CONSTRUCTION | INSTRUMENTATION CABLES

INFORM@X®

Application

The INFORM@X® P50 – 56 range of cables are designed for the interconnection of electrical instruments, monitoring and control equipment within industrial systems and processing plants.

Typical uses include
Supervisory Control And Data Acquisition (SCADA) systems, electrical sensing devices, field bus RS 485 and RS 422 data links, control cabinets to supervisory consoles, electrical measuring devices, Resistance Temperature Detectors (RTD) and many other supervisory applications.

Typical wiring systems will use multi-pair cables to connect control room equipment to panels in field junction boxes. Single pair cables are used to connect junction boxes to field devices.

INFORM@X *P50 – 56 cables are suitable for use where it is necessary to provide:*

- Protection from Interference to the transmission signal from other electrical circuits.
- Prevention from physical damage to the cable (achieved by screens and steel wire armour, where applicable).
- Intrinsically safe cables (coloured blue).

Approvals

AS/CA S008
These cables are not to be regarded as power cables for mains power supplies.

Behaviour in flame and fire:

Flame Propagation to AS/NZS 1660.5.6

Temperature range

Minimum installation temperature: 0 °C
Maximum operating temperature: +75 °C
Minimum operating temperature: -25 °C

Minimum bending radius

Installed cables: refer to data tables.

Resistance to

Chemical exposure: Occasional
Mechanical impact: Light
Water exposure: Spray
Solar radiation and weather exposure: Occasional

Cable design

Conductor:
Plain copper wire
P50/P53 – 0.5 mm^2 (7/0.3 mm), 20 AWG
P51/P55/P56 – 1.5 mm^2 (7/0.5 mm), 16 AWG

Insulation:
V-90HT PVC

Construction:
P50/P55 - Multi-pair; black and white numbered cores
P53/P56 - Multi-triple; black, white & red numbered cores
P51 - Single pair or triple, colours as above

Sheath:
5V-90 PVC
Colours: Black, Blue on request.

Screen:
Aluminium/Polyester tape with a 7/0.25 mm tinned copper drain wire.

Armour (optional):
Galvanised mild steel wire.
(Add SWA to the product code).

Communication wire (optional):
A 7/0.25 mm central communication wire.

Physical & electrical characteristics

INFORM@X® P50 – Overall Screen (CS)

Product code	Pairs 0.5 mm²	Nominal O.D		Min. bending radius		Max. pulling tension		Approx. mass	
		Plain mm	SWA mm	Plain mm	SWA mm	Plain N	SWA N	Plain kg/km	SWA kg/km
P5001CS	1	6.8	–	41	82	70	–	55	–
P5002CS	2	10.3	14.4	62	173	140	1030	121	344
P5004CS	4	11.8	16.6	71	200	280	1380	162	516
P5006CS	6	14.0	18.8	84	226	420	1780	196	631
P5008CS	8	14.4	19.3	87	231	560	1850	256	679
P5010CS	10	17.5	23.1	105	277	700	2670	304	972
P5012CS	12	18.0	23.6	108	284	840	2790	344	1031
P5016CS	16	19.9	25.6	120	307	1120	3270	431	1178
P5020CS	20	22.1	27.7	132	332	1400	3840	519	1343
P5024CS	24	25.0	30.6	150	367	1680	4690	634	1544
P5036CS	36	28.5	35.0	171	420	2520	6110	882	2153

INFORM@X® P50 – Individual and Overall Screened (ES/CS)

Product code	Pairs 0.5 mm²	Nominal O.D		Min. bending radius		Max. pulling tension		Approx. mass	
		Plain mm	SWA mm	Plain mm	SWA mm	Plain N	SWA N	Plain kg/km	SWA kg/km
P5001ESCS	1	–	–	–	–	–	–	–	–
P5002ESCS	2	11.5	15.6	69	187	140	1220	146	391
P5004ESCS	4	13.3	18.1	80	218	280	1640	200	598
P5006ESCS	6	16.4	21.4	98	256	420	2280	266	772
P5008ESCS	8	16.8	21.7	101	261	560	2360	312	831
P5010ESCS	10	19.7	25.3	118	304	700	3200	384	1129
P5012ESCS	12	20.3	25.9	122	311	840	3370	437	1203
P5016ESCS	16	22.5	28.2	135	338	1120	3970	551	1393
P5020ESCS	20	25.4	31.1	153	373	1400	4830	691	1618
P5024ESCS	24	28.3	34.7	170	417	1680	6040	814	2084
P5036ESCS	36	32.4	39.3	194	471	2520	7720	1141	2626

GENERAL INFORMATION

Core: An insulated wire. The cable core is formed by assembling the required number of wires or elements together.

Pair: Two cores twisted together (white & black).

Triple: Three cores twisted together (red, white and black).

Element: An element consists of a pair (or triple) formed by twisting the wires together. Elements are twisted with different twist lengths to reduce interference between them.

Drain wire: A bare tinned copper wire.

Screen: A metallic covering which may be applied over an element or a cabled assembly.

Sheath: An extruded covering of either PVC or LSOH material.

Individual Screened (ES – Element Screened):
Each element having a drain wire and screen applied.

