



ENGINE STARTER RELAY ESR1.1



DESCRIPTION

ESR 1.1 engine starter relay offers a very efficient method of starting and stopping any diesel and gasoline engine while providing full protection for the engine.

The operator can start and stop the engine manually, via the ignition key-switch mounted on the front panel of the unit.

ESR 1.1 is also provided with alternator phase voltage input terminals so that the unit can monitor and protect the generator against over/under speed failures.

The control unit contains a 2 digit 7-segment LED display in order to display the alternator frequency on the front panel, thus avoiding the use of analog type frequency meters on the control cabin.

Other features include monitoring of oil pressure, engine temperature, auxiliary fail input and charge alternator failure.

FEATURES

- Micro-controller based design
- Pre-glow heater control
- Low oil pressure failure detection
- High engine temperature failure detection
- Auxiliary input protection
- Charge alternator failure warning
- Fuel / Start solenoid output relay control
- Alarm Output contact
- Excitation Current feed for charge alternator unit
- Small Dimensions (72mmx72mm)
- Easy connection via screw terminal sockets
- High reliability concept design (MTBF > 50.000 hours)
- Front panel LED indicators for alarm status level
- Front panel 2 digit 7-segment LED display for frequency
- IP52 front panel protection class
- CE compliant
- 9-36Vdc supply voltage range

PROTECTION FUNCTIONS

- Low oil pressure protection
- High engine temperature protection
- Auxiliary input protection
- Charge alternator failure protection
- High-speed / Low speed protection

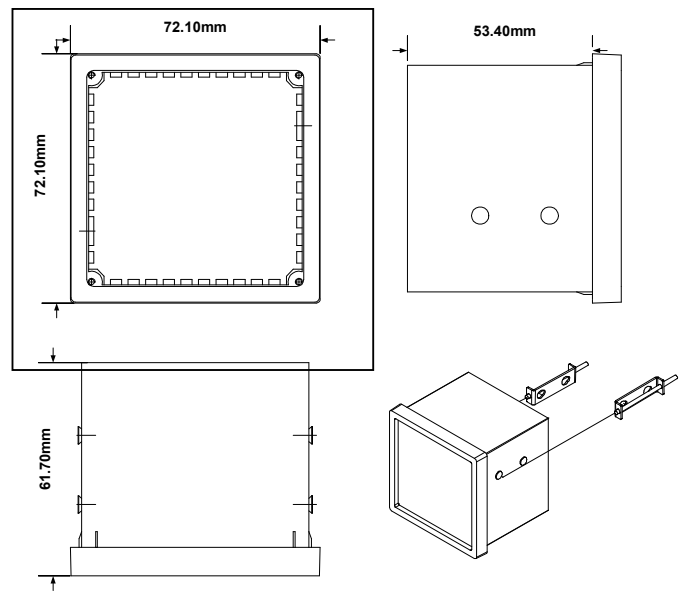
EN-KO Electronic Control Systems

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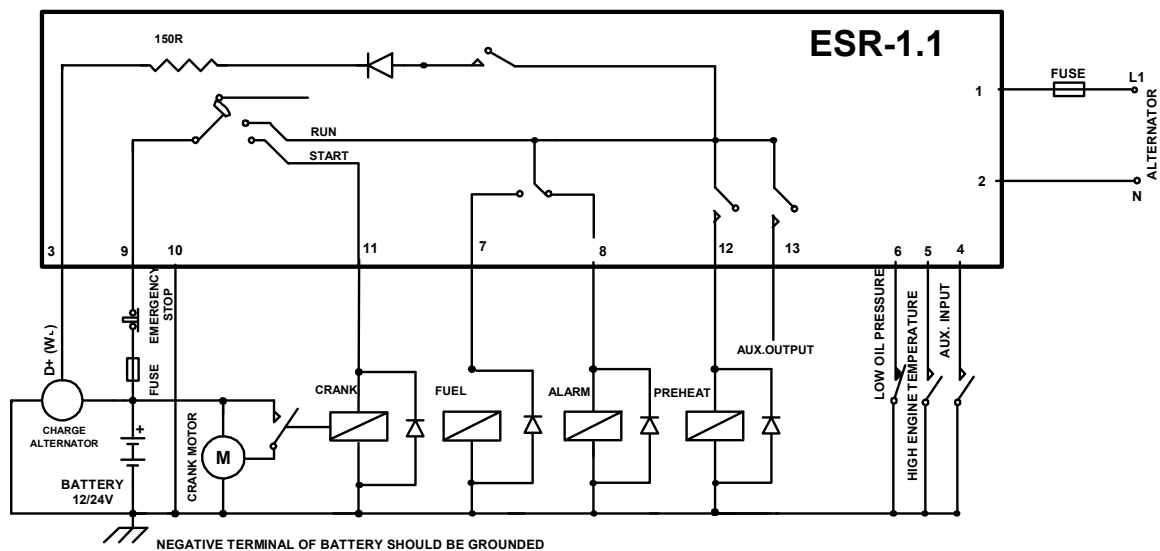
ESR 1.1 ENGINE STARTER RELAY

| SPECIFICATIONS | |
|------------------------|--|
| DC Supply | 9-35VDC 30mA (off state) 130mA (maximum current) |
| Operating Temperature | -10°C / +70°C |
| Relative Humidity | 10% - 95% non-condensing |
| Outputs | Fuel and Start relay contact rating: 16A/30VDC Preheat relay contact rating: 6A/30VDC |
| Additional Outputs 1.1 | Alarm output contact rating: 16A/30VDC |
| Frequency measurement | 1.0Hz – 99.0Hz |
| Measurement Accuracy | Alternator Frequency : ± 0.1Hz |
| Excitation Current | 125mA @ 12VDC 250mA @ 24VDC |
| Connection | Screw terminal type socket |
| Housing | High temperature proof NORYL SE1 GFN2 |
| Protection Class | IP 52 (Front panel protection) |
| Weight | 250 gram for ESR 1.1 |
| Dimensions(WxHxD) | 72x72x62 mm |
| Panel cut out | 67x67mm |
| Mounting Installation | Front panel mounted with rear metal screw fixings |

MOUNTING AND INSTALLATIONS



CONNECTION DIAGRAM



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