

Battery-free Wireless Pushbutton

The DUX modules - ref. DMF_A and DMF_B - enable the implementation of battery-free wireless transmission of a pushbutton signal; for application e.g. in the building technology, industrial automation, automotive industry and others. The required energy is provided by an electrodynamic power generator using the energy of the key travel (energy harvesting).

All the advantages at a glance

- no extra power supply necessary in the sender
- no additional wiring and cable routing
- signal reach 300 m (in a free field)
- EnOcean protocol
- data rate 120 kbps
- serial data output, high output signal on operation
- easy programming of receiver
- multinetwork-compatible
- small mounting depth
- can be combined with various actuators and enclosures



Functional Principle

With the short energy pulse, a telegram is transmitted to the receiver including a 32-bit module ID of the relative pushbutton and its switching position.

In addition to these informations, 1 to 2 input signals can be transmitted. 1 input signal is transmitted by DMF_A; suitable for all pushbutton heads, 2-position selector heads and key actuators. The DMF_B transmits 2 separate input signals for the functional implementation of the 3-position key or selector switch.

Technical Data Overview

Energy input	$E_{\text{Pulse}} > 0.45 \text{ mWs}$, $2.5 \text{ V} \leq U_{\text{max.Pulse}} \leq 5.5 \text{ V}$, $0.001 \text{ ms} \leq T_{\text{Pulse}} \leq 11 \text{ ms}$
Antenna	Lambda/4-whip (strand)
Frequency/Transmission power	868.3 MHz / max. 10 mW EIRP
Data rate/Bandwidth/Modulation type	125 kbps / 280 kHz / ASK
Number of digital inputs	2
Telegram type	RPS of type 2, 32-bit ID, 3 telegrams within 25 ms
Min. time between activations	45 ms
Transmission range	300 m free field, range strongly dependent on surrounding materials and position relative to other energy generators or metal surfaces
Dimensions	approx. 43 x 45 x 29 mm
Operating temperature	- 25 up to + 65 ° C
Storage temperature	- 40 up to + 85 ° C
Humidity	0-93% r.h. non-condensing, IP 00 behind the panel

The module conforms to the R & TTE EU Directive on wireless transmission equipment.

The wireless transmission module is licensed under  enocean®

Approval:

- License-free continuous transmitting at a frequency of 868.3 MHz is allowed within the EU, as well as in Croatia, Monaco, New Zealand, Switzerland, Saudi Arabia, Singapore, South Africa and Turkey, **except in** Argentina, China, Hongkong, Israel, Japan, Russia, South Korea and Taiwan.
- Limited use in the USA, Canada, Brazil, Columbia and Mexico.
- A special license has to be applied from the local operators of Australia (ACA) and Malaysia (SIRIM).

