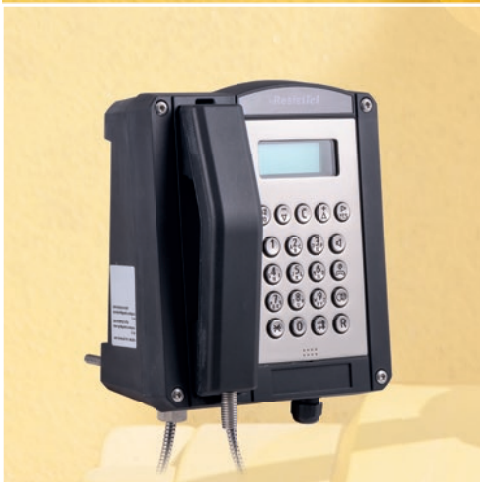


# Reliable communication, whatever the environment

Be heard | Be informed | Be safe



*Powering Business Worldwide*



# The future of industrial communications is here

Making yourself heard in a noisy, busy environment is always a challenge. But in harsh and hazardous industrial environments, it is a safety imperative. Personnel must be able to communicate clearly and unambiguously in order to stay safe and keep operations running efficiently.

## Meet the FHF product line - part of Eaton's Crouse-Hinds series portfolio

Eaton's world-renowned FHF product line was born and is still, 125 years later, manufactured in Germany.

Delivering reliable and highly functional telephones, the portfolio includes IP, analogue, weatherproof and explosion proof options to suit every application.

Our robust, high quality industrial telephones are designed to withstand high temperatures, shock, vibration, dust and humidity and are manufactured to the highest accreditation standards.





# We make what matters work.\*

\*Our goal is simple: to provide unique solutions across a wide range of markets that keep businesses on the leading edge of change.

Over the years, we have also expanded our expertise and portfolio of products, services and systems by integrating the competencies of some of the world's most respected names. We have built the brand you can trust to meet your toughest power management challenges.

We're a power management company, but more importantly, what we do improves quality of life and the environment. Our products, technologies and services make a difference in the world.

Cybersecurity is constantly front-of-mind during Eaton system development, resulting in the highest levels of protection for users of our solutions.

Our innovation strategy is advancing our responsibility to cleaner, lower carbon technology and solutions - all while increasing reliability, durability and safety.

Our promise of doing business right reflects our unwavering commitment to the highest ethical practices and standards of behaviour.



We are committed to improving the quality of life and the environment, by 2030 our target is to be carbon neutral and have zero waste manufacturing sites.

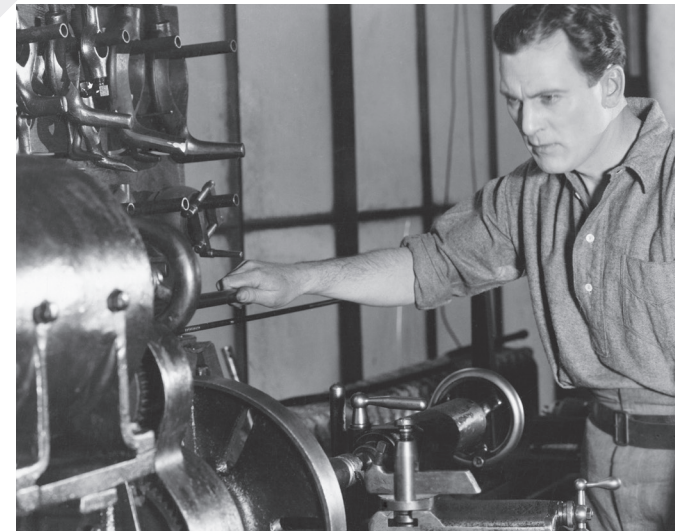
We are redefining our business by adapting digital technologies to transform power management for safer and more efficient power use.

We have global support teams who have the expertise to provide support and care 24hrs a day.

**"As a power management company, it's important that we make power safe, reliable and efficient for our customers. And to do it better than anyone else. But we also recognize that we can only achieve this goal if we have excited and engaged employees doing work that they believe in. And when we get these two things right, it gives us the ability to give back and support our superior returns to our shareholders."**

Craig Arnold, Chairman and CEO

# An unparalleled history for over 125 years



Eaton's Crouse-Hinds series brings together a comprehensive portfolio of products to serve the harshest and most hazardous environments in the world. This shared expertise across our global product lines allows us to call on decades of experience - you're in safe hands. Trust in Eaton to protect your people and processes.

Eaton's FHF product line was born in Germany in 1897. Our decades long heritage gives us a unique passion in this challenging and demanding industry.

