



# ISP-16

# Alarm Annunciator

- 16 CHANNELS LED TECHNOLOGY
- COMMUNICATION AND EVENT RECORDING OPTIONS
- RELIABLE PERFORMANCE UNDER ELECTROMAGNETIC INTERFERENCE
- WORKING WITH DIFFERENT VOLTAGE LEVELS. (24/48 ,110 AND 220 VDC)
- EASY PROGRAMMING WITH ISPSim™SOFTWARE
- CAPABILITY OF RELAY OUTPUT SELECTION FOR EACH CHANNEL BY USING PUSH BUTTONS ON THE FRONT PANEL
- ISOLATED RS485 PORT AND MODBUS RTU PROTOCOL SUPPORT
- HIGH QUALITY AND LONG LIFE POWER SUPPLY WITH PROTECTION FOR OVER TEMPERATURE, SHORTCIRCUIT, OVERCURRENT/OVERVOLTAGE,

TELEPRO-ISP-16 Alarm Annunciator is a flexible, functional and reliable product used in the protection and control automation systems.

Our product, combining low cost with good quality, compact and unique design, is an unrivaled product with optional communication and optional event recording features.

Each of 16 pcs channels is isolated. They are protected by opto-coupler, harmonic suppressors and noise filtering software. Device can be safely used under the environment containing high electromagnetic noise which is continuously met.

Horn and bell selection can be done with pushbuttons as well as all the parameters can be set via ISPSim™ software (just for one having communication option).

Our models having optional event recording provide event recording with 1 msec resolution.

Response and release time for the environment with electromagnetic noise are to be programmed between 3-250msec (for the ones having communication options)

Optional RS485 communication port supports Modbus RTU and could be easily integrated to the SCADA systems.

ISP-16 could be easily labelled by the aid of dedicated labeling template provided by TELEPRO®.

## GENERAL DATA

### MODULAR CONSTRUCTION

TELEPRO-ISP16 Alarm Annunciator is an advanced technology product providing compact, flexible programming and labelling options.

It could be easily used in the wide area protection systems, thanks to the parallel working feature.

### COMMUNICATION (OPTIONAL)

Our models with communication and event recording; provide galvanic isolation protection as a standard, support Modbus RTU protocol through integrated RS485 port and get easily connected to the SCADA systems.

### INTERNAL EVENT RECORDER (OPTIONAL)

It is an ideal device with sequential event recording in 1ms resolution timestamps and software supported reporting features for wide area protection systems. All the event records in the annunciators working in parallel with 1-1920 channels quantity can be instantly monitored from one station via internet connection with IP based.

*PS: Integrated event recording system supported with HEIM-48 and HEEP-3000-RTU designed by TELEPRO® are recommended to be used for wide area protection systems requiring high performance.*

### LED INDICATION

LED indication, providing ultra bright illumination which could be seen even in the high lighting environments, is supplied as default for all models.

### FULL SOFTWARE CONFIGURATION

With the help of ISPSim™ software; relay selection (horn-bell), response and release time as well as ModbusID setting can be programmed.

ISA18.1 Sequence Code is set to Code M (Manuel RESET) as standard.

In addition, horn-bell selection of all channels can be safely (and independently from software) set with the push buttons on the front panels without opening panel doors. With the advantages resulted from unique design, needs for dip switches are eliminated.

### INPUTS

All inputs are isolated with opto-coupler, protected with varistor, having common return terminal and filtered. Fulfill EU Electromagnetic Compatibility (EMC) and Low voltage directive (LVD). False alarm possibility is completely eliminated. Maximum input current is 5mA, input voltage can be ordered as 24/48V, 110V and 220V DC upon request.

### RELAY OUTPUTS

TELEPRO-ISP16 provides 2pcs of NO FormA type dry contact relay outputs by default. Outputs are set to HORN or BELL alternatives. All channels can be set to one of these alternatives with software or push buttons on the front panel. Additionally it provides FAULT relay having FormC type NC/NO with common terminal so as to indicate internal system faults.

