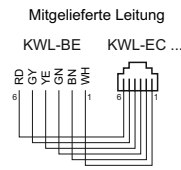
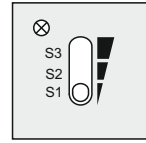


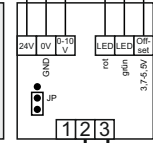
**Farbcode/color code
code couleur (IEC 757)**
BN-br-braun-brown-brun
RD-rt-rot-red-rouge
YE-ge-gelb-yellow-jaune
GN-gn-grün-green-vert
GY-gr-grau-gray-gris
WH-ws-weiß-white-blanc



Bedienelement
KWL-BE
Art.Nr. 4265 002



KWL-BE, Detailplan siehe [SS-1444](#)



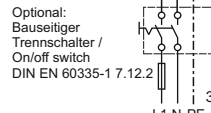
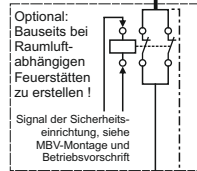
2) max. Länge mit z.B. LiYY 6x0,34mm² = 200 m

alternativ zu KWL-BE:
auch GLT-Signal 0-10 V auf
RJ-12, Pin 2: + 0-10V, Pin 3: +4,6V(Offset=0), Pin 6: GND möglich

Ethernet, TCP/IP, 100 Mbit/s,
- Festverlegung mit CAT7 max. 75 m und zusätzlich
Patchkabel mit min. CAT5 max. 25 m

LAN-Leitung. Patch oder Crossover

2 m, 3 x 1,5mm²



Zuleitung, 230V~
3 x 1,5mm²

3) Schutzleiterstrom der 500er und 370er Type
> 3,5 mA. Externe Zuleitung mit 2 x PE oder
1 x PE > 10 mm² nach DIN EN 50178

Analog-Steuerung

Helios-BUS

2) KWL-SL 4/ 3 bis 20 bzw.
max. Länge siehe Tabelle [SS-1077](#)

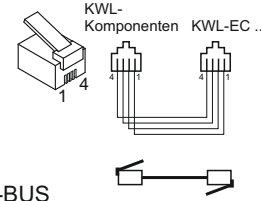
Darstellung beispielhaft !
Bestückung der
Komponenten "beliebig".

Wichtige Hinweise im
Komponenten - BUS- Plan
[SS-1077](#) und [SS-1079](#)

	LAN RJ-45	Analog RJ-12	Digital RJ-10
PIN	LAN	Analog	Digital
1	TX+	+24,5 V / I max 0,9 A	+24,5 V / I max 0,9 A
2	TX-	0 - 10 V Ventilatorstufe	BUS A
3	RX+	3,7 - 5,5 V Offset	BUS B
4	TX	LED rot	GND
5	PC	LED grün	x
6	RX-	GND	x
7	frei	x	x
8	GND	x	x

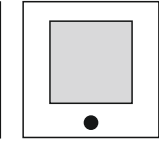
KWL EC ... easyControls

1) JP-Jumper	Abschlusswiderstand
offen	ohne Abschlusswiderstand, nicht letzter BUS-Teilnehmer
gesteckt	Abschlusswiderstand 120 Ohm aktiv, letzter Teilnehmer im BUS



KWL-SL 4/3 (3 m im Lieferumfang inkl. RJ10-Stecker)
(5 m- SL4/5, 10 m- SL4/10, 20 m- SL4/20)

Bedienelement
KWL-BEC
Art.Nr. 4263



max. 8 Stück

KWL-BEC, Detailplan siehe [SS-1072](#)

Zuleitung,
230V~
3 x 1,5mm²

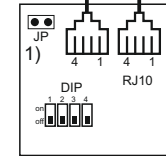
Erweiterungsmodul
KWL-EM
Art.Nr. 4269

KWL-EM, Detailplan für
- Prinzipplan Heizungsanschluss [SS-1078](#)
- Elektro-Heizung siehe [SS-1145](#)
- Warm Wasser Heizung bzw. L/SEWT siehe [SS-1145](#)

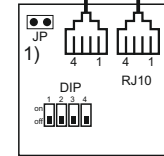
Adressierung mit DIP beachten !

max. 2 Stück

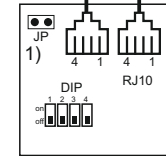
Bauseits zu
erstellen
120 Ohm
Abschluss-
widerstand
wenn letzter
Teilnehmer



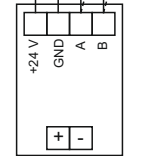
Sensor
KWL-CO₂
Art.Nr. 4272
Detailplan [SS-1073](#)
max. 8 Stück



Sensor
KWL-FTF
Art.Nr. 4273
Detailplan [SS-1074](#)
max. 8 Stück



Sensor
KWL-VOC
Art.Nr. 4274
Detailplan [SS-1075](#)
max. 8 Stück



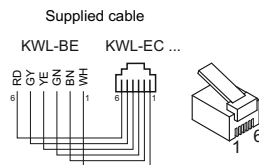
KNX/EIB Modul
KWL-KNX
Art.Nr. 4275
Detailplan [SS-1076](#)

Adressierung mit DIP beachten !

