

RoHS
compliant ✓



General information

Design	Hybrid connector for Ethernet communication and power supply
Product standard	IEC 61076-3-106 (Variant 5)
No. of contacts	8 + 4 (2x4 for Ethernet + 4x power)
Transmission rate	10 / 100 Mbit/s and 1 / 2,5 / 5 / 10 Gbit/s
Transmission performance	Category 6/6A / Class EA up to 500 MHz acc. to ISO/IEC 11801:2002, EN 50173-1
Shielding	Fully shielded, 360° shielding contact
Degree of protection	IP65/67
Mating cycles	Min. 500
UL certification	E 102079
RoHS – complainant	yes
Lead free	yes

Cable specification and termination details for the plug side

Cable diameter (plug)	6 to 12 mm
-----------------------	------------

Ethernet

— IDC types (Cat. 6)

Conductor cross section	AWG 27 to AWG 22 (solid and stranded)
Conductor diameter	Max. 1,6 mm

Piercing types (Cat. 6A)

Conductor cross section	AWG 28/7 to AWG 24/7 (stranded)
Conductor diameter	Max. 1,05 mm

Power

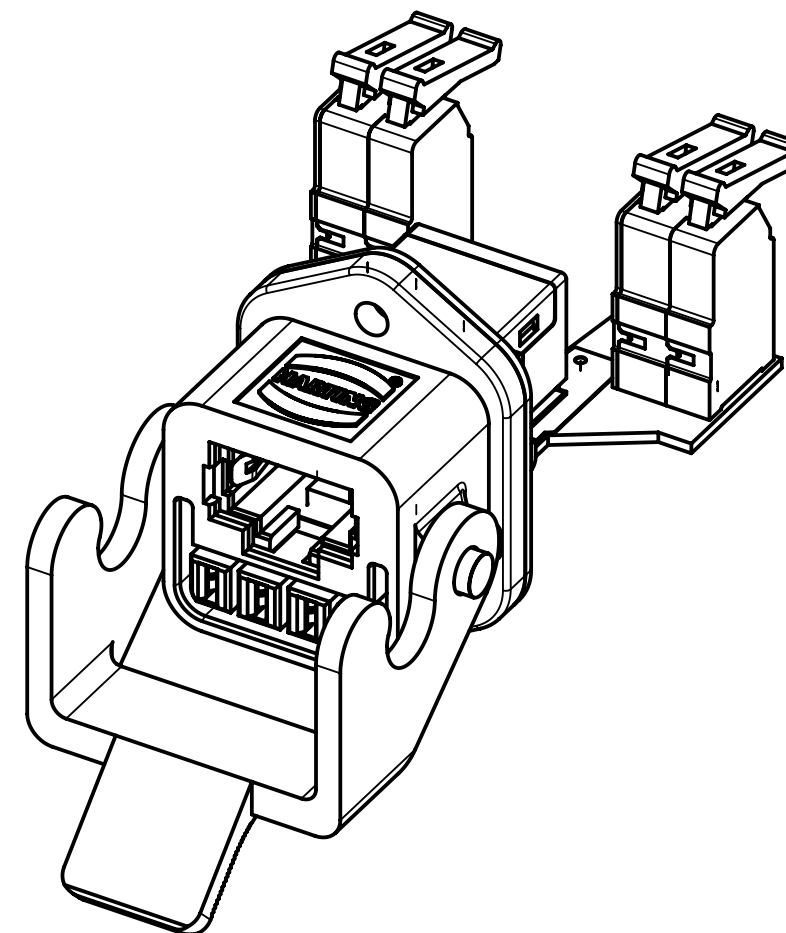
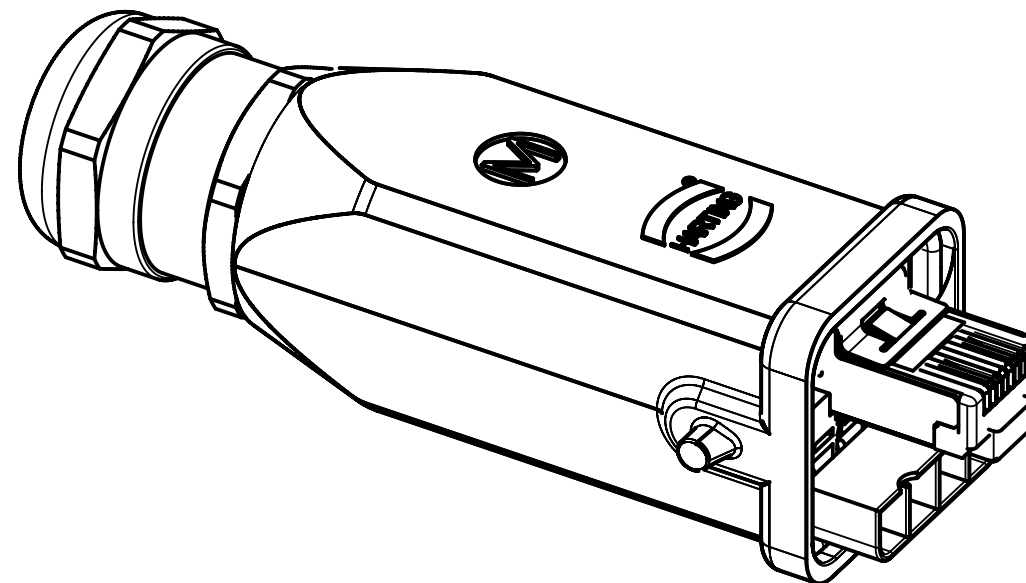
Power	IDC contacts 4x 1.5 mm ² (stranded)
-------	--