Overall Screened (CS – Composite Screen):
A cable where each element is unscreened but a drain wire and screen is applied over the laid up elements.

Individual and Overall Screened (ES/CS – Element Screened/Composite Screened):
Each element is screened and an overall screen is applied over the laid up assembly.

Armour (SWA – Steel Wire Armour):
Mechanical protection can be provided by the application of galvanised steel wires.

Physical & electrical characteristics

INFORM@X® P51 – Overall Screened (CS)

Product code	Pairs 1.5 mm²	Nominal O.D		Min. bending radius		Max. pulling tension		Approx. mass	
		Plain mm	SWA mm	Plain mm	SWA mm	Plain N	SWA N	Plain kg/km	SWA kg/km
P5102CS	1	9.3	13.5	56	162	210	910	81	250

INFORM@X® P51 – Overall Screened (CS)

Product code	Triple 1.5 mm²	Nominal O.D		Min. bending radius		Max. pulling tension		Approx. mass	
		Plain mm	SWA mm	Plain mm	SWA mm	Plain N	SWA N	Plain kg/km	SWA kg/km
P5103CS	1	9.8	14.0	59	168	210	980	115	305

GENERAL INFORMATION

Core: An insulated wire. The cable core is formed by assembling the required number of wires or elements together.

Pair: Two cores twisted together (white & black).

Triple: Three cores twisted together (red, white and black).

Element: An element consists of a pair (or triple) formed by twisting the wires together. Elements are twisted with different twist lengths to reduce interference between them.

Drain wire: A bare tinned copper wire.

Screen: A metallic covering which may be applied over an element or a cabled assembly.

Sheath: An extruded covering of either PVC or LSOH material.

Individual Screened (ES – Element Screened):
Each element having a drain wire and screen applied.

Overall Screened (CS – Composite Screen):
A cable where each element is unscreened but a drain wire and screen is applied over the laid up elements.

Individual and Overall Screened (ES/CS – Element Screened/Composite Screened):
Each element is screened and an overall screen is applied over the laid up assembly.

Armour (SWA – Steel Wire Armour):
Mechanical protection can be provided by the application of galvanised steel wires.

Physical & electrical characteristics

INFORM@X® P53 – Overall Screened (CS)

Product code	Triples 0.5 mm²	Nominal O.D		Min. bending radius		Max. pulling tension		Approx. mass	
		Plain mm	SWA mm	Plain mm	SWA mm	Plain N	SWA N	Plain kg/km	SWA kg/km
P5302CS	2	11.6	16.4	69	197	210	1350	152	495
P5304CS	4	13.4	18.2	80	219	420	1660	212	610
P5306CS	6	16.5	21.5	99	258	630	2310	297	803
P5308CS	8	16.6	21.6	100	259	840	2330	334	841
P5310CS	10	19.5	25.1	117	301	1050	3160	412	1138
P5312CS	12	20.1	25.7	121	309	1260	3310	471	1233
P5316CS	16	22.3	28.0	134	335	1680	3910	596	1435
P5320CS	20	25.2	30.8	151	370	2100	4750	748	1671
P5324CS	24	28.0	34.5	168	413	2520	5940	883	2146
P5336CS	36	32.1	38.9	192	467	3780	7580	1249	2698

INFORM@X® P53 – Individual and Overall Screened (ES/CS)

Product code	Triples 0.5 mm²	Nominal O.D		Min. bending radius		Max. pulling tension		Approx. mass	
		Plain mm	SWA mm	Plain mm	SWA mm	Plain N	SWA N	Plain kg/km	SWA kg/km
P5302ESCS	2	12.6	17.4	76	209	210	1520	175	540
P5304ESCS	4	15.2	19.5	91	234	420	1900	266	680
P5306ESCS	6	18.1	23.7	109	285	630	2820	346	1034
P5308ESCS	8	18.6	24.2	112	291	840	2940	399	1105
P5310ESCS	10	21.9	27.5	131	330	1050	3780	490	1313
P5312ESCS	12	22.6	28.2	135	338	1260	3980	562	1405
P5316ESCS	16	25.5	31.2	153	374	1680	4860	739	1683
P5320ESCS	20	28.3	34.8	170	417	2100	6040	898	2168
P5324ESCS	24	31.6	38.5	189	461	2520	7390	1060	2513
P5336ESCS	36	36.2	43.1	217	517	3780	9280	1504	3140

GENERAL INFORMATION

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Pair: Two cores twisted together (white & black).

Triple: Three cores twisted together (red, white and black).

Element: An element consists of a pair (or triple) formed by twisting the wires together. Elements are twisted with different twist lengths to reduce interference between them.

Drain wire: A bare tinned copper wire.

Screen: A metallic covering which may be applied over an element or a cabled assembly.

Sheath: An extruded covering of either PVC or LSOH material.

Individual Screened (ES – Element Screened):
Each element having a drain wire and screen applied.

Overall Screened (CS – Composite Screen):
A cable where each element is unscreened but a drain wire and screen is applied over the laid up elements.

Individual and Overall Screened (ES/CS – Element Screened/Composite Screened):
Each element is screened and an overall screen is applied over the laid up assembly.

