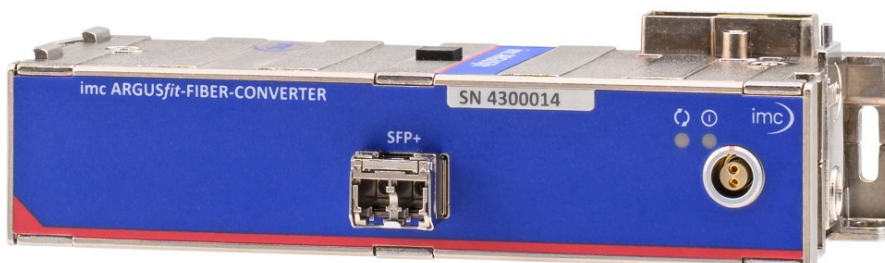


Fiber-Converter for imc ARGUSfit

Extender and Media Converter for ARGUSfit system bus



The Fiber Converter is a clickable module for the modular imc ARGUSfit system. It allows decentralized distributed system topologies.

The module converts the internal high-speed ARGUS system bus, which connects the ARGUS measurement amplifier and interface modules via the click connector, to a fiber-optic data link in the sense of a media converter. Thus, the click connection can be extended to a spatially distributed arrangement of the entire ARGUS system by a pair of converters (master/slave) and a fiber optic cable.

The remote module block uses a joint power supply at is fed into the slave converter module.

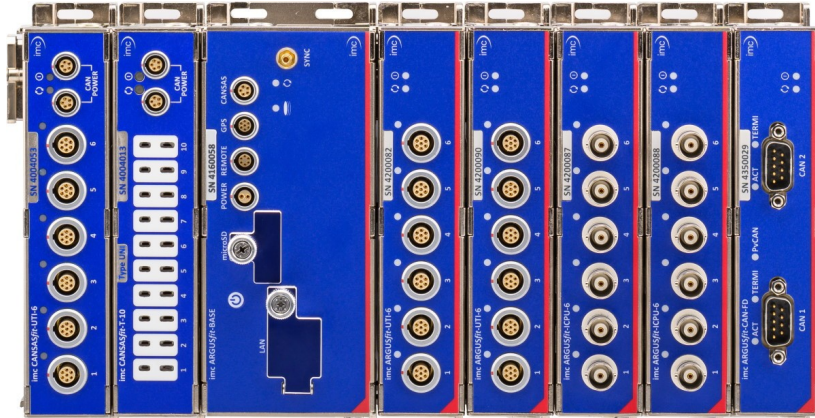
Highlights

- Extension of the ARGUS high-speed system bus to long extended fiber optic cables
- Decentralized distributed system topology at device level (system bus instead of Ethernet PC connection) which enables advanced functionalities available within an ARGUS system, such as imc Online FAMOS.
- Robust fiber optic technology using SFP+ cartridges.
- Applying a purely optical link yields robustness against EMC interference and potential ground loop issues.
- Allows distributed modular system topologies that involve both amplifiers and interface modules such as CAN FD.

Typical applications

- Setup of extended data acquisition systems in vehicles, trains, ships etc.
- Measurement applications in industrial plants, wind turbines etc.
- Test stands with extensive cabling and demanding electromagnetic environments can benefit from EMI robustness, improved signal quality and reduced cabling costs by installing amplifiers close to sensor locations.

imc ARGUSfit: Flexible modular system for fast measurement systems



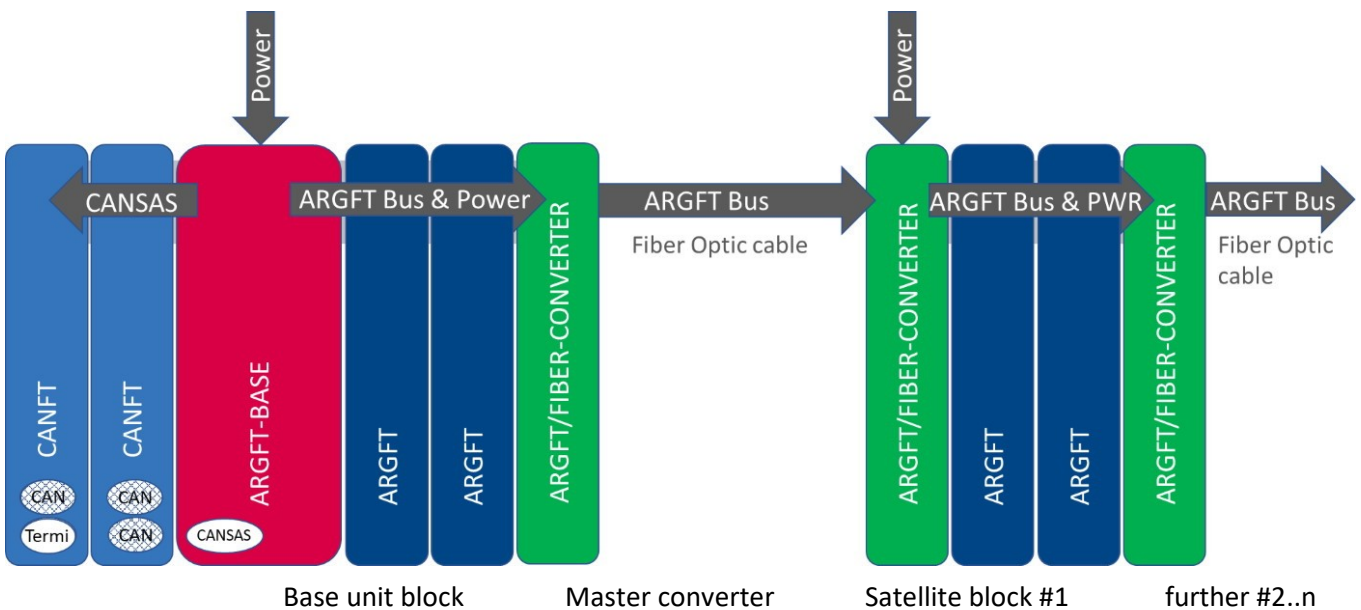
Based on an imc ARGUSfit base unit, imc ARGUSfit measurement amplifier and interface modules can be combined to form complete systems by means of a robust click mechanism, which can even integrate imc CANSASfit modules. The click connectors provide the electrical connection to the power supply and system 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 measuring instrument series. Furthermore, it can also be operated autonomously and stand-alone capable without PC with data storage on microSD during the measurement.

