

The Intelligent Choice for Communications Solutions



Smart Technologies, Experience, Professionalism, Customer-Focused

... We Deliver

Becker/SMC provides a range of Communications solutions that include VHF & UHF Leaky Feeder Systems designed to provide seamless communications throughout an underground mine or tunnel. The Leaky Feeder cable acts as a mine-wide antenna, eliminating the need to install and maintain dozens of hard-wired cables and signal wires. The RF signals from the Head End are transmitted throughout the site network over the Leaky Feeder System. This enables site wide personnel communication, system monitoring as well as control of electrical equipment (e.g., fans and pumps). Additional capabilities can provide video streaming from strategic locations to monitor safety, process or personnel throughout the site.

Normal coaxial cable is designed to keep RF signals within the cable and to block any external signals and noise from penetrating. Leaky Feeder cable is designed to intentionally 'leak' or radiate the RF signal out, as well as allow radio transceiver signals into the cable. To sustain the RF signal levels over long distances, Line Amplifiers are inserted along the Leaky Feeder cable.

Comparison of VHF & UHF Leaky Feeder Systems	
VHF	<ul style="list-style-type: none"> • Less expensive active/passive components (amplifiers, splitters, etc.) • Easier to install VHF Cable • Great for voice-only communications — limited data capacity
UHF	<ul style="list-style-type: none"> • Clearer voice communications due to lower noise floor • Better propagation from cable - translates to less required equipment • Greater usable bandwidth to offer more voice and data capacity



Becker/SMC offers VHF and UHF Leaky Feeder Systems, each providing reliable and robust communications solutions for the most demanding installations. The choice between the VHF and UHF systems depends on the specific application.

	Smart Com IS (VHF Leaky Feeder)	Becker Com IS UHF Leaky Feeder
# of Channels	16	64
Leaky Feeder Cable	RNG-500	RCF12-50JFN
Cable Impedance	75 Ω	50 Ω
Cable Loss (Longitudinal)	21 dB/500 m @ 150 MHz	17 dB/305 m @ 450 MHz
Typical Amplifier Gain	25 dB	22 dB
Typical Amplifier Spacing	500 m (1,640 ft)	305 m (1,000 ft)
Automatic Gain Control	Yes	Yes
Manual Gain Control	Yes	Yes
MSHA Approved	Yes	Yes
Ethernet	Yes	No
Remote Diagnostics	Yes	Yes
Frequency Range	145-160 MHz (Downlink) 170-185 MHz (Uplink)	475-480 MHz (Downlink) 450-455 MHz (Uplink)
Optional Redundancy Package	Yes	Yes
Warranty	2-years from Manufacture Date	2-years from Manufacture Date



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