

Sensors and Systems

Edition 3.0



Your automation, our passion.

pf PEPPERL+FUCHS



Properties

- 250 mm and 400 mm sensing range versions
- DC, switching output
- Sub-miniature F77 housing
- Connector version

Your Benefit

- Best-in-class immunity to acoustic interference
- Simple, intuitive range adjustment
- High-end performance and low cost
- Front-view output LED

Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	20 ... 30 V DC , ripple 10 % _{SS} ; 12 ... 20 V DC reduced sensitivity by 90 %
No-load supply current	≤ 20 mA
Output type	1 switch output PNP, NO
Rated operational current	200 mA , short-circuit/overload protected
Input type	1 program input
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	Polycarbonate
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP67
Connection type	M8 x 1 connector , 4-pin



Model Number

Sensing range	20 ... 250 mm 25 ... 400 mm	green = preferred type
Transducer frequency	approx. 400 kHz approx. 300 kHz	
Switching frequency	10 Hz 5 Hz	

UB250-F77-E2-V31

UB400-F77-E2-V31

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●
CSA approval	cCSAus Listed, General Purpose	●	●

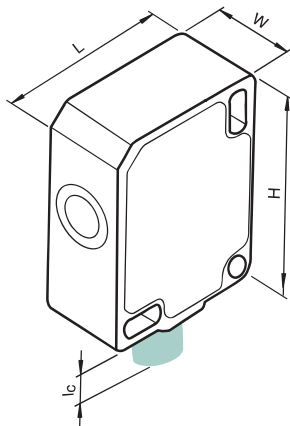
Dimensions

Length L [mm]	23
Width W [mm]	12
Height H [mm]	31
Connector area l _c [mm]	9

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

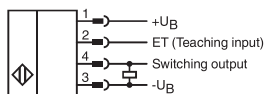
UB-PROG4-V31	Programming unit
OMH-ML7-01	Mounting bracket
V31-GM-2M-PVC	M8, 4-pin socket, PVC cable
V31-WM-2M-PVC	M8, 4-pin socket, PVC cable



Electrical Connection



UB250-F77-E2-V31
UB400-F77-E2-V31



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Date of issue: 04/08/2015

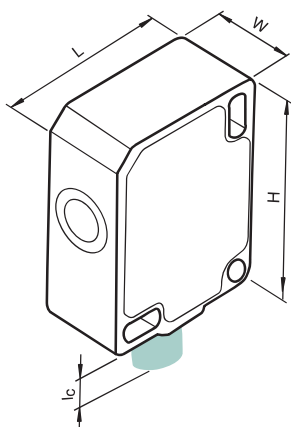


Properties

- 250 mm and 400 mm sensing range versions
- DC, switching output
- Sub-miniature F77 housing
- Connector version

Your Benefit

- Retro-reflective operation
- Best-in-class immunity to acoustic interference
- Simple, intuitive range adjustment
- High-end performance and low cost



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	20 ... 30 V DC , ripple 10 % _{SS} ; 12 ... 20 V DC reduced sensitivity by 90 %
No-load supply current	≤ 20 mA
Rated operational current	200 mA , short-circuit/overload protected
Input type	1 program input
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	Polycarbonate
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP67
Connection type	M8 x 1 connector , 4-pin



Model Number

Sensing range	0 ... 250 mm 0 ... 400 mm	UBR250-F77-E2-V31	UBR250-F77-E3-V31	UBR400-F77-E2-V31	UBR400-F77-E3-V31
Transducer frequency	approx. 400 kHz approx. 300 kHz	●	●	●	●
Output type	1 switch output PNP , NC 1 switch output PNP , NO	●	●	●	●
Switching frequency	10 Hz 5 Hz	●	●	●	●

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●

Dimensions

Length L [mm]	23
Width W [mm]	12
Height H [mm]	31
Connector area l _c [mm]	9

Accessories

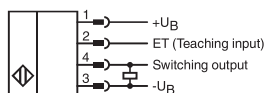
This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

UB-PROG4-V31	Programming unit
OMH-ML7-01	Mounting bracket
V31-GM-2M-PVC	M8, 4-pin socket, PVC cable
V31-WM-2M-PVC	M8, 4-pin socket, PVC cable

Electrical Connection



UBR250-F77-E2-V31
UBR400-F77-E2-V31
UBR250-F77-E3-V31
UBR400-F77-E3-V31



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Date of issue 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	10 ... 30 V DC , ripple 10 % _{SS}
Output type	Push-pull output, short-circuit protected, reverse polarity protected
Rated operational current	200 mA , short-circuit/overload protected
Synchronization	1 synchronous connection, bi-directional
Ambient temperature	-15 ... 70 °C (5 ... 158 °F)
Material	
Housing	Frame: nickel plated, die cast zinc, Laterals: glass-fiber reinforced plastic PC
Transducer	epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT
Protection degree	IP54
Connection type	Device connector M12 x 1 , 5-pin



Properties

- Up to 800 mm sensing range versions
- DC, switching output
- Miniature F12 housing
- Connector version

Your Benefit

- Potentiometer configurable
- Selectable wide/narrow beam width
- Universal sinking-sourcing output
- Rugged metal housing

Model Number

		UB120-F12P-EP-V15	UB250-F12P-EP-V15	UB800-F12P-EP-V15
Sensing range	15 ... 150 mm	●		
	20 ... 250 mm		●	
	30 ... 800 mm			●
Transducer frequency	approx. 850 kHz	●		
	approx. 400 kHz		●	
	approx. 310 kHz			●
No-load supply current	≤ 25 mA		●	●
	≤ 60 mA	●	●	●
Switching frequency	max. 4 Hz			●
	20 Hz		●	
	50 Hz	●	●	
Input type	1 input for sound lobe adjustment		●	●

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●

Dimensions

Length L [mm]	43
Width W [mm]	15
Height H [mm]	49
Connector area l _c [mm]	16

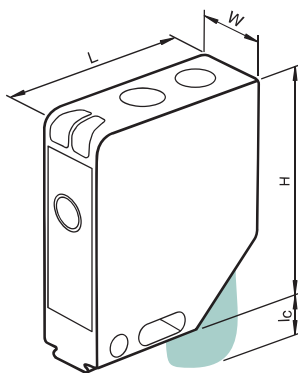
Accessories

This and more accessories can be found in chapter 3.5 from page 673

See pages from 972 ... for cordsets

See pages 1068 ... for mounting aids

OMH-K01	dove tail mounting clamp
OMH-K02	dove tail mounting clamp
OMH-K03	dove tail mounting clamp
OMH-01	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
OMH-06	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
OMH-MLV12-HWG	Mounting bracket for series MLV12 sensors
OMH-MLV12-HWK	Mounting bracket for series MLV12 sensors
V15-G-2M-PVC	Cable socket, M12, 5-pin, PVC cable
V15-W-2M-PUR	Cable socket, M12, 5-pin, PUR cable

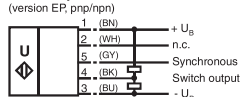


Electrical Connection



UB120-F12P-EP-V15

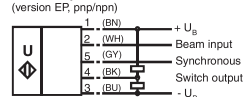
Standard symbol/Connections:



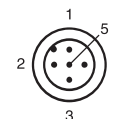
Core colours in accordance with EN 60947-5-2.