Fiber converter application

One fiber converter each is clicked onto the right (master) or left (slave) side of an imc ARGUSfit module block. The converters have a uniform design and recognize their master/slave function automatically:

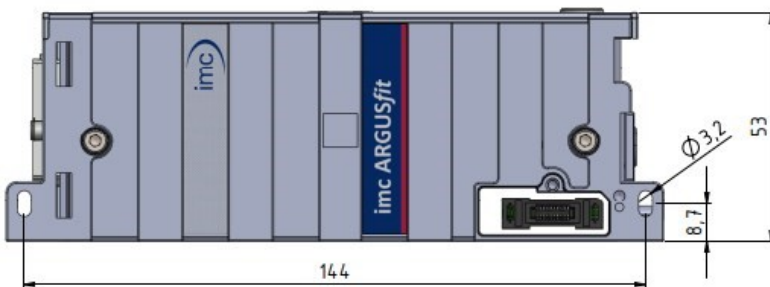


The voltage supply of the base block is realized via the supply socket of the base unit. The power supply of the

satellite block (ARGFT module block #1) and possibly further module blocks #2..n is realized via the supply socket of the slave fiber converters clicked onto these module blocks. For this purpose, a DC supply voltage or an AC/DC mains adapter must be connected to the LEMO.0B (2-pin) "POWER" socket of the converter (optional accessory).

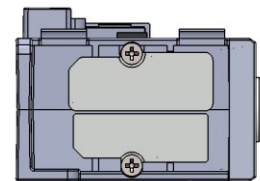
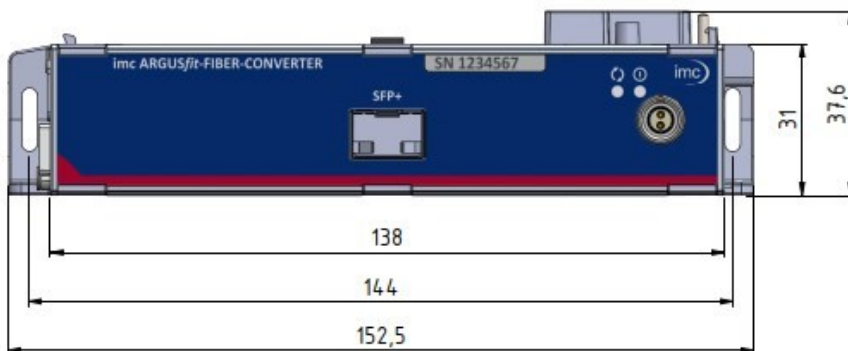
If the slave fiber converter detects no signal activity via the connected fiber cable, it deactivates the power supply of the clicked modules and the slave fiber converter is in sleep mode with reduced power consumption. If signal activity is detected, the power supply for the clicked modules is switched on. Thus, switching off the base unit always leads to switching off the satellite module blocks as well, and the slave fiber converters are put into sleep mode.