### PROGRAMMABLE RESPONSE AND RELEASE TIME

There are “software programmable” response – release time which provide flexible and safe performance for protection against induced magnetic fields resulted from maneuvers i.e CB opening/closing especially. With the help of ISPSim™ software; Response and release time are independently set between 3msec and 250msec. Response time is set to 5msec, release time is set to 20msec by default.

### HIGH QUALITY POWER SUPPLY

TELEPRO-ISP16, can be supplied with 4 different voltage level in order to meet the different alternatives used in the distribution system automation. It can be freely connected to the voltage levels of 24/48V, 110V and 220V DC. Power supply with the design of protection against shortcircuit, overcurrent/overvoltage and over temperature, guarantees long life.

### DISPLAY AND LABELING

Having front panel design which membrane featured, providing high quality appearance. Easily changed, printed out labelling system with the front label size of 46,5x10,5 mm dedicated for each channel, is having an user friendly design. Window for each channel can be named with label template supplied by TELEPRO®. Whenever requested, labels can be easily changed.

### CASE AND MOUNTING

TELEPRO-ISP16, is provided in case configuration, with panel type and UL94Vo\_Self-extinguish standard. Mechanical protection of our standard case is of IP51. Having Standard dimensions of (144x144x77 mm) and weight of 585gr. With user friendly screwed mounting system, it can be fast and safely mounted / dismantled.

### EASY TO USE

16 pcs of dry contacts from the field are to be connected to inputs of ISP16.

Each channel can be set to HORN or BELL relay according to operator choice. These settings provide difference in LED indication too. Corresponding channel turns to GREEN when setting to BELL, it turns to RED when setting to HORN. (Optionally Red/Yellow alternative available)

Wiring connection and other details are provided in the Installation Manual supplied with the device.

