



شرکت پالایش میعانات گازی آدیش جنوبی
کارشناس محترم بخش بازرگانی - خانم مهندس ابراهیمی

موضوع: پیشنهاد فنی مربوط به استعلام خرید کابل های درخواستی

احتراماً، عطف به ایمیل دریافتی مورخ ۱۴۰۴/۰۴/۱۰ و ایمیل دریافتی
مورخ ۱۴۰۴/۰۵/۰۶ در خصوص خرید کابل های درخواستی، پیشنهاد فنی
این شرکت به شرح ۷ برگ **Technical Data** به شماره **23155** به
پیوست تقدیم می گردد

با تقدیم احترام
مدیریت عامل

صنایع کابل کرمان (سهامی خاص)
Kerman Cable Industries



warrington fire
global safety

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دفتر مرکزی: تهران، خیابان ولیعصر، بالاتر از پل پارک وی، کوچه هستی، پلاک ۱۸
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Page : 1 of 1

Code : Trial

Rev.No: 00

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Information Requests Cable List

KERMAN CABLE IND



List Number: 23155

Customer : Southern Adish

Row	Code	Cable Name and Size	Description	Customer Reference	Cable Length (m)
1	724267	RE-2X(St)YRY 1x2x1.5 mm2 vzn	ND/Black,White(Numbered)/+Pt		7,000
2	722830	RE-2G(St)YRY CI 1x3x2.5 mm2 vzn	ND/Black,White,Red/+Pt		3,000
3	322070	NYRY-J 3x2.5 mm2 rm	Brown,Blue,G&Y		4,000

Preparation Date : 04/04/10

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KCI

Cables Technical Data Sheets

*** Technical DataSheets presented for Southern Adish // List Number : 23155 Date: 04/05/22 ***

Abbreviations used for cable's designation (Acc to DIN/VDE standard)

KCI

A) General

Y: Polyvinyl Chloride (PVC) For Insulation or Sheath
Yw: Heat Resistant Polyvinyl Chloride (PVC) For Insulation or Sheath (90oC or 105oC)
Yfl: Improved Flame Retardant & Reduced Smoke Polyvinyl Chloride (PVC)
2Y: Polyethylene (PE) For Insulation or Sheath
02YS: FPE with skin layer of PE (For Insulation)
2X: Cross-linked Polyethylene (XLPE)
2G: Silicon Rubber
K: Lead cover (LC)
R: Round steel wires (SWA)
B: Steel tape (STA)
AWA: Aluminum wires (used for Armouring)
ATA: Aluminum tapes (used for Armouring)
Gb: Counter open helix tape
(F): Water blocking tape
H: Flame retardant, Low smoke & Halogen Free (FRLH)
HX: Crosslinked ; Flame retardant, Low smoke & Halogen Free (FRLH)
O: Oil resistant outer sheath (Hydrocarbon resistant) Acc to VDE 0472-803
Q: Steel Braid Wire Armour
vzn: Tinned Copper
CI: Circuit Integrity (Fire Resistant acc to IEC 60331)

B) Power and Control Cables

N: Copper conductor (CU) (DIN VDE Standard)
NA: Aluminum conductor (AL) (DIN VDE Standard)
S: Copper tape in common screen (CTSC)
C: Concentric copper wires in common screen (CWSC)
S: Screen of copper in common (SC) ; for MV
SE: Screen of copper over each individual core (SC) ; for MV
-O: Cable core has not green-yellow (Earth) wire
-J: Cable core has green-yellow (Earth) wire

C) Instrument & Telephone & Signaling Cables

A-: Outdoor telecommunication cables
AJ-: Outdoor telecommunication cables with induction protection Generally used for railway signaling
SLg: Signalling cables
D: Concentric copper wires (Railway-Signal cables)
D: Spiral tinned copper wires (Equipment & Electronics cables)
J-: Indoor telephone cables
JE-: Industrial electronic cables
S-: Switchboard cables
RE-: Instrumentation cables (stranded conductor)
RD-: Instrumentation Rehnomatic cables
FB-: FieldBus (or Profibus) Cables
RT-: Extension or Compensation Thermocouple Cables
LI: Equipment wires and cables (flexible conductor) Generally used for special and sensitive electronic
(St): Static screen ; Al.foil or Copper tape (OSC : Overall screen) Aluminum polyester tape with a drain wire.
(L): Aluminum co-polymer (OSC : Overall screen) usually applied longitudinally.
F: Jelly-Filled compound
PIMF/TIMF: Pair/Triple in metallic foil (ISC : Individual screen) Each element has individual screen
PIMFY/TIMFY: Pair/Triple in metallic foil + Pair/Triple Jacket; Each element has ind.screen & jacket

