

## UPS-NiMH for imc ARGUSfit

UPS for imc ARGUSfit (ARGFT) and imc CANSASfit (CANFT)



The imc ARGUSfit UPS module is used to bridge short-term power failures that typically occur in vehicle electrical systems. Typical applications are mobile measurement tasks in vehicles where the starting process or start-stop automatics in operation are to be recorded by an uninterrupted measurement. The module is equipped with NiMH batteries. These have a sufficient capacity for several such events, lasting max. 30 s each. If a single power failure exceeds the duration of 30 s, an auto-shutdown of the system is triggered.

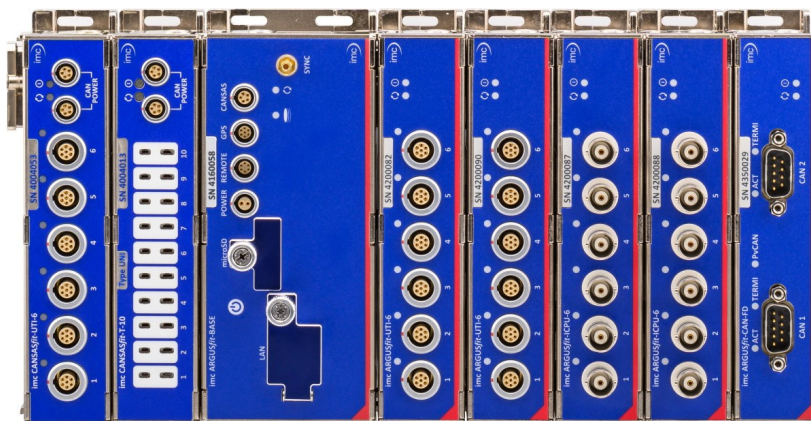
Additional output supply sockets "POWER OUT" enable the supply of further external imc devices or modules or blocks (independent of the clicked modules).

### Highlights

- Buffering of an entire system of imc ARGUSfit / imc CANSASfit
- Total power approx. 50 W (expected total power of typical configurations)
- Sufficient buffer capacity even under derating conditions (esp. -20°C and moderate aging)
- Fixed delay / buffer time constant of 30 sec. (typical application vehicle start-up process)
- Robust NiMH battery technology
- Additional AUX output for external components



### imc ARGUSfit: Flexible modular platform for fast measurement systems

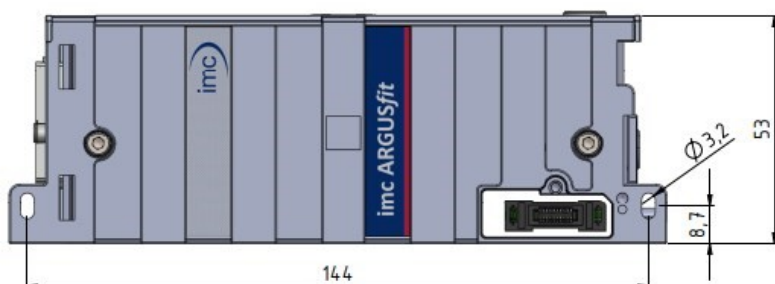


Based on an imc ARGUSfit base unit, imc ARGUSfit measurement amplifier and interface modules can be combined to form complete systems by means of a robust click mechanism, which can even integrate imc CANASfit modules. The click connectors provide the electrical connection to the power supply and system bus.

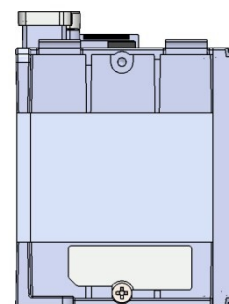
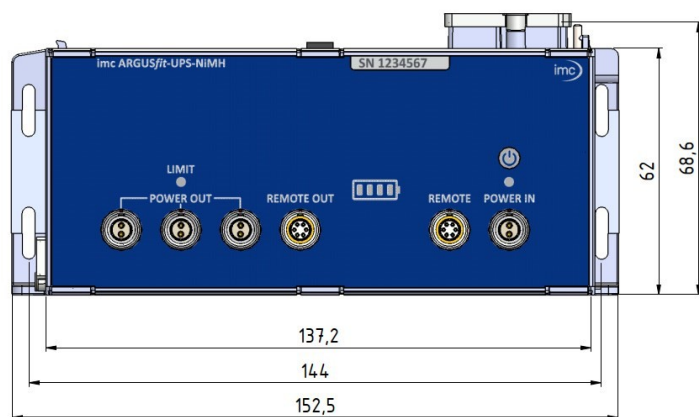
For expansion to decentralized distributed topologies, the fast internal ARGFT system bus can be converted to fiber optic cables by means of a clickable fiber converter module.