UB250-F12P-EP-V15
UB800-F12P-EP-V15

Standard symbol/Connections:



Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	10 ... 30 V DC
No-load supply current	≤ 30 mA
Output type	Push-pull output, short-circuit protected, reverse polarity protected
Rated operational current	200 mA , short-circuit/overload protected
Input type	1 program input
Synchronization	1 synchronous connection, bi-directional
Ambient temperature	-15 ... 70 °C (5 ... 158 °F)
Material	
Housing	Frame: nickel plated, die cast zinc, Laterals: glass-fiber reinforced plastic PC
Transducer	epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT
Protection degree	IP54
Connection type	Device connector M12 x 1 , 5-pin



Properties

- 250 mm and 800 mm sensing range versions
- DC, switching output
- Miniature F12 housing
- Connector version

Your Benefit

- Simple pushbutton configuration
- Selectable wide/narrow beam width
- Universal sinking-sourcing output
- Rugged metal housing

Model Number

		UB250-F12-EP-V15	UB800-F12-EP-V15
Sensing range	20 ... 250 mm	●	
	30 ... 800 mm		●
Transducer frequency	approx. 400 kHz	●	
	approx. 310 kHz		●
Switching frequency	20 Hz	●	
	6 Hz		●

Approvals and Certificates

		UB250-F12-EP-V15	UB800-F12-EP-V15
UL approval	cULus Listed, General Purpose	●	●
CSA approval	cCSAus Listed, General Purpose	●	●

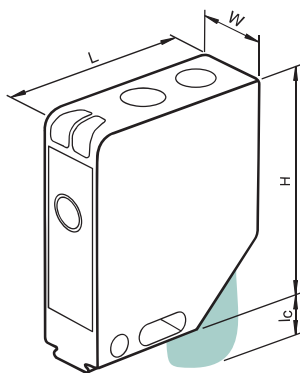
Dimensions

Length L [mm]	43
Width W [mm]	15
Height H [mm]	49
Connector area l _c [mm]	16

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

OMH-K01	dove tail mounting clamp
OMH-K02	dove tail mounting clamp
OMH-K03	dove tail mounting clamp
OMH-01	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
OMH-06	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
OMH-MLV12-HWG	Mounting bracket for series MLV12 sensors
OMH-MLV12-HWK	Mounting bracket for series MLV12 sensors
V15-G-2M-PVC	Cable socket, M12, 5-pin, PVC cable
V15-W-2M-PUR	Cable socket, M12, 5-pin, PUR cable

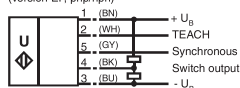


Electrical Connection

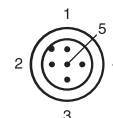


UB250-F12-EP-V15
UB800-F12-EP-V15

Standard symbol/Connections:
(version EP, npn/npn)



Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

No-load supply current	≤ 30 mA
Input type	1 program input
Synchronization	1 synchronous connection, bi-directional
Ambient temperature	-15 ... 70 °C (5 ... 158 °F)
Material	
Housing	Frame: nickel plated, die cast zinc, Laterals: glass-fiber reinforced plastic PC
Transducer	epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT
Protection degree	IP54
Connection type	Device connector M12 x 1 , 5-pin



Properties

- Up to 800 mm sensing range versions
- DC, analog output
- Miniature F12 housing
- Connector version

Your Benefit

- Simple pushbutton configuration
- Selectable wide/narrow beam width
- Universal sinking-sourcing output
- Rugged metal housing

Model Number

		UB250-F12-I-V15	UB250-F12-U-V15	UB800-F12-I-V15	UB800-F12-U-V15
Sensing range	20 ... 250 mm	●	●		
	30 ... 800 mm			●	●
Transducer frequency	approx. 400 kHz	●	●		
	approx. 310 kHz			●	●
Operating voltage	10 ... 30 V DC	●		●	
	12 ... 30 V DC		●		●
Output type	1 analog output 0 ... 10 V		●		●
	1 analog output 4 ... 20 mA	●		●	

Approvals and Certificates

		UB250-F12-I-V15	UB250-F12-U-V15	UB800-F12-I-V15	UB800-F12-U-V15
UL approval	cULus Listed, General Purpose	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●

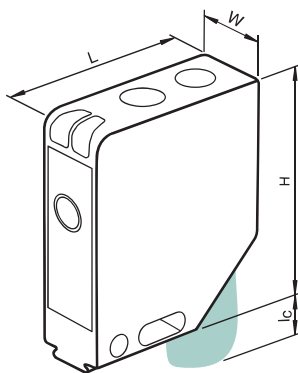
Dimensions

Length L [mm]	43
Width W [mm]	15
Height H [mm]	49
Connector area l _c [mm]	16

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

OMH-K01	dove tail mounting clamp
OMH-K02	dove tail mounting clamp
OMH-K03	dove tail mounting clamp
OMH-01	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
OMH-06	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
OMH-MLV12-HWG	Mounting bracket for series MLV12 sensors
OMH-MLV12-HWK	Mounting bracket for series MLV12 sensors
V15-G-2M-PVC	Cable socket, M12, 5-pin, PVC cable
V15-W-2M-PUR	Cable socket, M12, 5-pin, PUR cable

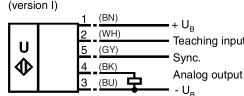


Electrical Connection



UB250-F12-I-V15
UB800-F12-I-V15

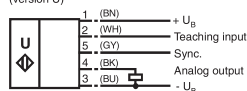
Standard symbol/Connections:
(version I)



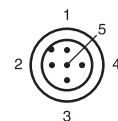
Core colours in accordance with EN 60947-5-2.

UB250-F12-U-V15
UB800-F12-U-V15

Standard symbol/Connections:
(version U)



Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)





Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	10 ... 30 V DC
No-load supply current	≤ 50 mA
Interface type	Serial interface (programming adapter required) 9600 BPS, no parity, 8 data bits, 1 stop bit
Rated operational current	200 mA , short-circuit/overload protected
Input type	1 program input
Input/output type	1 synchronization connection, bidirectional
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	PA-GF35
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP67
Connection type	Device connector M12 x 1 , 5-pin



Properties

- Up to 4000 mm sensing range versions
- DC, switching output
- Compact VariKont-L housing
- Connector version

Your Benefit

- High-visibility corner LEDs
- Pushbutton and PACTware configurable
- 5-way, quick pivot sensing face

Model Number

		UC500-L2-E4-V15	UC500-L2-E5-V15	UC2000-L2-E4-V15	UC2000-L2-E5-V15	UC4000-L2-E4-V15	UC4000-L2-E5-V15
Sensing range	35 ... 500 mm	●	●				
	60 ... 2000 mm			●	●		
	200 ... 4000 mm					●	●
Transducer frequency	approx. 380 kHz	●	●				
	approx. 175 kHz			●	●		
	approx. 85 kHz					●	●
Output type	1 switch output E4, NPN, NO/NC, programmable	●		●		●	
	1 switch output E5, PNP NO/NC, programmable		●		●		●
Switching frequency	≤ 14 Hz	●	●				
	≤ 5 Hz			●	●		
	≤ 2.8 Hz					●	●

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●	●	●

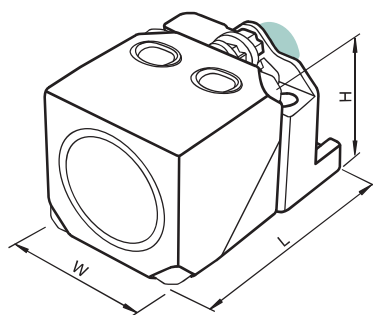
Dimensions

Length L [mm]	67
Width W [mm]	40
Height H [mm]	40

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

- PACTware 3.6**
- PACTware 4.X**
- Ultraschall-Sensoren DTM** DTM devices for communication with cube style and UMC... sensors
- UC-PROG1** Programming adapter
- V15-G-2M-PVC** Cable socket, M12, 5-pin, PVC cable
- V15-W-2M-PUR** Cable socket, M12, 5-pin, PUR cable
- UB-PROG2** Programming unit
- Microsoft .NET**