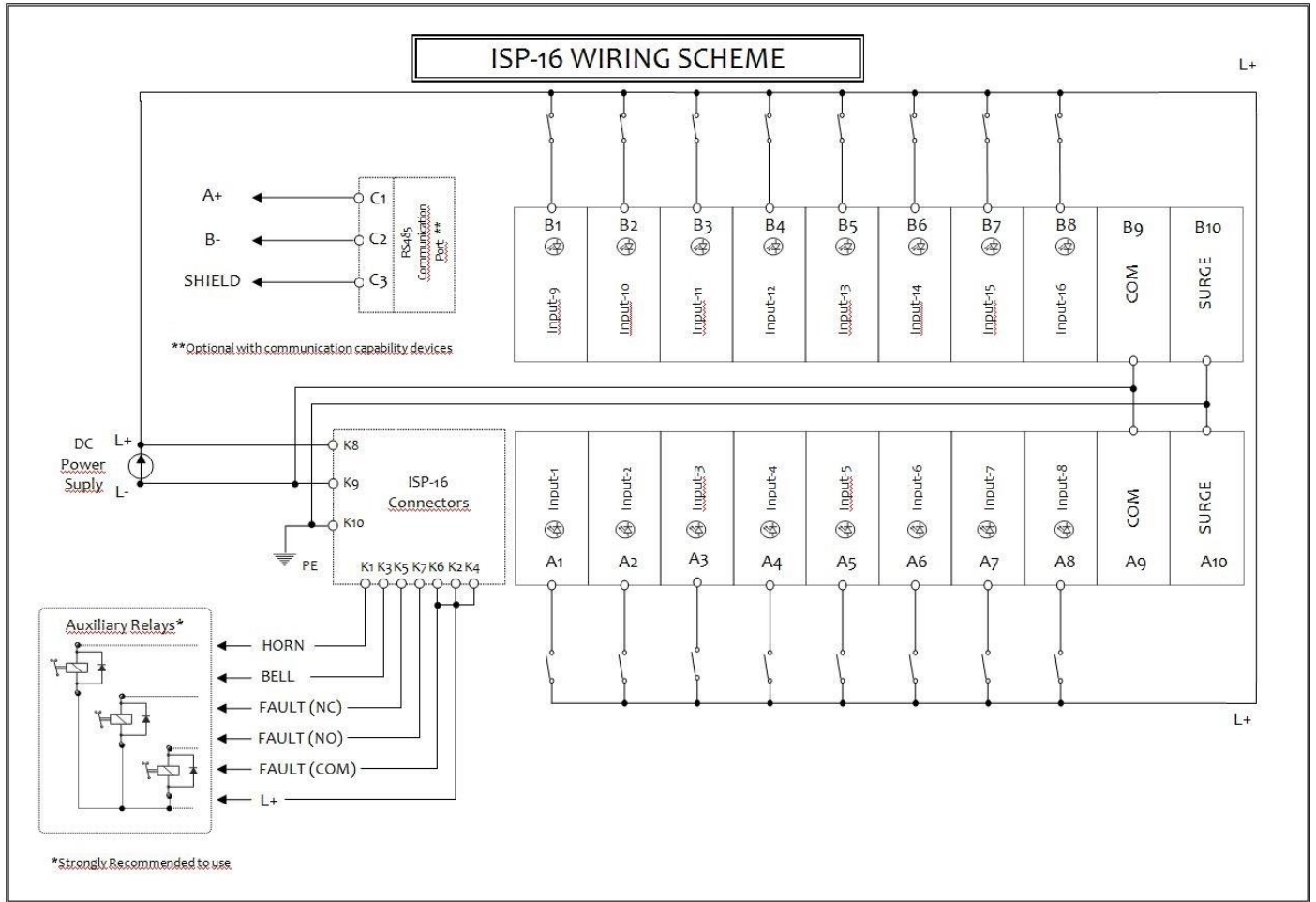
### CERTIFICATES & APPROVALS

|                   |  |
|-------------------|--|
| CE Certifications | : CE (ESIM)                                    |
| EMC Compliance    | : EN 61000-4-2 (+A1/ +A2 Dielectric Withstand) |
|                   | : EN 61000-4-3 (Radiated RFI Immunity)         |
|                   | : EN 61000-4-4 (Electrical Fast Transient)     |
|                   | : EN 61000-4-5 (Surge Immunity)                |
|                   | : EN 61000-4-6 (Conducted RFI Dist. Immunity)  |
|                   | : EN 61000-4-8 (Radiated Power Freq. Immunity) |
|                   | : EN 61000-4-11 (Immunity to Voltage dips)     |
|                   | : EN 61326-1 (Equipment for Measurement)       |
|                   | : EN 55011 (+A2 Emission – Ind. Sci. & Med.)   |
| LVD Compliance    | : EN 61010-1 :1993                             |

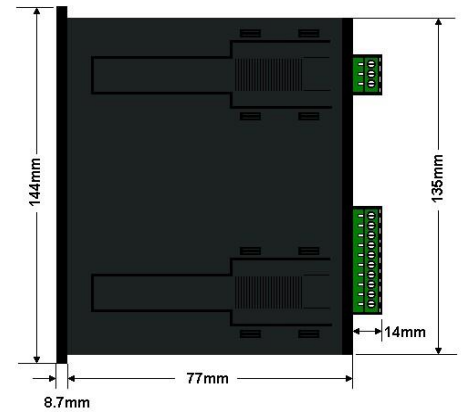
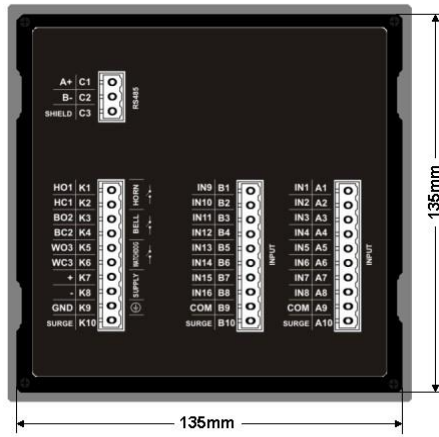
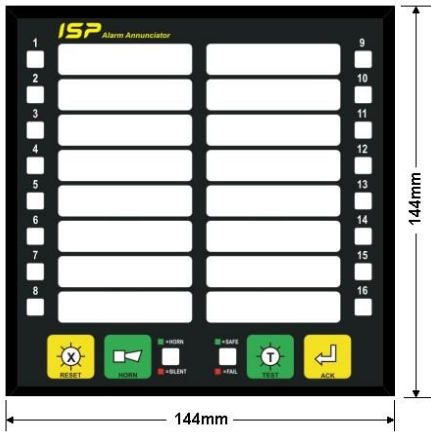
## TECHNICAL SPECIFICATIONS

