



Farapayam Engineering Co.

Line matching unit PPW750 - PNW750 Modular PLC Transmission System



Line matching unit functions

- ▶ Injection and extraction of PLC signals on high voltage overhead lines and cables.
- ▶ Through connections intermediate stations.
- ▶ Matching of HV line and PLC equipment impedances.
- ▶ Electrical insulation between HV plant and PLC equipment

Advantages and features

- ▶ Weather - proof and tropicalised
- ▶ Simple integration in PLC system
- ▶ Maximum personal protection
- ▶ High degree of modularity
- ▶ High carrier power rating
- ▶ Programmable

Methods of coupling

- ▶ Phase to earth coupling to the power line effected between the conductor(s) of one phase of the line and earth (fig.a)
- ▶ Phase to Phase coupling to the power line effected between the Conductor (s) of one phase and the conductor (s) of another phase of the same line (fig.b) or different line



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Line Trap



Iron Core Reactor



Air Core Reactor



Transducer

Technical data

- Coupling type
 - phase - to - ground
 - phase - to phase (inter - system)
- Frequency range
 - 40 to 500 KHZ (programmable)
- Coupling capacitance
 - 4.4, 6.8, 8.8, ... (nf)
- Nominal impedance Z 1
 - (power line side) 300/400 ohm unbal
- Nominal impedance Z 2
 - (plc equipment side) 75/150 ohm unbal / bal
- Composite loss within passband
 - < 1.3 dB
- Return loss within passband
 - > 13 dB
- Nominal peak power (P.E.P)
 - 750 w max
- Impulse test voltage
 - 10 KV peak
- Intermodulation & distortion
 - better than 80 dB at max power
- 50 / 60 HZ current in the transformer
 - primary and drail coil 5 A continuous
 - 100 A, 1s
- Surge arrester
 - Air gap (2 KV rms)
 - Si-c (0.66 KV)
- Permissible ambient temperature
 - 40° C to + 60° C

Outdoor continuous duty

exposition to sun ray, rain, hail, snow, ice, saline at mechanical characteristics

overall dimension : h = 420 mm
l = 230 mm
d = 190 mm

Designed and manufactured in accordance with requirements and recommendations of IEC 481, ANSI C93.4.

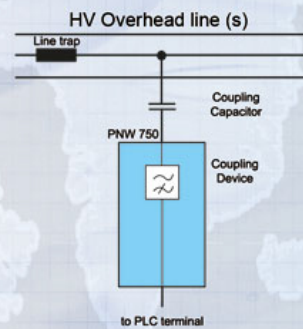


Fig a - phase to Earth

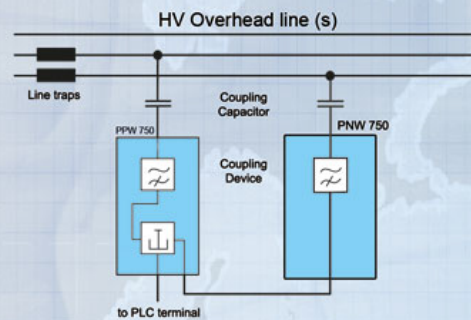
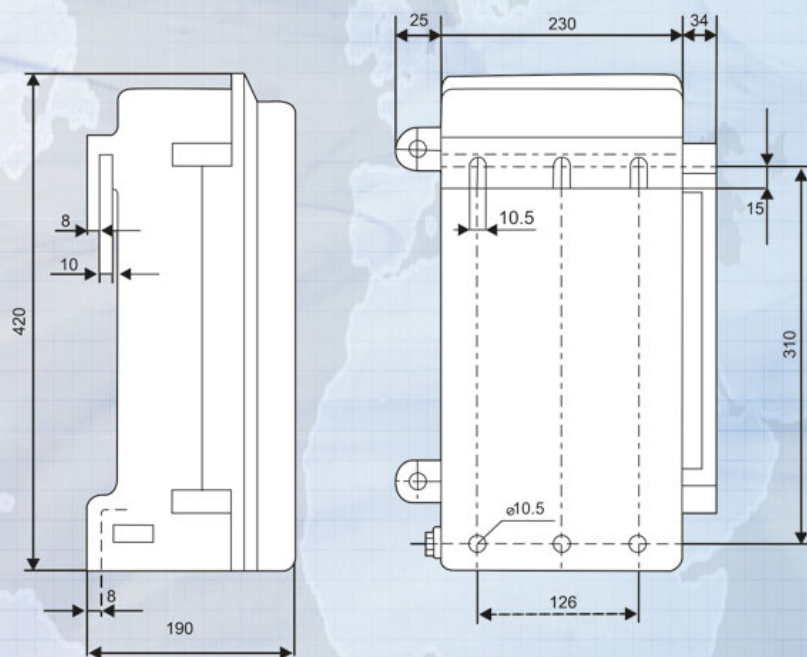


Fig b - phase to phase



Dimension layout of the coupling device

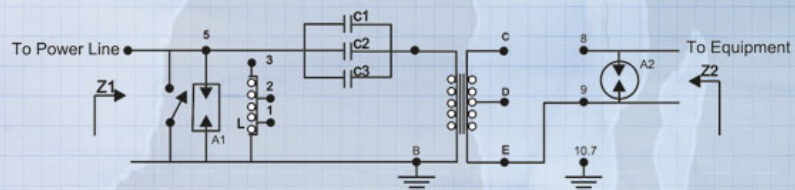


Diagram high - pass
coupling filter PNW 750

info@Farapayamco.com

Designed by FormAsa (0261 448 81 84)

www.Farapayamco.com Hamdavi@Farapayamco.com Info@Farapayamco.com

Office : Unit 12, Bahram bldg., No 4, 32th St., Gandhi St., Tehran - Iran
Factory : No 175, Sixth Golestan alley, Baharestan industrial city, Kamalshahr, Karaj - Iran
Office Telefax : (+98 21) 88208436 - 7 Factory Telefax : (+98 261) 4760477 - 9