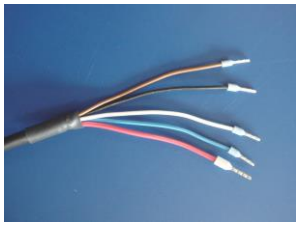
Accessory cable for sensors with build in plug (option C)

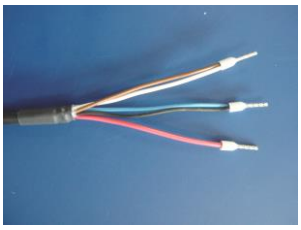
Accessory cable Z1

- recommended for connection of calibrated sensor with option Y1 (voltage output) Y2 (current output)
- cable for standard length 5 and 10 m from stock (larger quantities of different length on request)
- cable material: PVC-cable 4 x 0.34 mm², shielded, outside diameter 5 mm
- socket M12x1 potted on the cable, on request with straight socket (Z1G) or 90° angled socket (Z1W)
- IP65 if connected on sensor
- cable ends assembled with insulated ferrules, optionally for voltage sensors (-U, all wires individually) or current sensors/diode (-I, colors bundled), see pictures/table
- metal ring is connected to shield, this also connects the sensor body to the shield, do not ground the red cable if the sensor is already grounded via the reactor - avoid earth loops!


Z1G-* straight connector


Z1W-* 90° angled connector


cable ends Z1*-U (voltage)

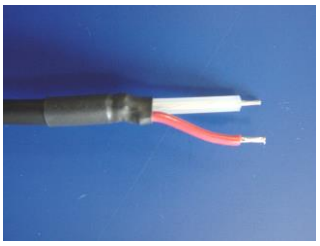

cable ends Z1*-I (current)

Accessory cable Z2

- recommended for connection of sensor with diode only (without implemented amplifier, without Y1/2)
- standard length of 5 m from stock (longer not recommended, but possible)
- cable material: coaxial cable RG 58 C/U, outside diameter 5 mm
- socket M12x1 screwed on the cable, on request with straight socket (Z2G) or 90° angled socket (Z2W)
- IP67 if connected on sensor
- cable ends welded, inside cable: cathode, shield: anode, see pictures/table


Z2G-* straight connector


Z2W-* angled connector

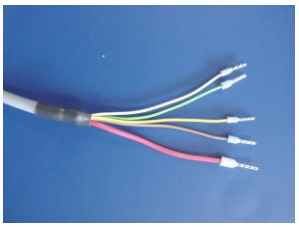

cable ends

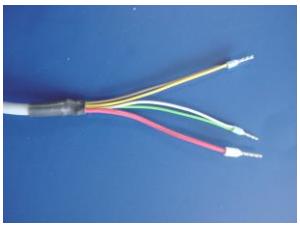
Accessory cable Z3

- recommended for connection of calibrated sensor with option Y1 (voltage output) Y2 (current output)
- cable for special length and small quantities (use Z1 for standard length at high quantities)
- cable material: PVC-cable LIYCY 4 x 0,14 mm², shielded, outside diameter 4 mm
- socket M12x1 screwed on the cable, on request with straight socket (Z3G) or 90° angled socket (Z3W)
- IP67 if connected on sensor
- cable ends assembled with insulated ferrules, optionally for voltage sensors (-U, all wires individually) or current sensors/diode (-I, colors bundled), see pictures/table
- shield not connected to sensor body, ground shield via the red cable if necessary


Z3G-* straight connector


Z3W-* angled connector


cable ends Z3*-U (voltage)


cable ends Z3*-I (current)

Accessories for digital or digital/analog UV sensors

Connection cable for digital sensors: Z1G-D, Z1G-UD, Z1G-ID (see table page 3)

illustrations similar

- recommended for connection of digital (option Z4) or digital/analog sensors (option Z4Y1, Z4Y2)
- available in standard length 5 m, other lengths on request
- plug M12x1, IP65 in screwed condition
- assembly of the cable ends with insulated ferrules
- 5-pole shielded, ground shield if required via red cable

Connection cable for digital sensors: VL1G-D

- recommended for the connection of digital sensors with option Z4
- available in standard length 0.3 / 0.6 / 1.5 / 3 m, other lengths on request
- both sides socket M12x1, IP65 in screwed condition
- 5-pole shielded, shield is looped through, grounding if required via connection cable

T-connector for digital sensors (pin to pin/socket)

