









Pushing Performance



HARTING Smart Network Infrastructure Selection Guide

Selection Guide – In just a few steps to a complete network



With this selection guide you get an easy tool, which supports you in designing your Automation IT network quick, reliable and suitable for your requirements. In the topic Automation IT, HARTING is bundling their activities and products for passive and active network infrastructure for Industrial-Applications.

Ethernet Network Components	
INSTALLATION CLASS	PROFILE
Ha-VIS eCon 	 Ethernet IEEE 802.3
Ha-VIS sCon 	
Ha-VIS mCon 	
Ha-VIS pCon 	

The concept of the selection guide is splitted in the partition for Ethernet switches and Ethernet cabling. In the part switching you will find the split in Function-classes, Installation classes, that represents the protection class, and profile specific characteristics for the individual application field.

Ethernet Cabling is divided in profile specific solutions, which is designed as 4-wire solution for 100 MBit / s (Fast Ethernet) applications and 8-wire solutions for Gigabit Ethernet applications and further services. This application follows the standard for structured cabling. HARTING offers a variety of optimized components for different application fields, which combined together show an optimized solution for an industrial network.

The typical application areas for Industrial switching range from Machinery and Automation applications over

Ethernet Cabling	
ETHERNET CABLING	
Fast Ethernet 100 Mbit / s 4-pin	Inside Outside 
Gigabit Ethernet 1000 Mbit / s 8-pin	Inside Outside 

networks in renewable Energy applications (Wind and Solar) to applications in the Transportation Industry like rail, ship and signalling.

Structured in logical planning steps, you will guided in very short time to the right components for a reliable and save Industrial network. The combination of the individual components will lead you to a suitable network system.

HARTING Connectivity & Networks develop innovations for all three livelines of the Industry: Data, Signal and Power.

The Triad consisting out of Installation Technology, Device Connectivity and Smart Network Infrastructure support the customers with focus on Industrial applications worldwide with individual and future oriented solutions.