Cable Jet-Print Marking : Manufacturer Name + Cable Name and Size + Rated Voltage + Related Standard + Year of Manufacture + Quality of Outer Sheath+ Length Marking (1 meter intervals)

*** Technical DataSheets presented for Southern Adish // List Number : 23155 Date: 04/05/22 ***

Tech.Data Code: 724267
Rev. No : 0
Approved Date: 08/16/2025

Technical Data

Instrument Cables

KCI

Kerman & Kavian
Cable Industries

Cable Name : RE-2X(St)YRY 1x2x1.5 mm² vzm

IEC Name Format :

Ti.CU/XLPE/OSCR/PVC(Bd)/SWA/PVC

Related Standard : EN 50288-7

Construction Data (Approx)

Twisted Pair

1 Conductor : Material/Construction/No.xDiameter	Tinned_Copper / Strand(Class 2) / 7 x 0.53 mm
2 Insulation : Thickness/Material	0.50 mm / XLPE
3 --- Color Code :	Black,White
4 Tape1 : No x Material	1 x Polyester
5 Drain : Material / No x Diameter	Tinned_Copper / 7 x 0.30 mm
6 Tape2 : No x Material	1 x Aluminium_Bonded_Polyester
7 Tape3 : No x Material	1 x Polyester
8 Bedding (or inner-covering) : Thickness / Material	0.90 mm / PVC (Extruded)
9 Wire Armour : Material / Wire Diameter	Galvanized_Steel / 0.90 mm
10 Diameter Over / Under Wire Armour :	9.2 / 7.4 mm
11 Jacket : Thickness / Material / Color	1.30 mm / PVC / Blue
12 **** Overall Diameter :	11.8 mm
13 **** Total (Net) Weight :	290 Kg/Km (gr/m)
14 Flame Retardancy of Cable While Burning :	Flame-Retardant Acc to IEC 60332-1
15 Smoke Density generation of Jacket while burning:	Lower Smoke vs Normal PVC : ASTM D2843,E662
16 Halogen generation of Jacket While Burning :	Halogen Gas Tested acc to IEC 60754-1 <17%
17 Special Protection of Cable's Jacket : Oil-Resistant :	According to ICEA S-82-552 , S-73-532
18 Special Protection of Cable's Jacket : UV-Resistant :	According to UL 1581 part 1200
19 Special Protection of Cable Jacket While Burning :	Limiting Oxygen Index(min 32%),ISO 4589-2

*** Technical Data Sheets presented for Southern Adish // List Number : 23155 Date: 04/05/22 ***

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Technical Data

Instrument Cables

KCI

Kerman & Kavian
Cable Industries

Cable Name : RE-2X(St)YRY 1x2x1.5 mm² vzt

IEC Name Format

Ti.CU/XLPE/OSCR/PVC(Bd)/SWA/PVC

Related Standard : EN 50288-7

Electrical Parameters

20	Conductor DC Resistance @20°C/35°C	12.4 / 13.14 Ohm/kM
21	Capacitance Core-Core @20°C	Max 120 nF/km
22	Capacitance Unbalance pair-pair	Max 500pF/500m
23	Insulation Resistance Core-Core @20°C & 500 V.DC	Min 5000 MOhm.kM
24	L/R Ratio	40 microH/Ohm
25	Inductance at 50Hz Typical / Max	0.3 / 0.5 mH/kM
26	Test Voltage Core to Core	2kV.AC or 3kV.DC, 1 minute
27	Test Voltage Core to Screen	2kV.AC or 3kV.DC, 1 minute
28	Operating Voltage	Max Ueff=500 V rms