With our specialist knowledge, we provide customers with the most reliable and up to date technology available to ensure they can operate with the highest safety levels in all environments.

Onshore/Offshore | Oil & Gas | Industrial  
Marine | Transportation - Railways & Road Tunnels  
Chemical Processing | Pharmaceutical Manufacture  
Alternative Energy | Power Generation | FPSOs





# Reliable in any environment

Noise. Vibration. Extreme operating temperatures. Humidity. Corrosive chemicals. Salt spray. Explosive atmospheres. No mains power.

Whatever the challenge, Eaton has an FHF phone to cover it.

Application areas

## An introduction to the range

Our versatile FHF range includes three main models:

### ExResistTel and ResistTel

Our highest specification phone for extreme environments.

- ExResistTel IP4 Explosion Proof Telephone
- ResistTel IP4 Weatherproof Telephone
- ExResistTel Explosion Proof Telephone
- ExResistTel MB Explosion Proof Telephone
- ResistTel Weatherproof Telephone
- ResistTel MB Weatherproof Telephone



### FernTel

Our mid-range solution, practical and programmable.

- FernTel IP4 Z2 Explosion Proof Telephone
- FernTel IP4 Weatherproof Telephone
- FernTel 3 Z2 Explosion Proof Telephone
- FernTel 3 Weatherproof Telephone
- FernTel-W Weatherproof Telephone



### InduTel

Our entry-level phone for basic, reliable communications environments.

- InduTel IP4 Weatherproof Telephone
- InduTel (LED) Weatherproof Telephone





# We make trusted connections work.\*

\*Cybersecurity is constantly front-of-mind during Eaton's system development, resulting in the highest level of protection online for users of our hazardous area communications solutions.

Our experienced team of cybersecurity leaders identify and address gaps in your processes and personnel training programs to minimize your overall attack surface. You can be confident in us that we have the capabilities to protect your people and processes by addressing high cyber threats in advance. We have robust and evolving protection with stringent follow-up procedure in place should a potential breach be detected.

The principle of Eaton's defence in depth strategy is to implement multiple layers of security controls around a product or system instead of single control. Deploying this design in a layered manner provides superior protection and often discourage a cyber-attack. With this level of security, it makes severe security vulnerabilities difficult to exploit in a real system and minimize the overall damage and chance of a full compromise to occur.

## Defence in depth layers



	<b>Policy and procedures</b> Risk management, Incident response, Supply chain management, Audit & assessment, Trainings etc.
	<b>Physical security</b> Access control, ID cards, Fences, CCTV etc.
	<b>Network security</b> Firewalls, IDS / IPS, Sandboxing, Monitoring and alerting etc.
	<b>Host security</b> Secure configurations, Restricting unwanted and insecure services, Whitelisting etc.
	<b>Application and data security</b> Security updates, Secure communications, Data encryption etc.

# Secure by design

Our FHF line has cybersecurity at the core of its “secure by design” philosophy and it is embedded in all intelligent power products and platforms we bring to market. Our FHF products are carefully designed and meticulously tested in our accredited laboratories with online security in mind. You can be confident that our devices are compliant with the highest industry cybersecurity requirements before they are installed in your critical systems.

Our IP4 telephone range offers security standard such as DTLS 1.2, TLS 1.2 (1.2 with next revision), X.509 certificates and Kerberos based authentication which provides ultimate protection you can trust and rely on.

# Ex-ResistTel and ResistTel Phones

FHF ResistTel telephones are the ideal choice for really tough industrial environments, including offshore and petrochemical applications. Available in weatherproof or Ex-rated versions, these phones are designed to support the highest levels of operational and personnel safety and are available in different housing colours.

FHF ResistTel phones are resistant to seawater, alkalis, acids and lubricants. Their tough GRP housings are impact resistant and the robust V4A stainless steel keypads withstand the stresses of industrial use. These phones are equipped with a steel-armoured handset cord for high tensile strength.

For explosive atmospheres, users can also choose from a range of approved accessories that will enhance phone functionality even further.