Ethernet Network Components

FUNCTION CLASS	INSTALLATION CLASS	SWITCHES										APPLICATION									
Ha-VIS eCon unmanaged	Inside IP 30 Protection Class	eCon 2000 · 3 / 4 / 5 / 16 Copper ports (RJ45) · Robust metal housing · Top-Hat rail mount · Optimum installation depth	1		eCon 2030-A 3 RJ45	2		eCon 2040-A 4 RJ45	3		eCon 2050-A 5 RJ45	4		eCon 2050-AA 5 RJ45 Full Gigabit	5		eCon 2160-A 16 RJ45	Ethernet IEEE 802.3			
																				6	
	WITHOUT F.O.	7		eCon 3080 -A1 8 RJ45	F.O.	9		eCon 3061-AE 6 RJ45, 1 ST	CONVERTER	11		eCon 3062-AE 6 RJ45, 2 ST									
	Inside IP 30 / IP 40 Protection Class	eCon 4000 · 8 Copper ports (M12 D-coding) · Robust metal housing · EMC, temperature range and mechanical stability meet the highest requirements	14		eCon 4080-B1 8 M12 D-coding	15		eCon 4080-B3 8 M12 D-coding 110 V DC power input	16		eCon 4080-BPoE1 8 M12 D-coding PoE on 8 ports	eCon 9000 · 7 - 8 Copper ports M12 D-coding · Robust metal housing · 19" rack mount · Small form-factor	17		eCon 9080-B1 8 M12, D-coding	18				eCon 9070-B 7 M12 D-coding Power input on the front	Ethernet IEEE 802.3
Outside IP 65 / IP 67 Protection Class	eCon 7000 · 5 / 10 Copper ports (Han® 3 A RJ45 or M12 D-coding) · Robust die-cast zinc housing · EMC, temperature range and mechanical stability meet the highest requirements	19		eCon 7050-A1 5 Han® 3 A RJ45 wide power input range	20		eCon 7050-B1 5 M12 D-coding wide power input range	21		eCon 7100-B1 10 M12 D-coding	22		eCon 7100-AA 8 Han® 3 A RJ45 2 Han® 3 A RJ45 Gigabit	Ethernet IEEE 802.3							
Ha-VIS sCon configurable	Inside IP 30 Protection Class	sCon 3000 · 6 / 8 / 10 Copper ports (RJ45) and optionally 2 / 3 F.O. ports (SC) · Robust metal housing · Parallel- / ring-redundancy · Top-Hat rail mounting · Potential-free alarm contact	23		sCon 3100-A 10 RJ45	24		sCon 3100-AA 8 RJ45 2 RJ45 Gigabit	25		sCon 3082-AD 8 RJ45, 2 SC	26		sCon 3063-AD 6 RJ45, 3 SC	Ethernet IEEE 802.3						
Ha-VIS Fast Track Switching	Inside IP 30 Protection Class	FTS 3000 · 6 / 8 / 10 Copper ports (RJ45) and optionally 2 SFP modules · Robust metal housing · Top-Hat rail mounting · Web-management · Fast Track Switching Technology	27		FTS 3100s-A 10 RJ45	28		FTS 3060-A 6 RJ45	29		FTS 3100-A 10 RJ45	30		FTS 3082-ASFP 8 RJ45 2 SFP module slots	Ethernet IEEE 802.3						
Ha-VIS mCon managed	Inside IP 30 Protection Class	mCon 3000 · Copper ports (RJ45); F.O. ports (SC / ST / SFP); Gigabit Uplink · Small, robust metal housing, · extended temperature range · Top-Hat rail mounting · Full managed via Web Interface and SNMP · Fanless Low-Power-Design	31		mCon 3080-A 8 RJ45	33		mCon 3100-AAV 8 RJ45 2 RJ45 Gigabit	35		mCon 3082-ADV / AFV 8 RJ45, 2 SC Multi Mode (ADV) Single Mode (AFV)	37		mCon 3082-AEV 8 RJ45, 2 ST	Ethernet IEEE 802.3						
																	32		mCon 3102-AASFP 8 RJ45, 2 RJ45 Gigabit, 2 SFP Gigabit, Combo	34	
	Inside IP 30 / IP 40 Protection Class	mCon 4000 · 8 Copper ports (M12 D-coding) · Robust metal housing · EMC, temperature range and mechanical stability meet the highest requirements · Web management	39		mCon 4080-B1V 8 M12 D-coding	40		mCon 4080-B3V 8 M12 D-coding, 110 V DC power input	41		mCon 4080-BPoE1V 8 M12 D-coding, PoE on 8 ports	mCon 9000 · 7 - 8 Copper ports D-coding · Robust metal housing · 19" rack mount · Small form-factor	42				mCon 9080-BV 8 M12 · D-coding	43		mCon 9070-BV 7 M12 · D-coding Power input on the front	Ethernet IEEE 802.3
Outside IP 65 / IP 67 Protection Class	mCon 7000 · 5 / 10 Copper ports (Han® 3 A RJ45 or M12 D-coding) · Robust die-cast zinc housing · EMC, temperature range and mechanical stability meet the highest requirements · Web management	44		mCon 7050-B1V 5 M12 D-coding, wide power input range	45		mCon 7100-B1V 10 M12 D-coding	46		mCon 7100-AAV 8 Han® 3 A RJ45, 2 Han® 3 A RJ45 Gigabit	Ethernet IEEE 802.3										
Ha-VIS pCon	Industrial DC / DC Converter 24 V / 48 V	IP 20 / IP 65 Protection Class	pCon 7000 · DC / DC Converter · Operating temperature: -40 °C ... +70 °C	47		pCon 7060-110 / 24 110 V DC / 24 V DC, IP 20 Protection Class	48		pCon 7150-110 / 48 110 V DC / 48 V DC, IP 65 Protection Class	49		pCon 7150-DC-24 / 48 24 V DC / 48 V DC, IP 65 Protection Class									

