

MTL3054 AND MTL3055 COMMUNICATIONS ISOLATORS/REPEATERS

The MTL3054 and 3055 enable the extension of LONWORKS® into hazardous areas. The units provide power and communications via the signal conductors.

MTL3054: the number of devices that can be supported is a function of the power required by each device.

MTL3055: two units may be used for communication across hazardous areas or for communication to LONWORKS nodes mounted in explosion-proof (flameproof) enclosures in a hazardous area. Two MTL3055s may be used to give dual-redundant connection to a hazardous-area node.

SPECIFICATION

See also 'Common specification'

Location of field devices (MTL3054)

Zone 0, IIC, T4-6 hazardous area if suitably certified

Location of field devices (MTL3055)

Zone 0, IIC, T4-6 hazardous area if suitably certified

Zone 0, IIC, T4-6 hazardous area if suitably certified when two MTL3055s are connected together.

Hazardous-area power supply (MTL3054)

19.4V, 105Ω dc impedance typical

Maximum current 90mA

Hazardous-area power supply (MTL3055)

19.4V, 210Ω dc impedance typical

Maximum current 45mA

Hazardous-area maximum cable length

Determined by IS requirements depending upon devices attached and maximum acceptable voltage drop along cable.

Free topology: 300m maximum (provisional value)

Bus topology: 1000m maximum

Hazardous-area digital signal transmission

78.1kbit/s, carried on same wires as power.

Signals are repeated between safe-area LONWORKS physical channel and IS physical channel.

Safe-area transceiver (MTL3054)

Similar to TP-78 devices with additional safety components required by IS regulations. Operates with conventional TP-78 transceivers but maximum number of nodes and maximum bus length are reduced.

Power requirement (MTL3054)

140mA typical at 24V with full load

110mA at 35V to 170mA at 20V with full load

Power requirement (MTL3055)

100mA typical at 24V with full load

90mA at 35V to 130mA at 20V with full load

Power dissipation within unit

2.5W typical at 24V with full load

2.8W maximum at 35V with full load

Replaceable fuse

250mA

Weight

170g

Safety description (MTL3054)

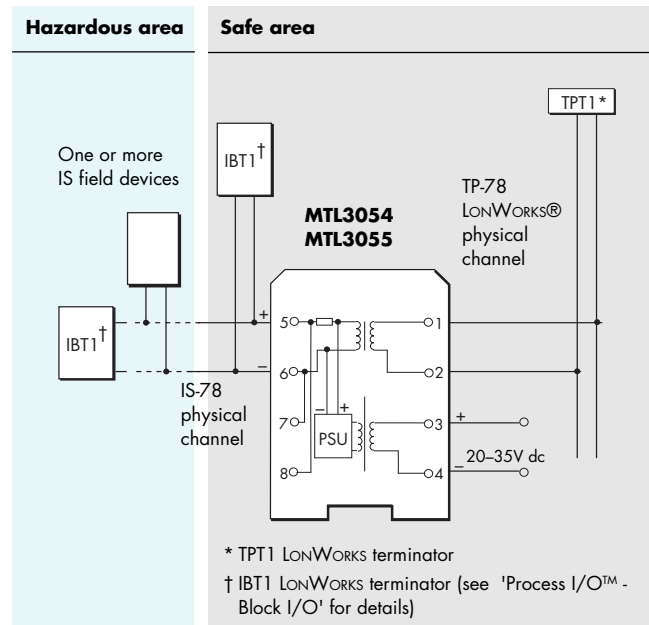
Terminals 5 to 6 and 7 to 8

22V, 102Ω, 216mA, $U_m = 250V$ rms or dc

Safety description (MTL3055)

Terminals 5 to 6 and 7 to 8

22V, 200Ω, 110mA, $U_m = 250V$ rms or dc



Note: IS-78 and TP-78 are standards of the LONMARK® Interoperability Association.