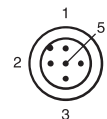
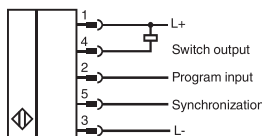
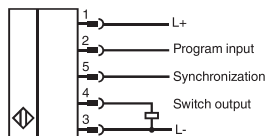


Electrical Connection



UC500-L2-E5-V15
UC2000-L2-E5-V15
UC4000-L2-E5-V15

UC2000-L2-E4-V15
UC500-L2-E4-V15
UC4000-L2-E4-V15



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	10 ... 30 V DC
No-load supply current	≤ 50 mA
Interface type	Serial interface (programming adapter required) 9600 BPS, no parity, 8 data bits, 1 stop bit
Rated operational current	200 mA , short-circuit/overload protected
Input/output type	1 synchronization connection, bidirectional
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	PA-GF35
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP67
Connection type	Device connector M12 x 1 , 5-pin



Properties

- Up to 4000 mm sensing range versions
- DC, 2 switching outputs
- Compact VariKont-L housing
- Connector version

Your Benefit

- High-visibility corner LEDs
- Pushbutton and PACTware configurable
- 5-way, quick pivot sensing face

Model Number	UC500-L2-E6-V15	UC500-L2-E7-V15	UC2000-L2-E6-V15	UC2000-L2-E7-V15	UC4000-L2-E6-V15	UC4000-L2-E7-V15
Sensing range	green = preferred type					
35 ... 500 mm	●	●				
60 ... 2000 mm			●	●		
200 ... 4000 mm					●	●
Transducer frequency						
approx. 380 kHz	●	●				
approx. 175 kHz			●	●		
approx. 85 kHz					●	●
Output type						
2 switch outputs NPN, NO/NC, programmable		●		●		●
2 switch outputs PNP, NO/NC, programmable	●		●		●	
Switching frequency						
≤ 14 Hz	●	●				
≤ 5 Hz			●	●		
≤ 2.8 Hz					●	●

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●	●	●

Dimensions

Length L [mm]	67
Width W [mm]	40
Height H [mm]	40

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

PACTware 3.6

PACTware 4.X

Ultraschall-Sensoren DTM

DTM devices for communication with cube style and UMC... sensors

UC-PROG1

Programming adapter

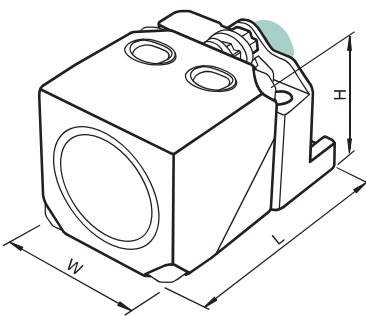
V15-G-2M-PVC

Cable socket, M12, 5-pin, PVC cable

V15-W-2M-PUR

Cable socket, M12, 5-pin, PUR cable

Microsoft .NET

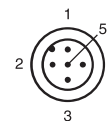
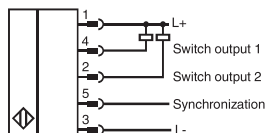
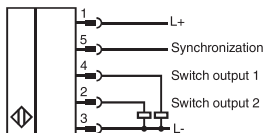


Electrical Connection



UC2000-L2-E6-V15
UC500-L2-E6-V15
UC4000-L2-E6-V15

UC500-L2-E7-V15
UC4000-L2-E7-V15
UC2000-L2-E7-V15



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue: 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

No-load supply current	≤ 50 mA
Interface type	Serial interface (programming adapter required) 9600 BPS, no parity, 8 data bits, 1 stop bit
Deviation of the characteristic curve	≤ 0.2 % of full-scale value
Input type	1 program input
Input/output type	1 synchronization connection, bidirectional
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	PA-GF35
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP67
Connection type	Device connector M12 x 1 , 5-pin



Properties

- Up to 4000 mm sensing range versions
- DC, analog output
- Compact VariKont-L housing
- Connector version

Your Benefit

- High-visibility corner LEDs
- Pushbutton and PACTware configurable
- 5-way, quick pivot sensing face

Model Number

	green = preferred type	UC500-L2-I-V15	UC2000-L2-I-V15	UC4000-L2-I-V15	UC500-L2-U-V15	UC2000-L2-U-V15	UC4000-L2-U-V15
Sensing range	35 ... 500 mm	●			●		
	60 ... 2000 mm		●			●	
	200 ... 4000 mm			●			●
Transducer frequency	approx. 380 kHz	●			●		
	approx. 175 kHz		●			●	
	approx. 85 kHz			●			●
Operating voltage	10 ... 30 V DC	●	●	●			
	12 ... 30 V DC				●	●	●
Output type	1 analog output 4 ... 20 mA	●	●	●			
	1 analog output 0 ... 10 V				●	●	●
Resolution	Evaluation range [mm]/3200, but ≥ 0.05 mm	●					
	Evaluation range [mm]/3200, but ≥ 0.4 mm		●	●			
	evaluation range [mm]/4000, but ≥ 0.05 mm				●		
	evaluation range [mm]/4000, but ≥ 0.4 mm					●	●

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●	●	●

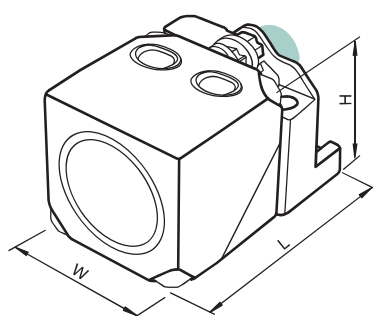
Dimensions

Length L [mm]	67
Width W [mm]	40
Height H [mm]	40

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

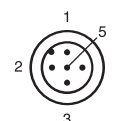
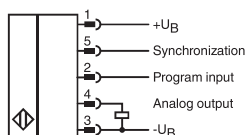
PACTware 3.6	Frame application
PACTware 4.X	Frame application
Ultraschall-Sensoren DTM	DTM devices for communication with cube style and UMC... sensors
UC-PROG1	Programming adapter
V15-G-2M-PVC	Cable socket, M12, 5-pin, PVC cable
V15-W-2M-PUR	Cable socket, M12, 5-pin, PUR cable
UB-PROG2	Programming unit
Microsoft .NET	Software



Electrical Connection



UC500-L2-I-V15
UC2000-L2-I-V15
UC4000-L2-I-V15
UC500-L2-U-V15
UC2000-L2-U-V15
UC4000-L2-U-V15



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	10 ... 30 V DC , ripple 10 % _{SS}
No-load supply current	≤ 55 mA
Rated operational current	200 mA , short-circuit/overload protected
Input type	1 program input,
Synchronization	1 synchronous input
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	ABS
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP65
Connection type	Device connector M12 x 1 , 5-pin



Properties

- 500 mm and 2000 mm sensing range versions
- DC, switching output
- Surface mount F54 housing
- Connector version

Your Benefit

- Low mounting profile

Model Number

		UB500-F54-E4-V15	UB500-F54-E5-V15	UB2000-F54-E4-V15	UB2000-F54-E5-V15
Sensing range	green = preferred type 30 ... 500 mm 80 ... 2000 mm	●	●	●	●
Transducer frequency	approx. 380 kHz approx. 175 kHz	●	●	●	●
Output type	1 switch output E4, NPN, NO/NC 1 switch output E5, PNP, NO/NC	●	●	●	●
Switching frequency	max. 10 Hz max. 3 Hz	●	●	●	●

