



SPECIAL TELEPHONE SETS,
BELLS AND HORNS



TESLA

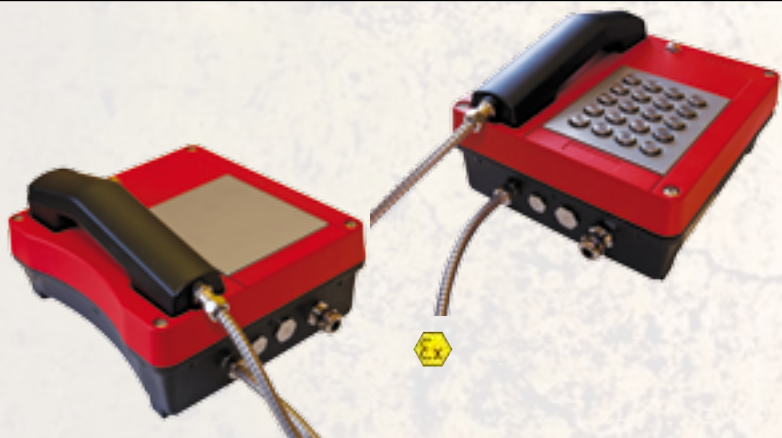
STROPKOV, a.s.



SPECIAL TELEPHONE SETS

Explosion-proof telephone set

4FP 153 32, 33, 34,35



Explosion - proof telephones (4FP 153 32 to 4FP 153 35) are intended for ambients with possible gas or dust explosion atmosphere according to specification: II2G Ex emb[ib] IIC T6 Gb, II2D Ex tb IIIC T80°C IP66 Db, I M2 Ex emb[ib] I Mb - 40°C ≤ Ta ≤ 60°C. They are connected to analog plug of telephone central with parameters 24 V DC to 66 V DC. The covers of phones are from special materials avoiding the accumulation of electrostatic charge on phone cover.

Ambient temperature:

- 40 °C to + 60 °C for II2G Ex emb[ib] IIC T6 Gb
- 40 °C to + 60 °C for II2D Ex tb IIIC T80°C IP66 Db
- 25 °C to + 60 °C for I M2 Ex emb[ib] I Mb

Protection:

IP 66

Dimensions:

245 x 225 x 129 mm (h x w x d)

Weight:

cca 3,2 kg

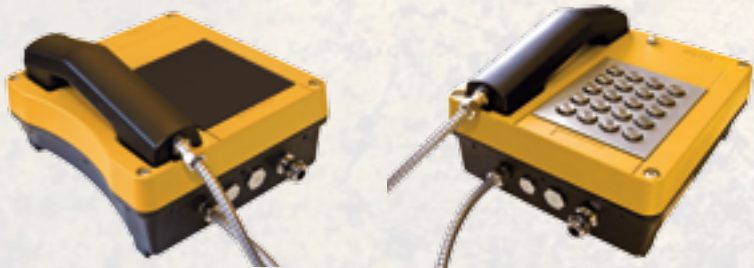
- ring loudness 90 dB (3 various loudness levels)
- pulse and tone dialling
- FLASH (adjustable to 100 ms or 200 ms)
- supply from analog telephone line
- 5 various ring tones
- pause (adjustable to 1 sec or 3 sec)
- electronic key lock

Product	Type	Dial buttons	Optical signalization	Possibility to connect additional secondary earphone 4FN 615 09	Loudness volume regulation	Programming of the memory from dial buttons	Direct memories
Explosion proof telephone set	4FP 153 32	✓	✓	4FN 615 09.2	✓	✓	3
Explosion proof telephone set ÜB	4FP 153 33		✓	4FN 615 09.2			-
Explosion proof telephone set with speakerphone	4FP 153 34	✓	✓	4FN 615 09.2	✓	✓	2
Explosion proof telephone set ÜB with speakerphone	4FP 153 35		✓	4FN 615 09.2	✓		-

Note.: ÜB - central battery

Industrial telephone set LB telephone sets

4FP 153 36, 37, 39,40
4FP 153 38



4FP 153 36 to 4FP 153 40 is intended for heavy-duty conditions (high humidity, noise, dust, mechanical effects, ...). They are usually used in industry halls, guardhouses, warehouses or underground chambers without methane. Their construction is robust and compact. They are connected to analog plug of telephone central with parameters 24 V DC to 60 V DC.