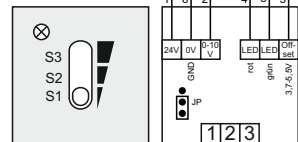
Adresse intern Fest



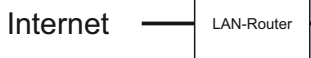
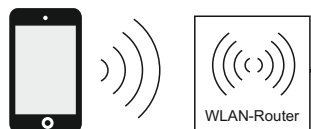
Farbcode/color code
code couleur (IEC 757)
 BN-br-braun-brown-brun
 RD-rt-rot-red-rouge
 YE-ge-gelb-yellow-jaune
 GN-gn-grün-green-vert
 GY-gr-grau-gray-gris
 WH-ws-weiß-white-blanc



Slide switch controller
 KWL-BE
 Art.Nr. 4265 002



KWL-BE, detailed plan see [SS-1444](#)



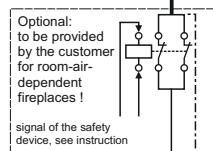
2) max. length with e.g. LiYY 6x0,34mm² = 200 m

alternative to KWL-BE:
 GLT-Signal 0-10 V to
 RJ-12, Pin 2: + 0-10V, Pin 3: +4,6V(Offset=0), Pin 6: GND

Ethernet, TCP/IP, 100 Mbit/s,
 - fixed installation with CAT7 max. 75 m and
 patch cable with min. CAT5 max. 25 m in addition

LAN-cable Patch or Crossover

2 m, 3 x 1,5mm²



Optional:
 disconnecter provided by customer/
 On/off switch
 DIN EN 60335-1 7.12.2

supply, 230V~
 3 x 1,5mm²

3) protective conductor current of type 500 and 370
 > 3,5 mA. External supply with 2 x PE or
 1 x PE > 10 mm² according to EN 50178

analog-control

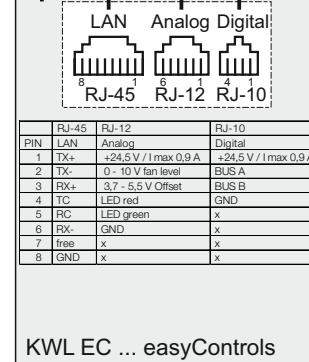
Helios-BUS

2) KWL-SL 4/3 to 4/20 resp.
 max. length see table [SS-1077](#)

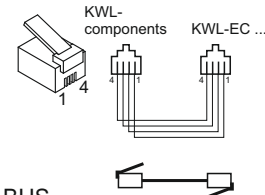
exemplary illustration !

Components can be
 equipped as required.

important notes in the
 BUS-Plan for components
[SS-1077](#) and [SS-1079](#)

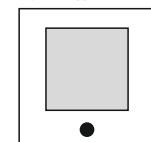


1) JP-Jumper	terminating resistor
open	without terminating resistor, if not last BUS-participant
plugged in	terminating resistor 120 Ohm active, if last participant at BUS



KWL-SL 4/3
 (3 m and RJ10-Plug are included in the scope of supply)
 (5 m- SL4/5, 10 m- SL4/10, 20 m- SL4/20)

Comfort controller
 KWL-BEC
 Art.Nr. 4263



max. 8 pieces

KWL-BEC, detailed plan see [SS-1072](#)

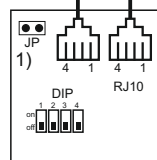
supply,
 230V~
 3 x 1,5mm²

Extension module
 KWL-EM
 Art.Nr. 4269

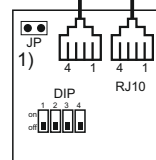
KWL-EM, detailed plan for
 - principle plan heating system [SS-1078](#)
 - electric heater, see [SS-1145](#)
 - warm water heater resp. L/SEWT see [SS-1145](#)

Note addressing with DIP !

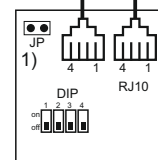
max. 2 pieces



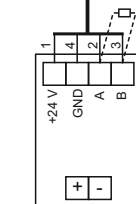
Sensor
 KWL-CO₂
 Art.Nr. 4272
 detailed plan [SS-1073](#)
 max. 8 pieces



Sensor
 KWL-FTF
 Art.Nr. 4273
 detailed plan [SS-1074](#)
 max. 8 pieces



Sensor
 KWL-VOC
 Art.Nr. 4274
 detailed plan [SS-1075](#)
 max. 8 pieces



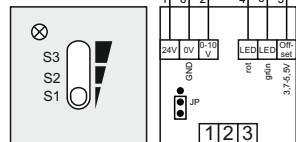
KNX/EIB Modul
 KWL-KNX
 Art.Nr. 4275
 detailed plan [SS-1076](#)
 fixed internal address

To be provided by
 customer
 120 Ohm
 termination resistor,
 if last participant

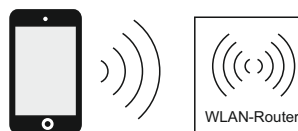
Note addressing with DIP !