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●

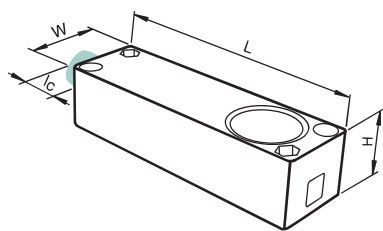
Dimensions

Length L [mm]	105
Width W [mm]	32
Height H [mm]	25
Connector area l _c [mm]	15

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

UB-PROG2	Programming unit
V15-G-2M-PVC	Cable socket, M12, 5-pin, PVC cable
V15-W-2M-PUR	Cable socket, M12, 5-pin, PUR cable

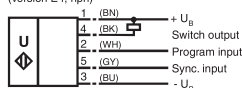


Electrical Connection



UB500-F54-E4-V15
UB2000-F54-E4-V15

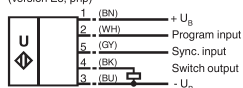
Standard symbol/Connections:
(version E4, npn)



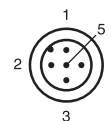
Wire colors in accordance with EN 60947-5-2.

UB500-F54-E5-V15
UB2000-F54-E5-V15

Standard symbol/Connections:
(version E5, pnp)



Wire colors in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue: 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

No-load supply current	≤ 55 mA
Deviation of the characteristic curve	± 1 % of full-scale value
Input type	1 program input
Synchronization	1 synchronous input
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	ABS
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP65
Connection type	Device connector M12 x 1 , 5-pin



Properties

- 500 mm and 2000 mm sensing range versions
- DC, analog output
- Surface mount F54 housing
- Connector version

Your Benefit

- Low mounting profile

Model Number

		UB500-F54-I-V15	UB500-F54-U-V15	UB2000-F54-I-V15	UB2000-F54-U-V15
Sensing range	green = preferred type 30 ... 500 mm 80 ... 2000 mm	●	●	●	●
Transducer frequency	approx. 380 kHz approx. 175 kHz	●	●	●	●
Operating voltage	10 ... 30 V DC , ripple 10 % _{SS} 15 ... 30 V DC , ripple 10 % _{SS}	●	●	●	●
Output type	1 analog output 0 ... 10 V 1 analog output 4 ... 20 mA	●	●	●	●
Resolution	0.11 mm 0.13 mm 0.47 mm 0.5 mm	●	●	●	●

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●

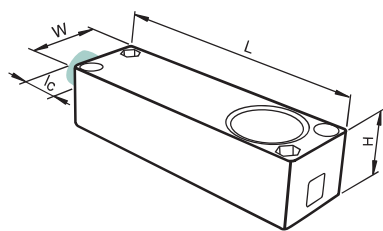
Dimensions

Length L [mm]	105
Width W [mm]	32
Height H [mm]	25
Connector area l _c [mm]	15

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

UB-PROG2	Programming unit
V15-G-2M-PVC	Cable socket, M12, 5-pin, PVC cable
V15-W-2M-PUR	Cable socket, M12, 5-pin, PUR cable

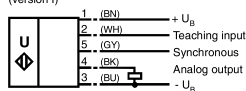


Electrical Connection



UB500-F54-I-V15
UB2000-F54-I-V15

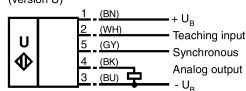
Standard symbol/Connections:
(version I)



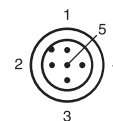
Core colours in accordance with EN 60947-5-2.

UB500-F54-U-V15
UB2000-F54-U-V15

Standard symbol/Connections:
(version U)



Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	10 ... 30 V DC, ripple $\pm 10\%_{SS}$
Power consumption	≤ 2 W (all relays pulled-in, current output 20 mA) no-load power consumption ≤ 0.7 W
Interface type	RS 232, 9600 bit/s, no parity, 8 data bits, 1 stop bit
Output type	2 relay outputs, 1 analog output 4 ... 20 mA
Contact loading	60 V DC / 1 A (max. 24 W DC), ohmic
Deviation of the characteristic curve	$< 0.2\%$ of full-scale value
Material	
Housing	PBT
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP65
Connection type	Device connector M12 x 1, 8-pin screen connected to pin 8



Properties

- 300 mm and 2000 mm sensing range versions
- DC, relay and analog outputs
- Surface mount F43 housing
- Connector version

Your Benefit

- Low mounting profile
- Minimal unusable area
- Software-configurable parameters

Model Number

		UC300-F43-2KIR2-V17	UC2000-F43-2KIR2-V17
Sensing range	0 ... 300 mm 80 ... 2000 mm	●	●
Transducer frequency	approx. 390 kHz approx. 175 kHz	●	●
Resolution	0.2 mm 0.6 mm	●	●
Ambient temperature	0 ... 70 °C (32 ... 158 °F) -25 ... 70 °C (-13 ... 158 °F)	●	●

Approvals and Certificates

		UC300-F43-2KIR2-V17	UC2000-F43-2KIR2-V17
UL approval	cULus Listed, General Purpose	●	●
CSA approval	cCSAus Listed, General Purpose	●	●

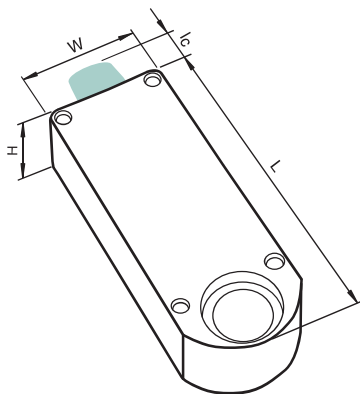
Dimensions

Length L [mm]	134
Width W [mm]	52
Height H [mm]	30
Connector area l _c [mm]	15

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

UC-F43-R2	Configuration Interface
ULTRA3000	Software for ultrasonic sensors, comfort line
V17-G-2M-PUR	Cable socket, M12, 8-pin, shielded, PUR cable
V17-G-5M-PUR	Cable socket, M12, 8-pin, shielded, PUR cable

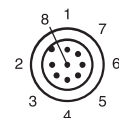
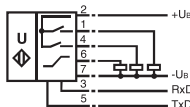


Electrical Connection



UC300-F43-2KIR2-V17
UC2000-F43-2KIR2-V17

Standard symbol/Connection:



Wire colors

1	WH	(white)
2	BN	(brown)
3	GN	(green)
4	YE	(yellow)
5	GY	(gray)
6	PK	(pink)
7	BU	(blue)
8	RD	(red)



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	10 ... 30 V DC , ripple 10 % _{SS}
Rated operational current	200 mA , short-circuit/overload protected
Synchronization	bi-directional
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	ABS
Transducer	epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT
Protection degree	IP54
Connection type	Device connector M12 x 1 , 5-pin



Properties

- Up to 6000 mm sensing range versions
- DC, switching output
- Surface mount F42 housing, front view
- Connector version