# Models available

ExResistTel IP4 Explosion Proof VoIP Telephone



- Indoor and outdoor used in zones 1, 2, 21, 22
- Protection class IP66 according to IEC60529
- Ambient temperature
  - 40 °C to +60 °C with armoured cord
  - 30 °C to +60 °C with spiral cord
- Ring tone ≥ 95 dB(A) in 1 m distance
- Pixel-based luminous OLED display
- V4A alphanumeric keypad
- Web-based monitoring (operating, handset, hands-free and ringing function)
- User-friendly menu structure
- VoIP Protocols: SIP, H.323 (UDP, TCP, TLS), RTP, SRTP (SDES, DTLS), RTCP, ICE
- Power supply: PoE or external
- Connection to 10/100/1000-BASE-T Ethernet
- Hands-free operation
- Two built-in independent relay contacts
- Different housing colours

ResistTel IP4 Weatherproof VoIP Telephone



- Protection class IP 66 according to IEC60529
- Ambient temperature -40 °C to +70 °C
- Ring tone 95 dB(A) in 1 m distance
- Pixel-based luminous OLED display
- V4A alphanumeric keypad
- User-friendly menu structure
- VoIP Protocols: SIP, H.323 (UDP, TCP, TLS), RTP, SRTP (SDES, DTLS), RTCP, ICE
- Power supply: PoE or external
- Connection to 10/100/1000-BASE-T Ethernet
- Relay built-in (SPST)
- Relay module (optional) 2x SPDT
- Hands-free operation
- Different housing colours

ExResistTel Explosion Proof Telephone



- Certified for dust and gas exposure
- Ideal choice for petrochemical and offshore applications
- 21-key V4A stainless steel keypad designed for use with gloves
- Hands-free operation
- Locking function with PIN
- Temperature range -25 °C to +60 °C
- IP 66 according to EN 60529
- Different housing colours
- **Option available without keypad**

ResistTel Weatherproof Telephone



- Locking function with PIN
- Hands-free operation
- Temperature range -25 °C to +60 °C
- Display
- IP 66 according to EN 60529
- V4A stainless steel keypad
- GRP housing
- Different housing colours
- **Option available without keypad**

ExResistTel MB Explosion Proof Telephone



- 3 direct dial keys (freely programmable)
- Certified for dust and gas exposure
- Ideal choice for petrochemical and offshore applications
- 21-key V4A stainless steel keypad designed for use with gloves
- Hands-free operation
- Temperature range -25 °C to +60 °C
- IP 66 according to EN 60529
- GRP housing

ResistTel MB Weatherproof Telephone



- 3 direct call keys (freely programmable)
- Hands-free operation
- Amplified listening in 7 steps, 0-12 db(A)
- Telephone book
- IP 66 according to EN 60529
- V4A stainless steel keypad
- GRP housing



# FernTel Phones

Eaton's FHF FernTel is equally at home as a desk phone inside or used outside as a wall-mounted phone. The elegant housing is made of impact and shock-resistant plastic. Acids, alkalis or lubricants cannot harm the high-quality components of this eye-catching desk/wall telephone.

Versatile and easy to use, the FernTel range offers a wide range of options, such as variants with 16 keys and no display, or 21 keys with display; a spiral cord or armoured cord, and a hotline (ZB) phone with call tone unit. There's also a model for installing into a control room desk or alarm room panel. For applications on moving machines, e.g. on ships, a handset stabilisation bracket is available.

Striking signal colours ensure that FernTel phones can be readily identified during an emergency - even in poor weather and light conditions. FernTel phones are available as weatherproof analogue, weatherproof VOIP, Ex analogue and Ex VOIP versions.

