

Using MGT Gate Safety Edge Transmitters with the APeX Controller

Linear's Model MGT Gate Safety Edge Transmitter is compatible with the APeX Controller used in Linear's swing and slide gate operators. The MGT transmitter is designed to connect to normally open gate edge contacts and is fully supervised.

During normal operation, when the edge contact detects an obstruction while the gate is moving, the MGT transmitter will send an obstacle signal to the APeX Controller and stop or reverse the gate.

Being supervised, the MGT transmitter sends **hourly** status reports. It also sends trouble signals to the APeX Controller when the transmitter detects a trouble condition. When a trouble signal is sent to the APeX Controller, the run alarm sounder will beep fast and continue beeping for five minutes, then the sounder will chirp every five seconds while the gate is idle. **To clear the trouble annunciation at the gate, the transmitter's trouble condition must be corrected first, then the Controller's power must be cycled off and on.**

Four conditions regarding the MGT transmitter can cause the APeX Controller to sound the audible trouble warning:

- *MGT transmitter case has been opened.*
- *Disconnected or shorted safety edge when MGT transmitter edge supervision is enabled.*
- *Low batteries in the MGT transmitter.*
- *Hourly supervisory signals from the MGT transmitter have not been received by the Controller.*



MGT Gate Safety Edge Transmitter



APeX Controller

All these brands are now under one name.



MGT Transmitter Troubleshooting

When troubleshooting an MGT transmitter, first open the MGT and check the unit's internal indicators. The POWER indicator should light when the safety edge is pressed or the TEST button is pressed. **If it flashes, the batteries are low.** The LOOP TROUBLE indicator will light when the TEST button is pressed **if** the SENSOR TEST jumper is ENABLED **and** the safety edge wiring is open or shorted.

Tamper Supervision

The MGT transmitter contains a spring loaded tamper switch that detects if the case is open. When the case is opened, the transmitter will **immediately** send a trouble transmission. Anytime the transmitter is serviced, you will need to open the case. **After closing the MGT case, cycle the Controller's power to clear the trouble annunciation.**

Edge Supervision

MGT transmitters can monitor the connection to the gate edge if the gate edge is equipped with an internal 100 µf capacitor. There is a jumper in the MGT that enables or disables the gate edge connection monitoring. If edge monitoring is enabled, and the connection to the gate edge is open or shorted, the MGT will send a trouble transmission **with the next hourly status report** to the Controller. **Use the transmitter's jumper to disable edge supervision if the safety edge does not contain a capacitor (the loop trouble indicator stays lit in the MGT transmitter).** The jumper does not affect the transmitter's hourly status reports.

Low Battery Supervision

MGT transmitters monitor their battery condition and will send a trouble transmission **with the next hourly status report** to the Controller when the battery tests low. Replace the batteries, close the MGT case, and power cycle the Controller.

Status Supervision

MGT transmitters send **hourly** status reports to the Controller. The Controller expects those hourly status reports (this cannot be disabled in the APeX Controller). When the Controller counts four missing transmitter status reports, the trouble annunciation will occur. This could occur from transmitter trouble or poor radio reception by the Controller.

Open the MGT and test the transmitter by viewing it's indicators and pressing on the safety edge. If the transmitter tests OK, check the radio range of the Controller using a handheld transmitter. If a handheld transmitter cannot reliably activate the operator at the distance the MGT is from the Controller, remotely mount the local antenna or use an external receiver antenna (Model EXA-1000 or EXA-2000). Also, Linear's Model FT-1 Radio Interference Field Tester can be used to test the installation for abnormal radio interference conditions.