Your Benefit

- Simple pushbutton configuration

Model Number

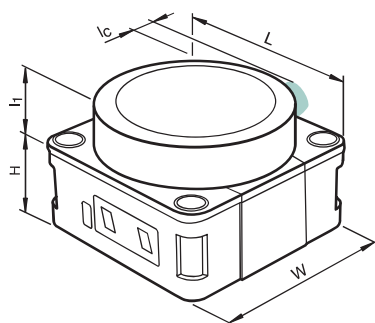
		UB500-F42-E4-V15	UB500-F42-E5-V15	UB2000-F42-E4-V15	UB2000-F42-E5-V15	UB4000-F42-E4-V15	UB4000-F42-E5-V15	UB6000-F42-E4-V15	UB6000-F42-E5-V15
Sensing range	30 ... 500 mm	●	●						
	60 ... 2000 mm			●	●				
	200 ... 4000 mm					●	●		
	350 ... 6000 mm							●	●
Transducer frequency	approx. 390 kHz	●	●						
	approx. 175 kHz			●	●				
	approx. 85 kHz					●	●		
	approx. 65 kHz							●	●
No-load supply current	≤ 50 mA	●	●	●	●				
	≤ 60 mA					●	●	●	●
Output type	1 switch output E4, NPN, NO/NC, programmable	●	●	●	●			●	●
	1 switch output E5, PNP NO/NC, programmable		●		●		●		●
Switching frequency	≤ 0.6 Hz							●	●
	≤ 1.2 Hz							●	●
	≤ 2.7 Hz			●	●				
	≤ 8 Hz	●	●						

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●	●	●	●	●

Dimensions

Length L [mm]	80
Width W [mm]	80
Height H [mm]	34
Transducer length l ₁ [mm]	0 16
Connector area l _c [mm]	16



Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

MH 04-3505	Mounting aid for FP sensors
MHW 11	Mounting brackets for sensors
V15-G-2M-PVC	Cable socket, M12, 5-pin, PVC cable
V15-W-2M-PUR	Cable socket, M12, 5-pin, PUR cable

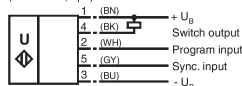
Electrical Connection



UB500-F42-E4-V15
UB2000-F42-E4-V15
UB4000-F42-E4-V15
UB6000-F42-E4-V15

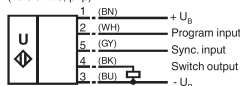
UB500-F42-E5-V15
UB2000-F42-E5-V15
UB4000-F42-E5-V15
UB6000-F42-E5-V15

Standard symbol/Connections:
(version E4, npn)

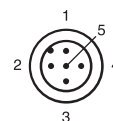


Wire colors in accordance with EN 60947-5-2.

Standard symbol/Connections:
(version E5, pnp)



Wire colors in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	10 ... 30 V DC , ripple 10 % _{SS}
Rated operational current	200 mA , short-circuit/overload protected
Synchronization	bi-directional
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	ABS
Transducer	epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT
Protection degree	IP54
Connection type	Device connector M12 x 1 , 5-pin



Properties

- Up to 6000 mm sensing range versions
- DC, 2 switching outputs
- Surface mount F42 housing, front view
- Connector version

Your Benefit

- Simple pushbutton configuration

Model Number

		UB500-F42-E6-V15	UB500-F42-E7-V15	UB2000-F42-E6-V15	UB2000-F42-E7-V15	UB4000-F42-E6-V15	UB4000-F42-E7-V15	UB6000-F42-E6-V15	UB6000-F42-E7-V15
Sensing range	green = preferred type	●	●	●	●	●	●	●	●
	30 ... 500 mm								
	60 ... 2000 mm			●	●				
	200 ... 4000 mm					●	●		
	350 ... 6000 mm							●	●
Transducer frequency	approx. 390 kHz	●	●						
	approx. 175 kHz			●	●				
	approx. 85 kHz					●	●		
	approx. 65 kHz							●	●
No-load supply current	≤ 50 mA	●	●	●	●			●	●
	≤ 60 mA					●	●	●	●
Output type	2 switch outputs NPN, normally open/ close selectable	●	●	●	●	●	●	●	●
	2 switch outputs PNP, NO/NC selectable	●	●					●	●
Switching frequency	≤ 0.6 Hz							●	●
	≤ 1.2 Hz					●	●		
	≤ 2.7 Hz							●	●
	≤ 8 Hz	●	●						

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●	●	●	●	●

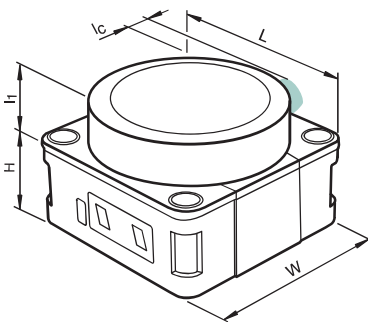
Dimensions

Length L [mm]	80
Width W [mm]	80
Height H [mm]	34
Transducer length l ₁ [mm]	0 16
Connector area l _c [mm]	16

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

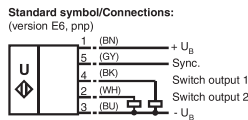
- MH 04-3505** Mounting aid for FP sensors
- MHW 11** Mounting brackets for sensors
- V15-G-2M-PVC** Cable socket, M12, 5-pin, PVC cable
- V15-W-2M-PUR** Cable socket, M12, 5-pin, PUR cable



Electrical Connection

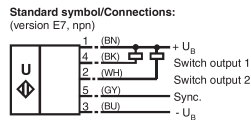


UB500-F42-E6-V15
UB2000-F42-E6-V15
UB4000-F42-E6-V15
UB6000-F42-E6-V15

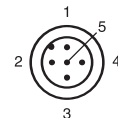


Core colours in accordance with EN 60947-5-2.

UB500-F42-E7-V15
UB2000-F42-E7-V15
UB4000-F42-E7-V15
UB6000-F42-E7-V15



Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

- 1 BN (brown)
- 2 WH (white)
- 3 BU (blue)
- 4 BK (black)
- 5 GY (gray)

Date of issue: 04/08/2015



Properties

- Up to 6000 mm sensing range versions
- DC, analog output
- Surface mount F42 housing, front view
- Connector version

Your Benefit

- Simple pushbutton configuration

Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Deviation of the characteristic curve	± 1 % of full-scale value
Synchronization	bi-directional
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	ABS
Transducer	epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT
Protection degree	IP54
Connection type	Device connector M12 x 1 , 5-pin



Model Number

		UB500-F42-I-V15	UB500-F42-U-V15	UB2000-F42-I-V15	UB2000-F42-U-V15	UB4000-F42-I-V15	UB4000-F42-U-V15	UB6000-F42-I-V15	UB6000-F42-U-V15
Sensing range	30 ... 500 mm	●	●						
	60 ... 2000 mm			●	●				
	200 ... 4000 mm					●	●		
Transducer frequency	350 ... 6000 mm							●	●
	approx. 390 kHz	●	●						
	approx. 175 kHz			●	●				
	approx. 85 kHz					●	●		
Operating voltage	approx. 65 kHz							●	●
	10 ... 30 V DC , ripple 10 % _{SS}	●	●	●	●	●	●	●	●
No-load supply current	17 ... 30 V DC , ripple 10 % _{SS}								
	≤ 50 mA	●	●	●	●	●	●	●	●
Output type	≤ 60 mA								
	1 analog output 0 ... 10 V		●		●		●		●
Resolution	1 analog output 4 ... 20 mA	●	●	●	●	●	●	●	●
	0.2 mm at max. sensing range	●	●						
	0.7 mm			●	●	●	●	●	●

