



OPTIONAL INSTALLATION TECHNIQUES E30-E90

7th Edition

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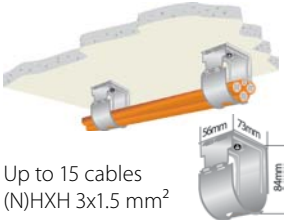
Optional installation techniques grouped by cable type

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Please note:

The optional installation techniques only apply to Datwyler cable types with Datwyler installation systems.
When multiple cables and/or functional integrity classes are combined in a single installation, the lowest values apply!

Multi-cable support, type E30-E90 for Hermann clamp S for horizontal wall and ceiling installations



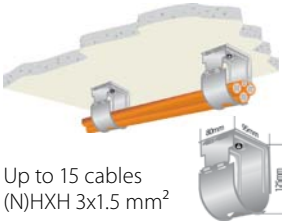
Up to 15 cables
(N)HXH 3x1.5 mm²

The cable with the highest weight must be placed in the multi-cable support beneath the cables with a lower weight.

Datwyler Keramik	Spacing (mm)	Functional integrity	Note
FE180 / E30-E60			maximum load: 3 kg/m
(N)HXH	800	E30-E60	
(N)HXCH	800	E30-E60	
FE180 / E90			maximum load: 3 kg/m
(N)HXH	800	E90	
(N)HXCH	800	E90	
FE180 / E30-E90			maximum load: 3 kg/m
JE-H(ST)H...Bd	800	E30-E60	*
JE-H(ST)H...Bd	600	E30-E90	
JE-H(ST)HRH...Bd	800	E30-E60	
JE-H(ST)HRH...Bd	600	E30-E90	

* JE-H(ST)H...Bd FE180/E30L classified in same manner as with E30.

Multi-cable support, type E30-E90 for Hermann clamp (large) for horizontal wall and ceiling lines



Up to 15 cables
(N)HXH 3x1.5 mm²

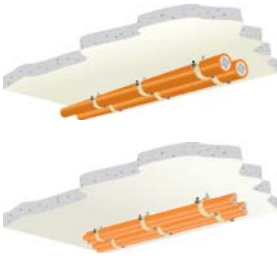
The cable with the highest weight must be placed in the multi-cable support beneath the cables with a lower weight.

Datwyler Keramik	Spacing (mm)	Functional integrity	Note
FE180 / E30-E60			maximum load: 6 kg/m
(N)HXH	800	E30-E60	
(N)HXCH	800	E30-E60	
FE180 / E90			maximum load: 6 kg/m
(N)HXH	800	E90	
(N)HXCH	800	E90	
FE180 / E30-E90			maximum load: 6 kg/m
JE-H(ST)H...Bd	800	E30-E60	*
JE-H(ST)H...Bd	600	E30-E90	
JE-H(ST)HRH...Bd	800	E30-E60	
JE-H(ST)HRH...Bd	600	E30-E90	

* JE-H(ST)H...Bd FE180/E30L classified in same manner as with E30.

SINGLE CLAMP

Separate and bundle installation using type SAS or TSD single clamps (stainless steel tunnel clamp) for horizontal wall and ceiling lines



Datwyler Keram	Spacing (mm)	Functional integrity	Note
FE180 / E30-E60			bundles without limits (number / weight)
(N)HXH	600	E30-E60	
	1200	E30	
(N)HXCH	600	E30-E60	
	1200	E30	
FE180 / E90			bundles without limits (number / weight)
(N)HXH	600	E90	
(N)HXCH	600	E90	
FE180 / E30-E90			maximum load: 2.5 kg/m
JE-H(ST)H...Bd	600	E90	
	1200	E30-E60	*
JE-H(ST)HRH...Bd	600	E90	
	1200	E30-E60	

* JE-H(ST)H...Bd FE180/E30L classified in same manner as with E30.

Separate and bundle installation using type SAS or TSD single clamps (stainless steel tunnel clamp) for vertical installation



Datwyler Keram	Spacing (mm)	Functional integrity	Note
FE180 / E30-E60			bundles without limits (number / weight)
(N)HXH	600	E30-E60	
	1200	E30	
(N)HXCH	600	E30-E60	
	1200	E30	
FE180 / E90			bundles without limits (number / weight)
(N)HXH	600	E90	
(N)HXCH	600	E90	
FE180 / E30-E90			maximum load: 2.5 kg/m
JE-H(ST)H...Bd	600	E90	
	1200	E30-E60	*
JE-H(ST)HRH...Bd	600	E90	
	1200	E30-E60	

* JE-H(ST)H...Bd FE180/E30L classified in same manner as with E30.

Note: For vertical installations >3.5 m between fire bulkheads on floor slabs, the cable system must be installed using an effective support measure (Datwyler WUM, for example).

Please follow the installation manual on page 79.

Separate and bundle installation using type B...D strap clamps without troughs for horizontal wall and ceiling installation



Strap clamps with troughs can also be used.