Ethernet Cabling

FUNCTION CLASS	INSTALLATION CLASS	CONNECTORS	SYSTEM CABLE	OUTLETS AND PANEL FEED-THROUGH	CABLES
Fast Ethernet 100Mbit/s 4-pin	Inside IP 20 Protection Class	<p>50 HARTING RJ Industrial® RJ45 Connector, 4-pin, IP 20, RJ45, Cat. 5</p> 	<p>51 HARTING RJ Industrial® System Cable RJ45, 4-wire, assembled / overmoulded, IP 20, Cat. 5, AWG 22</p> 	<p>53 HARTING Cabinet Outlet RJ45, IP 20, Cat. 6</p> <p>54 HARTING RJ Industrial® 10G RJ45 Coupling, IP 20, Cat. 6</p> 	<p>Type A (for fixed layouts)</p>  <p>68 Industrial Cat. 5 Standard Cable, 4-wire, AWG 22 / 1, solid, PVC</p>
	Outside IP 65 / IP 67 Protection Class	<p>55 HARAX® M12 Connector, D-coding, 4-pin, IP 65 / IP 67, Cat. 5</p> <p>56 Han® M12 Connector D-coding, 4-pin, IP 65 / IP 67, Cat. 5</p> 	<p>57 Han® M12 D-coding System Cable, 4-wire, IP 65 / IP 67, Cat. 5, AWG 22</p> <p>58 Han® M12 D-coding to RJ45, System Cable, 4-wire, IP 65 / IP 67, Cat. 5, AWG 22</p> <p>59 Han® M12 System Cable D-coding, 4-wire, suitable for railways, IP 65 / IP 67 Cat. 5, AWG 22</p> 	<p>60 Han® M12 Panel feed-through, D-coding,</p> <p>61 IP 65 / IP 67, Cat. 5, straight or angled</p> 	<p>Type B (for flexible layouts)</p>  <p>69 Industrial Cat. 5 Stranded Cable, 4-wire, AWG 22 / 7, stranded, PVC</p> <p>70 Industrial Cat. 5 Outdoor Cable, 4-wire, AWG 22 / 7, stranded, PVC</p>
		<p>62 Han® 3 A Connector RJ45, 4-pin, plastic or metal IP 65 / IP 67, Cat. 5</p> <p>63</p> 	<p>64 Han® 3 A RJ45 System, Cable, 4-wire, IP 65 / IP 67, Cat. 5, AWG 22</p> 	<p>65 Han® 3 A RJ45 Panel feed-through IP 65 / IP 67, Cat. 5</p> <p>66 Han® 3 A RJ45 Metal Outlet IP 65 / IP 67, Cat. 5</p> <p>67 Han® 3 A RJ45 Metal Outlet IP 65 / IP 67, Cat. 6</p> 	<p>Type C (for special applications)</p>  <p>71 Industrial Cat. 5 Trailing Cable, 4-wire, AWG 22 / 7, stranded, PUR</p> <p>72 Profinet Cat. 5 Torsional Stress cable, 4-wire, PUR AWG 22 / 19, flexible, PUR</p>
Gigabit Ethernet 1000 Mbit/s 8-pin	Inside IP 20 Protection Class	<p>73 HARTING RJ Industrial® 10G RJ45, Connector, 8-pin, IP 20, RJ45, Cat. 6</p> 	<p>74 HARTING RJ Industrial® RJ45 System Cable, 4-wire, IP 20, Cat. 6, flexible</p> <p>75 Industrial Ethernet RJ45 Patch Cable, 8-wire, IP 20, Cat. 6, AWG 26 / 7</p> <p>76 Industrial Ethernet RJ45 Patch Cable, 8-wire, IP 20, Cat. 5, AWG 26 / 7</p> 	<p>77 HARTING Cabinet Outlet RJ45, IP 20, Cat. 6</p> <p>78 HARTING RJ Industrial® 10G RJ45 Coupling, IP 20, Cat. 6</p> 	<p>Cat. 5 Cable</p>  <p>85 Industrial Cat. 5 Stranded Cable, 8-wire, AWG 26 / 7, stranded, PUR</p> <p>86 Industrial Cat. 5 Trailing Cable, 8-wire, AWG 26 / 19, PUR</p>
	Outside IP 65 / IP 67 Protection Class	<p>79 Han® 3 A Connector RJ45, 8-pin, plastic or metal IP 65 / IP 67, Cat. 6</p> <p>80</p> 	<p>81 Han® 3 A RJ45 System Cable, 8-wire, P 65 / IP 67, Cat. 6, flexible</p> 	<p>82 Han® 3 A RJ45 Panel feed-through IP 65 / IP 67, Cat. 6</p> <p>83 Han® 3 A RJ45 Metal Outlet IP 65 / IP 67, Cat. 5</p> <p>84 Han® 3 A RJ45 Metal Outlet IP 65 / IP 67, Cat. 6</p> 	 <p>87 Industrial Cat. 6_A Stranded Cable, 8-wire, AWG 26 / 7, stranded PVC or PUR</p> <p>88 Industrial Cat. 7 Installation Cable, 8-wire, Installation AWG 23 / 1, solid, PUR</p>
Fibre optic	Inside IP 65 / IP 67 Protection Class	<p>89 Fiber Optic Jumper Cord Multi Mode 50 / 125 µm, ST Duplex</p> 	<p>90 Fiber Optic Jumper Cord Multi Mode 50 / 125 µm, SC Duplex</p> 	<p>91 Fiber Optic Jumper Cord Multi Mode 50 / 125 µm LC Duplex</p> 	 <p>Drawing Multi-Mode</p>
		<p>92 Fiber Optic Jumper Cord Single Mode 9 / 125 µm, SC Duplex</p> 	<p>93 Fiber Optic Jumper Cord Single Mode 9 / 125 µm, LC Duplex</p> 	 <p>Drawing Single-Mode</p>	