Ambient temperature:

- 40 °C to + 60 °C

Protection:

IP 66

Dimensions:

245 x 225 x 129 mm (h x w x d)

Weight:

cca 2,5 kg

- ring loudness 90 dB (3 various loudness levels)
- pulse and tone dialling
- FLASH (adjustable to 100 ms or 200 ms)
- supply from analog telephone line
- 5 various ring tones
- pause (adjustable to 1 sec or 3 sec)
- electronic key lock

Product	Type	Dial buttons	Optical signalization	Secondary earphone	Loudness volume regulation	Programming of the memory from dial buttons	Direct memories
Industrial telephone set	4FP 153 36	✓	✓	4FN 615 09.1	✓	✓	3
Industrial telephone set ÜB	4FP 153 37		✓	4FN 615 09.1			-
MB TP	4FP 153 38		✓	4FN 615 09.1			-
Industrial telephone set with speakerphone	4FP 153 39	✓	✓	4FN 615 09.1	✓	✓	2
Industrial telephone set ÜB with speakerphone	4FP 153 40		✓	4FN 615 09.1	✓		-

Note.: MB - local battery
ÜB - central battery



Telephone set LB - 4FP 153 38 is duplex communication system for LB application and communication in postal and railway services. This telephone set is intended for communication with power supply system from local battery. This telephone set is designed for environment with high climate resistance.

Environment:

Protection: IP 65 according to EN60529
Operating temperature: -25 °C to +65 °C
Storage temperature: -25 °C to +70 °C
Power supply LR20 1,5V

Mining telephone sets

4FP 153 42 - 46
4FP 153 52 - 54

Autligyphone is intended for heavy-duty industrial conditions in underground mines and surface installations of the mines, with risk of endangering by methane or combustible dust (e.g. coal dust, rock dust etc.). The telephone can work with any public or private telephone central. The phone allows hands-free connection with dispatching centre, so called ligyphone operation. You can use additional earphone if required. The phone bodies are produced from zinc alloy and the complete unit is designed as explosion-proof hard lock with cover protection. The surface of the phones is covered by powder paint. The electrical circuits of the microphone, additional earphone and dial buttons are designed as intrinsically safe circuits.

Explosion-proof autligyphone



Explosion-proof automatic phone



Basic technical parameters:

- Application:** Undergroud SNM 2, ZONE 1 and 2
- Working environment:** IM2 Ex d [ib] I , or. IM2 Ex d I for 4FP 153 46
- Protection:** IP 54
- Supply:** from telephone Exchange 60 or 48 V, 60 mA DC
- Protection against dangerous contact:** device supply meets the requirements for PELV circuits in accordance with STN EN 60950-1 as communication equioment with voltage between wires in insulated system up to 85 V DC
- Trensmittig base absorption:** 0 to + 5 dB
- Receiving base absorption:** 0 to - 5 dB (useer can regulate the volume)
-only on version 4 FP 153 42, 43, 44
- Base absorption of side-tone:** + 7 to + 17 dB
- Acoustic stability:** stable at load 60 V, 2x500 Ω
- Resistance at DC current 25mA:** up to 320 Ω
- Input impedance:** 600 Ohm ± 20 %, at 1 000Hz
- Insulation resistance:** 100 MΩ at 30 % and 3 MΩ at 90 % humidity
- Loudness level:** min. 70 dB at distance 1 m
- Ligyphone loudness:** min. 70 dB
- Temperature of enviroment:** -20°C to +40°C
- Relative humidity of working environment:** 30 to 90%
- Dimensions:** 393x325x220 mm (w x h x d)
- Weight:** 17 kg