Datwyler Keram	Spacing (mm)	Functional integrity	Note
FE180 / E30-E60			bundles without limits (number / weight)
(N)HXH	800	E30-E60	
	1200	E30	
(N)HXCH	800	E30-E60	
	1200	E30	
FE180 / E90			bundles without limits (number / weight)
(N)HXH	800	E90	
(N)HXCH	800	E90	
FE180 / E30-E90			maximum load: 2.5 kg/m
JE-H(ST)H...Bd	800	E90	
	1200	E30-E60	*
JE-H(ST)HRH...Bd	800	E90	
	1200	E30-E60	
FO Universal Safety Cables			according to DIN 4102-12
ZGGFR	600	30 min.	2-12 fibres
wbGGFR	600	30 min.	24-60 fibres

* JE-H(ST)H...Bd FE180/E30L classified in same manner as with E30.

Separate and bundle installation using type B...D strap clamps without troughs for vertical installation



Datwyler Keram	Spacing (mm)	Functional integrity	Note
FE180 / E30-E60			bundles without limits (number / weight)
(N)HXH	800	E30-E60	
	1200	E30	
(N)HXCH	800	E30-E60	
	1200	E30	
FE180 / E90			bundles without limits (number / weight)
(N)HXH	800	E90	
(N)HXCH	800	E90	
FE180 / E30-E90			maximum load: 2.5 kg/m
JE-H(ST)H...Bd	800	E90	
	1200	E30-E60	*
JE-H(ST)HRH...Bd	800	E90	
	1200	E30-E60	

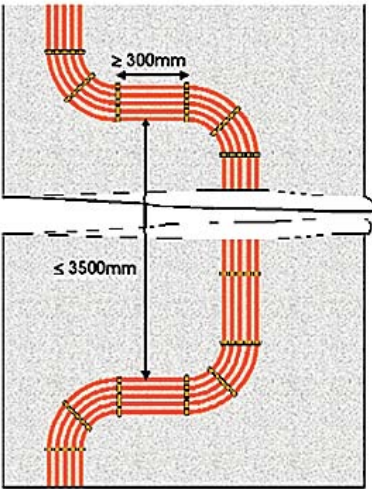
* JE-H(ST)H...Bd FE180/E30L classified in same manner as with E30.

Note: For vertical installations >3.5 m between fire bulkheads on floor slabs, the cable system must be installed using an effective support measure (Datwyler WUM, for example).

WUM

WUM

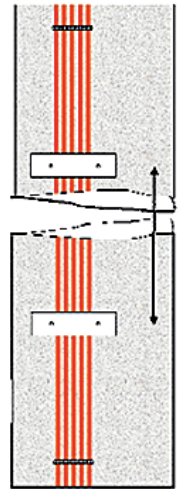
Effective support measure in accordance with DIN 4102-12



"With riser lines, this classification only applies when effective support mounts (spacing $\leq 3,500\text{ mm}$) are installed for the cables."



Datwyler WUM



In-wall installation horizontally / vertically along wall or ceiling



(Mineral-based wall covering on cable ≥ 15 mm)

Datwyler Keram	Spacing (mm)	Functional integrity	Note
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FE180 / E30-E60

(N)HXH		E30	
(N)HXCH		E30	

FE180 / E90

(N)HXH		E90	
(N)HXCH		E90	

FE180 / E30-E90

JE-H(ST)H...Bd		E30-E90	*
JE-H(ST)HRH...Bd		E30-E90	

* JE-H(ST)H...Bd FE180/E30L classified in same manner as with E30.

STEEL-ARMOURED CONDUITS

Separate and bundle installation in type Stapa DN to M steel armoured conduit without troughs with type SAS / TSD single clamps or type B...D strap clamps for horizontal wall and ceiling installations



(\leq M63, filling factor ≤ 60 %)

Datwyler Keram	Spacing (mm)	Functional integrity	Note
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FE180 / E30-E60

(N)HXH	1200	E30	bundles without limits (number / weight)
(N)HXCH	1200	E30	

FE180 / E30-E90

JE-H(ST)H...Bd	1200	E30-E60	maximum load: 2.5 kg/m
JE-H(ST)HRH...Bd	1200	E30-E60	

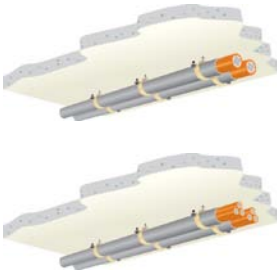
* JE-H(ST)H...Bd FE180/E30L classified in same manner as with E30.

Maximum line length without fasteners between ends of conduit: ≤ 1.200 mm

In accordance with DIN 4102-12, a "slip-off protection" is necessary for horizontal wall installations using strap clamps.