Panel feed-through

Mating interface extern:	RJ45 acc. to IEC 60603-7 for Ethernet and 4 power contacts
Mating interface intern:	RJ45 acc. to IEC 60603-7 for Ethernet and 4 PCB terminals

Power

Conductor cross section PCB terminal	0,5 to 2,5mm ² (solid and stranded)
--------------------------------------	--



All Dimensions in mm
Original Size DIN A3

Scale
1:1

Free size tol.	
----------------	--

	Ref.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Sub. DS 21 03 520 10 01 / EC04876 / 13.04.2010



All rights reserved

Department FC PD - R0

Created by
DRAGHICI

Inspected by
AVRAM

Standardisation
HOFFMANN

Date
2017-05-03

State
Final Release

Title	Han® 3A RJ45 Hybrid Cat6
-------	--------------------------

Doc-Key / ECM-Nr.
100637182/UGD/000/A
500000109451

HARTING Electronics GmbH

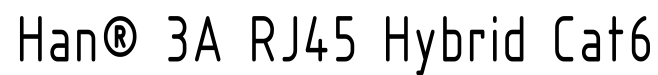
D-32339 Espelkamp

Type DS

Number	09452251760
--------	-------------

Rev. A

Page 1/3



RoHS
compliant ✓

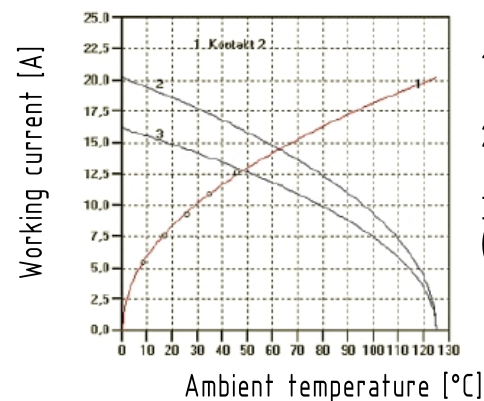


RJ45 Ethernet connection

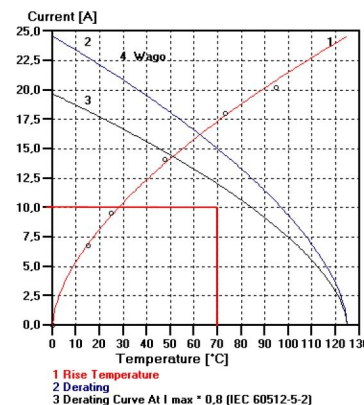
Rated current	1,5 A (all pins) values at 20°C
Rated voltage	50 V AC / 60 V DC
Contact Resistance	RJ45 Signal: $\Delta RD \leq 20 \text{ m}\Omega$ / RJ45 Shielding: $RD \leq 100 \text{ m}\Omega$ / Power: $\Delta RD \leq 4 \text{ m}\Omega$
Insulation Resistance	500 M Ω min. (500 V DC)
Voltage Proof	Contact / Contact: 1kV dc or ac peak; Contact / Test panel: 1.5kV dc or ac peak
Mechanical operation with electrical load (IEC 60512 – test 9c)	Unmating under electrical load with: 1,2 A / 50 V 50 cycles for each polarity
PoE	PoE IEEE 802.3af PoE+ IEEE 802.3at 4PPoE IEEE 802.3bt

Rated voltage	48 V / DC
Rated current	16 A

Current-carrying capacity	1,76 A @ 0°C
---------------------------	--------------