Eaton's Crouse-Hinds Series FHF Explosion Proof FernTel Phones

## Models available

### FernTel IP4 Z2 Explosion Proof Telephone

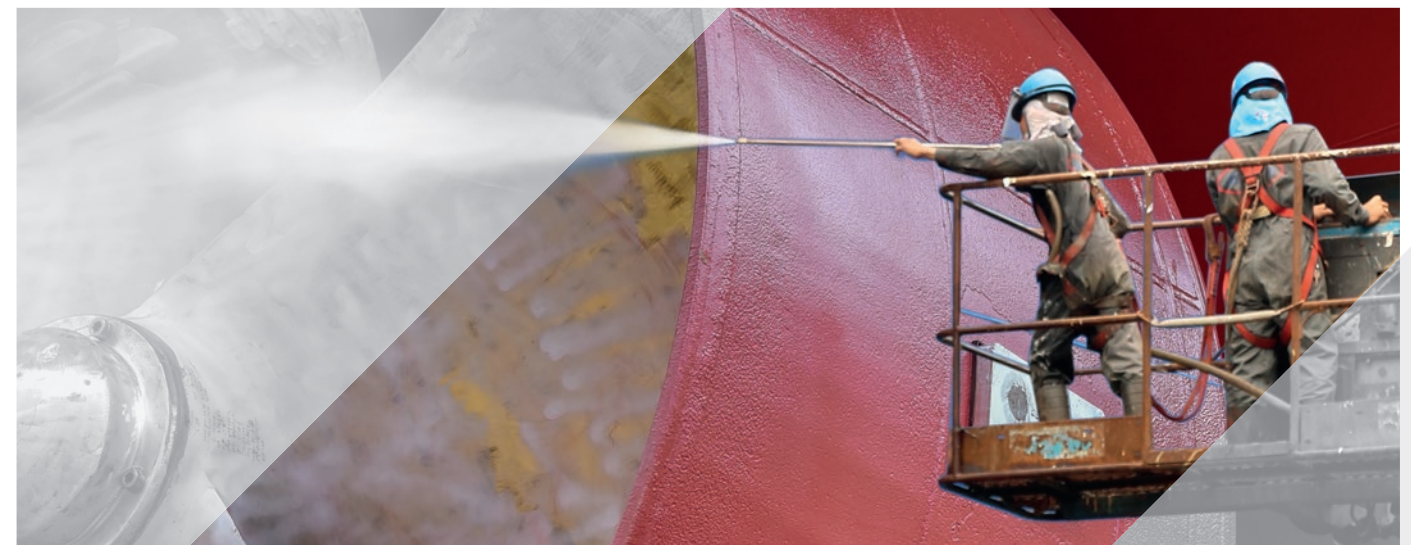


- Suitable for potentially explosive areas zone 2 and 22
- Impact resistant thermoplastic housing
- IP 65 according to IEC60529
- Ambient temperature -20°C to +55°C
- Pixel-based luminous OLED display
- Illuminated keypad
- Intelligent and user-friendly menu structure
- Call tone  $\geq 95$  dB(A) in 1 m distance
- VoIP Protocols: SIP, H.323 (UDP, TCP, TLS), RTP, SRTP (SDS, DTLS), RTCP, ICE
- Power supply: PoE or external
- Connection to 10/100/1000-BASE-T Ethernet LAN
- Different housing colours

### FernTel 3 Z2 Explosion Proof Telephone



- Suitable for potentially explosive areas zone 2 and 22
- Impact resistant thermoplastic housing
- Protection class IP65
- Stabilization bracket (optional)
- Ambient temperature -20 °C to +55 °C
- Ringing volume  $\geq 95$  dB(A), 1 m
- Explosion protection type
  - II 3G Ex nA ic IIC T5 Gc
  - II 3D Ex tc ic IIIC T80°C Dc
- Different housing colours
- Versions with or without display available
- Spiral or armoured cord





# Eaton's Crouse-Hinds Series FHF Weatherproof FernTel Phones

## FernTel IP4 Weatherproof Telephone



- Ingress protection class IP65 according to IEC60529
- Ambient temperature -40°C to +60°C
- Ringing volume ≥ 95 dB(A) in 1 m distance
- Pixel-based luminous OLED display
- Illuminated keypad
- Intelligent and user-friendly menu structure
- VoIP Protocols: SIP, H.323 (UDP,TCP,TLS), RTP, SRTP (SDES,DTLS), RTCP, ICE
- Power supply: PoE or external
- Connection to 10/100/1000-BASE-T Ethernet
- Relay built-in (SPST)
- Relay module (optional) 2x SPDT
- Hands-free operation
- Different housing colours

## FernTel 3 Weatherproof Telephone



- Housing made of impact-resistant plastic (polycarbonate)
- IP 65 according to IEC60529
- Ambient temperature -25 °C to +55 °C
- Call tone ≥ 95 dB(A) at 1m distance
- Optional handset locking (stabilization bracket)
- Easy installation
- Volume amplification
- PIN code
- Menu in 4 languages
- Different housing colours

## FernTel-W Weatherproof Telephone



- Installs into desk or control panel as an emergency phone
- Ambient temperature -25°C to +60°C
- Connects to every telephone branch with analogue interface
- IP 65
- Optional keypad illumination
- 6 direct dialling keys (programmable)
- Stainless steel mounting plate





# InduTel phones

Eaton's FHF InduTel is a simple-to-operate, rugged phone for non-explosive environments. Both models are provided with a protective door and are suitable for indoor or outdoor use.

Its elegant design makes the InduTel weatherproof phone a great choice for indoor as well as outdoor applications. This phone is robust enough to withstand high humidity, exposure to seawater and severe mechanical strain. A protective door also ensures that the handset and keypad are always perfectly protected against contamination.

The analogue InduTel LED and InduTel IP offer handset rest flashes to indicate an incoming call, making it perfect for use in noisy environments. When the handset is lifted, the flashing light stops and the keypad is illuminated enabling operators to respond effectively even at night.