PROTECTIVE CONDUITS

Separate and bundle installation in zero-halogen protective conduit with type SAS / TSD single clamps for horizontal wall and ceiling installation

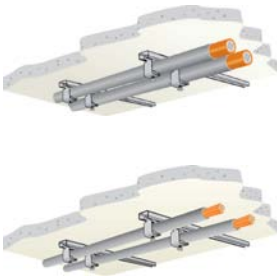


Datwyler Keram	Spacing (mm)	Functional integrity	Note
FE180 / E30-E60			bundles without limits (number / weight)
(N)HXH	600	E30-E60 ¹⁾	
	1200	E30 ¹⁾	
(N)HXCH	600	E30-E60 ¹⁾	
	1200	E30 ¹⁾	
FE180 / E90			bundles without limits (number / weight)
(N)HXH	600	E90	
(N)HXCH	600	E90	
FE180 / E30-E90			maximum load: 2.5 kg/m
JE-H(ST)H...Bd	600	E90 ¹⁾	
	1200	E30-E60 ¹⁾	*
JE-H(ST)HRH...Bd	600	E90 ¹⁾	
	1200	E30-E60 ¹⁾	

¹⁾ also in aluminium protective conduit

* JE-H(ST)H...Bd FE180/E30L classified in same manner as with E30.

Separate and bundle installation in zero-halogen protective conduit with strap clamps for horizontal wall and ceiling installations



Datwyler Keram	Spacing (mm)	Functional integrity	Note
FE180 / E30-E60			bundles without limits (number / weight)
(N)HXH	800	E30-E60 ¹⁾	
	1200	E30 ¹⁾	
(N)HXCH	800	E30-E60 ¹⁾	
	1200	E30 ¹⁾	
FE180 / E90			bundles without limits (number / weight)
(N)HXH	800	E90	
(N)HXCH	800	E90	
FE180 / E30-E90			maximum load: 2.5 kg/m
JE-H(ST)H...Bd	800	E90 ¹⁾	
	1200	E30-E60 ¹⁾	*
JE-H(ST)HRH...Bd	800	E90 ¹⁾	
	1200	E30-E60 ¹⁾	

Strap clamps with troughs can also be used.

¹⁾ also in aluminium protective conduit

* JE-H(ST)H...Bd FE180/E30L classified in same manner as with E30.

In accordance with DIN 4102-12, a "slip-off protection" is necessary for horizontal wall installation using strap clamps.

PROTECTIVE / WIRE MESH CABLE DUCTS

Bundle installation in protective cable duct (LLK 60.100 + holding piece LHS 100) for horizontal wall and ceiling lines



Datwyler Keram	Spacing (mm)	Functional integrity	Note
FE180 / E30-E60			maximum load: 3.1 kg/m ceiling installation; 7.0 kg/m wall installation
(N)HXH	500	E30	from 1.5 mm ² to 16 mm ²
FE180 / E30-E90			maximum load: 3.1 kg/m ceiling installation; 7.0 kg/m wall installation
JE-H(ST)H...Bd	500	E30	*
JE-H(ST)HRH...Bd	500	E30	

Bundle installation in protective cable duct (LLK 26.030) for horizontal wall and ceiling lines



Datwyler Keram	Spacing (mm)	Functional integrity	Note
FE180 / E30-E90			maximum load: 0,3 kg/m
JE-H(ST)H...Bd	500	E30	*
JE-H(ST)HRH...Bd	500	E30-E60	

Bundle installation in wire mesh cable duct Lanz Oensingen AG (CH), G-duct with G-post or hooked rail for horizontal wall and ceiling lines



Datwyler Keram	Spacing (mm)	Functional integrity	Note
FE180 / E30-E60			G-... ≤ 50x75 mm ≤ 3 kg/m
(N)HXH	1250	E30	from 1.5 mm ² to 16 mm ²
(N)HXCH	1250	E30	from 1.5 mm ² to 16 mm ²
FE180 / E30-E90			G-... ≤ 50x75 mm ≤ 3 kg/m
JE-H(ST)H...Bd	1250	E30	*
JE-H(ST)HRH...Bd	1250	E30-E60	
FE180 / E30-E60			G-... ≤ 75x100 mm ≤ 7,5 kg/m
(N)HXH	1250	E30	no restrictions
(N)HXCH	1250	E30	no restrictions
FE180 / E30-E90			G-... ≤ 75x100 mm ≤ 7,5 kg/m
JE-H(ST)H...Bd	1250	E30	*
JE-H(ST)HRH...Bd	1250	E30-E60	

* JE-H(ST)H...Bd FE180/E30L classified in same manner as with E30.

UNLIMITED FUNCTIONAL INTEGRITY

Standard installation techniques are not practical and are more expensive

Datwyler “Keram” safety cables for high- and low-voltage applications with integrated functional integrity in accordance with DIN 4102-12 allow for installation techniques that fulfil nearly all requirements in contemporary building applications. They are also highly affordable.

Cables with integrated functional integrity are used in applications requiring special protection against fire and hazards to persons and property, and where building safety laws and provisions must be complied with.