The entire system can be controlled via a common Ethernet connection (LAN/WLAN) with a PC (imc STUDIO software) and can be networked and operated synchronously and uniformly with all other imc data acquisition instrument series. Furthermore, it can also be operated autonomously and stand-alone without PC with data storage on microSD.

### Dimensions



Module shown in standard operating position (terminal connections upwards)



left module panel with parking position for the covers of the module connectors

### Overview UPS module

| Order Code        | properties                                                                         | article no. |
|-------------------|------------------------------------------------------------------------------------|-------------|
| ARGFT/UPS-NIMH    | battery buffered operation for ARGUSfit (ARGFT) systems (UPS with NiMH technology) | 11400219    |
| ARGFT/UPS-NIMH-EC | variant for extended condensation                                                  | 11410208    |

### Included accessories

| Networking                                                |                                                                                    |             |
|-----------------------------------------------------------|------------------------------------------------------------------------------------|-------------|
| Order Code                                                | properties                                                                         | article no. |
| ARGFT/UPS-BASE-REMOTE-OUT-0M3                             | UPS control cable: REMOTE OUT (UPS) - REMOTE (BASE), LEMO.0B (6-pin), 30 cm length | 11400223    |
| ARGFT/UPS-BASE-POWER-OUT-0M3                              | UPS power cable: POWER (OUT) - POWER (BASE), LEMO.0B (2-pin), 30 cm length         | 11400224    |
| Documents                                                 |                                                                                    |             |
| Getting started with imc ARGUSfit (one copy per delivery) |                                                                                    |             |
| Device certificate                                        |                                                                                    |             |

### Optional accessories

| Device power supply and networking |                                                                                    |             |
|------------------------------------|------------------------------------------------------------------------------------|-------------|
| Order Code                         | properties                                                                         | article no. |
| ARGFT/UPS-BASE-REMOTE-OUT-0M1      | UPS control cable: REMOTE OUT (UPS) - REMOTE (BASE), LEMO.0B (6-pin), 10 cm length | 11400221    |
| ARGFT/UPS-BASE-REMOTE-OUT-0M3      | UPS control cable: REMOTE OUT (UPS) - REMOTE (BASE), LEMO.0B (6-pin), 30 cm length | 11400223    |
| ARGFT/UPS-BASE-POWER-OUT-0M1       | UPS power cable: POWER (OUT) - POWER (BASE), LEMO.0B (2-pin), 10 cm length         | 11400222    |
| ARGFT/UPS-BASE-POWER-OUT-0M3       | UPS power cable: POWER (OUT) - POWER (BASE), LEMO.0B (2-pin), 30 cm length         | 11400224    |
| ACC/AC-ADAP-24-60-0B               | AC/DC power adaptor: 24 V, 60 W, connector: LEMO.0B 2-pin                          | 13500246    |
| ACC/POWER-PLUG3                    | DC-power connector (plug for power socket)                                         | 13500033    |
| ACC/CABLE-LEMO-0B-BAN-2M5          | supply cable with LEMO.0B.302 via banana, 2.5 m length                             | 13500276    |
| Miscellaneous                      |                                                                                    |             |
| ACC/REMOTE-0B                      | connector for remote                                                               | 13500050    |