¹⁾ preferred types ²⁾ railway approved

Ethernet Network Components				
		SWITCHES	TERMINATION PORTS	PART NUMBER
Ha-VIS eCon unmanaged	1	eCon 2030-A	3 RJ45	20 76 103 3000
	2	eCon 2040-A	4 RJ45	20 76 104 3000
	3	eCon 2050-A	5 RJ45	20 76 105 3000
	4	eCon 2050-AA	5 RJ45 Gigabit	20 76 105 3001
	5	eCon 2160-A	16 RJ45	20 76 116 3000
	6	eCon 3080-A	8 RJ45	20 76 108 3000
		- eCon 3080-A2	8 RJ45	20 76 108 3002
		- eCon 3080-A4	8 RJ45	20 76 108 3004
	7	eCon 3080-A1	8 RJ45	20 76 108 3001
	8	eCon 3061-AD	6 RJ45 + 1 SC	20 76 107 3100
	9	eCon 3061-AE	6 RJ45 + 1 ST	20 76 107 3200
	10	eCon 3062-AD	6 RJ45 + 2 SC	20 76 108 3100
		- eCon 3062-AD2	6 RJ45 + 2 SC	20 76 108 3102
		- eCon 3062-AF	6 RJ45 + 2 SC	20 76 108 3103
	11	eCon 3062-AE	6 RJ45 + 2 ST	20 76 108 3200
	12	eCon 3011-AD	1 RJ45 + 1 SC	20 76 102 3100
	13	eCon 3011-ASFP	1 RJ45 + 1 SFP module slot	20 76 102 3101
	14	eCon 4080-B1	8 M12 D-coding	20 77 208 3001
	15	eCon 4080-B3	8 M12 D-coding (110 V DC)	20 77 208 3003
	16	eCon 4080-BPoE1	8 M12 D-coding with PoE	20 77 208 3009
	17	eCon 9080-B1	8 M12 D-coding	20 76 208 7003
	18	eCon 9070-B	7 M12 D-coding	20 76 207 7000
19	eCon 7050-A1	5 Han® 3 A RJ45	20 70 305 3923	
20	eCon 7050-B1	5 M12 D-coding	20 70 305 3943	
21	eCon 7100-B1	10 M12 D-coding	20 70 310 3942	
22	eCon 7100-AA	8 RJ45 + 2 RJ45 Gigabit	20 70 310 3924	
Ha-VIS sCon configurable	23	sCon 3100-A	10 RJ45	20 76 110 1000
	24	sCon 3100-AA	8 RJ45 + 2 RJ45 Gigabit	20 76 110 1001
	25	sCon 3082-AD	8 RJ45 + 2 SC	20 76 110 1100
	26	sCon 3063-AD	6 RJ45 + 3 SC	20 76 109 1100
Ha-VIS Fast Track Switching	27	FTS 3100s-A	10 RJ45	20 78 110 1000
	28	FTS 3060-A	6 RJ45	20 78 106 4000
	29	FTS 3100-A	10 RJ45	20 78 110 4000
	30	FTS 3082-ASFP	8 RJ45 + 2 SFP module slot	20 78 110 4300
Ha-VIS mCon managed	31	mCon 3080-A	8 RJ45	20 76 108 4000
	32	mCon 3102-AASFP	10 RJ45 + 2 SFP module slot	20 76 112 4300
	33	mCon 3100-AAV	8 RJ45 + 2 RJ45 Gigabit	20 76 110 4003
	34	mCon 3100-AV	10 RJ45	20 76 110 4002
	35	mCon 3082-ADV	8 RJ45 + 2 SC	20 76 110 4101
		- mCon 3082-AFV	8 RJ45 + 2 SC	20 76 110 4102
	36	mCon 3063-ADV	6 RJ45 + 3 SC	20 76 109 4101
	37	mCon 3082-AEV	8 RJ45 + 2 ST	20 76 110 4201
	38	mCon 3063-AEV	6 RJ45 + 3 ST	20 76 109 4201
	39	mCon 4080-B1V	8 M12 D-coding	20 77 208 4001
	40	mCon 4080-B3V	8 M12 D-coding (110 V DC)	20 77 208 4003
	41	mCon 4080-BPoE1V	8 M12 D-coding with PoE	20 77 208 4009
	42	mCon 9080-B1V	8 M12 D-coding	20 76 208 7002
	43	mCon 9070-B1	7 M12 D-coding	20 76 207 7002
	44	mCon 7050-B1V	5 M12 D-coding	20 70 305 4943
	45	mCon 7100-B1V	10 M12 D-coding	20 70 310 4945
46	mCon 7100-AAV	8 RJ45 + 2 RJ45 Gigabit	20 70 310 4924	
Ha-VIS pCon	47	pCon 7060-110 / 24	110 V DC / 24 V DC	20 80 300 3025
	48	pCon 7150-110 / 48	110 V DC / 48 V DC	20 80 300 3026
	49	pCon 7150 DC-24 / 48	24 V DC / 48 V DC	20 80 300 3027

