

TUNNEL ERT

communication medium: SM fiber

- Low consumption
- Large range
- Negligible maintenance



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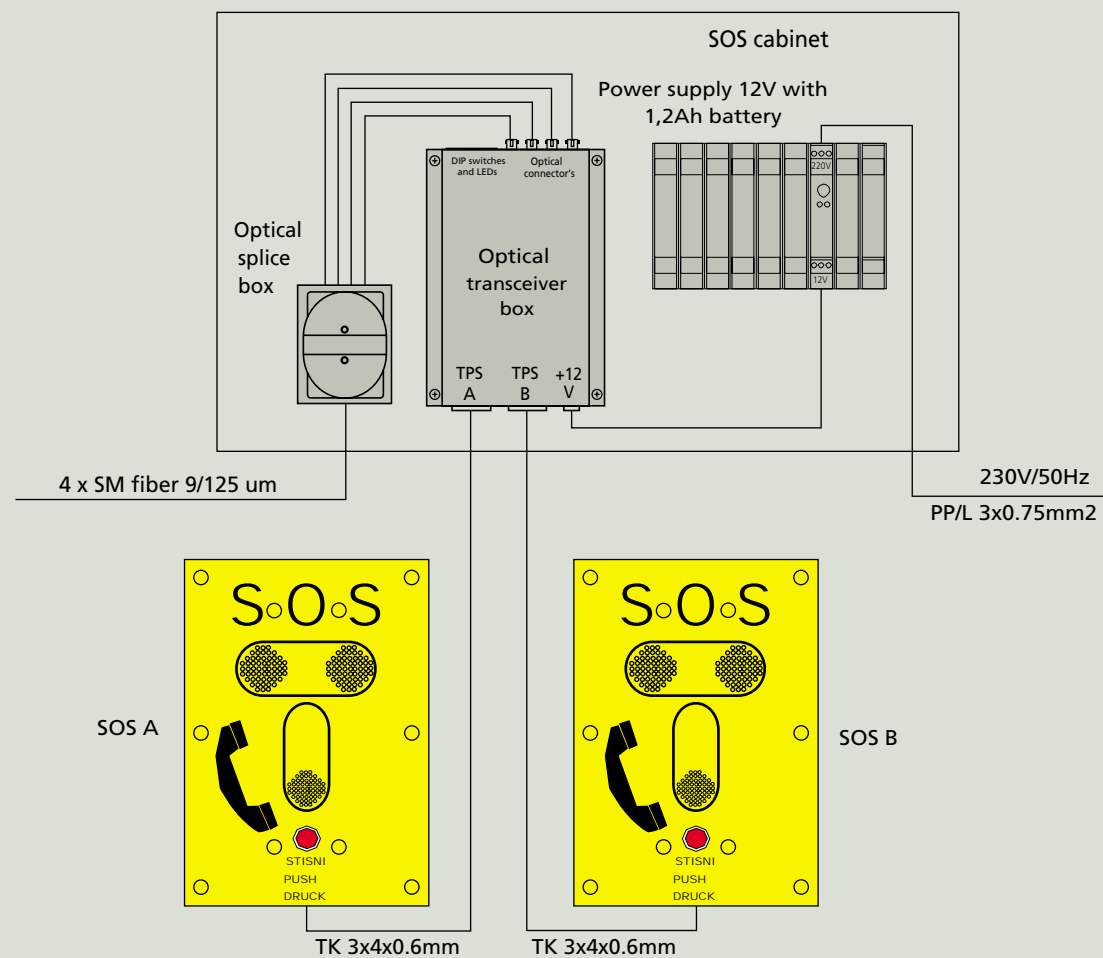
Communication with central control station is serial by means of SM fiber optic cables. Two ERTs are connected to one communication unit, one on each side of the tunnel. Pillar communication units are connected in series, forming two redundant full duplex serial loops with central control station, with max 16 communication units (32 pillars) in one optical telecommunication line. System is therefore insensitive to first failure in any of communication lines.



Tunnel version of the Emergency Roadside Telephone (ERT) is a communication device manufactured according to the highest technology standards. Its reliability and endurance guarantee full functionality in the harshest of environments.

It is ergonomically designed, very easy to use (only one big pushbutton), highly visible and easy to spot. By using the single mode fiber as a communication medium, the ERT system operating range extends up to 160 km.

Block diagram



Pillar communication unit

DC electrical specifications:

Parameter	Sym	Min	Typ	Max	Unit
Operating temperature range	t_o	-30		+70	°C
Supply voltage	V_{ss}		230		VAC
Supply current				10	mA
Battery capacity	C_{bat}		1.2		Ah
Duration of operation, fully charged battery without recharging	T_{op}	24			hours

Optical specifications:

cable type: 9/125 single mode
 No of fibers: 4 (2)
 Connector type: ST, or user selectable

Parameter	Sym	Min	Typ	Max	Unit
Coupled optical power, single mode	P_{opt}		0.3		mW
Optical budget	A_{rec}	17			dB
Link distance	D_{imin}	20			km

Audio specifications:

Parameter	Sym	Min	Typ	Max	Unit
Frequency response (-3dB)	f_0	300		3200	Hz
Audio encoding	f_s		7.2		kHz
Sampling frequency			12		bit, PCM
Speaker audio output power	P_{out}	0.7			W

Mechanical specifications:

H x W x L: 300 x 160 x 120 mm

Pushbutton type: mechanical

Weight: 4 kg

Certified according to standards:

HRN EN 55022; HRN EN 61000-3-2; HRN EN 61000-3-3;
 HRN EN 55024 (HRN EN 6100-4-2; HRN EN 61000-4-3;
 HRN EN 61000-4-4; HRN EN 61000-4-5; HRN EN 61000-4-6;
 HRN EN 61000-4-11)