### Technical Specs - ARGFT/UPS-NIMH

| Power supply                                  |                                              |                                                                                                                |
|-----------------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Parameter                                     | Value                                        | Remarks                                                                                                        |
| Input supply voltage                          | 10 V to 50 V DC                              | e.g. via AC/DC adapter or vehicle power supply via LEMO supply socket "Power In"                               |
| Power-on threshold (typ.)                     | 10 V DC                                      | min. input voltage required for power-on (open circuit)                                                        |
| UPS take-over threshold (typ.)                | 9.3 V DC<br>9.9 V DC                         | at 25 °C, no load<br>take-over internal buffer battery<br>switch back to external supply                       |
| Input power                                   | 60 W                                         | max.                                                                                                           |
| Output voltage                                | $V_{in} - 0.4$ V DC (min.)<br>12 V DC (typ.) | 10 V to 50 V DC input (full load), "Power Out" buffer operation                                                |
| Output power                                  | 50 W                                         | at normal conditions according EN 61010-1                                                                      |
| Tolerated overload                            | shutdown after:<br>10 s<br>1 s               | with static load > 50 W<br>in operation with external supply<br>in buffer operation                            |
| Overload / short-circuit protection<br>Output | long-term<br>(reversible)                    | with power ground of the output voltage;<br>repeated automatic restart until error condition has been resolved |
| Overload protection<br>Input                  | safety fuse<br>10 A                          |                                                                                                                |

| Uninterruptible power supply (UPS)                                            |                                                 |             |                                                                                                                                             |
|-------------------------------------------------------------------------------|-------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Parameter                                                                     | Value typ.                                      | min. / max. | Remarks                                                                                                                                     |
| Battery type                                                                  | NiMH                                            |             |                                                                                                                                             |
| Nominal capacity                                                              |                                                 | 12 Wh       | 25 °C, fully charged battery                                                                                                                |
| Available buffer capacity                                                     | 11 Wh<br>6.5 Wh                                 |             | battery was fully charged at 25 °C<br>12 W output power, 25 °C<br>50 W output power, 25 °C                                                  |
| Reduction of the maximum output power for buffer operation in cold conditions | 1 W / K                                         |             | $T_a < +15$ °C, fully charged battery                                                                                                       |
| Continuous buffer duration (bridging time)                                    | 30 s                                            |             | internal timer is reset when external supply is applied                                                                                     |
| Charging power                                                                | 8.0 W                                           |             | module switched on                                                                                                                          |
| Charging time ratio:<br>charging- and discharging duration                    | 1.25 · (total power / 8 W)                      |             | worst case example:<br>total power of the system: 50 W<br>discharge time 0.5 min., resulting charge time < 4 min. (charging time ratio 8:1) |
| Charging time for complete battery recovery                                   | 2.4 h                                           |             | module switched on                                                                                                                          |
| Temperature range                                                             | -10 to +60 °C<br>-10 to +60 °C<br>-20 to +65 °C |             | charging<br>discharging<br>standby                                                                                                          |



| General                |                                                                                      |                                                                                               |
|------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Parameter              | Value                                                                                | Remarks                                                                                       |
| Isolation              | isolated to case,<br>no input-to-output isolation                                    | to case (CHASSIS)                                                                             |
| Power supply sockets   | LEMO.0B (2-pin)                                                                      | recommended plug FGG.0B.302<br>"POWER IN" and "POWER OUT"                                     |
| Remote control         | LEMO.0B (6-pin)                                                                      | recommended plug FGG.0B.306<br>"REMOTE" and "REMOTE OUT"                                      |
| On/Off push button     | ✓                                                                                    |                                                                                               |
| Weight                 | 0.7 kg                                                                               |                                                                                               |
| Dimensions (L x W x H) | 153 x 69 x 53 mm                                                                     | including mounting flanges and click mechanism,<br>see <a href="#">drawings</a> <sup>2)</sup> |
| Status LED             | POWER (Tri-Color)<br>LIMIT (Tri-Color)<br>battery charge level (4 segment Tri-Color) | operating mode<br>overload<br>battery charge level and UPS state                              |

| Operating conditions                        |                                                                                                                                                                   |                                                                    |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Parameter                                   | Value                                                                                                                                                             | Remarks                                                            |
| Operating environment                       | dry, non corrosive environment within<br>specified operating temperature range                                                                                    |                                                                    |
| Ingress protection class                    | IP50                                                                                                                                                              | with correctly fixed mounted covers over both<br>module connectors |
| Pollution degree                            | 2                                                                                                                                                                 |                                                                    |
| Shock- and vibration resistance             | IEC 60068-2-27, IEC 61373<br>IEC 60068-2-64<br>category 1, class A and B<br>MIL-STD-810<br>Rail Cargo Vibration Exposure<br>U.S. Highway Truck Vibration Exposure |                                                                    |
| Extended shock- and vibration<br>resistance | upon request                                                                                                                                                      | specific tests or certification upon request                       |