- Dialling:** impluse, DTMF, buttons from fine steel
- Dialling parameters:** 3 direct memories, re-dialling
- Ringing:** single-pan bell, loudness level min. 70dB, ligyphone loudness min. 70dB
- Optical signalization:** LED diode

name	type	button keypad	talkback button	call button	optical signalization	secondary earphone	regulation of call loudness	memory programming from keypad
AUTLIGYPHONE	4FP 153 42	✓		✓	✓	✓	✓	✓
AUT. PHONE	4FP 153 43	✓			✓	✓	✓	✓
AUT. PHONE	4FP 153 44	✓	✓		✓	✓	✓	✓
CB PHONE	4FP 153 45				✓	✓		
LIGYPHONE	4FP 153 46			✓	✓			
AUTLIGYPHONE	4FP 153 52	✓		✓	✓	✓		✓
AUT. PHONE	4FP 153 53	✓			✓	✓		✓
AUT. PHONE	4FP 153 54	✓	✓		✓	✓		✓

Secondary earphone

4FN 615 09.1
4FN 615 09.2



The secondary earphone 4FN 615 09.2 can be connected to special telephones 4FP 156 32, 33, 34, 35. The secondary earphone 4FN 615 09.1 can be connected to special telephones 4FP 153 36, 37, 39, 40. The secondary earphone is delivered as solo product.

SPECIAL TELEPHONE SETS

LB telephone sets

4FP 121 41 – 45



- duplex communication system for LB application
- communication in postal and railway services
- power supply 3 V=
- relative humidity 45 - 80 %
- ambient temperature +5 °C + 45 °C

Drawing number	Model			Ringling	Bell	
	for postal servis	for railways	for export	by rolling the inductor handle	electronic	mechanical
4FP 121 41		✓		✓		✓
4FP 121 42		✓	✓	✓		✓
4FP 121 43		✓		✓	✓	
4FP 121 44		✓	✓	✓	✓	
4FP 121 45	✓			✓		✓

Test microtelephone

4FP 122 69



Test phone 4FP 122 69 is intended for testing of phone lines on automatic phone centrals working in impulse and frequency dial modes. Test phone includes internal power supply (AC) for extended testing of phone lines. The design of the phone is based on phone version „HN“. The parts are produced from materials resistant to mechanical damages. In the upper part of the phone is metal holder for mounting to pole or belt of service mechanic. The phone is proteted by leather case (included in package). The functional characteristics allow impulse-frequency dial, or mixed dial, temporary or permanent change of dial mode, calibrating of interdigital space, light indication and visual control of phone activation.

Test phone allows:

- acoustic monitoring of line state
- optical control of line polarity
- optical and acoustic control of tariff impulses 16 kHz
- optical and acoustic control of line conductivity max. 27 kΩ
- testing of line by low-frequency signal (900 Hz)

Basic functions:

- PULSE/TONE dial switch
- button for calibrating of interrupted line
- button for subscriber's number dial
- button for line polarity
- button for REDIAL and inserting of interserial space
- LED diode signaling line polarity:
 - +a -b = green
 - a +b = red
- LED diode signaling:
 - phone switch-on
 - generator switch-on
 - conductivity control
- function switch 1
 - ON (phone switch-on)
 - OFF (phone switch-off)
 - MON (line monitoring)
- function switch 2
 - CONT (conductivity control)
 - TONE (generation of low-frequency signal)
 - TALK (speech state)
- line cord with measuring spikes
- connector JACK 6/4
- holder and leather case

Technical parameters:

- transmit base absorption: 0 to +/- 5 dB
- receive base absorption: 0 to +/- 5 dB
- base absorption of side-tone: 7 to + 17 dB
- DC resistance: < 320 Ω at 25 mA
- input call impedance: 600 Ω +/- 20%
- pulse mode:
 - pulse frequency 10 Hz +/- 0,5 Hz
 - pulse ratio 1,5 +/- 0,1:1
- interdigital space > 800 ms
- interserial space > 3 sec.
- frequency mode:
 - frequency according to CCITT
- line signal level 8 +/- 2 dB
- bar signal level 6 +/- 2 dB
- calibrated line dropout: FLASH 100 ms
- sensitivity of tariff pulse detector: 16 kHz min. 43,6 mV
- impedance in monitoring state at 1000 Hz: min. 4200 Ω
- increased bias protection resistance of input: up to 200 V / 60 mA

Technical characteristics of internal AC source:

- input voltage (no load): (4+1) Vef
- output signal frequency: (900 + 150) Hz
- source supply: 9 V (battery located inside of phone)

Additional bells to telephone

4FN 606 00, 31



4FN 606 31



4FN 606 00

Additional bells are intended for better hearing of telephone ringing. They are used in areas with worse hearing of telephone ringing (e.g. back rooms of bigger apartments, warehouses, garages etc.), where the installation of another parallel telephone is not effective. Additional bell can be used also as school-bell. The additional bells are connected parallel to telephone ringer. They are intended for installation in regular ambient.

Technical parameters:

- supply voltage (AC)
- current sensitivity
- minimum loudness
- electric strength
- insulation resistance between coil winding and bell
- temperature
- relative humidity
- dimensions (w,h,d)
- weight
- minimum operating voltage

4FN 606 00

75 V/25 Hz

70 dB
500 V eff . 50 Hz

- 10°C to + 40°C
from 45 % to 80 %
118x117x51,5 mm
cca 0,3 kg
25 V

4FN 606 31

50 V/50Hz, 25 Hz
6 mA pri 25 Hz
70 dB

> 100 MΩ
- 5 °C to + 40 °C
80 %
65x90x27 mm
0,08 kg

Water-proof bells

4FE 606 09, 11, 12, 13



Technical parameters:

- insulation resistance (temperature)
relative humidity
- insulation resistance (temperature)
relative humidity
- operating temperature
- waterflush resisatance
- resistance against vibrations
and strokes with frequency
- dimensions (w,h,d)
- weight

25 °C (40 °C) ± 2 °C
65 (80)% ± 3 % > 20 MΩ
25°C (40°C) ± 2°C
80 (95)% ± 3 % > 5 MΩ
-30 °C to + 40 °C
STN 33 0330,
protection IP 55

5-25 Hz
129x204x187 mm
2,2 kg

Water-proof bells are used as additional acoustic signal device to telephones, or as single acoustic device. Water-proof bells are intended for ambient with danger of direct contact with water (e.g. ships, vessels, free spaces at air-ports with possible rain impact etc.)

Drawing number	Supply voltage (V)	Frequency (Hz)	Input (VA)
4FE 606 09	230	50	2,2
4FE 606 11	75	25	0,4
4FE 606 12	24	25	0,7
4FE 606 13	24	=	2,0

Telephone switch

4FN 216 25



Telephone switch is device which allows, instead or simultaneously with telephone ringing, the switching (in ringing rhythm) of additional acoustic or light signal, intended for supply from electric supply network with nominal voltage 230 V/50 Hz. As additional signal can be used any acoustic or light signal standardized for 230 V appliances of class I. (zeroing protection) or class II. (double isolation) with maximum input 500 W. We recommend, as acoustic signal for noisy ambient, our product - horn „PIRATA“ 4FE 601 15. We recommend the connection of telephone switch to telephone line by additional telephone socket connected to socket for telephone.

Technical parameters:

- line input: line voltage
- line output: controlled line voltage
- load on line output
- load protection: tubular fuse
- phone input: ring voltage

180 - 250 V/50 Hz
180 - 250 V/50 Hz
0-500 VA
T - 2,5 A/250 V
25-75 V/20-50 Hz

HORNS

Electromagnetic horn PIRATA

4FE 601 09 - 15



Electromagnetic horn (AC) is used as acoustic signal in various areas, except ambient with explosion danger (gas, vapour, combustible). „PIRATA“ is used as signalling in production areas, noisy places, at crane tracks, railway crossings etc. Electrical appliance: class I., protection level (against splashy water): IP 54.