The highly limited standard installation techniques are not able to comply with the demands in construction work and architecture. As a result, costly and time-intensive building site approvals are required on a case-by-case basis together with even more expensive correctional measures.

The installation itself is costly in terms of materials and time when performed in the “normal” manner.

Datwyler “Keram” cable types for high- and low-voltage applications with functional integrity in accordance with DIN 4102-12 allow for installation techniques that fulfil nearly all requirements in contemporary building applications. They are also highly affordable.

Installation type	Standard installation techniques in accordance with DIN 4102-12 (Nov. 1998)	Installation techniques with Datwyler Keram cable in acc. with DIN 4102-12	Savings fastening system
Cable ladder	With threaded rod suspension Support spacing: up to 1.200 mm Width: up to 400 mm Load capacity: up to 20 kg/m	Without threaded rod suspension Support spacing: up to 1.500 mm Width: up to 400 mm Load capacity: up to 20 kg/m	Approx. 20%
Cable tray	With threaded rod suspension Support spacing: up to 1.200 mm Width: up to 300 mm Load capacity: up to 10 kg/m	Without threaded rod suspension Support spacing: up to 1.500 mm Width: up to 400 mm Load capacity: up to 20 kg/m	More than 50% for cable loads larger than 10 kg/m
Strap clamp	With trough Fastener spacing up to 600 mm	Without trough Fastener spacing up to 1.2 m (E30); 800 mm (E60 + E90) Bundling up to 2.5 kg/m	Approx. 60% for separately installed cables, more than 90% for cable bundles
Single clamp	Line spacing: up to 300 mm	Fastener spacing up to 1.2 m (E30); 600 mm (E60 + E90) Bundling up to 2.5 kg/m	Approx. 50 - 60 % for separately installed cables, more than 90 % for cable bundles
Multi-cable supports	(Bundled lines only on cable tray / cable ladder)	Bundle lines in multi-cable support Fastener spacing up to 800 mm (E30); 600 mm (E60 + E90) Up to 3 or 6 kg/m cable weight.	More than 90%
Conduit / duct	Not possible	Installation in zero-halogen plastic conduit / aluminium protective conduit / steel-armoured conduit / sheet steel ducts	

Wire mesh trays for horizontal wall and ceiling installation



Ceiling with threaded rod

Wall with threaded rod

Width ≤ mm	Load capacity ≤ kg/m	Fastener spacing ≤ m	OBO Menden				PUK Berlin				Vergokan B-Oudenaarde			
			(N)HXH E30 (N)HXH E90	(N)HXCH E30 (N)HXCH E90	JE-H(S)H	JE-H(S)HRH	(N)HXH E30 (N)HXH E90	(N)HXCH E30 (N)HXCH E90	JE-H(S)H	JE-H(S)HRH	(N)HXH E30 (N)HXH E90	(N)HXCH E30 (N)HXCH E90	JE-H(S)H	JE-H(S)HRH
400	20	1,5												
400	10	1,25												
300	10	1,2												
300	30	1,5 stainless steel	E30 E90	E30 E90	E30	E30								
400	20	1,5					E30 E90	E30 E90			E30 E90	E30 E90	E30 E60	E30 E60
400	10	1,25					E30 E90	E30 E90			E30 E90	E30 E90	E30 E60	E30 E60
300	10	1,2					E30 E90	E30 E90			E30 E90	E30 E90	E30 E60	E30 E60



Ceiling with threaded rod

Wall with threaded rod

Width ≤ mm	Load capacity ≤ kg/m	Fastener spacing ≤ m	Metal Deploye S.A (Cablofil)				Niedax Linz/Rhein
			(N)HXH E30 (N)HXH E90	(N)HXCH E30 (N)HXCH E90	JE-H(S)H	JE-H(S)HRH	FO Universal Safety ZGGFR 2-12 Fasern wBGGFR 24-60 Fasern
400	20	1,5					Datwyler Keramik
400	10	1,25	E30 E90	E30 E90	E30	E30	Datwyler
300	10	1,2					30 min.
300	30	1,5 stainless steel					
400	20	1,5					
400	10	1,25	E30 E90	E30 E90	E30	E30	
300	10	1,2	E30 E90	E30 E90	E30	E30	30 min.

E&OE.
Please see the cable tray vendor's General Appraisal Certificates (ABP) and approvals for assessing standard-compliant cable trays (in accordance with DIN 4102-12).