Dimensions



imc ARGUSfit FiberConverter

Module shown in standard operating position (terminal connections upwards)



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

Order Code	properties	article no.
ARGFT/FIBER-CONVERTER-SET	Media converter for the ARGUS system bus Includes: 2 converter modules, 2x SFP+ transceiver, 5 m fiber optic cable, AC/DC power adaptor and a power plug	11400225

Included accessories for ARGFT/FIBER-CONVERTER-SET

Power supply and connectors		
Order Code	properties	article no.
1x ACC/AC-ADAP-24-60-0B	AC/DC power adaptor: 24 V, 60 W, connector: LEMO.0B 2-pin	13500246
1x ACC/POWER-PLUG3	DC-power connector (plug for power socket)	13500033
FIBER-CONVERTER		
2x ARGFT/FIBER-CONVERTER	Media converter for the ARGUS system bus The module is already equipped with a mounted (plugged in) SFP+ transceiver. This is also available as a separate spare part (see optional accessories).	11400218
Fiber optic cable		
1x FH/FO-CABLE-LC-5M	fiber optic cable 5 m for ARGUSfit Fiber-Converter (system bus extender) LC-Duplex, OM3	13300151
Documents		
Getting started with imc ARGUSfit (one copy per delivery)		
Device certificate		

Optional accessories

Power supply and connectors		
Order Code	properties	article no.
ACC/AC-ADAP-24-60-0B	AC/DC power adaptor: 24 V, 60 W, connector: LEMO.0B 2-pin	13500246
Power supply: cables and connectors		
ACC/POWER-PLUG3	power connector for the power socket: CL, BUSFX, CANFX, ARGFT, type: LEMO.0B	13500033
ACC/CABLE-LEMO-0B-BAN-2M5	supply cable with LEMO.0B.302 via banana, 2.5 m length	13500276
FIBER-CONVERTER		
ARGFT/FIBER-CONVERTER	Media converter for the ARGUS system bus <i>AC/DC power adaptor or DC power connection cable must be ordered separately</i>	11400218
FiberConverter and cables		
FH/FO-CABLE-LC-5M	fiber optic cable 5 m for ARGUSfit Fiber-Converter (system bus extender) LC-Duplex, OM3	13300151
FH/FO-CABLE-LC-30M	Fiber Optic cable 30 m for ARGFT/FIBER-Converter LC-Duplex, OM3	13300152
FH/FO-SFP+10GBIT	Fiber Optic Transceiver SFP+ for ARGUSfit FiberConverter (system bus extender) 10 GBit, LC-Duplex	13300153
ACC/FIBER-CLEAN-LC	Cleaning tool for fiber optic connectors (LC), for LC type connector	12500145



Technical Specs - ARGFT/FIBER-CONVERTER

Terminal connections		
Parameter	Value	Remarks
Power supply "POWER"	LEMO.0B (2-pin)	compatible to LEMO.EGE.0B.302 suitable plug FGG.0B.302
Module connector	Click connection (with covering caps)	mechanical connection, common DC power supply, system bus for imc ARGUSfit modules
Optical LC duplex connector cable length	Laser class 1 max. 250 m	fiber optic cable OM3 Multimode

Power supply		
Parameter	Value	Remarks
Input supply voltage	10 V to 50 V DC	
Power-on threshold (typ.)	>12.5 V	min. input voltage required for power-on (open circuit)
Shutdown threshold (typ.)	<8 V	input voltage at which the automatic deactivation is triggered
Power consumption	0.5 W 0.6 W 0.9 W 0.1 W 0.2 W 0.3 W	typical value without connected modules module active: at 12 V DC at 24 V DC at 48 V DC module in sleep mode: at 12 V DC at 24 V DC at 48 V DC
Isolation	60 V	against housing (CHASSIS)
AC/DC power adaptor	110 V to 230 V AC	external adaptor 24 V / 60 W included in delivery

Max. number of modules for direct coupling (block size with click mechanism)		
Parameter	Value	Remarks
Compatible modules	imc ARGUSfit (ARGFT)	right and left not clickable at the same time; Master/slave function is automatically detected
Max. number of modules	max. n ARGFT modules	analog and digital modules, fieldbus module; n modules see Excel power configurator
Wake-up duration from sleep mode	≤1 s	after signal activity at the optical port the slave switches on the right clicked modules

Pass through power limits for directly connected modules (click mechanism)		
Parameter	Value	Remarks
Max. current	5 A 60 W at 12 V DC 120 W at 24 V DC	typ. DC vehicle voltage AC/DC power adaptor or installations

Status- & Power LED			
Parameter		Wert	Bemerkungen
Power-LED green red		bicolor actively powered TBD	
Status-LED red green yellow blue blue flashing		multicolor error ready for measurement warning error sleep mode	module connected right and left at the Fiber-Converter module connected right or left and signal activity optical receive level low (e.g. increased cable attenuation) no module clicked at the fiber converter sleep mode

Operating conditions		
Parameter	Value	Remarks
Operating environment	dry, non corrosive environment within specified operating temperature range	
Ingress protection class	IP40	with correctly mounted covers ³ over both module connectors and in case of no fiber optic cable connected a dust protective cover is necessary
Pollution degree	2	
Operating temperature range	-15 °C to +55 °C	without condensation
Shock- and vibration resistance	IEC 60068-2, IEC 61373 IEC 60062-2-64 category 1, class A and B MIL-STD-810 Rail Cargo Vibration Exposure U.S. Highway Truck Vibration Exposure	
Extended shock- and vibration resistance	upon request	specific tests or certification upon request
Dimensions (L x W x H)	153 x 40 x 53 mm	including mounting flanges and click mechanism, see mechanical drawings ³
Weight	0.22 kg	