Technical parameters:

- maximum input 20 VA
- minimum loudness 95 dB (z 1 m)
- relative humidity 97 %
- temperature ambient -25 °C to + 55 °C (248 K to 328 K)
- dimensons ø 134, height 66 mm
- weight 0,98 kg

Drawing number	Supply voltage (V)	Frequency (Hz)
4FE 601 09	6	50 - 60
4FE 601 10	12	50 - 60
4FE 601 11	24	50 - 60
4FE 601 12	48	50 - 60
4FE 60113	60	50 - 60
4FE 601 14	110	50 - 60
4FE 601 15	230	50 - 60

Electrical explosion-proof horns

4FE 601 03 - 05



Electrical explosion-proof horns for AC current are used as acoustic signaling devices in ambient with explosion danger (gas, vapour, combustible) like mines, chemical and wood factories etc. Explosion level (class) of ambient: I, IIB, temperature level T5.

Technical parameters:

- maximum input: 40 VA
- loudness level (5m from horn axle) 68 dB
- signal tone frequency 100 Hz
- working time max. 60 min.
- cross-section of connecting lines 6 mm2
- temperature ambient - 10°C to + 40°C (263K to 313K)
- relative humidity 100 %
- dimensions (w x d x h) 129x204x167 mm
- weigh: 7 kg

Drawing number	Supply voltage (V)	Frequency (Hz)	Explosion level (class)	Reliable function in voltage scope (V)
4FE 601 03	24	50	IM2EExdl II2GEEExdIIBT5	21,6 - 26,4
4FE 601 04	120	50	IM2EExdl II2GEEExdIIBT5	108 - 132
4FE 601 05	230	50	IM2EExdl II2GEEExdIIBT5	207 - 253

Electronical horns

Electronical horns are intended for signalling by shrill acoustic signal which can be supported by light signalling.



Vertical horns HV
85Db



Horizontal horn HH
85Db



HORNS WITH LIGHT SIGNAL

Electronical horns

Technical parameters:

- weight: see the table below
- dimensions: see the table below
- operating temperature: - 20°C ÷ +50°C
- protection level: IP 65
- supply voltage:
 - for „HV ... 230 ..“ and „HH ... 230 ..“ 215 ÷ 245 V/50 Hz
 - for „HV ... 24 ..“ and „HH ... 24 ..“ 22 ÷ 26 V ~ or 24 ÷ 28 V=
- acoustic pressure (loudness level):
 - for „HV 100 ..“ min. 98 dB 1 m
 - for „Hv85 ..“ and „Hh85..“ min 85 dB/1 m
- light signalling
 - for „HV ... 230X ..“ and „HH ... 230X ..“
 - number of flashes: 55 ÷ 65 x/1 min.
 - for „HV .. 24LED ..“ and „HH .. 24LED ..“ adjustable:
 - a) flashing 65 ÷ 75 x/1 min.
 - b) flashing 100 ÷ 110 x/1 min.
 - c) permanent light