Ethernet Cabling				
		ETHERNET CABLING	PART NUMBER	
Fast Ethernet 100 Mbit / s 4-pin	50	HARTING RJ Industrial® RJ45 Connector	09 45 151 1100	
	51	HARTING RJ Industrial® RJ45 System cable, assembl.	09 45 751 11xx*	
	52	HARTING RJ Industrial® System cable RJ45, overm.w	09 45 771 11xx*	
	53	HARTING Cabinet Outlet RJ45	20 76 102 8000	
	54	HARTING RJ Industrial® 10G RJ45 Coupling	09 45 545 1560	
	55	HARAX® M12 Connector D-coding	21 03 281 1405	
	56	Han® M12 Connector D-coding	21 03 485 xxxx	
	57	Han® M12 System cable D-coding	21 03 485 14xx*	
	58	Han® M12 System cable D-coding to RJ45	09 45 700 50xx*	
	59	Han® M12 System cable D-coding, suitable for railway	09 47 222 2xxx*	
	60	Han® M12 Panel feed-through D-coding, straight	21 03 381 2400	
	61	Han® M12 Panel feed-through D-coding, angled	21 03 381 4400	
	62	Han® 3 A RJ45 Connector, plastic	09 45 125 1100	
	63	Han® 3 A RJ45 Connector, metal	09 45 115 1100	
	64	Han® 3 A System cable RJ45	09 45 715 11xx*	
	65	Han® 3 A RJ45 Panel feed-through, metal	09 45 215 1100	
	66	Han® 3 A RJ45 Metal Outlet, Cat. 5	09 45 815 1100	
	67	Han® 3 A RJ45 Metal Outlet, Cat. 6	20 79 302 0922	
	68	Industrial Cat. 5 Standard cable	09 45 600 01x0*	
	69	Industrial Cat. 5 stranded cable	09 45 600 01x2*	
	70	Industrial Cat. 5 Outdoor cable	09 45 600 01x5*	
	71	Industrial Cat. 5 Trailing cable	09 45 600 01x1*	
72	Profinet Kat. 5 Torsional stress cable	09 45 600 11x0*		
Gigabit Ethernet 1000 Mbit / s 8-pin	73	HARTING RJ Industrial® 10G RJ45 Connector	09 45 151 1560	
	74	HARTING RJ Industrial® System cable RJ45, Cat. 6	09 45 751 15xx*	
	75	HARTING RJ Industrial® Eth. Patch cable RJ45, Cat. 6	09 47 474 71xx*	
	76	HARTING RJ Industrial® Eth. Patch cable RJ45, Cat. 5	09 47 474 70xx*	
	77	HARTING Cabinet Outlet RJ45	20 76 102 8000	
	78	HARTING RJ Industrial® 10G RJ45 Coupling	09 45 545 1560	
	79	Han® 3 A RJ45 Connector, plastic	09 45 125 15x0*	
	80	Han® 3 A RJ45 Connector, metal	09 45 115 15x0*	
	81	Han® 3 A flexibles System cable RJ45	09 45 715 15xx*	
	82	Han® 3 A RJ45 Panel feed-through, metal	09 45 215 1560	
	83	Han® 3 A RJ45 Metal Outlet, Cat. 5	09 45 815 1100	
	84	Han® 3 A RJ45 Metal Outlet, Cat. 6	20 79 302 0922	
	85	Industrial Cat. 5 stranded cable	09 45 600 04x0*	
	86	Industrial Cat. 5 Trailing cable	09 45 600 01x6*	
	87	Industrial Cat. 6 _A stranded cable	09 45 600 06x0*	
	88	Industrial Cat. 7 Installation cable	09 45 600 06xx *	
Fibre optic	89	Fiber Optic Jumper Cord, MM, ST Duplex	33 01 241xxx0007*	
	90	Fiber Optic Jumper Cord, MM, SC Duplex	33 01 241xxx0006*	
	91	Fiber Optic Jumper Cord, MM, LC Duplex	33 01 241xxx0005*	
	92	Fiber Optic Jumper Cord, SM, SC Duplex	33 01 241xxx0009*	
	93	Fiber Optic Jumper Cord, SM, LC Duplex	33 01 241xxx0008*	



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