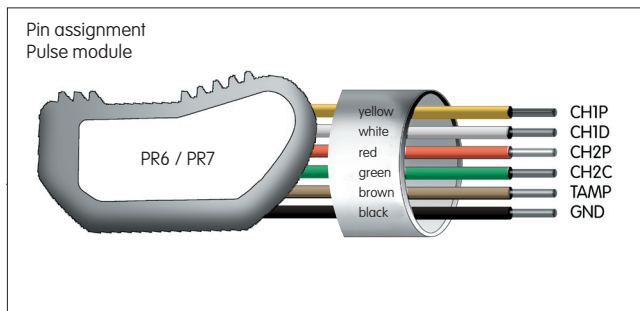# PR6 / PR7
Falcon communication modules

High data quality and flexibility
for remote metering

- For ELSTER water meters with communication interface, from year of construction 2008
- Pulse modules with two outputs
- EMERIS radio module
- M-Bus module acc. to EN13757
- Integrated forward and backflow detection
- Non-reactive and tamper-resistant

elster

Pin assignment Pulse module

Wire color	Signal
yellow	CH1P
white	CH1D
red	CH2P
green	CH2C
brown	TAMP
black	GND

PR6 / PR7

Radio module		Ordering number	
		TPR6	TPR7
internal antenna		2925M1272	2925M1276
external antenna (2 m fixed cable)		2925M1273	2925M1277

Protocol		Wavenis
Frequency technology		FHSS (15 radio channels)
		(Frequency Hopping Spread Spectrum)
Frequency		868 MHz, ISM band
Type of transmission		Bi-directional
Transmitting power	mW	25
Range	m	up to 600 (depending on env. circumstances)

Connection velocity		up to 9.6 kbits/s
Power of emission		8 dBi
Standard		CE (EN300-683)
Certification		ART (EN300-220-1)
Conformity		RTTE 99/5/EC

Operating temperature	-15 °C up to +70 °C
Protection class	IP68
Battery lifetime	up to 15 years

Protocol content

Minimum	Initial meter reading
	Pulse value
Data memory	24 values
	programmable
	– monthly, weekly, daily values
	– free interval (1 min - 31 h.)
Alarm signal	Battery,
	cable break, burst pipe,
	backflow,
	manipulation
Time management	Day/night switch off
	weekend switch off
Programming	via ECM software

M-Bus module		Ordering number	
Standard		PR6M	PR7M
EN13757		2925M1268	2925M1269

Connecting cable	m	2	5
		2 wires reverse polarity protection	

Power supply	Remote power supply of the M-Bus
	with automatic changeover to battery
	if the bus fails

M-Bus operation	max. 1.5 mA (1 standard load),
	standby current M-Bus max. 1.5 mA, typ. 1.4 mA

Space (0-Bit) current	standby current + typ. 13 mA
M-Bus Interface	TI TSS721 with 2 x 215Ohm
	protective resistor

Operating temperature	-15 °C up to +70 °C
Protection class	IP68

Connection velocity	300 and 2400 Baud

Protocol content

	13 monthly vloume values with date
	13 flow rate maximum values with date
	13 leckage alarm
	Due date volume
	Date and time
	Alarm signal
	– battery
	– manipulation with date
	– backflow with date
	pulse value
	momentary flow rate l/h or m^3/h
	flow rate calculation 1 min – 60 min
	backflow volume
	decimal place
Long and short telegram	switchable
Write protection	for important settings
Programming	via MB Conf-software

Primary/secondary addressing	with wildcard

Supported functions	FCB-Bit, SND_NKE, REQ_UD2, SND_UD,
	RSP_UD

Pulse module		Ordering number	
CH1P CH2P		PR6	PR7
1 litres/pulse*; 10 litres/pulse*		2925M1265	2925M1224
1 litres/pulse*; 100 litres/pulse*		2925M1261	2925M1263
1 litres/pulse*; 1000 litres/pulse*		2925M1262	2925M1264

Connecting cable	m	2	5

Battery lifetime	10 years
Operating temperature	-15 °C up to +70 °C
Protection class	IP68

Output load	max.	30 Vdc
	max.	30 mA
Frequency	max.	75 Hz
Pulse width CH 1P	min.	5 ms (typical 8-12 ms)
Pulse width CH 2P	min.	50 ms
Pulse/pause		1:1

* for meters up to DN 125/Qn 100, from DN 150/Qn 150 upwards pulse rate x 10.
  Other pulse versions on request

Pin assignment

CH1P	Volume pulses (independent of flow direction), active „low"
CH1D	Direction flag, „high" = forward flow
CH2P	adjusted volume pulse = forward flow minus backflow, active „low". During a backward flow no pulses are send to the output. After renewed forward first the pulse numbers which are stored in the memory will be deleted. This pulse numbers are generated from the previous backward flow. After deleting the memory forward pulses will be send to the output only.
CH2C	Backflow compensations flag. This flag is „low", if currently a backflow compensation is running
TAMP	Alarm flag, signalizes the removal of the pulse module from the register or low charge of battery, active „high"
GND	Ground

TÜV CERT
ISO 9001
ISO 14001