Farbcode/color code
code couleur (IEC 757)
 BN-br-braun-brown-brun
 RD-rt-rot-red-rouge
 YE-ge-gelb-yellow-jaune
 GN-gn-grün-green-vert
 GY-gr-grau-gray-gris
 WH-ws-weiß-white-blanc

Commutateur
 à 3 positions
 KWL-BE
 Art.Nr. 4265 002



KWL-BE, plan détaillé [SS-1444](#)

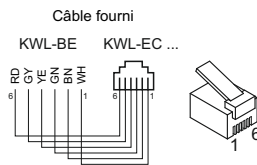


Internet

LAN-Router

Modbus

Modbus / TCP/IP
Gateway



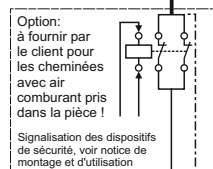
2) longueur max. avec p.ex. LiYY 6x0,34mm² = 200 m

alternative à KWL-BE:
 aussi signal externe 0-10 V sur
 RJ-12, Pin 2: + 0-10V, Pin 3: +4,6V(Offset=0), Pin 6: GND possible

Ethernet, TCP/IP, 100 Mbit/s,
 - installation fixe avec CAT7 max. 75 m et câble de
 ethernet supplémentaire avec min. CAT5 max. 25 m

câble LAN: Patch ou Crossover

2 m, 3 x 1,5mm²



Option:
 disjoncteur (fourniture client)/
 On/off commutateur
 DIN EN 60335-1 7.12.2

alimentation, 230V~
 3 x 1,5mm²

3) Courant de fuite des types 500 et 370
 > 3,5 mA. Conduite d'alimentation avec
 2 x PE ou 1 x PE > 10 mm² selon DIN EN 50178

commande analogique

Helios-BUS

2) KWL-SL 4/ 3 jusqu'à 20 ou
 longueur max. voir tableau [SS-1077](#)

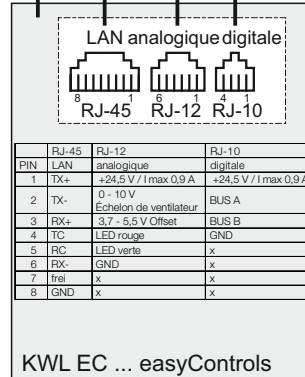
exemple:

Les composants peuvent
 être équipés selon les
 besoins.

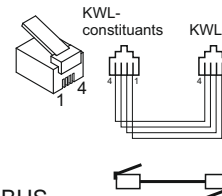
Remarques importantes
 sont dans le plan BUS
 des composants
[SS-1077](#) et [SS-1079](#)

OU

OU

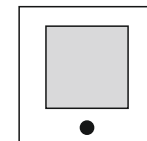


1) JP-Jumper	résistance terminale
ouvert	sans résistance terminale, pas le dernier composant du BUS
branché	résistance terminale 120 Ohm active, le dernier composant du BUS



KWL-SL 4/3 (3 m et RJ10-connecteur inclus dans la livraison)
 (5 m- SL4/5, 10 m- SL4/10, 20 m- SL4/20)

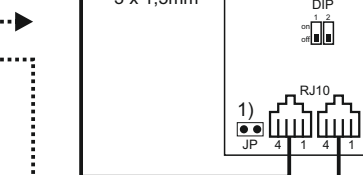
Commande à distance
 KWL-BEC
 Art.Nr. 4263



max. 8 unités

KWL-BEC, plan détaillé [SS-1072](#)

alimentation,
 230V~
 3 x 1,5mm²



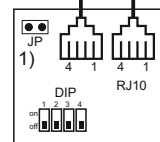
Module d'extension
 KWL-EM
 Art.Nr. 4269

KWL-EM, plan détaillé pour
 - schéma de principe en mode chauffage [SS-1078](#)
 - Chauffage électrique [SS-1145](#)
 - Chauffage à eau chaude ou L/SEWT [SS-1145](#)

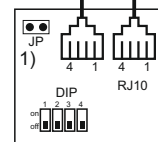
Adressage par interrupteur DIP !

max. 2 unités

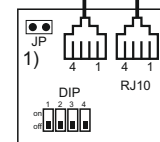
à créer par
 le client
 120 Ohm
 résistance
 terminale, si
 dernier composant



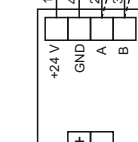
Senseur
 KWL-CO₂
 Art.Nr. 4272
 plan détaillé [SS-1073](#)
 max. 8 unités



Senseur
 KWL-FTF
 Art.Nr. 4273
 plan détaillé [SS-1074](#)
 max. 8 unités



Senseur
 KWL-VOC
 Art.Nr. 4274
 plan détaillé [SS-1075](#)
 max. 8 unités



KNX/EIB Modul
 KWL-KNX
 Art.Nr. 4275
 plan détaillé [SS-1076](#)

adresse interne fixe

Adressage par interrupteur DIP !