CABLE TRAYS

Cable trays for horizontal ceiling installation



Ceilings without threaded rod

Width ≤ mm	Load capacity ≤ kg/m	Fastener spacing ≤ m	PUK Berlin				Vergokan B-Oudenaarde			
			(N)HXH E30-E60 (N)HXH E90	(N)HXCH E30-E60 (N)HXCH E90	JE-H(ST)H E30-E90 *	JE-H(ST)HRH E30-E90*	(N)HXH E30-E60 (N)HXH E90	(N)HXCH E30-E60 (N)HXCH E90	JE-H(ST)H E30-E90 *	JE-H(ST)HRH E30-E90*
400	30	1,50	Datwyler Keram				Datwyler Keram			
400	20	1,50	E30 E90	E30 E90	E30 E90	E30 E60	E30 E90	E30 E90	E30 E90	E30 E90
300	20	1,50	E30 E90	E30 E90	E30 E90	E30 E60	E30 E90	E30 E90	E30 E90	E30 E90



Wall without threaded rod

Width ≤ mm	Load capacity ≤ kg/m	Fastener spacing ≤ m	Datwyler Keram				Datwyler Keram			
			(N)HXH E30-E60 (N)HXH E90	(N)HXCH E30-E60 (N)HXCH E90	JE-H(ST)H E30-E90 *	JE-H(ST)HRH E30-E90*	(N)HXH E30-E60 (N)HXH E90	(N)HXCH E30-E60 (N)HXCH E90	JE-H(ST)H E30-E90 *	JE-H(ST)HRH E30-E90*
400	30	1,50	Datwyler Keram				Datwyler Keram			
400	20	1,50	E30 E90	E30 E90	E30 E90	E30 E60	E30 E90	E30 E90	E30 E90	E30 E90
300	20	1,50	E30 E90	E30 E90	E30 E90	E30 E60	E30 E90	E30 E90	E30 E90	E30 E90

Standard in acc. with DIN 4102-12

Width ≤ mm	Load capacity ≤ kg/m	Fastener spacing ≤ m	Datwyler Keram				Datwyler Keram			
			(N)HXH E30-E60 (N)HXH E90	(N)HXCH E30-E60 (N)HXCH E90	JE-H(ST)H E30-E90 *	JE-H(ST)HRH E30-E90*	(N)HXH E30-E60 (N)HXH E90	(N)HXCH E30-E60 (N)HXCH E90	JE-H(ST)H E30-E90 *	JE-H(ST)HRH E30-E90*
300	10	1,20	E30 E90	E30 E90	E30 E90	E30 E90	E30 E90	E30 E90	E30 E90	E30 E90

E&OE.

Please see the cable tray vendor's General Appraisal Certificates (ABP) and approvals for assessing standard-compliant cable trays (in accordance with DIN 4102-12).

*) More Appraisal Certificates coming soon.

Special fastening with clamps is permitted with standard-compliant cable trays if there is just a non-significant deviation from the General Appraisal Certificate (ABP).

Niedax Linz/Rhein					Rico Kirchheim/Teck					OBO - Menden			
(N)HXH E30-E60 (N)HXH E90	(N)HXCH E30-E60 (N)HXCH E90	JE-H(ST)H E30-E90 *	JE-H(ST)HRH E30-E90*	FO Universal Safety ZGGFR 2-12 Fasern wöGGFR 24-60 Fasern	(N)HXH E30-E60 (N)HXH E90	(N)HXCH E30-E60 (N)HXCH E90	JE-H(ST)H E30-E90 *	JE-H(ST)HRH E30-E90*	(N)HXH E30-E60 (N)HXH E90	(N)HXCH E30-E60 (N)HXCH E90	JE-H(ST)H E30-E90 *	JE-H(ST)HRH E30-E90*	
Datwyler Keramik					Datwyler Keramik					Datwyler Keramik			
E30 E90	E30 E90	E30	E30		E30 E90	E30 E90	E30	E30					
E30 E90	E30 E90	E30 E60	E30 E60		E30 E90	E30 E90	E30 E60	E30 E60	E30 E90	E30 E90	E30	E30	
E30 E90	E30 E90	E30	E30 E60		E30 E90	E30 E90	E30	E30 E60	E30 E90	E30 E90	E30	E30	
Datwyler Keramik					Datwyler Keramik					Datwyler Keramik			
E30 E90	E30 E90	E30	E30		E30 E90	E30 E90	E30	E30					
E30 E90	E30 E90	E30 E60	E30		E30 E90	E30 E90	E30 E60	E30	E30 E90	E30 E90	E30	E30	
E30 E90	E30 E90	E30 E60	E30		E30 E90	E30 E90	E30 E60	E30	E30 E90	E30 E90	E30	E30	
Datwyler Keramik					Datwyler Keramik					Datwyler Keramik			
E30 E90	E30 E90	E30 E90	E30 E90	30 Min.	E30 E90	E30 E90	E30 E90	E30 E90	E30 E90	E30 E90	E30 E90	E30 E90	

LOW-VOLTAGE CABLE E30-E60

Datwyler (N)HXH FE180 / E30-E60 Keram
all dimensions



1. Background Information

2. By Installation Type

Installation spacing

Datwyler fastener	horizontal and vertical		Note
Type SAS / TSD single clamp	E30 1.2 m	E60 60 cm	Bundles without limits
Type B...D strap clamp on profile rail	E30 1.2 m	E60 80 cm	Horizontal also possible with conduits
In-wall installation	E30 mineral-based wall covering on cable \geq 15 mm		

