

Pulse radio interface radio 4

One device, many variants: Data from measuring devices is transmitted, non-radio measuring instruments integrated into the Techem radio system, on-site reading is no longer necessary.

The Techem pulse radio interface records consumption data reliably, third-party devices can be integrated into the radio system.

In a nutshell

- Integration of conventional devices (e.g. water, gas or electricity meters) with pulse output or DIN S0 interface (EN 62053-31) into the Techem radio system
- Connection of one meter
- Reading of consumption data without entering the apartment, radio transmission of the mid-month and end-of-month data, no on-site intermediate readings necessary
- Reading flexibility with radio telegrams in accordance with OMS (Open Metering System) standard
- OMS-certificated telegram configurable
- Secure data transfer by encryption and CRC method



Radio transmission of various consumption data

The pulse radio interface can be used to integrate water, gas or electricity meters as well as external devices without radio transmission into the Techem radio system. One measuring device with pulse output can be connected to each interface. All consumption values, as well as meter data, are transmitted via radio, so reading on site is no longer necessary. Additionally, the pulse radio interface can be configured with the data of the measuring devices such as medium, pulse valency and unit. The interface accumulates the pulses from the measuring devices, stores them at mid-month, at the end of the month, as well as at a selectable due date, and transmits the encrypted consumption information to the radio receiver for reading.

Thanks to a long-life lithium battery, the device is independent of the grid and can be used for 10 years plus reserve.

Integrated as standard: optical interface

An optical interface is integrated as standard in all Techem devices. It is used for reading and configuration by service devices. The communication is ZVEI-compatible and complies with the IEC 870-5 international standard, which is recommended for tariff devices.

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Technical data Pulse radio interface

Power supply		Lithium battery
Battery lifetime		10 years + reserve
Ambient temperature	(°C)	0 ... 55
Protection class		IP44
Interface		Optical for Techem servicing devices
Dimensions	(mm)	W: 121; H: 122; D: 37

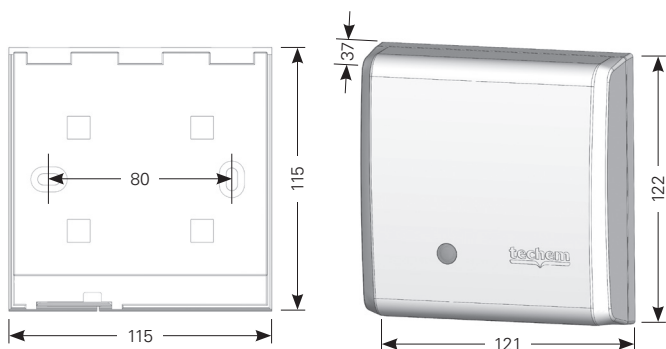
External power supply (only required for "S0" pulse interface)

Technical requirements		DC: 23 VDC – 40 VDC; 100 mA AC: 18 VAC – 28 VAC; 50 Hz; 100 mA
Cable length	(m)	10 (any polarity possible)

Use the optional power supply connected to an easily accessible power socket.

Technical data radio

Radio mode		unidirectional Standard: Mode C1 according to OMS V4
Radio data transmission		Standard: – Annual due date (as OMS data point) – Consumption data from 12 mid-month and end-of-month data – Status information
Operating frequency	(MHz)	868.95
Transmission power	(W)	0.015 ... 0.025
Transmission period	(sec)	up to 0.014
CE conformity		according to Directive 2014/53/EU (RED)
Data security		Encryption according to OMS standard; recognised by BSI TR-03109
Future-proof design		prepared for EED (Directive 2012/27/EU)



Wall mounting plate

Housing dimensions

Technical data Pulse interface

General

Pulse duration	(ms)	min. 30
Increase/decrease time	(ms)	max. 5
Pulse frequency	(Hz)	max. 16.7
Connection capacitance (Pulse generator + cable)	(nF)	max. 2
Cable length	(m)	max. 10
Pulse valency		any

"Reed contact"

Bouncing time	(ms)	max. 3
Max. resistance in switched state (including cable)	(Ohm)	560
Min. resistance in the "open" state (including cable)	(kOhm)	100
Scanning voltage	(V)	max. 3.1
Power supply		internal battery

"Transistor-switcher" (Open Collector, Open Drain)

Max. residual voltage of the pulse generator in the switched state @ Pgenerator <= 300 uA	(V)	Usat 1.0
Scanning voltage	(V)	max. 3.1
Power supply		internal battery

"S0-A connection" according to DIN EN 62053-31 class A (corresponding to invalid DIN 43 864)

Bouncing time (reed contact)	(ms)	max. 3
Scanning voltage	(V)	max. 17.5
Power supply		externally by power supply
Power supply of the pulse generator		by the IFS, according zero level is possible

"S0-B connection" according to DIN EN 62053-31 class B

Bouncing time (reed contact)	(ms)	max. 3
Scanning voltage	(V)	max. 3.3
Power supply		externally by power supply
Power supply from IFS to pulse generator		Possible with appropriate bias voltage configured in the IFS