Eaton's Crouse-Hinds Series FHF Weatherproof InduTel Phones

## Models available

### InduTel IP4 Weatherproof Telephone



- Protection class IP 66 according to IEC60529
- Ambient temperature -40 °C to +55 °C
- VoIP Protocols: SIP, H.323 (UDP, TCP, TLS), RTP, SRTP (SDS, DTLS), RTCP, ICE
- Relay built-in (SPST)
- POE or external power supply
- Optical call indication
- Illuminated keypad
- Different housing colours

### InduTel (LED) Weatherproof Telephone



- Protection class IP 66 according to IEC60529
- Ambient temperature -40 °C to +55 °C
- Protective door in yellow, red or transparent
- PIN for change of settings
- Open listening function
- Connection for secondary sounder
- Optical call indication (LED version only)
- Illuminated keypad
- Different housing colours





# HowlCall Sound-Powered Phone

## HowlCall Phone



Eaton’s FHF HowlCall Telephones are battery-free and network-independent. They feature a highly efficient dynamic transmitter and receiver modules offering reliable, remote communication without a power supply.

The call signal is generated by turning the rotary knob containing an audio frequency dynamo. All our HowlCall phones have a sturdy, impact-resistant and weatherproof housing.

- Telephony without external power supply
- Weatherproof transmitters and receivers
- Range approximately 10km
- Protection class IP 54

# Accessories

## TWIN-EEExII Explosion Proof Secondary Ringer



- Globally certified secondary telephone alarm and signal unit specifically designed for hazardous areas, meeting ATEX and IECEx certification standards
- Housing made from seawater-resistant cast aluminium providing durability and longevity
- Protection class IP 66 according to EN 60529

## ExResistTel Accessories Set



- Highly certified explosion proof receiver and headset designed for use in hazardous environments. With protection type II 2G Ex ia IIC T6 and II 1G Ex ia IIC T4 Ga
- Robust corrosion-free housing which is field-proven and meets ATEX standards
- Highly efficient solution reducing surrounding environmental noises

## mTAR Explosion Proof Telephone Relay



- Telephone connecting relay which is designed specifically for application in potentially explosive areas
- Meeting ATEX and IECEx standards with explosion protection II 2G Ex e ib mb IIC T4 Gb and II 2D Ex tb IIIC T135°C Db
- Robust housing manufactured from glass reinforced polyester (GRP). Durable and reliable material to perform in the roughest conditions

## Explosion Proof Secondary Bell



- Ex secondary telephone bell is a high-volume explosion proof telephone call signalling for indoor and outdoor installation in hazardous areas
- Highly certified meeting ATEX and IECEx standards with protection type Ex em [ib] IIC T6
- Housing manufactured from die-cast aluminium providing superior reliability

## Industrial Accessories Set



- Weatherproof secondary receiver and headset ideal for use in harsh environments in industrial areas
- Headset with approx. 15 m connection cable allows making telephone calls possible while carrying out tasks that require the use of both hands

## TWIN-LED Industrial Secondary Ringer



- Weatherproof telephone alarm and signal unit specifically designed for application in rough environments in industrial areas.
- Corrosion-resistant housing manufactured from aluminium provides a robust and reliable solution.
- Compact design with easy installation process and long-life cycle. Minimum maintenance required reducing overall costs

## Telephone Hoods



- Our telephone protection hoods are an excellent aid to improve audibility in noisy surroundings in industrial areas where telephones have been installed
- Manufactured from either synthetic, stainless steel or glass-reinforced polyester (GRP) material

## TAR 22 Industrial Telephone Relay



- Telephone connecting relay which is designed specifically for application in rough and harsh conditions in industrial areas
- Durable housing manufactured from glass-reinforced polyester (GRP)
- Degree of protection IP 66 in accordance with EN 60529

## Industrial Secondary Bell



- Weatherproof secondary telephone bell is designed for operation in indoor and outdoor applications in rough industrial environments
- Robust design manufactured from die-cast aluminium this secondary telephone bell is resilient to the hardest conditions
- Compact design with easy installation and minimal maintenance required



# The power of communication

Eaton's electrical business is a global leader with deep regional application expertise in power distribution and circuit protection; power quality, backup power and energy storage; control and automation; life safety and security; structural solutions; and harsh and hazardous environment solutions.

Eaton's leading FHF product line includes both telephones and signalling products. Manufactured in Germany, it boasts a long and distinguished history in the field of communication devices.

The FHF product line is part of the Eaton Crouse-Hinds series from Eaton which offers the broadest portfolio of electrical and instrumentation products for harsh and hazardous applications in the industry.

Visit [Eaton.com](https://www.eaton.com) to see Eaton's full range of signalling from the Crouse-Hinds series FHF and MEDC product lines.



Get in touch with your Eaton representative for order placement.

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