Approvals and Certificates

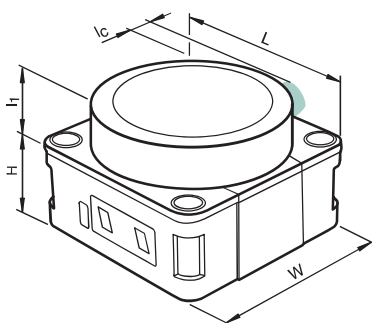
UL approval	cULus Listed, General Purpose	●	●	●	●	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●	●	●	●	●

Dimensions

Length L [mm]	80
Width W [mm]	80
Height H [mm]	34
Transducer length l ₁ [mm]	0 16
Connector area l _c [mm]	16

Accessories This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

- MH 04-3505** Mounting aid for FP sensors
- MHW 11** Mounting brackets for sensors
- DA5-IU-2K-V** Process control and indication equipment
- V15-G-2M-PVC** Cable socket, M12, 5-pin, PVC cable
- V15-W-2M-PUR** Cable socket, M12, 5-pin, PUR cable

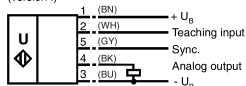


Electrical Connection



UB500-F42-I-V15
UB2000-F42-I-V15
UB4000-F42-I-V15
UB6000-F42-I-V15

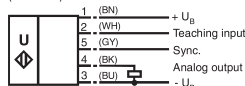
Standard symbol/Connections:
(version I)



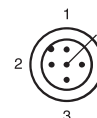
Core colours in accordance with EN 60947-5-2.

UB500-F42-U-V15
UB2000-F42-U-V15
UB4000-F42-U-V15
UB6000-F42-U-V15

Standard symbol/Connections:
(version U)



Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

- 1 BN (brown)
- 2 WH (white)
- 3 BU (blue)
- 4 BK (black)
- 5 GY (gray)

Date of issue 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	20 ... V DC ... 253 V AC
No-load supply current	≤ 60 mA
Output type	1 relay output
Rated operational current	3 A
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	PBT
Transducer	epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT
Protection degree	IP65
Connection	5-pin V95 connector (7/8"-16 UN 2A)



Properties

- Up to 5000 mm sensing range versions
- AC/DC, relay output
- Surface mount F42 housing, front view
- Connector version

Your Benefit

- Simple pushbutton configuration

Model Number

		UB400-F42-UK-V95	UB1500-F42-UK-V95	UB3000-F42-UK-V95	UB5000-F42-UK-V95
Sensing range	40 ... 400 mm	●			
	70 ... 1500 mm		●		
	200 ... 3000 mm			●	
	350 ... 5000 mm				●
Transducer frequency	approx. 390 kHz	●			
	approx. 175 kHz		●		
	approx. 85 kHz			●	
	approx. 65 kHz				●
Switching frequency	≤ 0.6 Hz				●
	≤ 1.5 Hz			●	●
	≤ 3 Hz		●		
	≤ 8 Hz	●			

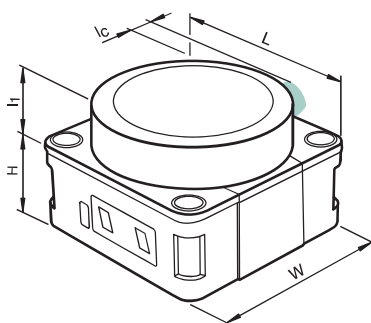
Dimensions

Length L [mm]		80
Width W [mm]		80
Height H [mm]		34
Transducer length l ₁ [mm]		0 16
Connector area l _c [mm]		16

Accessories

This and more accessories can be found in chapter 3.5 from page 673
 See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

V95-G	Female connector, 7/8" - 16 UN, 5-pin, field attachable
V95-W-5M-PVC	Female connector, 7/8", 5-pin, PVC cable
V95-W	Field attachable female cordset
V95-W-2M-PVC	Female connector, 7/8", 5-pin, PVC cable
MH 04-3505	Mounting aid for FP sensors
MHW 11	Mounting brackets for sensors

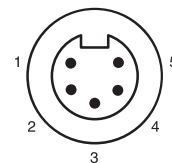


Electrical Connection



UB400-F42-UK-V95
 UB1500-F42-UK-V95
 UB3000-F42-UK-V95
 UB5000-F42-UK-V95

Standard symbol/Connections:
 (version UK)



Wire colors

1	WH	(white)
2	RD	(red)
3	GN	(green)
4	OR	(orange)
5	BK	(black)



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	10 ... 30 V DC , ripple 10 % _{SS}
No-load supply current	≤ 50 mA
Rated operational current	200 mA , short-circuit/overload protected
Synchronization	bi-directional
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	ABS
Transducer	epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT
Protection degree	IP54
Connection type	Device connector M12 x 1 , 5-pin



Properties

- 500 mm and 2000 mm sensing range versions
- DC, 1 and 2 switching outputs versions
- Surface mount F42 housing, side view
- Connector version

Your Benefit

- Simple pushbutton configuration

Model Number

		UB500-F42S-E4-V15	UB500-F42S-E5-V15	UB500-F42S-E6-V15	UB500-F42S-E7-V15	UB2000-F42S-E4-V15	UB2000-F42S-E5-V15	UB2000-F42S-E6-V15	UB2000-F42S-E7-V15
Sensing range	30 ... 500 mm	●	●	●	●				
	60 ... 2000 mm					●	●	●	●
Transducer frequency	approx. 390 kHz	●	●	●	●				
	approx. 175 kHz					●	●	●	●
Output type	1 switch output E4, NPN, NO/NC, programmable	●							
	1 switch output E5, PNP NO/NC, programmable		●						
	2 switch outputs NPN, normally open/close selectable				●				●
	2 switch outputs PNP, NO/NC selectable			●				●	
Switching frequency	≤ 2.7 Hz					●	●	●	●
	≤ 8 Hz	●	●	●	●				

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●	●	●	●	●

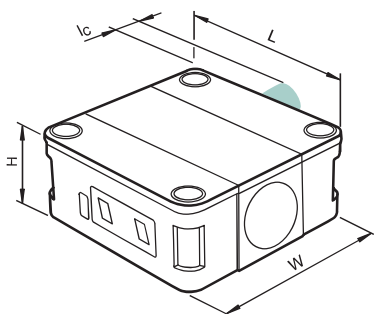
Dimensions

Length L [mm]	80
Width W [mm]	80
Height H [mm]	34
Transducer length l ₁ [mm]	0
Connector area l _c [mm]	16

Accessories

This and more accessories can be found in chapter 3.5 from page 673
 See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

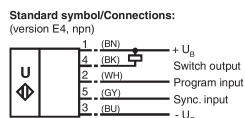
MH 04-3505	Mounting aid for FP sensors
MHW 11	Mounting brackets for sensors
V15-G-2M-PVC	Cable socket, M12, 5-pin, PVC cable
V15-W-2M-PUR	Cable socket, M12, 5-pin, PUR cable



Electrical Connection

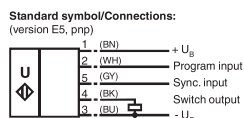


UB500-F42S-E4-V15
UB2000-F42S-E4-V15



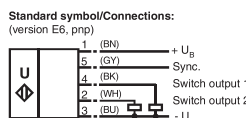
Wire colors in accordance with EN 60947-5-2.

UB500-F42S-E5-V15
UB2000-F42S-E5-V15



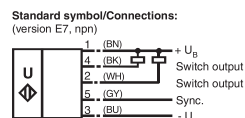
Wire colors in accordance with EN 60947-5-2.

UB500-F42S-E6-V15
UB2000-F42S-E6-V15

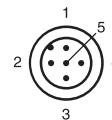


Core colours in accordance with EN 60947-5-2.

