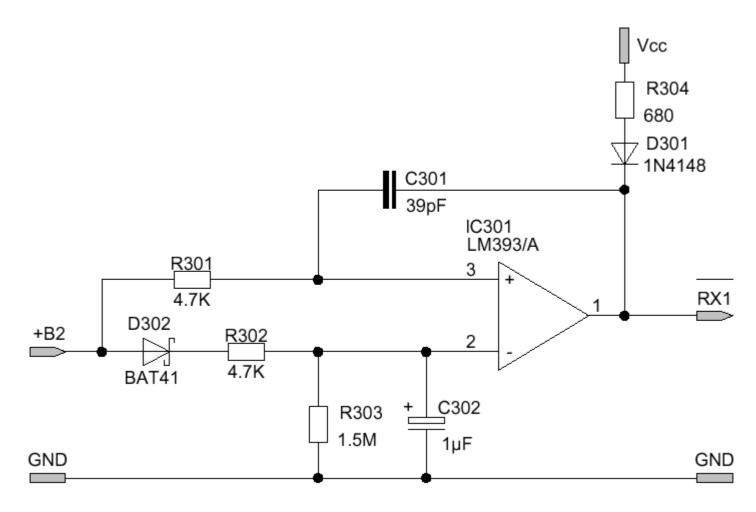






Merter-BUS: 主机接口 --- 接收

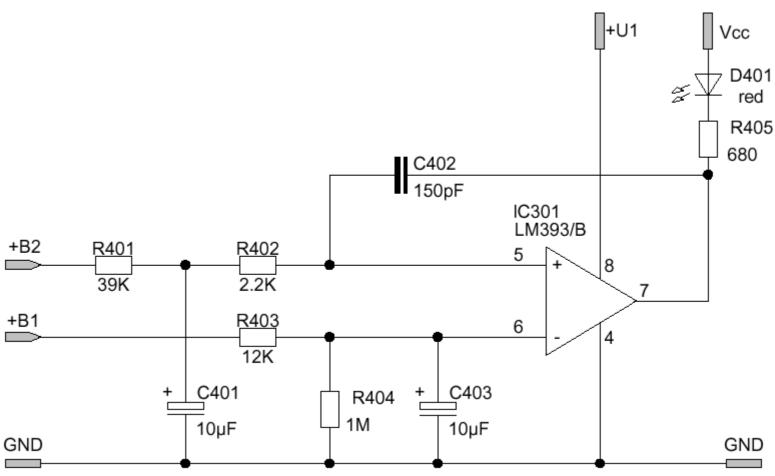


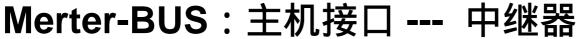




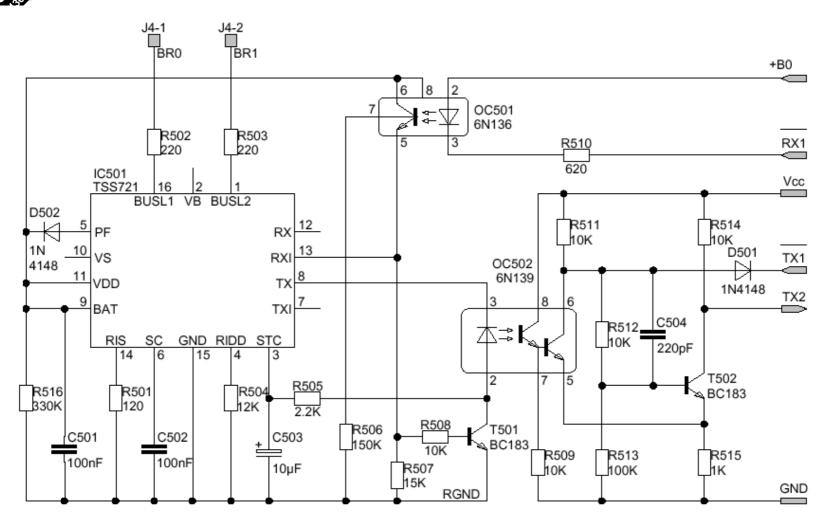
Merter-BUS: 主机接口 --- 过载报警











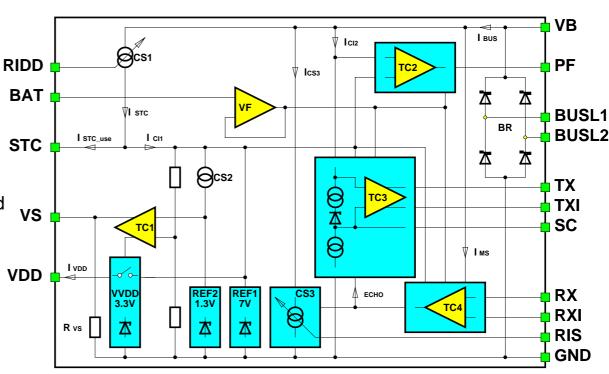


Meter-BUS: 从机收发器 TSS721A



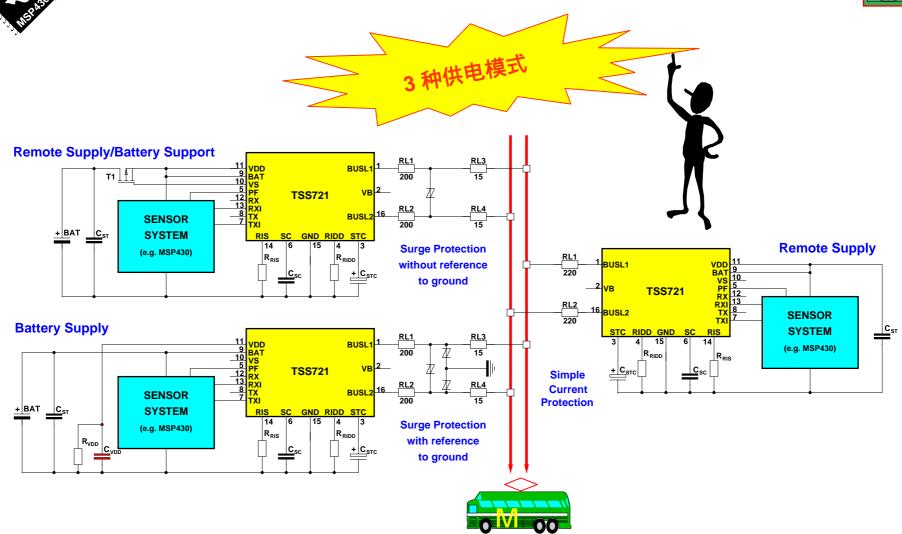
Meter-BUS 收发器: TSS721A

- ⇐ Meter-Bus 从机收发器
- 按收
 VMARK = 24 .. 42 V
 VSPACE = VMARK 12 V
- ← 发送
 IMARK = IBUS = constant
 ISPACE = IMARK + IMC
- ← 异步,半双工, 300 .. 9600 baud
- ⇔对从机供电
- ← 经VDD供电
- △ 经VDD供电 , 用电池作后备电源
- ⇔ 用电池供电 , Meter-Bus 仅用于数据发送



从机的远程供电模式







Merter-BUS TSS721A的光电隔离