Installation Notes

29	Ambient Temp. During Installation	min 0°C
30	Ambient Temp. After Installation	min -30°C
31	Permissible Cable Bending Radius when Laying	min 10 cm
32	Pulling Force in Laying with Pulling-Head/Socking	max 15 / 130 kgf
33	Standard Packing Style - Length	proper Wooden or Metalic Drum - 1000 (meter)
34	Packed Drum Dimention (HeightxWidth)	90 x 60 cm

*** Technical DataSheets presented for Southern Adish // List Number : 23155 Date: 04/05/22 ***

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Tech.Data Code: 722830
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Technical Data

Instrument Cables

KCI

Kerman & Kavian
Cable Industries

Cable Name : RE-2G(St)YRY CI 1x3x2.5 mm2 vzn

IEC Name Format

Ti.CU/SIR/OSCR/PVC(Bd)/SWA/PVC

Related Standard : EN 50288-7

Construction Data (Approx)

1	Conductor : Material/Construction/No.xDiameter	Tinned_Copper / Strand(Class 2) / 7 x 0.67 mm
2	Insulation : Thickness/Material	0.90 mm / SIR
3	--- Color Code :	Black,White,Red
4	Tape1 : No x Material	1 x Polyester
5	Drain : Material / No x Diameter	Tinned_Copper / 7 x 0.30 mm
6	Tape2 : No x Material	1 x Aluminium_Bonded_Polyester
7	Tape3 : No x Material	1 x Polyester
8	Bedding (or inner-covering) : Thickness / Material	1.00 mm / PVC (Extruded)
9	Wire Armour : Material / Wire Diameter	Galvanized_Steel / 0.90 mm
10	Diameter Over / Under Wire Armour :	12.5 / 10.7 mm
11	Jacket : Thickness / Material / Color	1.40 mm / PVC / Grey With Red Strip
12	**** Overall Diameter :	15.3 mm
13	**** Total (Net) Weight :	450 Kg/Km (gr/m)
14	Flame Retardancy of Cable While Burning :	Flame-Retardant Acc to IEC 60332-1
15	Fire Resistancy of Cable While Burning :	Circuit Integrity / IEC 60331-21 / 300 V.rms
16	Smoke Density generation of Jacket while burning:	Lower Smoke vs Normal PVC : ASTM D2843,E662
17	Halogen generation of Jacket While Burning :	Halogen Gas Tested acc to IEC 60754-1 <17%
18	Special Protection of Cable's Jacket : Oil-Resistant :	According to ICEA S-82-552 , S-73-532
19	Special Protection of Cable's Jacket : UV-Resistant :	According to UL 1581 part 1200
20	Special Protection of Cable Jacket While Burning :	Limiting Oxygen Index(min 32%),ISO 4589-2

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Tech.Data Code: 722830
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Technical Data

Instrument Cables

KCI

Kerman & Kavian
Cable Industries

Cable Name : RE-2G(St)YRY CI 1x3x2.5 mm² vzn

IEC Name Format :

Ti.CU/SIR/OSCR/PVC(Bd)/SWA/PVC

Related Standard : EN 50288-7

Electrical Parameters

21 Conductor DC Resistance @20'C/35'C	7.7 / 8.16 Ohm/kM
22 Capacitance Core-Core @20'C	Max 250 nF/km
23 Insulation Resistance Core-Core @20'C & 500 V.DC	Min 300 MOhm.kM
24 L/R Ratio	60 microH/Ohm
25 Inductance at 50Hz Typical / Max	0.36 / 0.46 mH/kM
26 Test Voltage Core to Core	2kV.AC or 3kV.DC, 1 minute
27 Test Voltage Core to Screen	2kV.AC or 3kV.DC, 1 minute
28 Operating Voltage	Max Ueff=500 V rms

Installation Notes

29 Ambient Temp. During Installation	min 0'C
30 Ambient Temp. After Installation	min -35'C
31 Permissible Cable Bending Radius when Laying	min 20 cm
32 Pulling Force in Laying with Pulling-Head/Socking	max 38 / 210 kgf
33 Standard Packing Style - Length	proper Wooden or Metalic Drum - 1000 (meter)
34 Packed Drum Dimention (HeightxWidth)	100 x 60 cm

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Technical Data

Low Voltage Power Cables

KCI

Kerman & Kavian
Cable Industries

Cable Name : NYRY-J 3x2.5 mm² rm

IEC Name Format :