UB500-F42S-E7-V15
UB2000-F42S-E7-V15



Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	20 ... V DC ... 253 V AC
No-load supply current	≤ 60 mA
Output type	1 relay output
Rated operational current	3 A
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	PBT
Transducer	epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT
Protection degree	IP65
Connection	5-pin V95 connector (7/8"-16 UN 2A)



Properties

- 400 mm and 1500 mm sensing range versions
- AC/DC, relay output
- Surface mount F42 housing, side view
- Connector version

Your Benefit

- Simple pushbutton configuration

Model Number

		UB400-F42S-UK-V95	UB1500-F42S-UK-V95
Sensing range	40 ... 400 mm	●	
	70 ... 1500 mm		●
Transducer frequency	approx. 390 kHz	●	
	approx. 175 kHz		●
Switching frequency	≤ 3 Hz		●
	≤ 8 Hz	●	

Dimensions

Length L [mm]	80
Width W [mm]	80
Height H [mm]	34
Transducer length l _t [mm]	0
Connector area l _c [mm]	16

Accessories

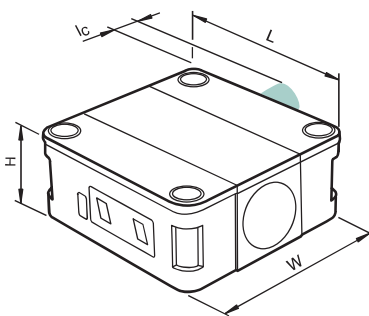
This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

V95-G	Female connector, 7/8" - 16 UN, 5-pin, field attachable
V95-W-5M-PVC	Female connector, 7/8", 5-pin, PVC cable
V95-W	Field attachable female cordset
V95-W-2M-PVC	Female connector, 7/8", 5-pin, PVC cable
MH 04-3505	Mounting aid for FP sensors
MHW 11	Mounting brackets for sensors

3
1



Ultrasonic Sensors, Diffuse Mode Sensors, rectangular types

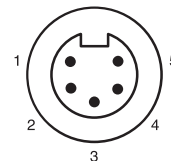
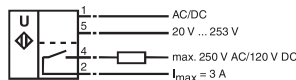


Electrical Connection



UB400-F42S-UK-V95
UB1500-F42S-UK-V95

Normsymbol/Anschluss:
(Version UK)



Wire colors

1	WH	(white)
2	RD	(red)
3	GN	(green)
4	OR	(orange)
5	BK	(black)

Date of issue: 04/08/2015



Properties

- 500 mm and 2000 mm sensing range versions
- DC, analog output
- Surface mount F42 housing, side view
- Connector version

Your Benefit

- Simple pushbutton configuration

Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Deviation of the characteristic curve	± 1 % of full-scale value
Synchronization	bi-directional
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	ABS
Transducer	epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT
Protection degree	IP54
Connection type	Device connector M12 x 1 , 5-pin



Model Number

		UB500-F42S-I-V15	UB500-F42S-U-V15	UB2000-F42S-I-V15	UB2000-F42S-U-V15
Sensing range	30 ... 500 mm	●	●		
	60 ... 2000 mm			●	●
Transducer frequency	approx. 390 kHz	●	●		
	approx. 175 kHz			●	●
Operating voltage	10 ... 30 V DC , ripple 10 % _{SS}	●		●	
	17 ... 30 V DC , ripple 10 % _{SS}		●		●
No-load supply current	≤ 50 mA	●	●	●	●
Output type	1 analog output 0 ... 10 V		●		●
	1 analog output 4 ... 20 mA	●		●	
Resolution	0.2 mm at max. sensing range		●		
	0.2 mm for max. detection range	●			
	0.7 mm			●	●

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●

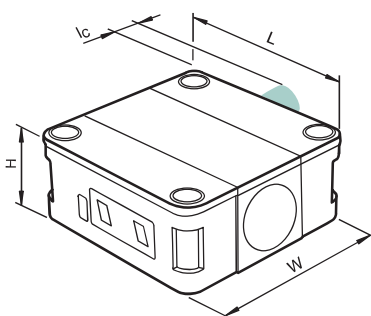
Dimensions

Length L [mm]	80
Width W [mm]	80
Height H [mm]	34
Transducer length l _t [mm]	0
Connector area l _c [mm]	16

Accessories This and more accessories can be found in chapter 3.5 from page 673

See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

MH 04-3505	Mounting aid for FP sensors
MHW 11	Mounting brackets for sensors
DA5-IU-2K-V	Process control and indication equipment
V15-G-2M-PVC	Cable socket, M12, 5-pin, PVC cable
V15-W-2M-PUR	Cable socket, M12, 5-pin, PUR cable

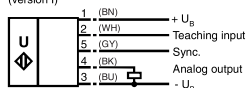


Electrical Connection



UB500-F42S-I-V15
UB2000-F42S-I-V15

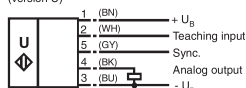
Standard symbol/Connections:
(version I)



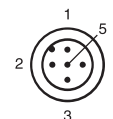
Core colours in accordance with EN 60947-5-2.

UB500-F42S-U-V15
UB2000-F42S-U-V15

Standard symbol/Connections:
(version U)



Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	12 ... 30 V (including ripple) In supply voltage interval 12 ... 20 V reduced sensitivity by 20% ... 0%
No-load supply current	≤ 60 mA
Output type	2 switch outputs PNP, NO
Rated operational current	150 mA , short-circuit/overload protected
Input type	1 program input Teach-In of S _{min}
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	PBT
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP65
Connection type	Device connector M12 x 1 , 5-pin



Properties

- Up to 2500 mm sensing range
- DC, 2 switching outputs and programming interface
- Level measurement optimized F65 housing
- Connector version

Your Benefit

- SONPROG programmable sensing limits and filtering
- Ultra-low 30 mm mounting height
- Gasketed transducer seals the tank/container

Model Number	UC500-F65-E8R2-V15	UC1500-F65-E8R2-V15	UC2500-F65-E8R2-V15
Sensing range	60 ... 500 mm	200 ... 1500 mm	250 ... 2500 mm
Transducer frequency	approx. 300 kHz	approx. 200 kHz	approx. 120 kHz

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●

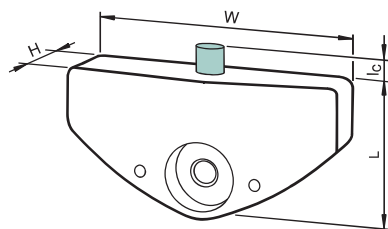
Dimensions

Length L [mm]	64,4
Width W [mm]	125
Height H [mm]	30
Connector area l _c [mm]	12

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

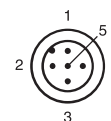
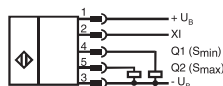
V15-G-2M-PUR	Cable socket, M12, 5-pin, PUR cable
V15-G-2M-PVC	Cable socket, M12, 5-pin, PVC cable
V15-W-2M-PUR	Cable socket, M12, 5-pin, PUR cable
V15-W-2M-PVC	Cable socket, M12, 5-pin, PVC cable
3RX4000-PF	PC interface



Electrical Connection



UC500-F65-E8R2-V15
UC1500-F65-E8R2-V15
UC2500-F65-E8R2-V15



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue: 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	15 ... 30 V (including ripple) In supply voltage interval 15 ... 20 V reduced sensitivity by 20% ... 0%
No-load supply current	≤ 60 mA
Output type	1 switch output PNP, NO
Operating current	≤ 300 mA , short-circuit/overload protected
Linearity error	≤ 1.5 %
Input type	1 Function input
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	PBT
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP65
Connection type	Device connector M12 x 1 , 5-pin