3. By Cable Type

4. Product Range

Datwyler fastener	horizontal	Note
Hermann clamp S, small	E30-E60 80 cm	Maximum load: 3 kg/m (e.g. up to 15 cables 3 x 1.5 mm ²)
Hermann clamp, large	E30-E60 80 cm	Maximum load: 6 kg/m (e.g. up to 30 cables 3 x 1.5 mm ²)

5. Assembly Instructions

6. FAQ

Installation spacing

Datwyler fastener	horizontal	Note
Aluminium pipe with type SAS / TSD single clamp with type B...D strap clamp on profile rail	E30 1.2 m	Bundles without limits
	E60 60 cm	
	E60 80 cm	
Zero-halogen plastic armoured conduit with type SAS / TSD single clamp with type B...D strap clamp on profile rail	E30 1.2 m	Bundles without limits
	E60 60 cm	Separately installed cables
	E60 80 cm	1.5 mm ² to 16 mm ²
Steel-armoured conduit with type SAS / TSD single clamp with type B...D strap clamp on profile rail	E30 1.2 m	≤ M63, filling factor ≤ 60% Bundles without limits
		Maximum line length w/o fasteners between ends of conduit: ≤ 1.2 m
G-duct 50 x 75 mm with G-post or hooked rail	E30 1.25 m	Maximum load: 3 kg/m up to 16 mm ²
G-duct ≤ 75 x 100 mm with G-post or with hooked rail	E30 1.25 m	Maximum load: 7.5 kg/m
Protective cable duct 60 x 100 mm	E30 50 cm	Maximum of 16 mm ² Maximum load: 3.1 kg/m ceiling installation; 7 kg/m wall installation.
Cable tray 60 x ≤ 400 mm without threaded rod suspension	E30-E60	Maximum load: 20 kg/m.
	1.5 m	Wall and ceiling installation

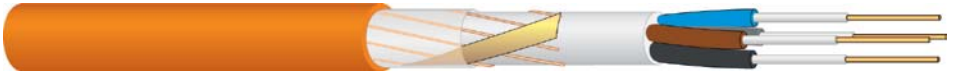
Cable support systems also without threaded rod	dependent on manufacturer		
Wire mesh cable tray	≤ 400 mm	1.50 m	maximum 20 kg/m
Tray	≤ 500 mm	1.50 m	maximum 30 kg/m
Ladder	≤ 600 mm	2.00 m	maximum 25 kg/m

If a Hermann clamp is used to support multiple cables with varying cross-sections, the cable with the largest cross-section must be installed below the smaller ones. When installed horizontally, the installation is the same for walls and ceilings. However, riser lines (directly fastened, using only single or bracket clamps) require the installation of an appropriate fireproof bulkhead or WUM (see page 75) at a spacing of every 3.50 m. Any certified steel fastening bolts or certified fireproof plugs from other manufacturers can be used.

In accordance with DIN 4102-12, a "slip-off protection" is necessary for horizontal wall installation using strap clamps.

LOW-VOLTAGE CABLE E30-E60

Datwyler (N)HXCH FE180 / E30-E60 Keram
all dimensions



Installation spacing

Datwyler fastener	horizontal and vertical		Note
Type SAS / TSD single clamp	E30 1.2 m	E60 60 cm	Bundles without limits
Type B...D strap clamp on profile rail	E30 1.2 m	E60 80 cm	Horizontal also possible with conduits
<hr/>			
In-wall installation	E30 mineral-based wall covering on cable \geq 15 mm		
<hr/>			

Datwyler fastener	horizontal	Note
Hermann clamp S, small	E30-E60 80 cm	Maximum load: 3 kg/m (e.g. up to 15 cables 3 x 1.5 mm ²)
Hermann clamp, large	E30-E60 80 cm	Maximum load: 6 kg/m (e.g. up to 30 cables 3 x 1.5 mm ²)

Installation spacing

Datwyler fastener	horizontal	Note
Aluminium pipe with type SAS / TSD single clamp with type B...D strap clamp on profile rail	E30 1.2 m	Bundles without limits
	E60 60 cm	
	E60 80 cm	
Zero-halogen plastic armoured conduit with type SAS / TSD single clamp with type B...D strap clamp on profile rail	E30 1.2 m	Bundles without limits
	E60 60 cm	
	E60 80 cm	
Steel-armoured conduit with type SAS / TSD single clamp with type B...D strap clamp on profile rail	E30 1.2 m	≤ M63, filling factor ≤ 60% Bundles without limits Maximum line length w/o fasteners between ends of conduit: ≤ 1,2 m
	E60 60 cm	
	E60 80 cm	
G-duct 50 x 75 mm with G-post or hooked rail	E30 1.25 m	Maximum load: 3 kg/m up to 16 mm ²
	E30 1.25 m	
G-duct ≤ 75 x 100 mm with G-post or hooked rail	E30 1.25 m	Maximum load: 7.5 kg/m
	E30 50 cm	
Protective cable duct 60 x 100 mm	E30 50 cm	Maximum of 16 mm ² Maximum load: 3.1 kg/m ceiling installations; 7 kg/m wall installations.
	E30-E60	
Cable tray 60 x ≤ 400 mm without threaded rod suspension	E30-E60	Maximum load: 20 kg/m. Wall and ceiling installations
	1.5 m	