Armour (SWA – Steel Wire Armour):
Mechanical protection can be provided by the application of galvanised steel wires.

Physical & electrical characteristics

INFORM@X® P55 – Overall Screened (CS)

Product code	Pairs 1.5 mm²	Nominal O.D		Min. bending radius		Max. pulling tension		Approx. mass	
		Plain mm	SWA mm	Plain mm	SWA mm	Plain N	SWA N	Plain kg/km	SWA kg/km
P5502CS	2	12.4	17.3	75	207	420	1490	193	547
P5504CS	4	14.5	19.3	87	231	840	1860	272	686
P5506CS	6	17.9	23.5	107	282	1260	2760	373	1059
P5508CS	8	18.4	24.0	110	288	1680	2890	436	1141
P5510CS	10	21.6	27.2	130	327	2100	3710	536	1340
P5512CS	12	22.3	27.9	134	335	2520	3900	617	1458
P5516CS	16	25.0	30.6	150	368	3360	4690	817	1743
P5518CS	18	26.4	32.0	158	384	3780	5120	906	1870
P5520CS	20	27.7	34.2	166	410	4200	5830	996	2236
P5524CS	24	30.9	37.8	185	453	5040	7130	1178	2602
P5536CS	36	35.4	42.3	212	508	7560	8940	1679	3284

INFORM@X® P55 – Individual and Overall Screened (ES/CS)

Product code	Pairs 1.5 mm²	Nominal O.D		Min. bending radius		Max. pulling tension		Approx. mass	
		Plain mm	SWA mm	Plain mm	SWA mm	Plain N	SWA N	Plain kg/km	SWA kg/km
P5502ESCS	2	13.3	18.1	80	217	420	1640	215	589
P5504ESCS	4	16.7	21.6	100	260	840	2340	331	803
P5506ESCS	6	19.9	25.6	120	307	1260	3270	426	1173
P5508ESCS	8	20.4	26.1	123	313	1680	3400	501	1266
P5510ESCS	10	24.5	30.2	147	362	2100	4550	640	1546
P5512ESCS	12	25.3	31.0	152	372	2520	4800	736	1662
P5516ESCS	16	27.9	34.4	168	412	3360	5910	944	2187
P5518ESCS	18	29.5	35.9	177	431	3780	6450	1047	2374
P5520ESCS	20	31.0	37.9	186	455	4200	7180	1150	2575
P5524ESCS	24	34.6	41.5	208	498	5040	8610	1360	2935
P5502ESCS	36	40.2	46.7	241	560	7560	10880	1982	3729

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Armour (SWA – Steel Wire Armour):
Mechanical protection can be provided by the application of galvanised steel wires.

Physical & electrical characteristics

INFORM@X® P56 – Overall Screened (CS)

Product code	Triples 1.5 mm²	Nominal O.D		Min. bending radius		Max. pulling tension		Approx. mass	
		Plain mm	SWA mm	Plain mm	SWA mm	Plain N	SWA N	Plain kg/km	SWA kg/km
P5602CS	2	14.0	18.9	84	226	630	1780	250	635
P5604CS	4	16.9	21.9	102	262	1260	2390	391	869
P5606CS	6	20.2	25.9	121	310	1890	3350	514	1275
P5608CS	8	20.4	26.0	122	312	2520	3380	614	1374
P5610CS	10	24.4	30.1	147	361	3150	4520	782	1679
P5612CS	12	25.2	30.9	151	370	3780	4760	906	1821
P5616CS	16	28.0	34.5	168	414	5040	5940	1167	2421
P5618CS	18	29.6	36.0	178	432	5670	6490	1297	2610
P5620CS	20	31.1	38.0	187	456	6300	7230	1428	2837
P5624CS	24	34.8	41.6	209	500	7560	8670	1694	3250
P5636CS	36	40.4	46.8	242	562	11340	10960	2501	4243

INFORM@X® P56 – Individual and Overall Screened (ES/CS)

Product code	Triples 1.5 mm²	Nominal O.D		Min. bending radius		Max. pulling tension		Approx. mass	
		Plain mm	SWA mm	Plain mm	SWA mm	Plain N	SWA N	Plain kg/km	SWA kg/km
P5602ESCS	2	15.8	20.6	95	247	630	2120	298	720
P5604ESCS	4	18.4	23.8	111	286	1260	2840	438	1073
P5606ESCS	6	22.1	27.4	133	329	1890	3760	620	1381
P5608ESCS	8	22.8	28.1	137	337	2520	3940	743	1515
P5610ESCS	10	27.3	32.6	164	391	3150	5300	941	1842
P5612ESCS	12	28.3	34.3	170	411	3780	5870	1085	2238
P5616ESCS	16	31.5	37.9	189	454	5040	7170	1396	2704
P5618ESCS	18	33.2	39.6	199	475	5670	7840	1550	2909
P5620ESCS	20	35.0	41.3	210	496	6300	8550	1705	3139
P5624SCS	24	39.6	45.4	238	545	7560	10310	2061	3610
P5636ESCS	36	45.5	51.2	273	614	11340	13110	2971	4689

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