100Db



Type	Drawing number	Supply voltage	Acoustic pressure	Light type	Light colour	Assembly	Dimensions d, w, h	Weight
HV100-24LED-R	4 FN 601 20.2	24V= or 24V~	100 dB	LED „blinking“	red	vertical	238 x 82,5 x 91,5 mm	195±5 g
HV100-24LED-O	4 FN 601 20.4				orange			
HV100-230X-R	4 FN 601 21.2	230V/50Hz	100 dB	LED flashes	red	vertical	238 x 82,5 x 91,5 mm	200±5 g
HV100-230X-O	4 FN 601 21.4				orange			
HV85-24LED-R	4 FN 601 22.2	24V= or 24V~	85 dB	LED „blinking“	red	vertical	125 x 82,5 x 91,5 mm	150±5 g
HV85-24LED-O	4 FN 601 22.4				orange			
HV85-230X-R	4 FN 601 23.2	230V/50Hz	85 dB	LED flashes	red	vertical	125 x 82,5 x 91,5 mm	155±5 g
HV85-230X-O	4 FN 601 23.4				orange			
HV85-24	4 FN 601 24	24V= / 24V~	85 dB	-	-	vertical	81,8 x 82,5 x 91,5 mm	110±5 g
HV85-230	4 FN 601 25	230V/50Hz	85 dB	-	-	vertical	81,8 x 82,5 x 91,5 mm	115±5 g
HV100-24	4 FN 601 26	24V= / 24V~	100 dB	-	-	vertical	194,8 x 82,5 x 91,5 mm	155±5 g
HV100-230	4 FN 601 27	230V/50Hz	100 dB	-	-	vertical	194,8 x 82,5 x 91,5 mm	160±5 g
HH85-24LED-R	4 FN 601 28.2	24V= or 24V~	85 dB	LED „blinking“	red	horizontal	105,5 x 105,5 x 134 mm	180±5 g
HH85-24LED-O	4 FN 601 28.4				orange			
HH85-230X-R	4 FN 601 29.2	230V/50Hz	85 dB	LED flashes	red	horizontal	105,5 x 105,5 x 134 mm	185±5 g
HH85-230X-O	4 FN 601 29.4				orange			
HV100-12LED-R	4 FN 601 30.2	12V= or 12V~	min. 95 dB	LED „blinking“	red	vertical	238 x 82,5 x 91,5 mm	195±5 g
HV100-12LED-O	4 FN 601 30.4				orange			
HVS100-12LED-R	4 FN 601 31.2	12V= or 12V~	min. 95 dB	LED „blinking“	red	vertical	238 x 82,5 x 91,5 mm	200±5 g
HVS100-12LED-O	4 FN 601 31.4				orange			
HV85-12LED-R	4 FN 601 32.2	12V= or 12V~	min. 85 dB	LED „blinking“	red	vertical	125 x 82,5 x 91,5 mm	150±5 g
HV85-12LED-O	4 FN 601 32.4				orange			
HVS85-12LED-R	4 FN 601 33.2	12V= or 12V~	min. 85 dB	LED „blinking“	red	vertical	125 x 82,5 x 91,5 mm	155±5 g
HVS85-12LED-O	4 FN 601 33.4				orange			
HV85-12	4 FN 601 34	12V= / 12V~	min. 85 dB	-	-	vertical	81,8 x 82,5 x 91,5 mm	110±5 g
HVS85-12	4 FN 601 35	12V= / 12V~	min. 85 dB	-	-	vertical	81,8 x 82,5 x 91,5 mm	115±5 g
HV100-12	4 FN 601 36	12V= / 12V~	min. 95 dB	-	-	vertical	194,8 x 82,5 x 91,5 mm	155±5 g
HVS100-12	4 FN 601 37	12V= / 12V~	min. 95 dB	-	-	vertical	194,8 x 82,5 x 91,5 mm	160±5 g
HH85-12LED-R	4 FN 601 38.2	12V= or 12V~	min. 85 dB	LED „blinking“	red	horizontal	105,5 x 105,5 x 134 mm	180±5 g
HH85-12LED-O	4 FN 601 38.4				orange			
HHS85-12LED-R	4 FN 601 39.2	12V= or 12V~	min. 85 dB	LED „blinking“	red	horizontal	105,5 x 105,5 x 134 mm	185±5 g
HHS85-12LED-O	4 FN 601 39.4				orange			



TESLA

STROPKOV, akciová spoločnosť

TESLA STROPKOV, a.s.
Hviezdoslavova 37/46
091 12 Stropkov
Slovenská republika
tel.: +421-54-7867 (500)
fax: +421-54-7867 502 (505)
tech. podpora: +421-918 594 907
e-mail: predaj@tesla.sk, sales@tesla.sk
www.tesla.sk

Distributor:

K - SPaH - 194 / 2015