

TSN-EX DOT MATRIX DISPLAY

APPLICATION AREA

TSN-EX dot matrix displays are meant to present warning or information messages for underground transportation systems to enhance safety of personnel and improve organization of transport operations. The content and colours (red or green) of displayed messages stored in the device memory is agreed upon with the user at order submission according to specific needs.

APPLICATION CONDITIONS

TSN light message boards are suitable for working areas of underground operations without the hazard of methane explosion and the ones with the 'a', 'b' and 'c' degree of methane explosion hazard as well as the ones classified to the 'A' or 'B' class of coal dust explosion hazard, at ambient temperatures from 0°C to 40°C, relative humidity up to 95% and the 'C' degree of corrosion aggressiveness to PN-71/H-04651). The device meets requirements of the EU ATEX Directive 2014/34/UE.

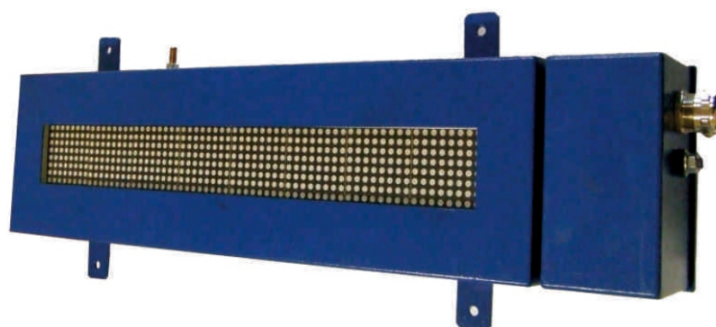
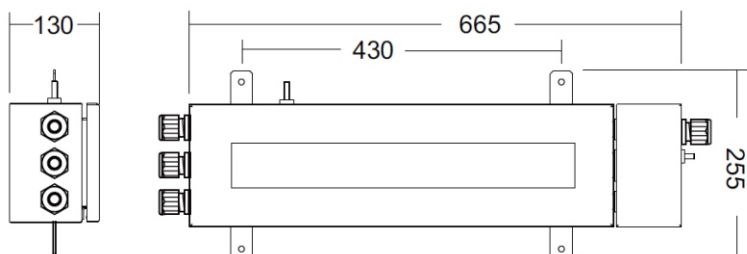


CHARACTERISTICS

Messages to be displayed can be selected locally by means of switches provided on the device enclosure. In case of remote control the messages are popped out from the memory upon commands received via intrinsically safe (IS) input contacts. Displaying of messages is controlled with use of voltage available in internal circuits of the device. The dot matrix display is furnished with an intrinsically safe relay output to control any other slave devices. The display can be mounted in whichever position and messages are always displayed correctly since cable inlets are provided at both at left-hand and right-hand side of the device. Displayed messages can be scrolled at two selectable speeds.

TECHNICAL SPECIFICATION

TYPE	TSN-EX
Rated voltage	37÷253V AC 50/60 Hz 40÷250V DC
Maximum consumption of current	100 mA
Maximum parameters at functional contacts	30V, 1 A DC (intrinsically safe circuit of ib category)
Number of messages to be displayed	16
Range of operation temperatures	-10°C ÷ +40°C
Enclosure index of protection	IP 54
Colour of displayed messages	Red, Green
Overall dimensions (W x H x D)	665 x 255 x 130 mm
Message area (W x H)	480 x 60 mm
Weight	16 kg
Maximum cross-section of connecting conductors	0.5 ÷ 4 mm ²
Code of explosion-proof design (Ex marking)	I M2 Ex ib mb I Mb



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