Cable support systems also without threaded rod	dependent on manufacturer		
Wire mesh cable tray	≤ 400 mm	1.50 m	maximum 20 kg/m
Tray	≤ 500 mm	1.50 m	maximum 30 kg/m
Ladder	≤ 600 mm	2.00 m	maximum 25 kg/m

If a Hermann clamp is used to support multiple cables with varying cross-sections, the cable with the largest cross-section must be installed below the smaller ones. When installed horizontally, the installation is the same for walls and ceilings. However, riser lines (directly fastened, using only single or bracket clamps) require the installation of an appropriate fireproof bulkhead or WUM (see page 75) at a spacing of every 3.50 m. Any certified steel fastening bolts or certified fireproof plugs from other manufacturers can be used.

In accordance with DIN 4102-12, a "slip-off protection" is necessary for horizontal wall installation using strap clamps.

LOW-VOLTAGE CABLE E90

Datwyler (N)HXH FE180 / E90 Keram
all dimensions



Datwyler (N)HXCH FE180 / E90 Keram
all dimensions



Installation spacing

Datwyler fastener	horizontal and vertical	Note
Type SAS or TSD single clamp	60 cm	Bundles without limits
Type B...D strap clamp on profile rail	80 cm	Horizontal also possible with plastic armoured conduits
In-wall installation	E30 mineral-based wall covering on cable ≥ 15 mm	

Datwyler fastener	horizontal	Note
Hermann clamp S, small	80 cm	Maximum load: 3 kg/m (e.g. up to 15 cables 3 x 1.5 mm ²)
Hermann clamp, large	80 cm	Maximum load: 6 kg/m (e.g. up to 30 cables 3 x 1.5 mm ²)

Installation spacing

Datwyler fastener	horizontal	Note
Zero-halogen plastic armoured conduit with type SAS / TSD single clamp	60 cm	Bundles up to 2.5 kg/m without limits
Zero-halogen plastic armoured conduit with type B...D strap clamp on profile rail	80 cm	
Cable tray 60 x ≤ 400 mm without threaded rod suspension	1.5 m	Maximum load: 20 kg/m. Wall and ceiling installations

Cable support systems also without threaded rod	dependent on manufacturer		
Wire mesh cable tray	≤ 400 mm	1.50 m	maximum 20 kg/m
Tray	≤ 500 mm	1.50 m	maximum 30 kg/m
Ladder	≤ 600 mm	1.50 m	maximum 20 kg/m

If a Hermann clamp is used to support multiple cables with varying cross-sections, the cable with the largest cross-section must be installed below the smaller ones. When installed horizontally, the installation is the same for walls and ceilings. However, riser lines (directly fastened, using only single or bracket clamps) require the installation of an appropriate fireproof bulkhead or WUM (see page 75) at a spacing of every 3.50 m. Any certified steel fastening bolts or certified fireproof plugs from other manufacturers can be used.

In accordance with DIN 4102-12, a “slip-off protection” is necessary for horizontal wall installation using strap clamps.

JE-H(ST)H E30-E90

Datwyler Keramik

Datwyler JE-H(ST)H...Bd FE180/E30-E90 Keramik

Colour: red, with inscription for fire alarm cable



Datwyler JE-H(ST)H...Bd FE180/E30 L Keramik

Colour: red, with inscription for fire alarm cable



Datwyler JE-H(ST)H...Bd FE180/E30-E90 Keramik

Colour: orange



Datwyler JE-H(ST)H...Bd FE180/E30 L Keramik

Colour: orange



Datwyler JE-H(ST)HRH...Bd FE180/E30-E90 Keramik

Colour: red, with inscription for fire alarm cable



Installation spacing

Datwyler fastener	horizontal and vertical	Note
Type SAS / TSD single clamp	E30-E60 1.2 m E90 60 cm	Bundles up to 2.5 kg/m
Type B...D strap clamp on profile rail	E30-E60 1.2 m E90 80 cm	Horizontal also possible with conduits
In-wall installation	Mineral-based wall covering on cable \geq 15 mm	

Datwyler fastener	horizontal	Note
Hermann clamp S, small	E30-E60 80 cm E90 60 cm	Maximum load: 3 kg/m
Hermann clamp, large	E30-E60 80 cm E90 60 cm	Maximum load: 3 kg/m

