

Q SERIES

SIGNALLING RELAYS



Miniature, Plug-in Type, DC Neutral Line Relays
Designed for Critical Railway Signalling Applications

ABOUT REPL

Royal Elastomers Pvt. Ltd. is a trusted name in the **Indian Railways** and elastomer industry, with a **legacy dating back to 1997**. As a part of the Royal Group of Companies, we have built a strong reputation for delivering **high-performance, reliable, and precision-engineered** products for **critical railway and industrial applications**. Over the years, our commitment to **innovation, quality, and customer satisfaction** has enabled us to become a dependable partner to **Indian Railways and allied industries**.

With **decades of experience** in manufacturing railway elastomeric components such as **rail pads, gaskets, liners, dowels, bushes, and other engineered polymer products**, Royal Elastomers has expanded its expertise into the **Railway Signalling Relay Division** with the development and manufacturing of **Q Series Signalling Relays**. Designed for **safety-critical railway signalling systems**, our relays are engineered to ensure **dependable performance, operational accuracy, and long service life** under demanding field conditions.

Our manufacturing facility is equipped with **advanced production and testing infrastructure**, operating under a highly controlled environment featuring **air curtains, air purifiers, dust-proof flooring, and automated digital testing systems**. Backed by a competent and dynamic team of engineers, technicians, and skilled professionals, we manufacture signalling relays conforming to stringent **Indian Railway standards and specifications**.

Engineering Precision for Railway Safety



Q SERIES SIGNALLING RELAYS

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Designed for Critical Railway Signalling.

OUR COMMITMENT



At REPL, we maintain a **stringent process for testing** and manufacturing relays, recognizing their **critical role in safety**. Our commitment is to ensure **each relay is made to perfection for reliable** use in railway signaling.

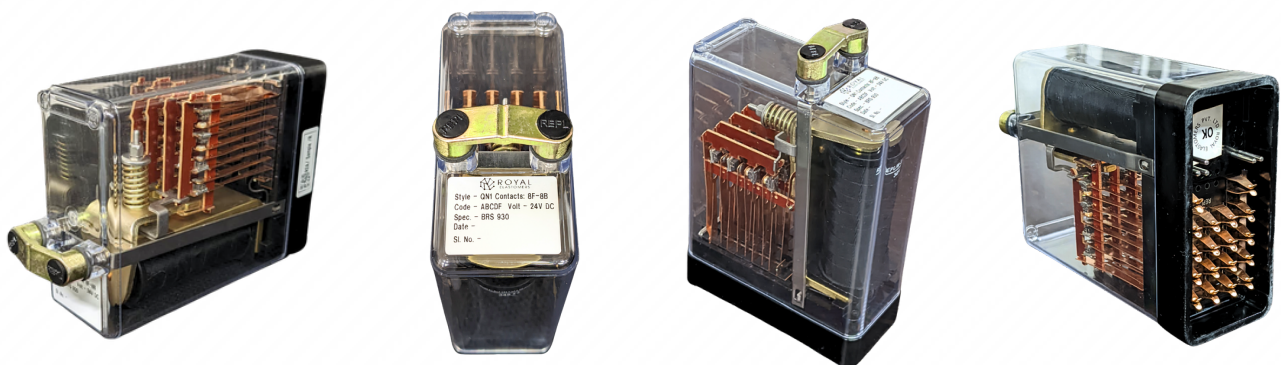


QN1 Relay

Miniature, Plug-in Type, M to C,
DC Neutral Line, Non-AC Immunised Relay

PRODUCT OVERVIEW

The **QN1 Relay** is a compact, **DC neutral, tractive armature line relay** from the proven '**Q**' series, engineered for **safety-critical railway signalling**. Conforming to **BRS Specification 930** and applicable **RDSO standards**, it delivers consistent performance, long service life, and stable operation under demanding field conditions — making it the trusted choice for manufacturers, system integrators, and railway operators worldwide.



CONTACT CONFIGURATION (REAR VIEW)

Available Standard Configurations

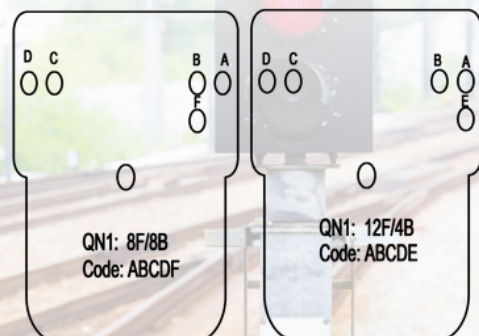
12F/4B

8F/8B

	A	B	C	D		A	B	C	D	
1	F	F	F	F	1	F	F	F	F	1
2	F	F	F	F	2	F	F	F	F	2
3	F	F	F	F	3	F	F	F	F	3
4	F	F	F	F	4	F	F	F	F	4
5	B	F	F	B	5	B	B	B	B	5
6	B	F	F	B	6	B	B	B	B	6
7	B	F	F	B	7	B	B	B	B	7
8	B	F	F	B	8	B	B	B	B	8
R1	Coil			Coil	R2	Coil			Coil	R2
R3					R3					R3

12F 4B

8F 8B



The **QN1 Relay** is purpose-built for dependable operation in **demanding railway environments**. Its compact form **factor**, **sealed construction**, and **proven tractive armature design** make it a trusted solution for signalling and control applications.