\* indicated features are optional.

|                               |   |           |            |
|-------------------------------|---|-----------|------------|
| <b>Product Type</b>           | <b>ISP-16</b>   |           |            |
| <b>Supply</b>                 |   |           |            |
| Supply Voltage                | 24/48Vdc  | 110Vdc    | 220Vdc     |
| Supply Voltage range          | 18-60Vdc  | 88-132Vdc | 176-242Vdc |
| Supply power                  | 5W  |           |            |
| <b>Inputs</b>                 |   |           |            |
| Qty of Inputs                 | 16 digital inputs   |           |            |
| Type of Inputs                | Optical Isolated, Varistor Protected, Common return terminal,transient filtered         |           |            |
| Input Current(per channel )   | Max. 5 mA   | Max. 5 mA | Max. 5 mA  |
| Input impedance (min)         | 20 kΩ   | 75 kΩ     | 200 kΩ     |
| Input threshold voltage       | 12V ± %20   | 65V ± %20 | 130V ± %20 |
| Transient Voltage             | Common Mode: 1kV – Serial Mode: 2kV   |           |            |
| * Response time               | *Programmable 3-250ms (For models with Communication) Default :5 ms                     |           |            |
| * Release time                | * Programmable 3-250ms (For models with Communication) Default :20 ms                   |           |            |
| Connection type               | Screwed, pluggable type terminals   |           |            |
| Wire size                     | 12 AWG (2.5 mm)   |           |            |
| <b>Outputs</b>                |   |           |            |
| Contact Outputs               | 48Vdc-1A / 250Vdc-0.2A  |           |            |
| Horn Relay                    | 1-Form-A drycontact relay (SPST) (NO)   |           |            |
| Bell Relay                    | 1-Form-A drycontact relay(SPST) (NO)  |           |            |
| Fault Relay                   | 1-Form-C drycontact relay(SPDT) (NO/NC)   |           |            |
| <b>Communication</b>          |   |           |            |
| * Communication Port          | 2 wires, RS485  |           |            |
| * Communication Protocol      | Modbus RTU (19200,8n1)  |           |            |
| <b>Event Recorder</b>         |   |           |            |
| * Event Recorder              | Yes ( Optional )  |           |            |
| * ISP RTU Integration         | Yes ( Optional )  |           |            |
| <b>User Interface</b>         |   |           |            |
| PushButton                    | Test – Horn – Ack – Reset   |           |            |
| Front Panel                   | Dual Layer, Embossed, Multi Color Membrane, With Sticker Slots                          |           |            |
| Window dimensions(WxL)        | 46,5x10,5 mm  |           |            |
| Indication                    | 5mm, 2 coloured ( Red / Green) LED (Optional Red/YellowLED )                            |           |            |
| Audible indication            | 23mm Buzzer 75 dbA  |           |            |
| * Horn – Bell Configuration   | With front panel buttons – ISPSim Software (For the models with communications options) |           |            |
| <b>Case</b>                   |   |           |            |
| Case type                     | Panel type  |           |            |
| Case Standard                 | UL94Vo Self-extinguish  |           |            |
| Dimensions(WxLxD)             | 144x144x77 mm   |           |            |
| Panel Mounting                | Plug-in with panel mounting sleeve  |           |            |
| Protection Class              | IP51  |           |            |
| Weight                        | 585 gr  |           |            |
| <b>Environmental Features</b> |   |           |            |
| Operating temperature         | -20 C – +60 C   |           |            |
| Storage temperature           | -25 C – +80 C   |           |            |
| Humidity                      | 0-95% RH  |           |            |
| <b>Package</b>                |   |           |            |
| Package type                  | Carton Box  |           |            |
| Package dimensions(WxLxD)     | 183x107x153 mm  |           |            |
| Weight                        | 690 gr  |           |            |



#### Outline Dimensions



ISP Alarm Annunciators tested and type test certified according to the IEC61010-1/EN 61010-1 Standards



ISO 9001-2000 Cert. No:689866



All products under 2year warranty againsts manufacturing faults.