TECHNICAL DATA (BASIC UNIT)		
Order number	83462850	
Housing	Cast aluminium, wall, pipework or meter mounting	
Dimensions	H 180 mm x W 280 mm x D 115 mm (including connections)	
Weight	Approx. 2.8 kg (including 2 batteries)	
Metrological approvals	MID approval (NMI T 10339) Conforms to European standard EN 12405-1:2011-04	
ATEX approval	Ex-Zone 0/1, Ex ia IIB T3 with integrated modem (LCIE 11 ATEX 3027 X) Ex-Zone 0/1, Ex ia IIB T4 without integrated modem (LCIE 11 ATEX 3027 X) Ex-Zone 2, Ex na IIC T6 GC with integrated power supply (LCIE 12 ATEX 1015 X)	
Protection class	IP 65 (suitable for outdoor installation)	
Ambient conditions	Temperature: -25 to +55 °C	
Battery power supply	2 lithium battery modules, capacity: 13 Ah (Elster Type 73015774 or 73020663) (service life > 5 years under standard operating conditions) 2 additional batteries as an option	
Modem battery	1 lithium battery module, capacity: 16 Ah (Elster Type 73021211), if an internal GSM/GPRS modem is to be installed	
External power supply	7,5 – 8,5 V DC, I < 40 mA power supply unit can be provided by Elster accessory FE260 or iPS280	
Control panel	Sealed keypad with 7 buttons	
Display	Dot matrix display, 192 x 80 pixels, backlit All parameters, settings and archived values can be displayed.	
Inputs	6 digital inputs for connecting pulse generators and message signals (e.g. tamper detection contact) 1 encoder (Namur or SCR) max. 2 HF pulsers (max. frequency 2.5 kHz) max. 6 LF pulsers (max. frequency 10 Hz)	Input 1: encoder, LF, HF Input 2: LF, HF, status Input 3: LF, status Input 4: LF, status Input 5: LF, status Input 6: LF, status
Pressure sensor for volume conversion	Absolute sensor, Type ENVEC CT30, either integrated in the housing or, as an option, provided as an external sensor (if a second pressure sensor is used, this sensor is always integrated) Connection for precision steel pipe (Ermeto 6L) or flexible pressure tube, M12 x 1.5 thread Pressure ratings* 0.7 – 2 bar / 0.8 – 5 bar / 2 – 10 bar / 4 – 20 bar / 8 – 40 bar / 14 – 70 bar *Other pressure ratings on request	
2nd pressure sensor for monitoring (option)	Absolute sensor, Type ENVEC CT30, provided as an external sensor, length of supply cable 10 m Connection for precision steel pipe (Ermeto 6L) or flexible pressure tube, M12 x 1.5 thread Pressure ratings between 0.7 and 80 bar	
Temperature sensor or 2nd temperature sensor	Pt-500 resistance thermometer to DIN 60751 Class A with protective tube, for use with thermowells. Temperature range: -30 to +75°C. Installation length 50 mm, Ø 6 mm, length of supply cable 2.5 m (optionally 10 m)	
Compressibility	Calculation in accordance with S-GERG-88, AGA 8 (GC1 or GC2), AGA 8 DC 92, AGA NX-19, AGA NX-19 in accordance with Herning & Wolowsky or programmable as a constant	
Signal outputs	4 digital transistor outputs, freely programmable and protectable via calibration lock as Pulse output for all V_m or V_b counters max. frequency: LF – 4 Hz, HF – 1 kHz Signal output for alarm and/or warning messages	Output 1: LF, status Output 2: LF, HF, status Output 3: LF, HF, status Output 4: LF, status

TECHNICAL DATA: INTERFACES/DATA COMMUNICATION	
Data interfaces	- Optical interface in accordance with IEC 62056-21 (IEC 1107) (front) - Internal serial interface RS232, RS485 or RS422 (interface terminal block – configuration using enSuite parameterization software) - Internal modem module iCM280-GPRS (option)
Use of RS485 interface	Operating modes: RS485 2-wire (semi-duplex) RS485 4-wire (full duplex) Termination: no terminal resistor can be used in the connected bus stations Baud rate: max. 19,200 Baud Number of bus stations: driver rating at output: max. 16 unit loads Power consumption at input*1 - 6 unit loads (RS485, not electrically isolated) - 3 unit loads (RS485, electrically isolated)
Communications protocols	– IEC 62056-21 (IEC1107)*2 – Modbus ASCII, RTU, TCP*2 – DLMS/COSEM*2 (data encryption based on standards AES-128 and Galois/Counter Mode)

*1 Unit load: standard RS485 receiver with input resistance = 12 kOhm
*2 Details of implemented function range of the listed protocols can be provided on request

POWER SUPPLY UNIT (IPS-280)	
Power supply	Broad-range power supply unit for direct installation in volume conversion device EK280 to supply power to the volume conversion device and an optional built-in communication module
Primary	110 – 230 V AC, power consumption: 10 W
Secondary	For EK CPU boardFor → 7,5 ... 8,5 V DC modem iCM-280 → 3,3 ... 4,5 V DC
Buffer battery for modem (option)	2 lithium batteries, 13 Ah (73017964)

MODEM MODULE ICM280 2G (GPRS)	
Modem	Modem module iCM280-2G (GSM/GPRS) for direct installation in the volume converter EK280
Power supply	Ex-Zone 0/1 potentially explosive atmospheres – lithium battery module, capacity: 16 Ah (Elster Type 73021211) Ex-Zone 2 potentially explosive atmospheres – with power supply unit iPS-280
Antenna	Internal antenna External antenna with 2 dB gain (cable length 2.5, 5 or 10 m) as an alternative

INTERFACE MODULE ICE280-ETHERNET POE (EXCLUSIVELY FOR USE IN EX-ZONE 2)	
Module	Ethernet module to connect to an IP network (LAN, DSL, LTE-Router, etc.) • Ethernet 10/100 Mbit Full/Half Duplex (Autosensing), MDIX • ACT/LNK LED on module
Power supply	PoE (Power over Ethernet), without an addtional power supply unit if the network infrastructure provides the energy for the interface (Class 0 signature). Alternatively Power supply unit iPS280 if the network infrastructure does not provide PoE
Connection	plug-in wire connection on the interface module Connection via CAT5 Cable, wire cross section minimum AWG24 (0,51mm²).