## ferroamp

## Fireman switch

## For EnergyHub system 7-152 kW

# State of the art firefighter safety

- Simultaneous disconnection of all strings
- Circuit breaking close to PV string
- Redundant switches
- Cost effective solution

### The cost-efficient firefighter breaker system

The EnergyHub system with its Solar String Optimizers brings a new cost-effective way to completely disconnect all PV strings in case of a fire hazard. The system utilizes the existing safety relays in the Ferroamp Solar String Optimizers to disconnect as close to the PV strings as possible. No additional expensive DC-breakers are required. The system comprise a single remotely operated fireman switch that interrupts DC bus voltage and also interrupts keep-alive messages from the EnergyHub sent to the Solar String Optimizers that will force their internal safety relays to trip within 10 seconds.

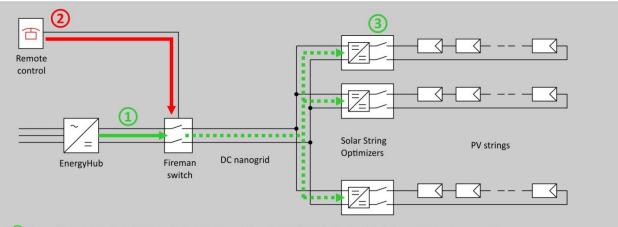


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7 – 152 kW

#### System topology



① Keep-alive messages to Solar String Optimizers are continuosly sent from the EnergyHub during normal system operation

(2) When the fireman switch is activated, a DC-relay breaks the DC bus connection to the EnergyHub. This also interrupts the keep-alive messages.

③ In absence of keep-alive messages all solar string optimzers will open their internal relays to make all PV strings potential free.

#### Specifications

|                           | Fireman switch                            |                                         |
|---------------------------|-------------------------------------------|-----------------------------------------|
| Fireman switch            | 7 – 76 kW                                 | 7 – 152 kW                              |
| Rated DC current          | 10 – 100 A                                | 10 – 200 A                              |
| Maximum DC voltage        | 1000 VDC                                  | 1000 VDC                                |
| Contact form              | 2 A                                       | 2 A                                     |
| Number of operations      | 100                                       | 100                                     |
| Trip time, maximum        | 10 s                                      | 10 s                                    |
| Remote control            |                                           |                                         |
| Control device            | Single pole breaker                       | Single pole breaker                     |
| Control voltage           | 230 VAC                                   | 230 VAC                                 |
| Power consumption         | 30 VA max                                 | 30 VA max                               |
| Physical                  |                                           |                                         |
| Dimensions H x W x D      | 400 x 300 x 150 mm                        | 508 x 355 x 199 mm                      |
| Weight                    | 8,5 kg                                    | 14 kg                                   |
| Color                     | Grey                                      | Grey                                    |
| Installation              |                                           |                                         |
| Ambient temperature       | -10°C – 45°C                              | -10°C – 45°C                            |
| Degree of protection      | IP 65                                     | IP 65                                   |
| Remote control connection | Screw terminals                           | Screw terminals                         |
| DC bus connection         | Screw terminals, 1,5 - 50 mm <sup>2</sup> | Screw terminals, 6 - 95 mm <sup>2</sup> |