Installation spacing

Datwyler fastener	horizontal	Note
Aluminium pipe with type SAS / TSD single clamp with type B...D strap clamp on profile rail	E30-E60 1.2 m	Bundles up to 2.5 kg/m
	E90 60 cm	
	E90 80 cm	
Zero-halogen plastic armoured conduit with type SAS / TSD single clamp with type B...D strap clamp on profile rail	E30-E60 1.2 m	Bundles up to 2.5 kg/m
	E90 60 cm	
	E90 80 cm	
Steel-armoured conduit with type SAS / TSD single clamp with type B...D strap clamp on profile rail	E30-E60 1.2 m	≤ M63, filling factor ≤ 60% Maximum load: 2,5 kg/m Maximum line length w/o fasteners between ends of conduit: 1.2 m
G-duct 50 x 75 mm with G-post or hooked rail	E30 1.25 m	Maximum load: 3 kg/m
G-duct ≤ 75 x 100 mm with G-post or with hooked rail	E30 1.25 m	Maximum load: 7.5 kg/m
Protective cable duct 60 x 100 mm	E30 50 cm	Maximum load: 3.1 kg/m ceiling installations, 7 kg/m wall installations
Protective cable duct 26 x 30 mm	E30 50 cm	Maximum load: 0.3 kg/m Wall and ceiling installations

Cable support systems also without threaded rod	dependent on manufacturer		
Wire mesh cable tray	≤ 400 mm	1.25 m	maximum 10 kg/m
Tray	≤ 500 mm	1.50 m	maximum 20 kg/m
Ladder	≤ 600 mm	2.00 m	maximum 25 kg/m

When installed horizontally, the installation is the same for walls and ceilings. However, riser lines (directly fastened using only single or bracket clamps) require the installation of an appropriate fireproof bulkhead or WUM (see page 75) at a spacing of every 3.50 m. Any certified steel fastening bolts or certified fireproof plugs from other manufacturers can be used.

For cable constructions ... E30 L: classifications apply only up to E30.

In accordance with DIN 4102-12, a "slip-off protection" is necessary for horizontal wall installation using strap clamps.

FIBRE OPTIC SAFETY CABLE

Functional integrity for 30 minutes according to DIN 4102-12 (E30)

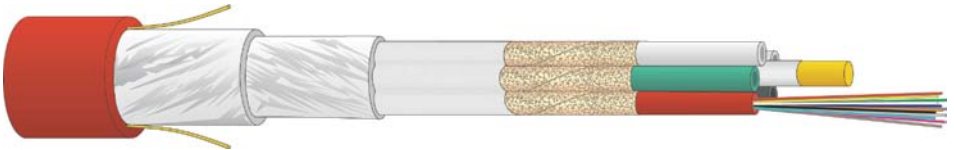
“Functional integrity” in accordance with IEC 60331-25 FE 90 (90 minutes at 750 °C)

FO Universal ZGGFR Safety



U-DQ(ZN)BH 1xm	Fibres	Article No.	Article No.	Article No.	Article No.	
Description	number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G62.5/125 OM1	
ZGGFR Safety	1 x 4	4	187288	186363	190604	186638
ZGGFR Safety	1 x 6	6	191867	186639	191851	190792
ZGGFR Safety	1 x 8	8	on request	190621	on request	on request
ZGGFR Safety	1 x 12	12	190719	187293	191796	187305

FO Universal wbGGFR Safety



U-DQ(ZN)BH nxm	Fibres	Article No.	Article No.	Article No.	Article No.	
Description	number	E9/125 G.652.D	G50/125 OM2	G50/125 OM3	G62.5/125 OM1	
wbGGFR Safety	2 x 12	24	190223	187294	187360	on request
wbGGFR Safety	3 x 12	36	190224	on request	on request	on request
wbGGFR Safety	4 x 12	48	190225	192119	191191	on request
wbGGFR Safety	5 x 12	60	190226	on request	190605	on request

FIBRE OPTIC SAFETY CABLE

Functional integrity for 30 minutes according to DIN 4102-12 (E30)

Features

Metal-free fibre optic safety cable with up to 12 fibres or up to 60 fibres.
The optimal combination of flame retardant fibre coating and flame-inhibiting stabilizing elements ensures enhanced functional integrity (System Circuit Integrity) in case of fire for 30 minutes.

Application

Safety applications in tunnels, underground railways, banks, insurance companies, large-scale industry, LAN backbones.
Indoor and outdoor cabling.
Can be installed in cable platforms, trays, ducts and vertical shafts.
Can be spliced in fibre optic distribution housings.

Installation spacing

Datwyler fastener	horizontal	vertical	
Strap clamp on profile rail	60 cm		
Cable support systems also without threaded rod	dependent on manufacturer		
Wire mesh cable tray	≤ 300 mm	1.20 m	maximum 10 kg/m
Tray	≤ 300 mm	1.20 m	maximum 10 kg/m

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