CU/PVC/PVC(Bd)/SWA/PVC

Related Standard : IEC 60502-1

Construction Data (Approx)

1	Conductor : Material/Construction/No.xDiameter	Plain_Copper / Strand(Class 2) / 7 x 0.67 mm
2	Insulation : Thickness/Material	0.80 mm / PVC
3	--- Color Code :	Brown,Blue,G/Y
4	Bedding (or inner-covering) : Thickness / Material	1.00 mm / PVC (Extruded)
5	Wire Armour : Material / Wire Diameter	Galvanized_Steel / 0.90 mm
6	Diameter Over / Under Wire Armour :	11.6 / 9.8 mm
7	Jacket : Thickness / Material / Color	1.80 mm / PVC / Black
8	**** Overall Diameter :	15.2 mm
9	**** Total (Net) Weight :	470 Kg/Km (gr/m)
10	Flame Retardancy of Cable While Burning :	Flame-Retardant Acc to IEC 60332-1
11	Smoke Density generation of Jacket while burning:	Lower Smoke vs Normal PVC : ASTM D2843,E662
12	Halogen generation of Jacket While Burning :	Halogen Gas Tested acc to IEC 60754-1 <17%
13	Special Protection of Cable's Jacket : Oil-Resistant :	According to ICEA S-82-552 , S-73-532
14	Special Protection of Cable's Jacket : UV-Resistant :	According to UL 1581 part 1200
15	Special Protection of Cable Jacket While Burning :	Limiting Oxygen Index(min 32%),ISO 4589-2

*** Technical DataSheets presented for Southern Adish // List Number : 23155 Date: 04/05/22 ***

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Tech.Data Code: 322070
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Technical Data

Low Voltage Power Cables

KCI

Kerman & Kavian
Cable Industries

Cable Name : NYRY-J 3x2.5 mm² rm

IEC Name Format :

CU/PVC/PVC(Bd)/SWA/PVC

Related Standard : IEC 60502-1

Electrical Parameters

16	Permissible Operating Temp : Normal work/Under Short Cir	70 / 160 Degree.Centigrad
17	Conductor DC Resistance @20'C max	7.41 Ohm/km
18	Conductor DC Resistance @Max Cond.Temp	8.892 Ohm/km
19	Conductor AC Resistance @70'C	8.87 Ohm/km
20	Assumed Thermal Resistivity Of (Normal) Soil	1.2 Km/W --- Depth of laying of 0.5 m
21	Derating of Soil Thr.R. 0.8/0.9/1.0/1.5/2.0/2.5/3.0 K.m/W	1.09 / 1.06 / 1.04 / 0.95 / 0.86 / 0.79 / 0.74
22	Derating ,Laying Depth 0.6/0.8/1/1.25/1.5/1.75/2/2.5/>3 m	0.99 / 0.97 / 0.95 / 0.94 / 0.93 / 0.92 / 0.91 / 0.90 / 0.89
23	Reactance @20'C,50Hz	0.107 Ohm/km
24	Current Rating in Air @30'C	25 Amp
25	Current Rating in Ground @15'C	34 Amp
26	Derating factor in Air @ 25 / 30 / 35 / 40 / 45 / 50 / 55 'C	1.06 / 1.0 / 0.94 / 0.87 / 0.79 / 0.71 / 0.61
27	Derating in Ground @ 10 / 15 / 20 / 25 / 30 / 35 / 40 / 45 'C	1.04 / 1.0 / 0.95 / 0.90 / 0.85 / 0.80 / 0.74 / 0.67
28	Rated Voltage U/U0(Um)	0.6/1 (1.2) kV
29	Test Voltage (for 5 minutes)	3.5 kV AC
30	Insulation Resistance Constant(Ki) @20'C,70'C	36.7,0.0367 MOhm.km (Acc to IEC60502-1 Sec 17.1)

Installation Notes

31	Ambient Temp. During Installation	min 0'C
32	Ambient Temp. After Installation	min -30'C
33	Permissible Cable Bending Radius when Laying	min 20 cm
34	Pulling Force in Laying with Pulling-Head/Socking	max 38 / 210 kgf
35	Standard Packing Style - Length	proper Wooden or Metalic Drum - 1000 (meter)
36	Packed Drum Dimention (HeightxWidth)	100 x 60 cm

