

ARTICLE HISTORY OF TECHNOLOGY

The Resilience of the Reed Relay › This simple electromechanical device, once crucial to telephone exchanges, lives on in portable defibrillators

BY ROBERT COLBURN

28 AUG 2015

CLAREED RELAY
CR12T-1055
C.P. CLARE & CO.
CHICAGO, ILL.

CLAREED RELAY

1001 R223
1001 R223
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1001 R223

EXACT
carefull
ened. C
position

THESE
are reed relays...

But make no mistake.
Don't confuse them with ordinary
reed type relays. These are
CLAREED® relays...built by Clare from start to finish. Every step
in the manufacture of every part—nickel iron reeds, contact plat-

HIMPP 1014

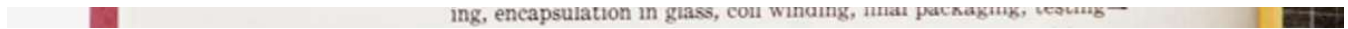


PHOTO: RANDI KLETT

Photo: Randi Klett

Invented in 1922 by a professor at Leningrad Electrotechnical University [pdf], the reed switch contains two slivers of wire that make contact in the presence of a magnet. Bell Telephone Laboratories evolved this device into the reed relay, in which the switch is controlled by an electromagnet. By the 1960s, reed relays were a fundamental component of telephone

exchanges. Their ultralow power consumption also made them popular for space applications, including the Apollo missions.

Although solid-state components eventually eclipsed reed relays for telephone switching, they're still useful when you need to stop very low currents from leaking away (as in photomultiplier detectors) or are handling high voltages (as in cardiac defibrillators). Along the way, the price of reed switches and relays has come down considerably. A reed switch optimized for aerospace once cost about US \$200. Modern reed switches go for well under a dollar, and vintage reed relays like the ones in this ad from *IEEE Spectrum's*

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