- 1 Temperature rise
- 2 Derating
- 3 Derating curve at $I_{max} \cdot 0.8$
(DIN IEC 512)

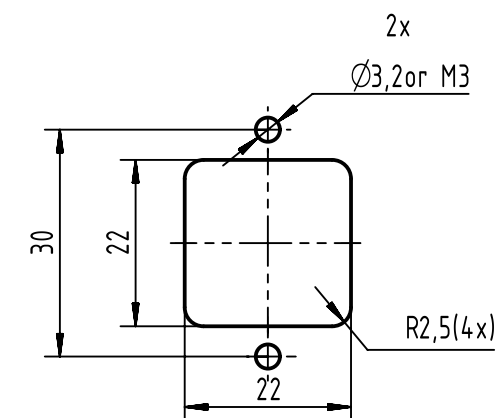


Insertion force	30 N max
Withdrawal force	30 N max
Mechanical Operation	500 times insertions and extractions / mating speed: 10 mm/s max. / rest: 5s, min.(unmated)
Lock Strength	Min. 100 N (for the mating axis direction in state in fitted with applicable connector)
Wrenching Strength	Applying 25times of 30 N 1 s for 2 axis direction on tip of plug case in state in fitted with applicable connector

Storage temperature range	-40°C to +70°C (95% RH max.)
Operating temperature range	-40°C to +70°C (95% RH max.)
Rapid change of temperature (IEC 60512-11d)	10 cycles between -55°C and 85°C with 30 minutes dwell at temp. extremes and 1 minute transition between temperatures
Dry heat (IEC 60512-11i)	Temperature 70°C, duration 5d
Damp heat cyclic (IEC 60068-2-38)	25°C to 65°C; cold sub-cycle - 10°C; humidity 93 % RH 25 cycles, 1 cycle/24 h
Cold (IEC 60512-11j)	-40°C duration 2h

Flow mixed gas test (IEC 60068-2-60)	Duration 4 d, Method 4 (mated and unmated)
Corrosion salt mist	Exposed at 5 % salt water, 35 ± 2°C, duration 48 h (left under unmated condition.)
Vibration Sinusoidal (IEC 60512-test 6d)	10 – 500 Hz; 0.35 mm; 49 m/s ² / 2 h / 3 axis / No contact disturbances ≥ 1 µs
Mechanical shock (IEC 60512-test 6c)	Half sine shock 300 m/s ² , duration 11 ms / 3 shocks / both directions / 3 axis – totally 18 shocks / No contact disturbances ≥ 1 µ
Mechanical shock (DIN EN 61373 Class 1 cat b) / Additional test to fulfill DIN EN 50155 for railway equipment	Half sine shock 5 g, duration 30 ms / 5 shocks / both directions / 3 axis – totally 30 shocks / No contact disturbances ≥ 1 µs
Random vibration	Class 1 cat b
(DIN EN 61373 Class 1 cat b)	5,72 m/s ²
Additional test to fulfill DIN EN 50155 for railway equipment	No contact disturbances ≥ 1 µs

Recommended panel cut out



Maximal panel thickness	9 mm
Material specification	
Housing material	Depending on type zinc die cast or plastic

Material	Isolation body PA / Plug hood PC
Color	Depending on type black or gray
UL classification	UL94 V-0

Contact material	Copper alloy (0.3mm thickness alloy C5210)
Plating contact area	Gold plating (15 μm) over Ni (min. 1,27 μm)
Plating solder area	Tin plating over Ni (min. 1,27 μm)

Material	Copper alloy
Plating	Nickel plated



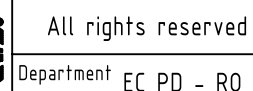
All Dimensions in mm
Original Size DIN A3

Scale
1:1

Free size tol.

Ref.

Sub. DS 21 03 520 10 01 / EC04876 / 13.04.2010



Created by
DRAGHICI

Inspected by
AVRAM

Standardisation
HOFFMANN

Date
2017-05-03

State
Final Release

Title	Han® 3A RJ45 Hybrid Cat6
-------	--------------------------

Doc-Key / ECM-Nr.
100637182/UGD/000/A
500000109451

HARTING Electronics GmbH

D-32339 Espelkamp

Type DS

Number 09452251760

Rev. A

Page 2/3

1	2	3	4	5	6	7	8
A							

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

HARTING:

[09451251760](#) [09451151760](#) [09451251720](#) [09451151720](#) [09451001760](#) [09452151765](#) [09452151760](#)
[09452151761](#) [09452251760](#) [09451001720](#)