*** Technical DataSheets presented for Southern Adish // List Number : 23155 Date: 04/05/22 ***

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CLARIFICATION AND DEVIATION LIST

Item No.	Project Specification			Specification Requirement Text	Supplier	Purchaser Resolution	Purchaser's Comments
	Document No.	Section / Page	Clause	Description	Deviation(D) - Exception(E) - Clarification(C)	Accepted (A) Rejected (R)	
1	SPECIFICATION FOR INSTRUMENT CABLE	Page 11 of 27	8.4	PARTICULAR CHARACTERISTICS	(C) Instrument cables are offered based on EN50288-7 reference standard and all electrical, mechanical and construction properties of that are based on this standard.	A	
2	SPECIFICATION FOR INSTRUMENT CABLE	Page 12 of 27	8.5	Flame retardant according to IEC 60332-3	(C) All offered cables are flame retardant acc. to IEC 60332-1 reference standard	A	
3	SPECIFICATION FOR INSTRUMENT CABLE	Page 16 of 27	8.11	Insulation: XLPE, low halogen	(D) There are some discrepancies between MTO and project specification about the type of insulation(PVC or XLPE) .Our offer for power cable is based on the cable structure requested in the MTO document with PVC insulation.	A	
4	SPECIFICATION FOR INSTRUMENT CABLE	Page 16 of 27	8.11	Stranded annealed copper	(C) Please note that KCI offerd the conductor of LV cable as Stranded plain copper(Class2).	A	
5	SPECIFICATION FOR INSTRUMENT CABLE	Page 21 of 27	9.1	CABLES MARKING	(D) Cables will be marked per your requirement with high quality jet printer. We use Jet Printer for cable marking instead of embossing method, because it provides better quality. Also the normal interval of all the data required to be printed on the outer-sheath is 1000 mm.	A	



Item No.	Project Specification			Specification Requirement Text	Supplier	Purchaser Resolution	Purchaser's Comments
	Document No.	Section / Page	Clause	Description	Deviation(D) - Exception(E) - Clarification(C)	Accepted (A) Rejected (R)	
6	SPECIFICATION FOR INSTRUMENT CABLE	Page23 of 27	10	INSPECTION AND TESTS	(D) ITP of the project will be finalized after the PO at PIM.	A	
7	SPECIFICATION FOR INSTRUMENT CABLE	Page9 of 27	8.1	the outer sheet of cables shall be selected as free halogen.	(C) Please note that cables with PVC jacket can not be halogen free. KCI offered the outer sheath of all cables with Low Smoke Low Halogen PVC (LSLH-PVC) . If halogen free is required offer shall be changed from PVC. Please clarify.	A	
8	Technical offer-TGS-KCI-Rev 0_Commented	Page4 of 9	Rows 4,5,6	Combined foil and braided shielding shall be considered.	(C) The most appropriate and common screen type for instrument cables is aluminium foil-screen. Therefore, we have offered these items as instrument cables with aluminium foil screen instead of copper wire screen (please note that copper wire screen is normally used for power cables).	R	
9	SPECIFICATION FOR INSTRUMENT CABLE	Page9 of 27	8.1	low halogen and Non Toxic fumes emission as per IEC-61034-2 and IEC 60754-1	(C) Please note that IEC 61034 standard is only applicable to halogen free cables. In order to evaluate smoke emission, we propose applying ASTM D2843 which is a recognized material standard for smoke emission testing of PVC.	R	

Item #1, used for the TGS signal, shall be a low noise cable as specified in TGS vendor documents. It shall include an aluminum foil screen and a tinned copper braided shield (minimum 80% coverage) for enhanced EMI protection.

ASTM D2843 is relevant to the "low smoke" requirement in the sentence, as it measures smoke density, but it overlaps with IEC 61034-2, which is more specific to cables and already cited. It is not relevant to "low halogen" or "non-toxic fume emission," as it does not address halogen content or toxicity-related properties like corrosivity.

All cables shall be designed to emit low smoke, low halogen, and non-toxic fumes, complying with IEC 61034-2 for smoke density, IEC 60754-1 for halogen acid gas emission, and IEC 60754-2 for corrosivity of emitted gases.