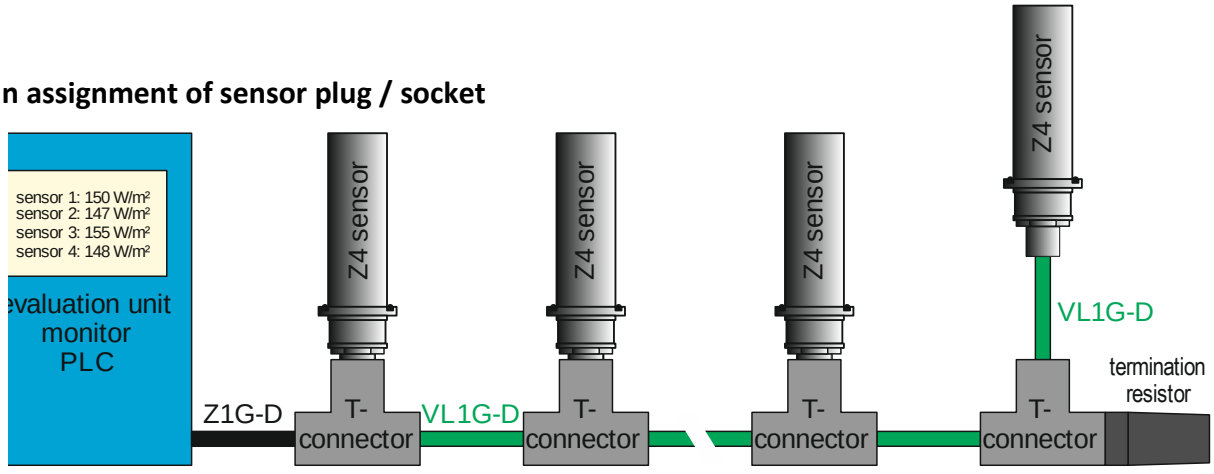
- recommended for the connection of digital sensors with option Z4
- plug to plug / socket M12x1, IP65 in screwed condition
- 5-pole shielded, shield is looped through, grounding if required via connection cable

Terminating resistor for digital sensors

- recommended for the connection of digital sensors with option Z4
- Socket M12x1, IP65 in screwed condition
- contains internally resistors for termination of the data bus line

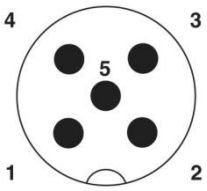
Connection diagram for digital sensors

Pin assignment of sensor plug / socket

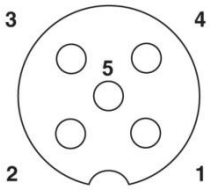


rminate the data bus on the evaluation unit with 120 Ohm resistor!

Pin numbering of the sensor plug / socket (valid for all standard sensors)



plug



socket

Top view to plug (analogue sensors) **/ socket** (digital sensors)
Please refer to the following tables for the contact assignment and the assignment to the internal cable colors.

ATTENTION!

Avoid connection errors! Incorrect connection can lead to damage to the connected devices and is not covered by our warranty!

plug assignment on calibrated analog sensors				cable colors		
type / contact	Y1 voltage	Y1T voltage/temperature	Y2 current	Z1	Z3 and cables at sensor	Z6
1	Uout UV	Uout UV	+UB / Iout UV (current loop)	brown	yellow	green
2	Uout GND	Uout TEMP		white	brown	yellow
3	-UB	-UB / Uout GND	-UB / Iout UV (current loop)	blue	green	brown
4	+UB	+UB		black	white	white
5	-	-	-	-	-	-
housing	shield	shield	shield	red*	red*	red*

* Z1: shield connected to the housing of the sensor, Z3: shield not connected to the housing of the sensor

plug assignment on relatively measuring sensors		cable colors	
type / contact	Diode	Z2 (coaxial cable - recommended) and cables at sensor	Z1 (shielded cable - usable)
1	cathode	white (inner core)	brown
2			white
3	anode	rot (outer conductor)	blue
4			black
5	-	-	-
housing	shield	-	red*

socket assignment to digital sensors			socket assignment to digital / analogue sensors				cable colors
type / contact	Z4 digital	Z1G-D cable	Z4Y1 digital/analogue voltage	Z1G-UD cable	Z4Y2 digital/analogue current	Z1G-ID	cable at sensor
1	RS485 A	brown	RS485 A[1]	-	RS485 A[1]	-	yellow
2	RS485 B	white	RS485 B[1]	-	RS485 B[1]	-	white
3	+UB	blue	+UB	blue	+UB / Iout UV (current loop)	blue	green
4	-UB / GND	black	-UB	black	-UB / Iout UV (current loop)	black	brown
5	-	-	Uout UV	grey	-	-	grey
housing	shield	red*	shield	red*	shield	red*	red*

* shield connected to the housing of the sensor
1 do not connect, only used by the KUV2.4WR during recalibration

ACHTUNG!

Avoid earth loops! Earth loops can be formed over the cable if the shield of the cable is connected to the sensor housing and it is grounded on both sides. At different ground potentials, compensation currents can cause damage to the connected devices! This is not covered by our warranty policy!