TECHNICAL DETAILS OF QN1 RELAY

Relay Description	Nominal Voltage (V DC)	Contact Arrangement	Coil Resistance @ 20°C (Ω)	Max Operate Voltage (V DC)	Min Release Voltage (V DC)	Interlocking Code
QN1	24	12F / 4B	345 ± 10%	19.2	3.6	ABCDE
QN1	24	8F / 8B	345 ± 10%	19.2	3.6	ABCDF

KEY FEATURES

- DC neutral tractive armature mechanism ensuring reliable operation
- Designed for fail-safe performance in safety-critical railway circuits
- High insulation resistance for enhanced electrical safety
- Sealed construction to protect against dust and environmental effects
- Robust design for extended mechanical and electrical service life
- Supplied complete with plugboard, connectors, and retaining clips
- Simple plug-in mounting for ease of installation and maintenance

STANDARDS & COMPLIANCE

- BRS Specification: BRS 930
- IRS Standards: IRS: S34, IRS: S23 (as applicable)

WARRANTY & QUALITY ASSURANCE

Each QN1 Relay is manufactured under strict quality control procedures and supplied with a warranty. Comprehensive testing confirms conformity with railway signalling standards and dependable long-term performance in service.

APPLICATION



Railway signalling and train automation systems



Interlocking circuits for safe train movement



Repeater, control, and indication circuits



Track circuit control, supervision, and monitoring



Fail-safe switching applications in signalling networks

QNA1 Relay

Miniature, Plug-in Type, M to C,
DC Neutral Line, AC Immunised Relay

PRODUCT OVERVIEW

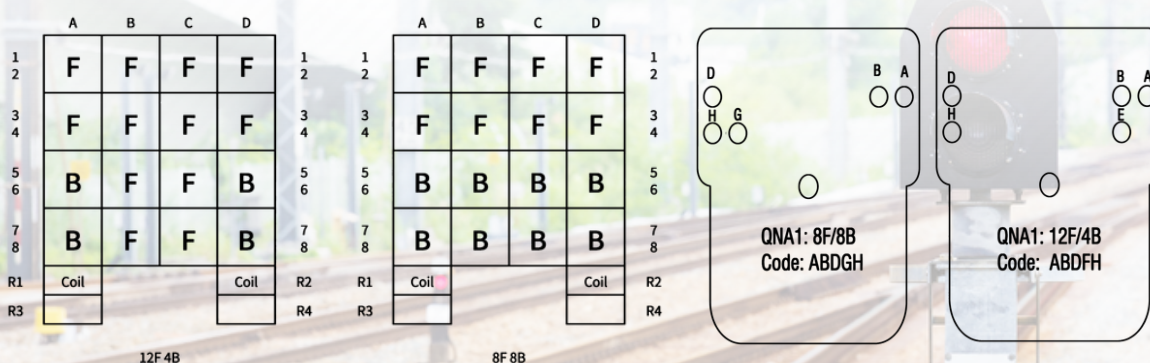
The **QNA1 Relay** is a compact, **AC immune, DC neutral, tractive armature line relay** purpose-built for **railway signalling environments** where induced AC interference is a concern. A magnetic slug and shunt assembly on the core delivers reliable AC immunity while maintaining precise DC pickup and release characteristics. The modular plug-in construction, sealed housing, and pin-code interlocking system ensure safe interchange and simplified maintenance. The QNA1 conforms to **BRS Specification 931A** and is suited for long-term deployment in **safety-critical circuits**.



CONTACT CONFIGURATION (REAR VIEW)

Available Standard Configurations

12F/4B | 8F/8B



The **QNA1 Relay** is purpose-designed for **safe and reliable operation** in demanding **railway signalling environments** where **AC interference** is a concern. Featuring an **AC-immunised DC neutral design** with a **tractive armature mechanism**, the relay ensures consistent pickup and release characteristics under **adverse electrical conditions**.

TECHNICAL DETAILS OF QNA1 RELAY

Relay Description	Nominal Voltage (V DC)	Contact Arrangement	Coil Resistance @ 20°C (Ω)	Max Operate Voltage (V DC)	Min Release Voltage (V DC)	Interlocking Code
QNA1	24	12F / 4B	215 $\pm$ 10%	19.2	3.6	ABDFH
QNA1	24	8F / 8B	215 $\pm$ 10%	19.2	3.6	ABDGH

KEY FEATURES

- Modular plug-in construction for easy installation and replacement
- Relay secured to plugboard using a retaining clip
- Pin code interlocking system ensures correct relay-plugboard matching
- High-quality metal-to-carbon contact system for dependable switching
- Robust mechanical construction for stable performance over extended service life

STANDARDS & COMPLIANCE

- BRS Specification: BRS 931A
- IRS Standards: IRS: S34, IRS: S23, IRS: S60-78 (as applicable)

WARRANTY & QUALITY ASSURANCE

Each QNA1 Relay is manufactured under strict quality control procedures and supplied with a warranty. Comprehensive testing confirms conformity with railway signalling standards and dependable long-term performance in service.

APPLICATION



Railway signalling and train automation systems



Railway interlocking systems



Track circuit and repeater circuits



AC-immunised DC relay circuits



Fail-safe control and indication circuits



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