Properties

- Up to 2500 mm sensing range versions
- DC, analog output, switching output and programming interface
- Level measurement optimized F65 housing
- Connector version

Your Benefit

- SONPROG programmable sensing limits and filtering
- Ultra-low 30 mm mounting height
- Gasketed transducer seals the tank/container

Model Number

	UC500-F65-IE2R2-V15	UC500-F65-UE2R2-V15	UC1500-F65-IE2R2-V15	UC1500-F65-UE2R2-V15	UC2500-F65-IE2R2-V15	UC2500-F65-UE2R2-V15
Sensing range	60 ... 500 mm	200 ... 1500 mm	250 ... 2500 mm			
Transducer frequency	approx. 300 kHz	approx. 200 kHz	approx. 120 kHz			
Output type	1 voltage output 0 ... 10 V , rising slope	1 current output 4 ... 20 mA , rising slope				

Approvals and Certificates

UL approval	cULus Listed, General Purpose					
CSA approval	cCSAus Listed, General Purpose					

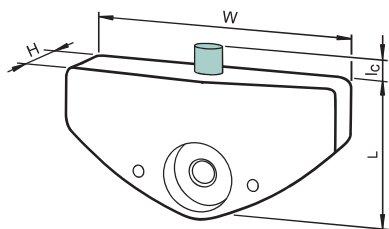
Dimensions

Length L [mm]	64,4
Width W [mm]	125
Height H [mm]	30
Connector area l _c [mm]	12

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

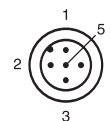
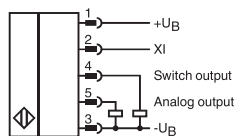
V15-G-2M-PUR	Cable socket, M12, 5-pin, PUR cable
V15-G-2M-PVC	Cable socket, M12, 5-pin, PVC cable
V15-W-2M-PUR	Cable socket, M12, 5-pin, PUR cable
V15-W-2M-PVC	Cable socket, M12, 5-pin, PVC cable
3RX4000-PF	PC interface



Electrical Connection



UC500-F65-IE2R2-V15
UC1500-F65-IE2R2-V15
UC2500-F65-IE2R2-V15
UC500-F65-UE2R2-V15
UC1500-F65-UE2R2-V15
UC2500-F65-UE2R2-V15



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Operating voltage	12 ... 30 V (including ripple) In supply voltage interval 12 ... 20 V reduced sensitivity by 20% ... 0%
No-load supply current	≤ 60 mA
Output type	1 Frequency output
Rated operational current	300 mA
Input type	1 Function input
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	PBT
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP65
Connection type	Device connector M12 x 1, 4-pin



Properties

- Up to 2500 mm sensing range versions
- DC, frequency output, switching output and programming interface
- Level measurement optimized F65 housing
- Connector version

Your Benefit

- SONPROG programmable sensing limits and filtering
- Frequency (Hz) output provides continuous feedback to discrete input controllers
- Ultra-low 30 mm mounting height
- Gasketed transducer seals the tank/container

Model Number

		UC500-F65-FE2R2-V15	UC1500-F65-FE2R2-V15	UC2500-F65-FE2R2-V15
Sensing range	60 ... 500 mm	●		
	200 ... 1500 mm		●	
	250 ... 2500 mm			●
Transducer frequency	approx. 300 kHz	●		
	approx. 200 kHz		●	
	approx. 120 kHz			●
Output frequency	30 ... 250 Hz (300 ... 2500 Hz) , adjustable	●		
	20 ... 150 Hz (200 ... 1500 Hz) , adjustable		●	
	12.5 ... 125 Hz (125 ... 1250 Hz) , adjustable			●

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●

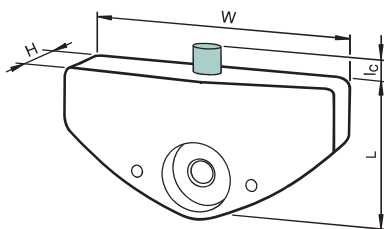
Dimensions

Length L [mm]	64,4
Width W [mm]	125
Height H [mm]	30
Connector area l _c [mm]	12

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

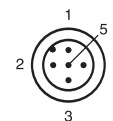
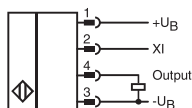
V1-G-2M-PUR	Cable socket, M12, 4-pin, PUR cable
V1-G-2M-PVC	Cable socket, M12, 4-pin, PVC cable
V1-W-2M-PUR	Cable socket, M12, 4-pin, PUR cable
V1-W-2M-PVC	Cable socket, M12, 4-pin, PVC cable
3RX4000-PF	PC interface



Electrical Connection



UC500-F65-FE2R2-V15
UC1500-F65-FE2R2-V15
UC2500-F65-FE2R2-V15



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Date of issue: 04/08/2015



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Sensing range	800 ... 10000 mm
Transducer frequency	approx. 60 kHz
Operating voltage	15 ... 30 V (including ripple) In supply voltage interval 15 ... 20 V reduced sensitivity by 20% ... 0%
No-load supply current	≤ 75 mA
Linearity error	≤ 1.5 %
Input/output type	1 synchronization connection, bidirectional
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Material	
Housing	UP 1225 SF/R8
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Protection degree	IP65
Connection type	screw terminals , PG 13.5 cable gland



Properties

- 10 m sensing range
- DC, analog output, switching outputs and programming interface
- Rotatable F260 housing
- Terminal compartment

Your Benefit

- SONPROG programmable sensing limits and filtering

Model Number

	UC10000-F260-IE8R2	UC10000-F260-IE9R2	UC10000-F260-UE8R2	UC10000-F260-UE9R2
Output type				
2 switch outputs PNP, NC	●	●	●	●
2 switch outputs PNP, NO	●	●	●	●
Operating current				
150 mA , short-circuit/overload protected	●	●	●	●
300 mA , short-circuit/overload protected	●	●	●	●
Output type				
1 voltage output: 0 ... 10 V rising slope	●	●	●	●
1 current output 4 ... 20 mA rising slope	●	●	●	●

Approvals and Certificates

	UC10000-F260-IE8R2	UC10000-F260-IE9R2	UC10000-F260-UE8R2	UC10000-F260-UE9R2
UL approval	●	●	●	●
CSA approval	●	●	●	●

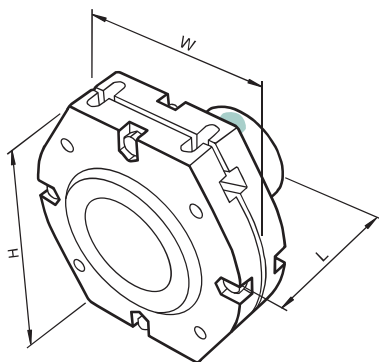
Dimensions

Length L [mm]	112
Width W [mm]	160
Height H [mm]	160

Accessories

This and more accessories can be found in chapter 3.5 from page 673
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

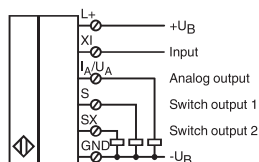
DA5-IU-C	Digital display unit
3RX4000-PF	PC interface
V1S-M12-500	Receptacles, M12/M16, 5-pin



Electrical Connection



UC10000-F260-IE9R2
UC10000-F260-UE8R2
UC10000-F260-UE9R2
UC10000-F260-IE8R2



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